Texas Agriculture

WARTIME CAPACITY

OF

TEXAS AGRICULTURE

Report

Prepared By

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and

Texas Agricultural Experiment Station

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Foreword

This appraisal of wartime capacity of Texas Agriculture is a part of the national project conducted under the joint leadership of the Bureau of Agricultural Economics and the Land Grant Colleges. Other agencies cooperating are the Agricultural Adjustment Administration, Food Distribution Administration, Agricultural Research Administration, and the Soil Conservation Service.

In Texas the study was initiated and projected under the general sponsorship of a State Committee made up of representatives of State and Federal Agricultural Agencies. The following persons served as representatives of their respective agency:

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The statistical phases of the study and the work of determining desirable levels of production of essential commodities were the primary responsibility of a smaller group who devoted full time for certain periods to the study. The following persons represented the various agencies in this work:

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Table of Contents

WARTIME CAPACITY OF TEXAS AGRICULTURE

The large quantities of foods and indispensable materials required in prosecuting the war have placed unprecedented demands upon our agricultural resources. Estimated future requirements indicate even greater needs for these materials. Remarkable increases in production of war crops have been accomplished thus far in spite of the many problems encountered as a result of wartime conditions. Ever-expanding requirements make it imperative that we re-examine our resources for the purpose of determining to what extent the required amounts of foods and indispensable materials can be met.

An attempt has been made to examine the resources now used for intensive crop production, as well as the extensively used resources capable of more intensive uses, for the purpose of determining the maximum production that might be attained. The possibilities of increasing production by utilizing all resources for the production of highly nutritive foods or indispensable materials instead of foods having low nutritive qualities or less essential materials also have been considered. In addition to the physical limits of production, attention was given to other factors such as established methods of production, regulative programs preventing the most effective use of resources, and price relationships basic to all changes in production.

Officials responsible for developing national programs should find this report useful as a guide for determining which states or geographic areas are best suited for the production of essential war materials. The indicated level of production attainable through full use of available resources should be helpful in establishing regional and state goals for various crops. At the state level this information should reflect the pattern of production which would result in the maximum contribution of essential products to our national requirements. Such pattern results primarily from the adaptability of the resources within each area to the production of the crops most needed in the war effort. Thus, the attention of those responsible for production programs within the various adjustment areas is directed to the enterprises which should receive major emphasis during the war period. The proposed changes in regulative measures, programs to facilitate production, and price relationships should be helpful to policy-forming groups at the state, regional, and national levels.

In developing this report, consideration was given to two levels of production. First, an attempt was made to indicate the maximum total production that could be attained, assuming full use of all resources. In arriving at these estimates, it was assumed that all of the production requirements, such as labor, machinery, fertilizers, and other materials, would be available and applied at optimum rates as indicated by the general practice of farmers within each area. It was also assumed that a market would be readily available at prices, or prices plus incentive payments, sufficiently remunerative to bring forth the desired level of production. All control programs or regulative measures would be adjusted in such way as to facilitate production at the maximum level. The term "wartime capacity" is most commonly used in referring to this level of production. Other terms such as "maximum capacity", "maximum situation", and "maximum level" have been used synonymously in this connection.

In the second group of estimates, the primary objective was to determine the degree of change toward wartime capacity which appears feasible for agriculture to make during the 1944 season. In connection with this set of estimates, this supply of such production resources as labor, machinery, fertilizer, and other materials was assumed to be only slightly more than the amounts used during the

1942 season. The effective working force was assumed to be approximately 5 per cent greater than in 1942, and the additional farm machinery was estimated at some 10 to 15 percent less than the amount produced during the 1940 season. Assumptions relative to available markets, price relationships, and regulative programs were essentially the same as for wartime capacity. The term "maximum capacity for 1944" is most commonly used to refer to this level of production.

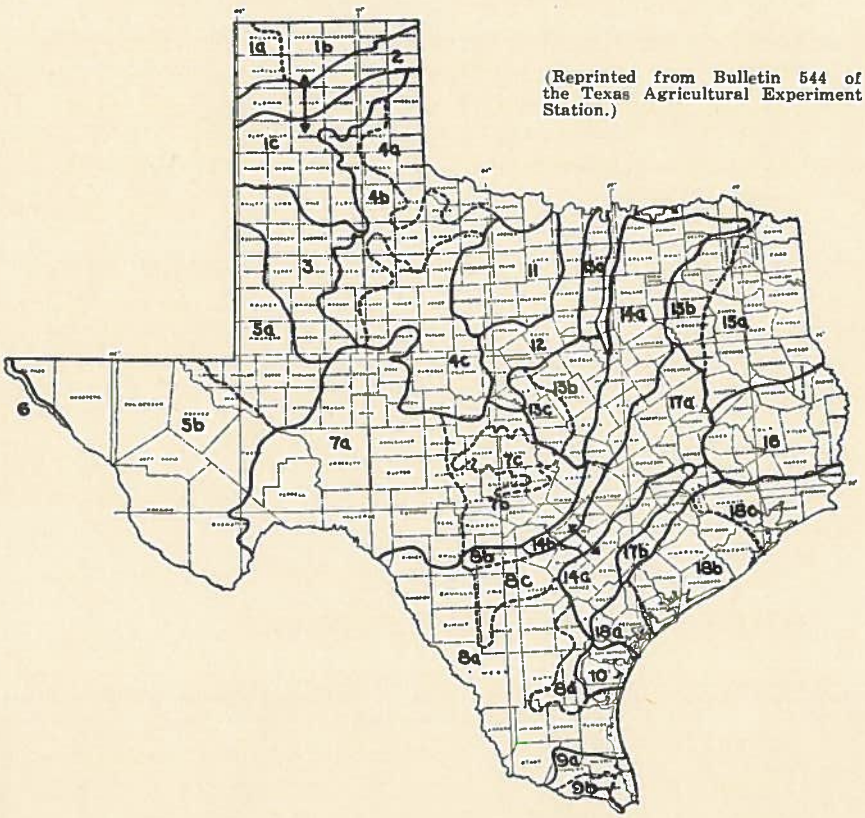
The adjustment areas used in making this analysis conform to the 18 major type-of-farming areas delineated and described in Texas Experiment Station Bulletin 544. This approach permits the grouping of farms having similar resources and similar crops and livestock organizations and analyzing them to determine wherein feasible adjustments might be made. Furthermore, the soils, topography, and rainfall conditions are basic factors influencing the present economy, and conditioning desirable adjustments. These areas present a logical basis around which any program designed to maximize production of essential materials should be formulated and projected.

WARTIME NEEDS vs. PRESENT PRODUCTION

A reasonable understanding of the Nation's needs with respect to food is a necessary first step in an analysis of the contributions Texas is capable of making under an all-out production program. Estimates of the quantities of foods and essential materials needed to supply our civilian population, military forces, our Allies, and the people of occupied territories, are greatly in excess of our normal production. Furthermore, our resources are not adequate to produce the quantities needed in the forms customarily used in the American diet. To obtain sufficient quantities of certain food nutrients substantial changes will be necessary in both production and consumption. In this regard, emphasis must be placed on foods giving the greatest amount of nutrients in relation to the resources required for their production. Specifically this means the production and use of more whole grain cereals; vegetable proteins such as dried beans, cowpeas, and soybeans; truck crops, especially potatoes and sweet potatoes; and fresh vegetables. Also vegetable oil may be substituted for much of the animal fats such as butter and lard. These changes would reduce the needs for proteins in the form of meat. The need for egg production as well as milk used in the form of whole milk would not be affected. It is recognized that dietary habits are relatively inflexible and will prevent any wide shift from established customs.

With these general objectives in mind, the present pattern of Texas agriculture was examined for the purpose of determining how well it conforms to over-all war needs and wherein desirable adjustments can be made. The vegetable producing areas such as the Lower Valley, Corpus Christi, and the Rio Grande Plains at present make a sizable contribution to the national requirements of these items. The capacity for producing these foods is considerably above present production. Grain production, which comes primarily from the dry-land areas, made up approximately 7 percent of the Nation's production of winter wheat in 1942, and 55 percent of the total production of grain sorghum. Cotton, which produces a number of essential war materials, is grown to the extent of approximately 8 million acres. This is slightly over one-third of the national acreage, from which approximately one-fourth of the total production of lint and seed is obtained. Peanuts, another important oil and protein bearing crop, were grown in 1942 to the extent of slightly over a million acres, or about 28 percent of the national crop. These crops combined make up a sizable contribution to the total production of vegetable oils and protein feeds. The vast acreage of grazing land maintains approximately 10 percent of the total cattle population and 18 percent of the total sheep numbers.

Type of Farming Areas in Texas



(Reprinted from Bulletin 544 of the Texas Agricultural Experiment Station.)

In a summary description of the agriculture of Texas, the State may be subdivided into 18 type-of-farming areas in each of which the operation of natural and economic factors has resulted in a high degree of similarity in the farm enterprises maintained, in their proportionate combination on the bulk of the farms, and in the production practices used. Eleven of the major type-of-farming areas are further subdivided into 30 sub-areas because of differences within these areas sufficiently significant to indicate a break in the general type of farming.

AREA:

1. **Panhandle Wheat Area.**
   a. Sandy soils; grain sorghums, corn, beef cattle.
   b. Large-scale specialized wheat production; dark, heavy soils; smooth land.
   c. Similar to (b) except more grain sorghums, cotton, and livestock; less specialized.
2. **Canadian River Grazing Area**—beef cattle; rough, broken lands of the Canadian River basin.
3. **High Plains Cotton Area**—cotton and grain sorghums; cattle grazing in the less developed parts of the area; smooth, level plains; light, sandy soils; large-scale methods.
4. **Rolling Plains**—mixed types; cotton and grain sorghums; cattle ranching; rolling topography; wide variations in soil types; numerous grazing and farming areas alternating.
   a. Farming predominates; extensive grazing areas.
   b. Grazing predominates.
   c. Farming predominates.
5. **High Plains and Trans-Pecos Cattle Grazing Area.**
   a. High Plains. Dry, level plains; sandy soils; little farming; large ranches.
   b. Trans-Pecos. Dry and mountainous; small amount of irrigated farming; large ranches.
6. **Upper Rio Grande Valley Irrigated Area**—cotton and alfalfa.
7. **Edwards Plateau Grazing Area**—cattle, sheep, and goats; shallow, stony soils; rough, broken topography; live-oak and shin-oak brush.
   a. Large ranches; practically no farming.
   b. Small ranches; some farming.
   c. Central Basin. Mostly cattle grazing; some farming.
8. **Rio Grande Plains Area**—mixed types; cattle grazing, some cotton; vegetable growing, largely under irrigation.
   a. Cattle grazing; vegetables.
   b. Corn, small grain, cotton; some grazing.
   c. Cotton, corn, vegetables; some grazing.
   d. Cotton, vegetables, and grazing.
9. **Lower Rio Grande Valley Area**—Winter vegetables, citrus, and cotton; some grazing.
   a. Dry farming; cotton, vegetables, and grazing.
   b. Irrigation farming; citrus, vegetables, and cotton.
10. **Corpus Christi Cotton Area**—cotton and vegetables; dark, rich soils; level topography; large-scale methods.
11. **North-Central Grazing Area**—cattle grazing; small amount of farming, similar in nature to that in surrounding areas.
12. **Western Cross Timbers Farming Area**—cotton, grain sorghums, corn, peanuts, and watermelons; sandy soils.
13. **Grand Prairie Area**—cotton, small grains, and corn; ranching; dark soils varying greatly in depth; rolling topography.
    a. Cotton, wheat, oats, corn; some ranching.
    b. Cotton, oats, wheat, corn; ranching.
    c. Ranching—cattle, sheep, and goats; cotton, small grains.
14. **Black Prairie Area**—cotton, corn, and small grains; deep, black, fertile soils; level to rolling topography.
    a. Cotton, corn, and small grains.
    b. Cotton and corn.
    c. Cotton, corn, and livestock.
15. **Northeast Sandy Lands Area**—cotton, corn, vegetables, and fruits; sandy soils; rolling topography; small farms, small irregular-shaped fields, small tools.
    a. Pine-covered.
    b. Oak-covered.
16. **Piney Woods Lumbering Area**—lumber, cotton, corn, range cattle, and hogs; self-sufficing farming.
17. **Post-Oak Area**—cotton, corn, truck crops, and beef cattle; sandy soils; farming mostly on interior prairies and bottom lands.
18. **Coast Prairie Area**—mixed types—cotton and corn; rice; fruits and vegetables; cattle grazing; widely varying soils; level topography and poor drainage.
    a. Cattle ranching.
    b. Cotton, cattle ranching, and rice.
    c. Rice, cattle ranching, and cotton.

Thus, it can be concluded that Texas agriculture is closely aligned with national needs for essential war materials. However, further increases of the most essential crops can be made by diverting available pasture land suitable for cultivation to more intensive use and shifting land now used for less essential crops to the production of items most needed.

LAND AND WATER FOR MAXIMUM PRODUCTION

Under the assumptions guiding this analysis, the total acreage of land suitable and readily available for crop production is the principal factor determining maximum limits to production. Since irrigated land accounts for a considerable portion of the production from certain areas, the amount of water which can be supplied to such land, or for bringing additional land under irrigation, represents another definite limit to production. Therefore, the land and water resources of the state were examined for the purpose of determining the maximum amounts available for use during a particular season for the production of crops.

Maximum Crop Acreage

In estimating the maximum wartime acreage of cropland, the agricultural census data for 1939 were used as a basis for departure. According to these records, there were 33,020,000 acres used for crops or idle and fallow in 1939. This was assumed to represent the total acreage now in cultivation. This acreage is made up of all grades of land from the standpoint of degree of slope, erosion conditions, and productivity. From data obtained through field surveys, the Soil Conservation Service has made an inventory of the soils by groups and capability classes for a fairly representative sample of the soils of the state. By expanding these data to the cropland given by the 1939 census for each adjustment area, the amount of land represented by each capability class was determined. A summary of these data indicates that approximately 29,339,000 acres of the crop and idle land are suitable for continuous use in crops. The remaining 3,681,000 acres are under normal conditions not desirable for crop production. This acreage is made up of shallow soils which are subject to, or have suffered from, severe erosion; certain sandy soils which, if continued in crops, would constitute a wind erosion hazard to adjacent land; and a certain amount of bottomland which overflows too frequently to be successfully cultivated. However, since this land is at present included in the cropping system, it is not considered feasible to discontinue use of the entire acreage for crop production during the emergency period. Because of its location, an attempt to do so would probably result in shifting an additional acreage of more desirable land lying adjacent to it, to less intensive uses. For these reasons, 345,000 acres, or about 9 percent, of the most productive part of this land is included in the acreage considered available for use during the war period. Most of this land is shallow-type soils best adapted for small grain production, and capable of producing desirable yields under favorable weather conditions. This land is located principally in the High Plains Wheat Area, 108,000 acres; the Rolling Plains Area, 60,000 acres; Black Prairie, 95,000 acres; and Grand Prairie, 50,000 acres. Also, in the Rio Grande Plains Area, 20,000 acres of light sandy soils are included, which are primarily adapted for peanut production.

In examining the plowable pasture land to determine the acreage desirably located and sufficiently productive to warrant bringing into use the same information furnished by the Soil Conservation Service was used. Only such land as is readily available and not subject to overflow, or would not constitute a potential wind erosion hazard in dry-land areas, was considered desirable for use during the

war period. A careful examination of all areas indicates that 1,835,000 acres represents the maximum acreage of new land which could be brought into use by 1945. This is made of the better grades of pasture land which are not subject to overflow and which do not require intensive erosion control practices. Such land is reasonably well distributed among the different areas. The largest acreage is in the Coastal Prairie Area, with 400,000 acres. Approximately 338,000 acres are in the Northeast Sandy Lands; 316,000 acres in the Rolling Plains; and 467,000 acres are about equally divided between the High Plains Wheat and the High Plains Cotton Areas.

A summary of these calculations gives a total of 31,519,000 acres, which represents the maximum acreage suitable for continuous crop production during the war period. This total is made up of 29,339,000 acres, which represents the acreage of present cropland suitable for continuous cropping; approximately 345,000 acres of less desirable cropland, which may be used during the emergency for specifically adapted crops; plus approximately 1,835,000 acres of the better grades of pasture land immediately available for use.

Maximum Irrigated Acreage

An inventory of irrigated land was compiled by the State Water Utilization Technician of the Bureau of Agricultural Economics. Information supplied by the various State and Federal agencies, and supplemented by field data gathered by the Water Utilization Planning Service, was used as a basis for this inventory. The acreage subject to irrigation accounts for a sizable amount of the production from 12 of the adjustment areas. The principal areas include the High Plains Wheat and High Plains Cotton Areas, with approximately 52,000 acres 1/ irrigated in 1942; the Lower Rio Grande Valley, with 340,000 acres irrigated; the Rio Grande Plains, with 94,000 acres; the Upper Rio Grande Valley, with 65,000 acres; and the Coastal Prairie Area, with 392,000 acres. A total of all 12 areas where irrigation is important shows that approximately 1,098,000 acres were irrigated in 1942. This figure, however, does not accurately reflect the acreage normally irrigated due to the unusually heavy rainfall during that season. This is especially true in Areas 1 and 3 where irrigation is on a supplemental basis and used in accordance with the needs for water. This results in wide fluctuation in the actual acreage irrigated. In 1942 there were 1,350,000 acres subject to irrigation in all areas and adequate water was available if needed.

Both surface and underground water supplies are depended upon to furnish water for the irrigated lands. Approximately three-fourths of the acreage depends upon surface water diverted from principal streams, by direct pumping or through storage reservoirs. The Rio Grande River constitutes the chief source of water for the Upper and Lower Valley, and for small areas at various other points along its course. The Pecos and Nueces Rivers are the primary sources for Areas 5 and 8, and the Trinity, Brazos, and Colorado Rivers furnish water for the major portion of the rice grown in Area 18. Well irrigation is depended upon entirely in the High Plains Wheat and Cotton Areas. Irrigation in these areas developed slowly until the middle 1930's when interest was stimulated by the drought years. Improvements in well equipment and motors for pumping were important contributing factors. At present there are about 2,700 wells which usually irrigate about 90

1/ This acreage is unusually low compared with the normal acreage owing to abnormally high rainfall during the 1941 and 1942 crop seasons.

to 100 acres per well. Groundwater is also depended upon to irrigate about 40,000 acres of rice each year in Area 18, and about 33,000 acres of the irrigated crops grown in Area 8.

To determine the maximum limits to which the water supplies could be utilized as a factor of production, the present and potential sources for each area were examined for the purpose of finding any additional supplies. After studying the degree to which present sources are being utilized, the availability and quality of water from new sources, the feasibility of bringing in new projects, and other related factors, it is estimated that the irrigated acreage could be increased to approximately 1,540,000 acres by 1945. This is an increase of about 190,000 acres over the acreage which was subject to irrigation with existing facilities in 1942. The above increases in terms of acres put under irrigation do not accurately reflect the increased use of water, however, due to the fact that in a number of areas crops with heavy water requirements have been substituted for those requiring only a small amount of water. This is particularly true in Areas 1 and 3 where the acreages of potatoes and alfalfa were increased to maximum limits at the expense of wheat, cotton, and grain sorghum. Although the suggested increase in the acreage irrigated in these areas is only from 300,000 to 307,000 acres, the annual water requirement of the crops which would be grown are 267,000 acre feet as compared with a normal requirement of 210,000 acre feet.

Other areas where an increase in irrigated acreage is possible are Area 18, where an additional 80,000 acres of rice can be grown; Area 8, with an increase of approximately 44,000 acres; Area 14, with an additional 20,000 acres; and Area 5, where about 14,000 acres more can be irrigated. The increased acreage in Area 18 would result principally from increased pumping from the Guadalupe, the Colorado, and the Brazos Rivers. Also fuller use of water stored in existing reservoirs would contribute to the increased acreage. In Area 8, the chief source for additional water is a proposed storage reservoir to be constructed on the Nueces River, which would irrigate approximately 40,000 acres in LaSalle County. The 20,000 acres in Area 14 would require the construction of a reservoir on the San Antonio River southeast of San Antonio. The land to be irrigated is located in Karnes County. In Area 5, it is proposed that present water supply be increased through the construction of small reservoirs on Six Shooter Draw and Comanche Creek, by increasing present storage capacity of the Balmorhea Reservoir, and a limited amount of groundwater development in certain localities.

MAXIMUM USE OF RESOURCES FOR MOST ESSENTIAL CROPS

The second major step in this analysis was to allocate the land, water, and other resources to the production of those crops which yield the maximum quantity of foods and indispensable materials per unit of input. This required examining the soil resources and other factors within each area, in light of their adaptability for the production of crops most needed, for the purpose of formulating the pattern of production which would result in the maximum contribution to war needs. In making this allocation it was necessary to establish some objective measures for judging the relative contribution which varying amounts of the different products would make to our war needs. These measures resulted in tentative priority ratings for the different crops, which were used as guides to indicate the order in which the crops adapted to each area would be maximized. In general, for the state as a whole, fresh vegetables and truck crops such as potatoes and sweet potatoes, were given first choice of the land in areas where the soils were adapted to their production. Peanuts were given second consideration in areas adapted to both truck crops and peanuts, and first consideration in other areas. After these crops were increased to desirable maximum limits the choice, as a rule,

lay between wheat, feed grains, and cotton. In areas having a definite advantage in the production of any one of these crops, such crop was given next preference. However, in areas where yields were such that the relative contribution by the different crops was about equal, the present pattern of production was used as a guide for making changes from the present level of production. This policy seemed most desirable in all cases where no material advantage would be gained by increasing the acreage of one crop at the expense of another.

Fresh Vegetables

In 1942, Texas grew approximately 226,000 acres of fresh vegetables. The major areas accounting for this production were Area 9 with 72,000 acres, Area 8 with 52,000 acres, Area 10 with 37,000 acres, and Area 14 with 36,000 acres. The vegetables in Areas 8, 9, and 10 are almost exclusively winter-growing vegetables. Thus, it is possible that a sizable portion of the vegetable acreage in these areas can be double-cropped with summer-growing crops. In Areas 8 and 9, vegetable production is carried on almost entirely under irrigation. The available water supply during the winter season is the limiting factor to increasing production. In Area 8, it is considered possible to increase the amount of water used during this period sufficiently for an additional 13,000 acres of vegetables, bringing the total to approximately 65,000 acres. In Area 9, it is not considered possible to increase the amount of water available during these months; however, through conservation measures and more complete utilization of present supplies, it was considered possible to increase the acreage to 78,000 acres. Area 10 presents an entirely different situation, since vegetable production is largely on dry-land. They are grown during the same seasons as in the other two areas, and a considerable acreage of onions and cabbage are normally double-cropped each year with cotton and feed crops. In this case, the limiting factor to expanding the acreage is the amount which can be double-cropped each year without disrupting too greatly the agricultural program during the summer months. However, the indicated needs for fresh vegetables were not considered sufficient to warrant a greater increase than could be absorbed from double-cropping. Under the assumptions relating to maximum production, it is considered possible to grow approximately 140,000 acres of vegetables in this area each season. This is an increase of 103,000 acres over the 1942 acreage. Vegetable production in Area 14 is carried on principally under dry-land conditions, and the bulk of the acreage is devoted to onions, tomatoes, and spinach. In the case of onions in this area, the acreage has fluctuated widely during the past several years as a result of unfavorable market conditions. Tomatoes and spinach are grown under somewhat specialized conditions within local areas, and it is not considered desirable to increase these acreages over the 1942 level. Other than onions, for which the needs do not appear to warrant a considerable expansion, this is not considered a potentially important vegetable-producing area. Area 15 is an important vegetable area from the standpoint of fresh tomatoes. An equivalent of 16,000 acres of tomatoes were grown in 1942 and it is considered possible to increase this to approximately 25,000 acres by 1945.

A summary of these areas indicates that fresh vegetables can be increased from 226,000 acres in 1942 to approximately 396,000 acres by 1945. These increases would come principally in Areas 8, 10, and 15. On the basis of specific vegetables, realization of this expansion would result in increasing cabbage from 38,000 to 92,000 acres, spinach from 43,000 to 96,000 acres, fresh tomatoes from 58,000 to 82,000 acres, onions from 58,000 to 73,000 acres, and carrots from 13,000 to 40,000 acres.

The suggested increases in vegetable production would require considerably larger quantities of productive resources other than land and water, than are nor-

mally used. However, the nature of the production, assembling, and packing system established in the area in connection with certain vegetable crops lends itself to rapid expansion. It is assumed that a program designed to attain maximum production would be projected along the same lines. That is, farmers would sign contracts to plant and cultivate a given acreage of the desired vegetables. Under this plan, his contribution would be limited to furnishing the land, planting the crop, and to the necessary machine cultivation. The contractor furnishes the seed and is responsible for such operations as thinning and weeding, harvesting, assembling, packing, and shipping. As a rule, they contract the harvesting operation to truckers who are in charge of field crews and are paid on a piece basis. The advantages of this system in a program for increasing production can readily be recognized. The farmer is freed of responsibility of recruiting and supervising harvesting crews. The shipper-contractor serves as a clearing house whereby seasonal labor can be immediately directed to localities in greatest need of their services. The attainment of the indicated goals would also require the establishment of additional packing facilities as well as means of transporting the products out of the area.

Potatoes

Irish potatoes are not grown extensively in any of the adjustment areas in the state. During normal times demands have not been strong enough and sufficiently stable to permit the development of commercial production except in limited areas. Production in the Lower Rio Grande Valley, due to exceptionally early seasons, normally is for commercial purposes and is shipped to distant markets. Also in the High Plains irrigated areas commercial production has developed in recent years. In all other areas production has been carried on primarily for home use or to supply local demands. For these reasons, the potato acreage was at a relatively low level from the standpoint of maximum acreage at the beginning of the war period.

Texas grew 57,000 acres of potatoes in 1942. The reported acreage for 1943 is 75,000 acres, and it is estimated that 111,000 acres can be grown each year during the war period. The 1942 acreage is somewhat scattered throughout the state. Area 15 has the largest acreage with 13,000 acres, followed by Area 9 with 10,000 acres, Area 14 with 9,000 acres, and Areas 1 and 18 with approximately 6,000 acres each. Potatoes are grown primarily under irrigation in Areas 1, 3, and 9, which are considered potential areas for increased production. The combined acreage in Areas 1 and 3 could be increased from 7,000 acres in 1942 to 25,000 acres for the maximum situation. Areas 14, 15, and 18 are the other areas where significant increases are possible. The combined acreage could be increased from approximately 28,000 acres in 1942 to 52,000 acres by 1945. Production in these areas would be primarily for home use and to supply local demands.

It is not considered that the above increases would be exceedingly difficult to realize. In the eastern areas where production is carried on under dry-land conditions, the chief requirement would be a well-planned program to encourage production. Sufficient experienced farmers are available to grow the suggested acreages.

In Areas 1 and 3, potatoes are grown on a somewhat specialized basis. This is a new enterprise and a limited number of experienced growers from western states have been attracted into these areas to develop potato production. Furthermore, it is apparent that the resident operators are hesitant to go into this enterprise on a strictly commercial basis, as it is recognized as a hazardous undertaking. For these reasons the increased acreages would require a special program designed to assist farmers with production practices, to insure a seed

supply at reasonable terms or possibly on credit basis, and to assist with assembling, grading, and marketing. Since potatoes are a heavy water-using crop, the increased acreage should be well distributed to prevent a heavy drain on the water supply in any local situation.

Sweet Potatoes

Sweet potatoes are grown primarily in the eastern part of the state. The important factors controlling the distribution of the present acreage are the more suitable soils and adequate rainfall. The sandy soils in Areas 12, 14, 15, 16, 17, and 18 are well adapted to sweet potatoes. The rainfall in these areas ranges from 30 to 50 inches. Under conditions of reasonably thorough production methods, yields of 75 to 100 bushels can be expected.

Production in these areas has been carried on at a relatively low level prior to the war period, primarily because of adverse market conditions. Normally the demand has not been sufficient to justify production on a commercial basis by many growers. The usual experience of farmers has been that only the No. 1 and No. 2 grades were salable, which resulted in culling out a significant portion of the crop. Under these conditions, sweet potato production was being carried on at a level of about 46,000 acres in 1942. In response to demands stimulated by war conditions, the acreage is estimated to have increased to 90,000 acres in 1943. It is considered possible to grow approximately 178,000 acres in 1945. Area 15 would contribute most to this increase as it is estimated that the acreage could be increased from 25,000 acres in 1942 to approximately 85,000 acres. Possible increases in other important areas are as follows: Areas 14 and 16, from 6,000 to 20,000 acres each; Area 17, from 3,000 to 15,000 acres; Area 18, from 3,000 to 12,000 acres; and Area 12, from 1,000 to 15,000 acres.

Realization of the maximum acreage would not make a heavy demand on the physical resources as the acreage of soils adapted to sweet potatoes is greatly in excess of the suggested acreage. Furthermore, general experience among farmers in production methods should not be a retarding factor as production for home use is carried on throughout the areas. The chief problems which would have to be overcome involve a well-designed program to furnish adequate seed and slips for planting the required acreage, to make available labor or labor saving machinery to meet the peak demands of transplanting and harvesting, and the establishment of adequate storage, processing, and marketing facilities.

Experienced and properly equipped farmers can, no doubt, grow slips more satisfactorily and economically than they can purchase them. Having the plants immediately available on the farm should prove most satisfactory as advantage could be taken of optimum moisture conditions for transplanting. Also, a commercial acreage of 5 or more acres would justify the additional effort required in producing plants on the farm. This method could not be depended upon, however, to supply all the plants required for the areas. Under an expanded program there would be enough growers with inadequate storage facilities and experience, or lack of initiative, to save seed and grow their own slips to warrant a sizable seed storage and potato slip enterprise throughout the area. Such an enterprise is established in certain localities at present, but demands were greatly in excess of supplies during the past season. These needs could be met largely through encouraging well-equipped growers to produce slips in excess of their own needs. In this connection proper measures should be taken to prevent the spreading of potato wilt and other diseases.

The heavy demand for labor at transplanting time may be met through the use of transplanting machines. A few machines are in use at present. Through their use,

it is reported that the labor required for transplanting is reduced to about 50 percent of the requirements when performed by hand. At prevailing wage rates the cost of such machines, which is about $75.00 each, should be recovered within two or three seasons.

Harvesting, assembling, storing, and processing the production indicated for the maximum situation presents a number of problems which cannot be readily overcome. In the first place, farm storage facilities are almost nil insofar as taking care of expanded production is concerned. Also, experience in storing and grading potatoes on farms is often lacking. For these reasons a program designed to receive the crop at harvest time, grade it for the desired use, and store in centrally located curing-houses is considered necessary if a satisfactory production program is to be realized. Such a program would permit full utilization of the crop by separating the various sizes and quality of potatoes required for specified purposes. Undoubtedly many growers would wish to dispose of their interest in the crop at harvest time rather than assume any part of the risk involved in storing and curing. In lieu of such program, however, either of two plans might be followed. Through loans at support prices, an agency or its designated representative might receive potatoes field-run which would be graded and stored. On the other hand contracts could be made with private concerns to receive, grade, and store potatoes at centrally located points at a nominal charge to producers. The rate charged would be governed by a responsible agency which would also underwrite any investment required to establish the necessary facilities. In either case the farmer would retain the right to dispose of the crop at a later date as he saw fit, at which time he would take up the loan and a reasonable charge for the storage and curing services.

It is assumed that a good portion of the production would be used for Lend-Lease shipments, the requirements of the Armed Forces at home and abroad, and to supply the demands of occupied territories. This portion of the production would need to be dehydrated. At present, however, the available dehydrating facilities have an annual capacity of only approximately 1,000,000 bushels. It is estimated that the maximum acreage would produce about 17,000,000 bushels. It is evident that present dehydrating facilities fall far short of the capacity needed to process that portion of the total production which would be used for war purposes. The expansion of dehydrating capacity would fit well into the general program for the preservation of foods. Expanded facilities for dehydration should also have a place in the post-war economy of sweet potato-producing areas. Dehydrated foods have a number of desirable features which may result in replacement of foods preserved in cans. Furthermore, the use of sweet potatoes as livestock feed in the dehydrated form offers definite possibilities. The favorable yields in these areas, especially if size and shape are disregarded, put them in a competitive position with corn and other grains as a source of carbohydrate feed. Dehydration would overcome the storage, curing, and preserving problem which makes impractical the feeding of raw potatoes on a large scale.

Peanuts

Peanuts have been grown on a commercial scale in certain areas in Texas for a number of years. These areas, which include the West Cross Timbers, Rio Grande Plains, the Sandy Land portion of the Blackland counties, and the Gulf Coast Prairies, were the first to make rapid expansions in production to meet the increased demand for peanut oil. As a result, the most important ones have expanded to nearly their maximum capacity. In the other areas where peanuts normally were grown only for home use, but having a considerable acreage of sandy land adapted

to their production, material increases have taken place during the war period, but numerous harvesting, assembling, and marketing problems have been encountered and stand in the way of further rapid expansion. The combined results indicate that peanut production for the state as a whole has reached a stage beyond which further expansion will be difficult to attain. In 1942, Texas farmers planted 1,007,000 acres. The July 1 estimate indicates that 1,114,000 acres were planted in the spring of 1943. It is estimated that for the maximum situation, the acreage of peanuts could be increased to approximately 2,870,000 acres.

The proposed increases would come from all the areas where peanuts are considered adapted except Areas 8 and 12 where the present acreage is near the maximum level. Largest increases are suggested for Area 15 which would expand from 155,000 acres in 1942 to 975,000 acres; Area 4, which would increase from 87,000 acres to 445,000 acres; Area 14, with a change from 166,000 acres to 400,000 acres; and Area 17, which would increase from 40,000 acres to 210,000 acres. Other areas capable of making smaller increases, although significant when compared with their present level of production, are Areas 7, 11, 13, and 16. The acreage indicated for each of these areas is the maximum which may be planted to peanuts during any one season, assuming reasonable conservation of the soil.

If the maximum acreage is attained, a well-designed and vigorously administered program will be necessary in some areas. The increases made thus far have to a large extent come about through taking up slack in the cropland. In many respects this is true regarding the other resources, such as the regular farm machinery (other than harvesting equipment), labor, and materials. As a result of unsatisfactory experience on the part of many farmers during the 1942 season with harvesting, assembling, and marketing problems, considerable resistance will have to be overcome to get farmers to respond to any program for increasing production. It will be necessary to plan the program on an area basis and furnish assistance in the purchase and effective use of special harvesting equipment.

In certain areas where farms are organized around a relatively small acreage of cropland and small-scale methods of production are practiced, as is the case in the Northeast Sandy Lands, it is anticipated that complete reorganization of farm units may be necessary to make possible the commercial production of peanuts on an efficient basis. Financial assistance to the operator would be needed for the purpose of obtaining tractors and other necessary equipment. With the decrease in number of families on farms which has taken place as a result of off-farm employment opportunities, this change likely has already been initiated on a small scale. An increase in cropland per farm would permit the production of as much as 20 to 30 acres of peanuts per farm, and on the larger units using tractor equipment, an even larger acreage would be possible. In this way the production costs would be reduced and in addition enough tractors would be brought into the area to operate the pickers required for harvesting.

Cotton

With regard to cotton, the possibilities of production in Texas conform to the pattern of all other southern states in that it is adapted to the wide range of soil and climatic conditions throughout the state and is grown in all the type-of-farming areas. In 1942, Texas farmers grew approximately 8.4 million acres of cotton, which was equal to one-fourth of the total acres of cropland. This acreage is well distributed throughout the state. In arriving at the adjustments which would be desirable in cotton production, a number of factors were taken into consideration. The more important of these were the adaptability of cotton to the

area in question, the quality of the cotton produced, comparative yields of cotton with other crops, and the relative contributions such crop would make to our war needs. After evaluating these factors as they relate to cotton production in each area, it was concluded that approximately 8,160,000 acres of cotton should be grown under the maximum situation. This is only a slight reduction from the 1942 acreage.

The suggested acreage for wartime capacity, if distributed between areas as anticipated, represents a greater adjustment than is indicated by the change in level of production for the state as a whole. In areas where yields and/or quality makes cotton production definitely undesirable, substantial reductions were made in favor of other crops. These areas include the High Plains Wheat, Edwards Plateau, Rio Grande Plains, the North-Central Grazing, and the West Cross Timbers Areas. The combined acreage in these areas was reduced from 783,000 acres in 1942 to 610,000 acres, or a reduction of approximately 22 percent. In the remaining areas, it was anticipated that cotton would remain at about the present level or would be increased slightly. The areas where increases are suggested are the Lower Rio Grande Valley, Corpus Christi Cotton, and the Gulf Coast Prairie. These areas all produce cotton of 1 to 1 1/8 inches in length.

Cotton as a rule competes with grain sorghum, corn, and small grains for land and other resources. It is exceedingly difficult to compare non-food crops on the basis of their relative contribution to war needs. This is especially true in the case of cotton which is used in the forms of oil, protein meal, lint, hulls, and linters. The best objective measures obtainable as to the relative importance of these materials were used in evaluating their contributions to war needs. In view of the shortage of protein feeds experienced during the past season cotton was given favorable consideration. Considering the utility of all the products obtained, and the average yields per acre, cotton ranks well above grain crops in most areas. For these reasons continued production at the present level appears desirable in most areas.

The quality of cotton produced in the dry-land sections was considered in connection with proposed adjustments between crops. If quality is measured primarily in terms of grade and staple length, it is true that a high percentage of of the cotton produced is of low quality. Furthermore, records indicate that there is a wide variation in staple length from year to year which is the result primarily of weather conditions during the growing season. For example, as much as 75 percent or more of a given variety of cotton may have staple less than 15/16 inch if grown under adverse weather conditions, whereas if favorable weather prevails it is entirely possible that 35 percent or less of the production will be shorter than 15/16 inch. Thus, for a given season the staple length within a certain range which may be produced is to a considerable extent an uncontrollable factor.

It should be recognized, however, that staple length alone is not a satisfactory measure of quality. Recent spinning tests show that other factors are much more important in determining spinning performance and breaking strength of yarns produced than is the staple length 2/. Selected varieties have a tendency to produce lint having the same spinning utility even though they are grown in widely different localities and the staple varies as much as 5/32 inch. Thus, it is entirely feasible and practical for farmers in the dry-land areas to produce cotton of a high spinning quality primarily by selecting the varieties grown. At

2/ See Texas Agricultural Experiment Station Bulletin No. 624, "Gearing Texas Cotton to War Needs".

the same time varieties which produce staple lengths of 15/16 inch or over should be selected. Such varieties are available which yield as much or more per acre than those yielding shorter staples.

To initiate a program of this kind it would be necessary to insure farmers a ready market for the longer staple cotton and to provide some safeguard against penalties which might result from slightly off grades due to undesirable color or a small amount of foreign materials. One of the factors which has fostered the production of short staple varieties in these areas is the fact that they will withstand rough treatment under adverse harvesting conditions better than the longer and softer types. Not only does the prevailing market operate to the disadvantage of individuals or communities interested in improving the quality of cotton grown but the present loan program is set up on a similar basis, and, in this respect, is fostering an undesirable situation. It is believed that farmers in these areas would readily accept a program to improve the quality of their cotton if a reasonable amount of outward evidence is shown toward rewarding their efforts by improving the prevailing marketing system.

Wheat

Wheat production is concentrated on the dark heavy soils in North-Central and Northwest Texas. Upwards of two-thirds of the states wheat acreage is grown in the High Plains Wheat area where it far exceeds all other crops in importance. It is also the principal crop on the smoother portions of the Canadian River Grazing Area. About one-third of the remaining acreage is grown on the heavy soils of the Rolling Plains. The balance is largely found in the North-Central Grazing Area, the Grand Prairie, the Black Prairie and the High Plains Cotton Area in about that order of importance. In all of these areas the acreage is not generally distributed but tends to be concentrated on heavy soils and soils which are considered too shallow and droughty for the successful production of row crops. In the North-Central Grazing Area, wheat is a major enterprise and along with other small grains, occupies a large part of the cropland. In all other of these latter named areas wheat constitutes a minor enterprise.

The level of wheat production in Texas fluctuates rather widely as a result of weather conditions. In 1942, 3.4 million acres were seeded to wheat which was about 900,000 acres less than the average acreage seeded during the 12-year period 1929-40 and the smallest acreage in 15 years. During these years, however, the acreage of sorghums, a controlling factor in wheat production, was considerably lower than the present acreage. Assuming normal moisture conditions, it is estimated that wheat can only be increased to about 4.8 million acres by 1945.

The largest acreage of wheat ever planted in Texas occurred in the fall of 1936 and again in 1937 when approximately 5,300,000 acres were seeded. This was the result of an unusual combination of circumstances, however, which rarely occur. Failure of summer growing crops in 1936 left large acreages of adapted soils available for seeding; heavy fall rains provided favorable moisture conditions and the need for both a quick income and late winter feed supply furnished the incentive for a large acreage of wheat. Favorable moisture conditions permitted the reseeding of this acreage in the fall of 1937.

Under the extremely variable weather conditions which prevail in the main wheat producing areas, it is questionable whether a policy to maximize a particular crop would result in the greatest contribution to war needs over a long period. The agriculture of this area has become recognized as extremely "opportunistic". Farmers are in the habit of taking advantage of any favorable moisture conditions for the seeding of wheat, spring grains, or grain sorghums. This is, no doubt, the

most practical course to follow and it should result in the maximum contribution to our war needs. Any rigid policy to maximize either wheat or grain sorghums would seem unwise under these conditions. It would appear more desirable to emphasize the importance of maximum grain production of all kinds with first preference given to wheat and allow farmers to adjust the acreage of the different crops in accordance with prevailing moisture conditions.

Grain Sorghums

Generally speaking, the grain sorghums constitute the principal feed grain crop in areas receiving less than 30 inches of rainfall. They are adapted to the same areas as wheat. In all other such areas they constitute the principal competitor of cotton for use of the land. The high level of grain sorghum acreage during the early 1940's has resulted from restrictions on cotton and wheat acreage rather than from favorable price relationships. The recent demand for feed grains, the lifting of restrictions on grain production, and the development of combine varieties have tended to sustain and increase these acreages. They have also tended to bring about a shift in utilization from sorghums for forage to sorghums for grain. In 1942, 4,830,000 acres were grown. A maximum of approximately 5,180,000 acres is indicated.

The problems involved in determining the desirable level of production of grain sorghums have been discussed in connection with wheat and cotton. Considering the assumptions outlined and the indications of relative needs for various commodities, the relative yields of cotton and grain sorghums do not justify the shifting of acreage from cotton to grain sorghums. It appears more desirable to maintain the present acreage of cotton and increase grain sorghum wherever there is available idle or fallow land. Since forage sorghums have been grown at a relatively high level during the past few years, it is suggested that the acreage be reduced to the requirements of livestock numbers and that the acreage in grain sorghums be increased to take up the resulting slack.

EFFECT OF PRACTICES ON PRODUCTION

The principal practices considered by the committee as having possibilities for increasing production by 1945 included moisture conservation practices such as terracing and contouring, seed improvement and treatment and fertilizer practices.

In general, it was agreed that such additional use of these groups of practices as could be induced by 1945 could cause only a slight increase in average yields.

In the western part of the state where moisture is the principal limiting factor, any increases in yields must come from increased use of moisture conservation practices.

In the better corn-producing areas yield increases ranging from a fraction of a bushel to a bushel per acre may be expected through enlargement of hybrid seed supplies.

In the Northeast Sandy Lands an increase in yields can be obtained by encouraging green manuring and increased use of commercial fertilizers.

Increased irrigation is expected to result in some increases in cotton yields in the High Plains Wheat Area and in the Lower Rio Grande Valley.

Some decrease in average peanut yields may be expected as a result of extension of the crop to new growers and onto less well adapted land.

MAXIMUM USE OF RESOURCES FOR LIVESTOCK PRODUCTION

Patterns of livestock production are determined in a large part by the nature of feed supply. In the past the preponderance of pasture and coarse forage as compared to the very limited production of concentrates has resulted in maximum production of range types of livestock and quite limited production of dairy and poultry products and pork. This situation has been further encouraged during the past several years by the Agricultural Adjustment Administration programs which have operated to limit the production of grain and protein concentrates and to further expand the production of grass and forage crops.

Furthermore, favorable moisture conditions during the past three years have resulted in greatly increased production from pasture and forage crops. These forces coupled with favorable feed-livestock price relationships have operated to encourage ranchmen and farmers to increase cattle and sheep beyond the normal carrying capacity of the range. On the other hand, there has been a rapidly increasing need growing out of war activities for dairy and poultry products and pork. These factors have been uppermost in the minds of the committee in considering capacity for maximum wartime production of livestock and livestock products.

It seems necessary to reduce the numbers of grazing livestock to bring about a more normal relationship between carrying capacity of the range and livestock numbers. At the same time a shift from the production of forage crops to grain crops seems advisable to permit continuing production of dairy and poultry products and hogs at near present high levels.

Changes in Feed Production

A comparison of feed production available to livestock from acreages indicated for maximum wartime production with production in 1942 indicates the extent to which the feed situation would be changed. Grain production from the maximum acreage computed at normal yields would be 4,957,000 tons or 790,000 tons in excess of the 4,166,000 tons produced in 1942. It would, however, be approximately 100,000 tons less than prospective production from the 1943 acreage at normal yields. Furthermore, it exceeds the estimated feed requirements of 1942-43 livestock numbers by 320,000 tons.

Forage production on the other hand would be reduced by 1,047,000 tons. This level of production, however, would still be well above normal forage requirements of the 1942-43 livestock numbers.

The production of protein supplements has not kept pace with increased livestock production. The shortage was acute during the past winter and spring and promises to be equally short again this year. The importance of an ample supply of high protein feeds to supplement dry range in the livestock areas and on the dairy farms of Texas cannot be over-emphasized.

Changes in Livestock Numbers

To obtain wartime maximum production, numbers of beef cattle, sheep, and workstock would be reduced and other classes of livestock would remain at levels approximating 1943 numbers.

Beef Cattle

All cattle and calves would be reduced by 145,000 head as compared with 1943 numbers. Most of this reduction would come in the High Plains Wheat Area and in the Rolling Plains where numbers have been built up to dangerous levels owing to two successive years of favorable conditions for wheat pasture and to large quantities of cheap forage. It cannot be expected that these favorable conditions will continue to prevail and adjustments to normal carrying capacity of the ranges should be made at this time when prices are favorable and the demand for meat is high.

A substantial increase in the numbers of cattle along with a decrease in sheep numbers to provide for a better balanced use of the range is indicated for the Edwards Plateau. Needle grass and bitterweed have been increasing in the Edwards Plateau because of overstocking with sheep. Beef cattle numbers can be increased in the Gulf Coast Prairie also. Numbers have been reduced in this area during the past two years for reasons other than lack of feed. The grazing capacity of the area will permit heavier stocking.

Sheep

The number of sheep should be reduced by approximately 1,000,000 head. Practically all of this reduction should come in the Edwards Plateau and in Trans-Pecos where ranges have become badly overstocked in response to favorable prices and three years of above normal moisture conditions. There are increasing signs of decreasing production per unit. It is believed that sheep numbers have passed the point in these areas where additional numbers will result in increased production. Needle grass and bitterweed infestation have increased and management problems generally have become increasingly difficult owing to overstocking. Probable shortages of cottonseed cake and other high protein feeds to balance winter range is an additional reason for reducing sheep.

Dairy Cattle

Increases in milk production are most urgently needed. It is believed that the number of cows kept for milk can be increased 5 percent or by 74,000 cows in the attainment of maximum production as compared with the number reported for 1943. The changes suggested ranged from slight decreases in the North-Central grazing area and the Rio Grande Plain to increases of over 10 percent in the High Plains Areas. Heavy concentration of defense activities as in the Coast Prairie and in the Northeast Sandy Lands or the availability of feed were determining factors.

If feed prices do not become prohibitive some increases in production per cow may be expected owing to heavier feeding. This is anticipated in the feed requirements used but no change in production was indicated in the computed rates of milk production.

Since the great bulk of the forage crops fed to milk cows in Texas are highly carbonaceous, large amounts of high protein concentrates such as cottonseed meal are needed to balance dairy rations if maximum production is to be attained. They are especially needed during the period of the year when the cows do not have access to green pastures. The importance of milk in the human diet would seem to warrant allowing milk producers some priority in securing supplies of protein concentrates.

Poultry and Eggs

The number of hens reported for January 1, 1943, was approximately 17 percent greater than the number reported a year earlier. Although increases took place rather generally over the state, the greatest expansion occurred in the northern and western parts where there was a surplus of grain.

Egg production per hen also was reported up. This indicates that laying flocks were given more attention and fed better than had been the case previous to the upsurge in demand for poultry products.

The number of chickens raised has increased but not as rapidly as did the number of laying hens. The emphasis placed on egg production is in line with wartime food needs.

The estimated maximum for hens and pullets is nearly 7 percent above the 1943 level. The greater part of this increase should come in the western part of the state where grain supplies are relatively large.

The indicated number of chickens raised is considered ample for replacement of flocks which are to be maintained at maximum levels. This represents a relatively small increase in chickens raised over that reported for 1942 and is approximately the same as expected in 1943. Commercial broilers production would remain at about the same number as expected in 1943.

A large proportion of Texas turkeys are grown on the range and do not receive heavy grain feeding except during a short fattening period. About the same number of turkeys are indicated for maximum production as were expected in 1943.

Hogs

Since the spring of 1941, the number of sows bred for both spring and fall farrowing has increased rapidly throughout the state in response to favorable prices and good grain supplies. The greatest increases have taken place in the High Plains Wheat Area, the High Plains Cotton Area and in the Rolling Plains.

Spring farrowings reported in 1943 and fall farrowing expected in 1943 are only slightly lower than the number suggested for maximum pork production. It is felt that for the state as a whole hog numbers have caught up with feed supplies and that maximum feed production offers very limited possibilities for expanding hog production. In several areas hog numbers are now at a point where they might easily be increased beyond available feed resources and where a drought year (an experience not uncommon to Texas farmers) would badly upset production plans.

Feed production in the High Plains Cotton Area, the Rolling Plains, and the Edwards Plateau appear to be sufficient to warrant increases in hog numbers.

A decrease in pork production was suggested for the West Cross Timbers to about the 1942 level. Salvage from peanuts provides an important part of the requirements for fattening hogs in this feed deficit area. The maximum acreage of peanuts is not sufficiently greater than the 1942 acreage to warrant expanding pork production beyond 1942 levels. A badly unbalanced situation developed in this area in 1943.

A reduction in number of sows farrowed was also suggested for the Northeast Sandy Land Area. This is another large feed deficit area which is believed to have expanded hog numbers beyond safe limits.

Should the suggested maximum acreage of peanuts be obtained in the state, additional opportunities would exist for salvaging waste peanuts with hogs in several areas. The opportunity would be greatest in the Rolling Plains, the Northeast Sandy Lands, the Piney Woods Lumbering Area, the Post Oak Area, and in the sandy portions of the Black Prairie counties. Data for the appraisal of these opportunities were not available; consequently, they were not considered in estimating capacity for maximum hog production.

Cattle on Feed

An estimated 194,000 head of cattle were reported in feed lots in Texas on January 1 of this year. Possibly 60,000 head of these cattle could be classed as full-fed and about 20,000 head as creep-fed calves. The remainder are believed to be merely "warmed up" rather than fattened. Roughage makes up a relatively large part of the feed consumed in the latter type of feeding enterprise.

Cattle feeders have the choice of using a ration high in concentrates of one with a high proportion of forage. In general, the ration may vary from 25 percent concentrates and 75 percent roughage (by weight) to 75 percent concentrates and 25 percent roughage. The plan which feeders should choose is as unpredictable as is the federal policy relating to the factors which affect this choice. It was assumed that the number of cattle on feed would not exceed the number fed in 1943.

The supply of protein concentrates is important in any cattle feeding program. Cottonseed meal or other similar protein concentrates is necessary to properly balance the carbonaceous grains and roughages commonly used. Feeders cannot be expected to put cattle on feed unless they have some assurance that high protein feeds needed for economical gains will be available.

Sheep on Feed

Sheep feeding is largely confined to grain producing areas of Northwest Texas. A high percentage of those reported on feed are lambs that are put on wheat pasture in the High Plains Wheat Area and are fattened for market with the use of very little grain. Pasturing lambs on wheat pasture is largely a matter of opportunity and the number of lambs involved varies greatly from year to year depending on the prospects in the fall.

Reports for January 1, 1942, showed 220,000 feeder sheep and lambs and this number was increased to 242,000 as of January 1, 1943. During both of these years good wheat pastures were available.

The committee assumed that the maximum numbers of sheep and lambs fed would not exceed the number fed in 1943. The increase in wheat acreage should help to maintain this level of feeding.

Horses and Mules

The present trend was followed in estimating that workstock numbers would decrease another 40,000 head from the number on farms in 1943. If increased numbers of tractors are made available the number of workstock would be further decreased.

Available Grain and Roughage Related to Maximum Livestock Needs

A summary of the estimated maximum feed supplies that will be available from all sources are compared with estimated total feed requirements of livestock in Table 1.

Table 1. Estimated maximum supplies of grains and roughages and feed requirements of livestock

Item	Supplies of feed grain	Supplies of forage
	1,000 tons	1,000 tons
Production:		
Corn	2402	
Grain sorghums	1799	
Oats	600	
Barley	156	
Sorghum forage		2519
Silage--reduced to dry basis		350
Peanut hay		1005
All other hays		1233
Straw		1567
Cottonseed hulls		257
Total production	4957	6931
Other sources:		
Wheat for feed 1/	110	
Feed grains available from outside sources	175	
Total available	5242	6931
For seed and farm food	184	
Total available for feed	5058	6931
Normal requirements for livestock	4931	5820
Surplus	127	1111

1/ Wheat produced and fed on farms. Does not include wheat released by Government for feeding.

In the preparation of these estimates the grain content of commercially mixed feeds was assumed to be 65 percent of the total weight of such feeds.

In addition to the above listed feeds, maximum production of peanuts would provide a large amount of waste nuts which could be salvaged with hogs. However, grain requirements for maximum production have not been modified to include possible reductions assuming attainment of maximum peanut acreage.

Estimates are not included on the production of protein concentrates or protein feed requirements. Unless the peanut or cotton acreage is greatly increased the production of protein feeds in Texas are not expected to be much, if any, above 1942 or 1943 production when protein feed requirements were well above production. While every effort is being made by farmers and ranchers to minimize the need for protein supplements, lack of protein may force them to greatly modify production plans.

Forage supplies are estimated to be 19 percent above livestock requirements and are sufficient to provide a substantial reserve in case of drought. The

large numbers of forage-consuming animals on farms and ranches increases the importance of having substantial forage reserves.

An increase of 1,600,000 acres of peanuts over the 1944 level is indicated for maximum production. This increase is expected to provide a hay yield equivalent to about one-half of the forage surplus. In view of the uncertainties of obtaining the maximum of peanuts and considering the importance of a reserve of feed, the surplus was not considered excessive.

REALIZATION OF WARTIME CAPACITY

The availability of adequate resources does not in any sense assure their use toward maximum production. The extent to which the most desirable proportions of the various resources are associated with each other in the production of the best adapted crop or livestock enterprises is the final determinant as to whether maximum production may be realized. Conditions must be favorable with respect to a number of factors if all resources are to be used most effectively. Adequate knowledge on the part of farmers regarding the best adapted war enterprise to the area in question or to his particular resources is of first consideration. This is necessary if farmers are to be able to plan their production program and follow it to a successful conclusion. Secondly, price relationships must be adjusted so as to encourage the development of the desired enterprises. It is important, however, that prices for war crops are not pushed beyond competitive levels as this would result in higher than necessary costs in obtaining the desired quantities of production. Assuming that prices are adjusted to favorable competitive levels, an effective program to assist farmers in obtaining the required labor, additional machinery needed and other essential materials is of most importance. Since the adjustments required to maximize production are as a rule in the direction of a higher degree of specialization for each adjustment area, it appears desirable to have all programs planned and developed on an area basis. Educational programs, technical assistance, and special arrangements for credit, materials, processing, and disposition could be formulated in accordance with special needs of the area.

Commodity Price Relationships

If adjustments in the production of various war crops are to be accomplished, it is necessary that the price outlook for war crops be sufficiently attractive to producers to justify a shift from the production of other competing crops. Therefore, it is necessary to give some attention to price relationships of the important commodities in evaluating the possibility of maximum production being realized. This can only be done in a very arbitrary manner, however, because of the wide variations in yields, as well as production methods and costs for the different adjustment areas.

The approach used in attempting this evaluation was to select the most commonly grown cash crop for each area or for several areas to use as a general standard for returns per acre in relation to the amount of labor used. In doing this it was necessary to examine the various costs involved, hazards of production, and other factors for the proposed war crops in comparison with the basic crop. Through these comparisons it was possible to judge whether or not the presently supported prices are adequate to give as high returns for labor required in production as is true of the selected competing crop. Consideration was also given to the necessary costs, risks, and trouble attached to making shifts to new crops.

In most of the adjustment areas cotton is the main cash crop with which other crops would have to compete for production resources. In certain areas, such as

the High Plains Wheat and the Lower Rio Grande Valley, other crops had to be taken into consideration. The current loan value of cotton, which is 18.5 cents per pound for 7/8 middling was used as a basis for calculating the return from cotton. The statements regarding prices of other commodities in relation to cotton are only applicable as long as the price of cotton remains at this level.

In the case of peanuts, the present support price of $140 per ton (Spanish and Virginia) is considered adequate to give peanuts a competitive position with cotton. In the commercial peanut areas where production costs are held to a minimum, the above price makes peanut production considerably more profitable than cotton from the standpoint of return to labor. However, as a rule the land on which peanuts are grown in these areas normally produces lower than average cotton yields. In areas not specialized in growing peanuts, where production costs are high as a result of inefficient methods, this price is not nearly as favorable to peanut production. Before peanuts can be grown efficiently, it will be necessary to increase the acreage of cropland on farms sufficiently to permit the use of machinery in peanut production. The above price is considered necessary to warrant the additional expense involved in making this shift. A considerable risk is also attached to making such shifts since there is no definite assurance provided relative to peanut prices after the emergency period, or that assistance will be given to farmers in making adjustments to the production of other crops.

A number of difficulties are encountered in examining the costs of producing grain sorghums in relation to cotton. In the main grain sorghum areas the two crops are handled similarly as far as planting and machine cultivation is concerned. However, with cotton production, considerable hand work is necessary in connection with chopping and harvesting. Thus, a much higher proportion of the total labor required in cotton production is relatively unskilled, and would not warrant as high returns as the labor used for grain sorghums. On the other hand, the comparative ease of harvesting grain sorghums through the widespread use of combines is a factor favoring its production. The choice of farmers in these areas relative to increasing grain sorghums or cotton at the expense of the other depends a great deal upon their previous experience in obtaining labor and prospective supplies for the current season.

Considering the price of cotton at 18.5 cents per pound in relation to 80 cents per bushel for No. 3 grade grain sorghum, and assuming no difficulty in obtaining labor, it appears to be more profitable to farmers to expand cotton production than to increase grain sorghum. With these prices in effect and marketing quotas released, it is likely that cotton production will be expanded at the expense of the grain sorghum acreage. A tentative estimate indicates that it would require a price of approximately $1.00 per bushel for No. 3 grade grain sorghum to make its production sufficiently attractive that farmers may be expected to maintain about the present level of production. The above price would increase substantially the competitive position of grain sorghum in the High Plains Wheat Area.

In the principal sweet potato areas the methods of production and proportion of the total labor performed by hand is about the same with sweet potatoes and cotton. The total labor required for sweet potatoes is about 120 hours per acre compared with 75 to 80 hours per acre for cotton. Sweet potato slips cost relatively much more than does cotton seed. Under the present marketing arrangements in order to take advantage of current support prices, farmers must provide crates, deliver potatoes to loading points, and pay the necessary inspection charge. Owing to scarcity of materials, the cost of these items are difficult of determination at planting time. For these reasons it was not considered wise to attempt to indicate a price which would include these costs. Also, we have suggested elsewhere that a program designed to receive potatoes in bulk at harvest time thereby relieving farmers of all these problems would be most desirable in bringing about maximum production.

Tentative estimates indicate that a price of approximately 90 cents per bushel over and above marketing costs would be required to make sweet potato production equally profitable as cotton. Yields are relatively dependable and with thorough cultural methods may be increased above the present average. This should encourage sweet potato production.

Farm Labor Needs

The adjustments outlined for maximum wartime production entail a substantial increase in labor requirements over the 1942 level. With the exception of one or two areas, additional labor would be needed throughout the state, the largest increases occurring in areas in which substantial expansion in war crops are proposed.

In estimating increases in the number of workers over the 1942 employment level, the committee gave primary consideration to the under-utilization of employed workers during 1942 and to the lower quality of replacement labor. These determinations were based upon the limited information available and general knowledge of the several areas with respect to farming methods, types of skills required, kinds of workers available, seasonal peak requirements and the relative overall losses of farm population.

These estimated numbers of additional workers needed presuppose a high degree of fluidity of the labor supply within areas and for the state as a whole. Such a degree of fluidity can only be realized through a most effective placement program A summary of the results of these calculations insofar as critical areas and critical periods are concerned is given in Table 2.

The additional labor needed for the attainment of maximum production appears to constitute an important obstacle in 7 of the 18 adjustment areas. In these areas, the peak month requirements are of most importance. Due to the nature of the adjustments proposed, the additional labor is needed during months of relatively full employment at present. This results from the fact that the crops which were increased are as a rule major enterprises in the area. In the High Plains Wheat Area additional labor would be needed to harvest wheat and to prepare the land for fall seeding. About 6,400 workers would be needed in June, 11,500 in July, and 3,900 in August. In Area 4, about 10,200 additional workers would be needed in June and 13,000 in October primarily to take care of the increased peanut acreage. In Areas 8 and 9, increased grain sorghum acreage, fresh vegetables, and cotton are the important crops requiring additional labor. Due to the large increase in winter vegetables proposed for Area 10, a substantial increase in workers would be required. Harvesting operations would necessitate about 13,000 additional workers in January and February, and about 11,000 in March. In Area 15, additional requirements of about 30,000 workers would be needed during May and June. Increases in peanuts, sweet potatoes, and tomatoes are chiefly responsible for these additional requirements. In Area 18 the substantial increases in cotton, rice, corn, potatoes, and sweet potatoes call for a considerable number of additional workers. Harvesting of these crops represents the main peak season to be overcome. About 11,000 additional workers would be needed in August, 16,000 in September, and 12,000 in October.

Attainment of maximum production will require successful handling of current farm manpower problems. Some points of special significance are:

1. Fuller utilization of the available farm labor supply. Areas 15, 16, and 17 seem to offer the best opportunity for improved labor utilization.

Table 2. Additional workers required during peak months to achieve maximum wartime production capacity in critical areas

Area and month	Additional labor requirements 1/	Additional workers required 2/	Crops and operations requiring additional workers
	100 workers	100 workers	
Area 1:			
June	50	64	Wheat harvest
July	88	115	and
August ..	26	39	land preparation
Area 4:			
June	24	102	Cultivating peanuts and grain sorghum
October .	60	130	Peanut harvesting
Area 8:			
August ..	25	55	Peanuts and grain sorghum harvesting and tomato planting
Area 9:			
July	9	21	Cotton and grain sorghum
August ..	22	43	harvesting
Area 10:			
January .	122	128	Fresh vegetables, harvesting
February	122	128	Fresh vegetables, harvesting
March ...	101	106	Fresh vegetables, harvesting
April ...	44	51	Fresh vegetables, harvesting
July	11	24	Cotton harvesting and
September	13	20	land preparation
Area 15:			
May	200	295	Sweet potatoes, peanuts, cultivation and
June	211	305	tomatoes, stake, prune, and harvesting
Area 18:			
August ..	98	140	Harvesting all crops
September	141	182	Harvesting all crops
October .	108	140	Harvesting all crops

1/ Employed workers based on calculated additional man months of labor required. A man month of 220 hours was used in most cases, variations being made in some instances to approximate more closely the practical length of critical harvest operations.

2/ Column 1 adjusted for an assumed loss of 5 percent in quality. It was assumed that no "slack" existed in the 1942 employment in these areas during the peak months.

2. Further substitution of machine for hand labor. Cotton harvesting by the stripper-type machine is believed to be feasible in Areas 3 and 4. Small combines for adapted types of grain sorghum in Areas 3 and 4, side-delivery rakes in all peanut areas, and mechanical cotton choppers in Area 10 and other areas with fairly level topography effect substantial economies in man hours.

3. Effective farm placement services. Greater cooperation between producers and government placement agencies is especially important in this connection.

4. Redistribution of manpower seasonally and in many instances on a year-round basis. Three essential phases of an effective recruitment and placement program are:

a. The collection of data on demand and supply conditions in the various areas on a larger scale than has hitherto been possible.

b. The dissemination of these data in a sustained educational program, particularly in potential recruitment areas.

c. An expansion of present facilities for training recruited workers. This applies especially to the training of dairy hands and operators of tractors, shearing machines, and combines.

5. Improved housing facilities. A general raising of rural housing standards would materially expedite the movement and placement of farm workers. Special attention should be given to mobile housing units particularly in Areas 3, 4, 10, and 18.

6. A close and continued scrutiny of overall manpower policies with particular reference to recruitment for out-of-state employment, importation of foreign workers, and Selective Service.

Farm Machinery Needs

The changes in farm organizations and methods of farming assumed to be necessary to attain wartime capacity are the important factors determining increased farm machinery requirements. These requirements are associated with the adjustment areas in relation to the additional land brought into cultivation and the increased acreage of certain war crops. Adequate information is not available to indicate the number of the important types of farm machinery on farms in the various adjustment areas. An inventory showing 39 major types of equipment on farms January 1, 1942, with the number expected to be on farms in 1943 and 1944, is given for the state as a whole in Table 10 3/. The increases indicated for 1943 were computed by adding the number of machines made and distributed in 1942, plus the amount made in the early part of 1943 and distributed for use during the same season, to the numbers on farms in 1942. Allowances were made for the number that would be no longer usable because of depreciation and destruction. A similar procedure based on the amount of materials allocated for farm equipment was used in arriving at the number which would be available during the 1944 season.

The indicated changes in numbers from 1942 to 1944 for certain types of equipment are not always associated with a proportional change in the acreages of crops for which they are used. Changes in farming practices with respect to certain

3/ This information prepared by the Washington Office, Bureau of Agricultural Economics.

enterprises are probably responsible for these variations. This probably explains the increase in number of windrow pick-up balers from 2,600 in 1942 to 3,400 in 1943, and 3,800 assumed to be on farms in 1944, since there is no material increase in the acreage of all tame hays. In general, the trend is toward more tractor-drawn equipment with a corresponding decrease in use of horse-drawn implements.

The increased acreages of various crops over the 1944 acreages form the basis for the indicated changes in amounts of farm machinery needed for wartime capacity shown in Table 10. These increases are associated with certain areas where greatest increases in war crops are suggested.

The additional machinery required for fresh vegetable production is not so great compared with other war crops. Some additional tractors as well as cultivating equipment and special type planters will be necessary. The greatest needs are associated with peanut production in the eastern sandy land areas where it is assumed that sufficient change in farm organization to permit efficient production would be effected. This would involve the mechanization of some 25,000 farms in these areas. Approximately the same number of tractors, cultivating equipment, and side-delivery rakes would be required for this purpose. A few additional tractors would be needed in connection with the increased rice acreage in Area 18, and certain crops in other areas. This gives a total increase of 26,000 above the number assumed to be on farms in 1944. Similar numbers of listers, middle busters, row cultivators, and row planters would be needed. Special peanut harvesting equipment would be required to the extent of about 2,100 peanut pickers and the same number of stationary power balers.

With the exception of certain harvesting equipment, substantially increased numbers of farm machinery should not be needed in connection with grain production. Sufficient new machines for replacements and new parts to keep used machinery in good repair should be adequate for the increased wheat acreage. The increased grain sorghum acreage will necessitate additional combines in Areas 3, 4, 8, and 10, as present numbers are considered inadequate. To meet the needs of all areas the number of combines should be increased from 16,600 in 1944 to about 21,600 to handle the maximum acreage. Tractor-drawn moldboard plows should be increased from 33,000 in 1944 to 33,500 for wartime capacity. Additional hay harvesting equipment will be needed, owing largely to increased alfalfa acreage in the High Plains irrigated areas. Approximately 500 additional tractor-drawn mowers and 100 windrow pick-up balers will be needed for these purposes. Special types of equipment such as transplanting machines for sweet potato production and corn pickers are needed in indeterminate quantities. Such machines would be rapidly adopted to the extent of several times their present numbers if made available. In general, the amount of horse-drawn equipment may be reduced as a result of the changes indicated above.

Fertilizer Needs

Detailed information on the amount of fertilizer used in Texas for the production of various crops is unobtainable. An indication of the amounts sold within the state each year can be obtained from manufacturers' records of tag purchases from the State Chemist. In 1942 approximately 141,000 tons of fertilizer were distributed in the state. This amount was increased to about 164,000 tons in 1943. This includes distributions by manufacturers plus 6,460 tons and 13,000 tons obtained through the Agricultural Adjustment Administration for each respective year.

The principal crops for which fertilizer is used include truck and vegetable crops, and cotton, peanuts, and other field crops in the heavier rainfall areas of the state. In estimating the amount of fertilizer needed to obtain maximum production, the increases in acreages of those crops where the use of fertilizer is a common practice were examined for the purpose of determining the additional amounts needed. It was assumed that only a part of the farmers would apply fertilizer at the rates recommended by the Experiment Station. It is estimated that approximately 258,000 tons would be needed for all purposes. This is an increase of 83,000 tons above the amount assumed to be available for use in 1944.

The increased acreage of peanuts would require about 65,000 tons, or over two-thirds of the additional amounts needed. This would be used primarily in Areas 14, 15, 16, and 17. Truck and vegetable crops make up most of the additional requirements.

WARTIME CAPACITY IN 1944

For the 1944 season it is difficult to visualize any material change over 1943 in the supply of essential production material such as feeds, fertilizer, machinery, and labor expected to be available for use. The present outlook for feed production from the 1943 crop appears reasonably favorable and a somewhat larger amount of feed grains should be available. Assuming normal yields the increased acreage of grain sorghum should result in approximately more grain from this source than was produced in 1942.

Since the use of commercial fertilizer is limited primarily to the sandy soils in the heavy rainfall sections of the state, its effect on the production for the state as a whole is not so great. Prospective supplies for the 1943-44 season, as reported by reliable sources, are approximately 92 percent as much potash, 113 percent as much superphosphates, and 115 percent as much nitrates as were used during the 1942-43 season. Also, provisions are being made for special-analysis fertilizers adapted to vegetable production and conditions prevailing in local areas.

The amount of farm machinery available for use in 1944 should be approximately 4 or 5 percent greater than in 1942. This is based on the understanding that sufficient materials have been allocated for the production of 80 to 90 percent as much machinery as was produced in 1940.

The farm labor supply for the state as a whole is expected to be about 5 percent greater than in 1942. This is based on the assumption that the labor recruiting and placement program will result in more efficient use of the present supply of rural and urban workers plus a more effective program for utilizing seasonal labor to meet peak requirements in different areas.

Resources for Crop Production

With these somewhat elusive assumptions in mind an attempt was made to arrive at the maximum production which could be attained by 1944. The same procedure was used in allocating scarce factors for the production of different crops as was followed in arriving at the maximum figures. It was estimated that there would be approximately 30,300,000 acres of cropland available for use during the 1944 season. This is making use of all the present crop and idle land considered sufficiently productive to warrant continuing in crops during the war period plus approximately 650,000 acres of plowable pasture which could be brought into use. It was estimated that the acres of land subject to irrigation would be increased from 1,359,000 acres in 1943 to 1,373,000 acres in 1944. This change does not accurate-

ly reflect the amount of additional water used, however, as a number of heavy-water-requiring crops were substituted for crops having only light water requirements.

Fresh Vegetables

The acreage of fresh vegetables may be increased to approximately 270,000 acres in 1944 which is about 20 percent above the 226,000 acres grown in 1942. These increases would be distributed among the principal vegetable areas as follows: Area 8 from 52,000 to 65,000 acres, Area 9 from 72,000 to 82,000 acres, Area 10 from 37,000 to 50,000 acres, and Area 15 from 16,000 to 21,000 acres. A well directed program to inform shippers and growers of the vegetables for which increased production is needed, is considered the most important factor involved in the realization of these goals. The system of production whereby shippers contract with growers to produce a given acreage of vegetables lends itself to a rapid expansion in acreage. This is particularly true in Area 10. In Area 9 the amount of water available for irrigation appears to be a limiting factor to a substantial increase in acreage. The dependance upon seasonal labor to meet peak requirements should not represent a serious limiting factor, as a reasonably effective recruitment program should obtain the necessary supply.

Potatoes

The estimated maximum acreage of potatoes for the 1944 season is about 93,000. This is 33,000 above the 1942 acreage and 18,000 acres greater than the reported 1943 crop. These increases would be made primarily in Areas 1, 3, 9, and 18. The combined acreage for the High Plains areas would change from 7,000 acres in 1942 to 15,000 acres in 1944. Nine thousand acres were reported in 1943. In view of the specialized nature of potato production in these areas, this appears to be as great an increase as could be expected. The limited experience in production practices under irrigation, the high cost attached to planting the crop in relation to other crops grown, and the prospective seed supplies are the chief factors controlling production. Immediate attention should be given to conserving enough planting seed from the most desirable sources to meet the requirements of these areas. In addition, some type of production loan is needed to assist farmers not in a financial position to meet the initial outlay required for seeding a substantially larger acreage.

In the Lower Valley the estimated maximum acreage for 1944 is 15,000 acres which is an increase of 5,000 acres over 1942 production. This is the same acreage as is suggested for the maximum period. The fact that growers are in the habit of varying the acreage widely in response to changing demands leads to the conclusion that the maximum acreage could be attained by 1944. However, to attain this acreage the need for increased production should be called to the attention of growers in this area within the near future as the production season is near at hand.

The suggested maximum acreage for 1944 in the Gulf Coast Prairie is 10,000 acres compared to 5,600 acres in 1942. It is anticipated that this increase will be primarily for home use and to meet local demands. The chief factor affecting this expansion is the availability of planting seed at reasonable prices.

Sweet Potatoes

It is estimated that sweet potato production could expand to approximately 129,000 acres in 1944. This is compared with 46,000 acres in 1942 and 90,000 acres reported for 1943. These increases would take place primarily on the sandy soils

located in the eastern portion of the state, and including parts of Areas 12, 13, 14, 15, 16, 17, and 18. The largest increase is suggested for Area 15 where the planting of 60,000 acres appears to be feasible. This compares with 25,000 acres in 1942 and 45,000 acres in 1944. Similar relative increases from the 1942 acreage are suggested for all of the other areas. These increases are considered possible primarily because a considerable number of farmers grow sweet potatoes on a home use basis throughout the areas mentioned. Thus, the experience of growers and the labor required are not considered limiting factors to the attainment of the acreages indicated. The prospects for increased acreages in 1944 will no doubt be affected by the experience which farmers have in harvesting and marketing the considerably expanded 1943 crop. Assuming reasonably satisfactory results from this year's production, it would appear that a well designed program to inform growers throughout these areas would be adequate to stimulate interest in an expanded program. In addition assurance of prices sufficient to provide as high returns as from other crops would be necessary. It is furthermore assumed that a marketing program set up along the lines indicated for attaining maximum production would be initiated and in operation during the 1944 season. A program to encourage the better equipped growers to produce slips in excess of their own needs to supply the requirements of new producers also would be necessary. With these limiting factors taken care of, it should be possible to attain the acreages suggested.

Peanuts

The estimated maximum peanut acreage for 1944 is 1,255,000. This is 25 percent larger than the 1,007,000 acres grown in 1942, and 13 percent larger than the 1,114,000 acres reported for 1943. Although increases are suggested for all of the peanut producing areas, the largest expansion would come in Areas 4 and 15. In relation to needs for peanuts for oil, it is recognized that this is a relatively small increase. However, an examination of the trends for the important peanut areas and prospective programs designed to assist farmers with production problems would indicate that this increase is about the maximum which can be attained in 1944. The important commercial areas have already expanded to near their maximum limits. In other areas limiting factors other than cropland have proven to be extremely difficult to overcome. To expand acreages substantially over the 1943 level it would be necessary to increase the acreage of cropland per farm so that production can be carried on on an efficient basis. This would mean the acquisition of considerable new machinery by farmers in addition to some program for making harvesting equipment available in each community. Existing programs to encourage production do not provide adequate assistance to farmers for making these adjustments. Neither do they provide a safeguard against excessive financial losses after wartime levels of peanut production are no longer needed. Unless these limitations to production are corrected very little further increase in peanut acreage can be expected.

Cotton

The 8 million acres of cotton suggested for 1944 is approximately the same as reported for 1943. Except for certain areas such as the High Plains Wheat, Rio Grande Plains, and West Cross Timbers where crops considered more essential have a decided advantage, cotton production should continue at about the present level. An increased acreage is suggested for Areas 9, 10, and 18 since most of the cotton produced is of satisfactory staple length and yields are relatively high. No important problems are anticipated in the realization of these acreages.

Wheat

The maximum acreage of wheat which appears feasible for 1944 is about 4.3 million acres. This is an increase of 25 percent above the 3.4 million acres seeded in 1942, and 12 percent below the 4.8 million acres indicated as the maximum it is considered possible to grow during the war period. The increased acreage is expected primarily in the High Plains Wheat Area where two-thirds or more of the total acreage for the state is normally grown.

The primary limiting factor to expanding wheat production for 1944 is the unusually large acreage of grain sorghums reported for the dry-land areas during the current season. Farmers have responded to the program for increasing feed grains by seeding as large an acreage as feasible to grain sorghums. In the High Plains Wheat Area the acreage increased from 846,000 in 1942 to 1,162,000 acres reported for this year. Thus, an additional 460,000 acres, which would normally have been available for seeding to wheat, is rendered unavailable. The 3 million acres indicated for this area in 1944 would necessitate complete use of the total acreage of cropland not presently seeded to corn, cotton, grain or forage sorghums. This is considered possible since a small percentage of these crops likely have been abandoned due to poor stands. It should be pointed out that only under unusually favorable moisture conditions is it possible to successfully establish a stand of winter wheat on land from which summer growing crops have been harvested. The prospective labor supply and equipment available are considered adequate for seeding and harvesting this acreage.

Grain Sorghum

The acreage of grain sorghum appears to be somewhat over-expanded at present to permit the most efficient use of cropland for other more essential crops. In view of the demands of other crops for land, it seems desirable to reduce the acreage to about 5 million, or a 14 percent reduction from the reported acreage for 1943. This over-expansion is confined primarily to the principal wheat areas where the two crops compete directly for land. In these areas it would be necessary to reduce the acreage of grain sorghum below the acreage which could be planted on land available at seeding time because of the fact that a part of this land must be kept free of a sorghum crop to make it possible to maximize the wheat acreage in 1945. As much of such acreage as appears desirable should be seeded to spring grains which would permit the seeding of wheat on the same land in the fall. It should be realized, however, that a rigid policy relative to the level of grain sorghum production in these areas most likely would not result in the maximum production of feed grains in the long run. The extremely variable weather conditions make it necessary that farmers adjust the acreages of the various grain crops to the prevailing moisture supply at planting time.

Resources for Livestock Production

The numbers of livestock indicated for 1944 represents the production that appears practical under the assumptions previously set forth. Compared to the 1943 pattern, the significant changes suggested for 1944 include a reduction in numbers of beef cattle, sheep, sows farrowing, and of horses and mules. Increases are thought feasible for dairy cattle and poultry. The livestock pattern for 1944 will be influenced to quite an extent by the progress made by late feed crops in this and other states. Favorable conditions for pastures and late feed crops will encourage farmers to keep livestock numbers high. Unfavorable weather conditions would stimulate liquidation and heavy marketing. Continued high prices for grain sorghums will encourage selling grain sorghum rather than feeding on farms produced.

Beef Cattle

It is suggested that the number of all cattle on farms and ranches January 1, 1944, be 130,000 below the 1943 level. Since dairy cows are expected to increase, beef cattle would be reduced by more than the number indicated. This reduction would result in a better balance between the cattle population and the normal carrying capacity of the ranges. Reduction in numbers would be greatest for the High Plains Wheat Area and the Rolling Plains. A significant increase is indicated for the Edwards Plateau and Coast Prairie.

In order to obtain the adjustment for the state it will be necessary that heavy marketings of beef cattle take place during the remainder of the year. If corresponding movements take place in other states, it is questionable whether packing facilities will be able to handle the heavy marketings. The attitude of cornbelt feeders with regard to putting cattle on feed will also influence the outlet for Texas stocker cattle. The adverse influence of either of these factors could retard these changes.

Sheep and Lambs

Sheep numbers would be reduced about 5 percent to relieve pressure on overstocked range areas. Reduction would be largely confined to the Edwards Plateau and the Trans-Pecos Areas. Heavy marketings during the remainder of 1943 would be necessary to make this adjustment. The forces which would tend to hinder such an adjustment are similar to those suggested as likely to retard the reduction of beef cattle numbers.

Dairy Cattle

The number of milk cows indicated for 1944 is an increase of 37,000 head over the 1943 level. Although this would mean a slightly higher rate of expansion for the state than took place between January 1, 1942 and January 1, 1943, it is well within physical limits. The greatest proportional increases for 1944 are indicated for the Coast Prairie, the Post-Oak, and for the High Plains Areas.

Poultry and Eggs

An increase of more than 4 percent in the number of hens and pullets is indicated for 1944 over the level of the previous year. The largest increase should be in northern and western parts of the state where grain supplies are greatest. The spring hatchings for 1943 are reported to be above corresponding hatchings of the year before. Since spring hatchings provide the majority of pullets added to laying flocks it seems that provision has been made for further expansion in 1944.

Hogs

The present price ceiling for corn tends to encourage hog production while the high prices for uncontrolled grains such as sorghums have the opposite effect. Whether or not an effort will be made to bring prices of various grains more nearly in line is not known at this time. It does seem that high prices for the grains not controlled by ceilings will check further expansion of hog numbers at this time and will probably tend to reduce farrowings for 1944. It is thought that hogs will be marketed at lighter weights during 1944 than in 1942.

Horses and Mules

Numbers of horses and mules will continue to decline. There will be less than a million head on farms by January 1, 1944. The number of tractors available will greatly influence the trend.

Table 3.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons

Texas State Summary

Use of cropland	Acreage	Reported for 1/		Expected: in 1943	Wartime	
		1941	1942		Capacity: 1944 2/	Maximum capacity 2/
		1,000 acres				
Corn, all.	Planted	5079.0	5638.0	5581.8	5342.3	5328.3
Grain sorghums, all	do.	4311.0	4827.7	5820.4	5069.3	5182.6
Sweet sorghums except sirup	do.	2917.0	1698.9	1640.2	1577.2	1567.2
All sorghums for grain	Harvested	2839.0	3004.0	4772.1	4368.0	4466.3
All sorghums for silage	do.	244.0	197.8	190.2	182.2	184.2
All sorghums for forage	do.	3882.0	2992.8	2498.3	2096.3	2099.3
Soybeans, grown alone	Planted	19.0	50.0	52.0	13.0	13.0
Soybeans for beans	Harvested	3.0	25.0	18.8	4.6	4.6
Soybeans for hay	do.	12.0	13.0	10.2	6.9	6.9
Cowpeas, grown alone	Planted	642.0	610.0	366.0	309.0	262.6
Cowpeas for peas	Harvested	210.0	223.0	205.0	184.5	141.5
Cowpeas for hay	do.	84.0	96.0	86.9	90.5	98.6
Peanuts, grown alone	Planted	398.0	1007.0	1114.0	1255.0	2871.0
Peanuts picked & threshed	Harvested	332.0	896.0	1053.0	1190.0	2732.0
Peanuts for hay	do.	312.0	756.0	969.0	1106.0	2484.0
Cotton, all upland	Planted	8100.9	8396.4	8019.3	7951.0	8157.0
Under 15/16" staple	do. 3/	2829.3	3784.0	3192.3	3100.0	2843.0
15/32" to 1-3/32" staple	do. 3/	5246.0	4585.0	4804.0	4827.0	5276.0
1-1/8" staple & over	do. 3/	25.6	27.4	23.0	24.0	38.0
Cotton, Am. Egyptian or Sea Is.	do.	17.8	33.3	30.2	1.5	1.5
Irish potatoes	do.	61.0	57.0	75.0	92.8	110.8
Sweetpotatoes	do.	62.0	45.9	89.9	128.8	177.8
Beans, dry edible	do.	-		29.2	35.4	37.4
Processing vegetables, total 4/						
Tomatoes 6/	do.	9.5	15.0	16.0	18.0	20.0
Miscellaneous vegetables 7/	do.	5.4	6.0	6.8	6.7	6.7
Fresh vegetables, total 4/	Harvested	172.4	225.9	213.9	271.7	396.9
Cabbage	do.	24.0	38.0	26.0	45.7	91.5
Onions	do.	32.8	57.8	43.4	57.7	73.7
Beets	do.	7.8	7.1	7.6	4.7	4.7
Carrots	do.	11.7	13.0	19.0	23.0	40.0
Peppers	do.	2.5	2.8	1.8	1.7	2.4
Spinach	do.	35.4	43.3	41.9	59.0	95.5
Tomatoes	do.	52.8	57.9	67.4	73.2	82.4
Other intertilled crops, total	do.				10.0	10.0
Total cropland used for intertilled crops 5/		21715.4	22571.9	22999.3	21996.8	23937.9
Oats	Planted	1916.0	1896.9	1897.0	1966.0	1863.4
Barley	do.	392.0	549.0	571.1	610.0	475.0
Winter wheat	do.	3917.0	3423.0	3491.0	4297.0	4805.0
Oats for grain	Harvested	1519.0	590.0	826.0	1547.5	1464.5
Barley for grain	do.	325.0	292.0	263.0	449.0	359.0
Grains cut green for hay	do.	55.0	44.0	48.0	36.4	35.4

Continued

Table 3.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons-Continued

Texas State Summary

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested	17.0	20.0	33.0	-	-
Flaxseed	Planted	15.0	18.0	38.0	38.0	38.0
Rice	do.	347.0	392.0	396.0	415.0	476.0
Other crops	Harvested	2.0	2.0	2.0	2.0	2.0
Citrus fruit		75.0	75.0	75.0	75.0	75.0
Total cropland used for close-seeded crops & citrus fruits 5/		6514.1	5891.0	6117.0	6544.6	7029.0
Hay, all tame, except soybean, cowpea, peanut, and small grain hay	Harvested	670.1	637.2	546.4	563.5	591.5
Hay, all tame	do.	1133.1	1546.2	1660.6	1803.3	3216.4
Alfalfa seed	do.	9.0	8.0	8.0	8.0	8.0
Total cropland used for sod crops 5/		670.1	637.1	546.4	563.5	591.5
Total cropland used for crops 5/		28899.8	29100.0	29662.7	29104.9	31558.4
Idle cropland		4120.2	3921.1	3359.8	1197.6	
Total cropland 5/		33020.0	33021.1	33022.5	30302.5	31519.5
Wild hay	Harvested	192.0	200.0	200.0	204.8	204.8
Total land in farms		137683	137683	137683	137683	137683

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ Approximate planted acreage of varieties which usually yield specified staple lengths.

4/ Commercial crop.

5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

6/ Acreage equivalent of portion of tomato crop processed. Not distributed by areas or included in acreage listed in tomatoes under fresh vegetables.

7/ Included in the total for fresh vegetables.

Table 4.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons

Texas State Summary - Irrigated Land

Use of cropland	Acreage	Reported for 1941	Reported for 1942	Expected in 1943	Wartime Capacity 1944 1/	Wartime Maximum capacity 1/
			1,000 acres			
Corn, all	Planted		56.6	57.1	50.1	59.8
Grain sorghums, all	do.		49.1	145.4	146.7	189.1
Sweet sorghums, except sirup	do.		37.8	40.0	40.0	44.0
All sorghums for grain	Harvested		38.4	115.9	117.3	152.1
All sorghums for silage	do.		-	.2	.2	.2
All sorghums for forage	do.		48.5	69.3	69.2	80.8
Soybeans grown alone	Planted					
Soybeans for beans	Harvested					
Soybeans for hay	do.					
Cowpeas grown alone	Planted					
Cowpeas for peas	Harvested					
Cowpeas for hay	do.					
Peanuts grown alone	Planted					
Peanuts picked & threshed	Harvested					
Peanuts for hay	do.					
Cotton, all upland	Planted		224.4	299.7	316.4	355.4
Under 15/16" staple	do. 2/					
15/32" to 1-3/32" staple	do. 2/					
1-1/8" staple and over	do. 2/					
Cotton, Am. Egyptian or Sea Is.	do.		16.8	15.2	0	0
Irish potatoes	do.		21.5	25.0	34.5	48.5
Sweetpotatoes	do.		.2	.7	.7	.7
Beans, dry edible	do.					
Processing vegetables, total 3/	do.					
Tomatoes	do.					
Miscellaneous vegetables 4/	do.		12.0	12.8	12.9	22.3
Fresh vegetables, total 3/	Harvested		128.7	134.1	147.8	186.5
Cabbage	do.		29.6	23.9	30.9	32.7
Onions	do.		6.4	6.4	5.4	12.7
Beets	do.		5.3	5.5	2.7	2.7
Carrots	do.		12.5	16.7	18.0	18.0
Peppers	do.		2.5	1.8	1.4	2.1
Spinach	do.		30.3	28.2	36.5	53.0
Tomatoes	do.		30.1	38.8	40.0	43.0
Other intertilled crops, total	Harvested		3.0	4.3	4.2	4.2
Total cropland used for intertilled crops 5/			523.2	702.1	718.9	867.4
Oats	Planted		4.8	5.0	4.5	3.5
Barley	do.					
Winter wheat	do.		24.0	96.8	70.0	0
Oats for grain	Harvested					
Barley for grain	do.					
Grains cut green for hay	do.					

Continued

Table 4.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons-Continued

Texas State Summary - Irrigated Land

Use of cropland	Acreage	Reported for 1941	Reported for 1942	Expected in 1943	Wartime Capacity 1944 1/	Wartime Maximum capacity 1/
		1,000 acres				
Rye for grain	Harvested					
Rice	Planted		392.0	396.0	415.0	476.0
Clover	do.		.4	.5	.5	.5
Alfalfa	do.		26.5	29.5	35.3	47.0
Citrus fruit			75.0	75.0	75.0	75.0
Total cropland used for close-seeded crops 5/			498.2	575.4	567.0	557.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested		25.8	25.5	26.9	40.1
Hay, all tame	do.					
Rotation (cropland) pasture (Sudan)			22.5	25.5	25.0	30.0
Total cropland used for sod crops 5/			74.8	80.8	87.2	117.1
Total cropland used for crops 5/			1096.2	1358.3	1373.1	1541.5
Idle cropland			1.4	.7	.3	.3
Total cropland 5/			1097.6	1359.0	1373.4	1541.8
Wild hay	Harvested					

1/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".

2/ Approximate planted acreage of varieties which usually yield specified staple lengths.

3/ Commercial crop.

4/ Included in fresh vegetable total.

5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 5. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Texas State Summary

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	16.1	16.1	16.1	16.1
All sorghums for grain	Harvested	do.	1937-41	15.8	15.8	15.8	15.8
All sorghums for silage	do.	Ton	1937-41	4.7	4.7	4.7	4.7
All sorghums for forage	do.	do.	1937-41	1.2	1.2	1.2	1.2
Soybeans for beans	do.	Bu.		8.4	8.	8.	8.
Cowpeas for peas	do.	do.		9.0	9.	9.	9.
Peanuts picked & thresh	do.	1,000 lb.	1937-41	.470	.470	.460	.460
All upland cotton	Planted	Lb.	1937-41	170.	170.	170.	170.7
Irish potatoes	do.	Bu.	1937-41	70.	75.	80.	80.
Sweet potatoes	do.	do.	1937-41	75.	85.	85.	85.
Fresh vegetables:							
Cabbage	Harvested	do.	1937-41	4.1	4.1	4.1	4.1
Onions	do.	100 lb.	-	80.	80.	80.	80.
Beets		bu.	1937-41	140.	140.	140.	140.
Carrots		bu.	1937-41	172.	172.	172.	172.
Peppers		do	1937-41	120.	120.	120.	120.
Spinach		do	1937-41	135.	135.	135.	135.
Tomatoes		ton	1937-41	3.5	3.5	3.5	3.5
Oats for grain	Harvested	Bu.		25.6	25.6	25.6	25.6
Barley for grain	do.	do.		18.1	18.1	18.1	18.1
Winter wheat	Planted	do.	1937-41	7.1	7.	7.	7.
Rye for grain	Harvested	do.		10.3	10.3	10.3	10.3
Rice	do.	do.	1937-41	48.8	48.8	48.0	48.
Hay, all tame	Harvested	Ton	1937-41	1.0	1.0	1.0	1.
Wild hay	do.	Ton	1937-41	1.0	1.0	1.0	1.

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

. Table 6.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Texas State Summary

Item of livestock and livestock products	Unit	Reported for 1/		Reported: for 1943:	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942		1944	1945	
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	1164.0	1084.0	1037.0	997.4	956.9	956.9
Cattle & calves, all	do.	7090.0	7444.0	7518.0	7388.0	7373.0	7373.0
Cows kept for milk, 2 years old & over	do.	1444.0	1502.0	1532.0	1569.0	1604.0	1606.0
Other cows, 2 yr.&over	do.	2280.0	2388.0	2310.0	2245.6	2226.3	2225.5
Sheep & lambs, all	do.	9656.0	10332.0	10435.0	9880.6	9390.6	9390.6
Ewes, 1 yr. & over	do.	6568.0	6765.0	7036.0	6661.5	6331.1	6331.1
Hens & pullets	do.	24238.0	28307.0	33331.0	34784.0	35660.0	35660.0
During year:				Expected: in 1943			
Sows farrowed, spring 3/	do.	184.0	270.0	364.0	359.0	xxx	366.5
Sows farrowed, fall 4/	do.	207.0	269.0	310.4	309.6	xxx	316.1
Chickens raised 5/		40759.0	46058.0	47458.0	47550.0	47550.0	47550.0
Commercial broiler production	do.	7000.0	9500.0	9500.0	9500.0	9500.0	9500.0
Turkeys raised	do.	3651.0	3724.0	3772.0	3777.5	3777.5	3777.5
Milk cows, average during year	do.	1349.0	1399.0	1427.7	1462.2	1494.8	1496.8
Milk produced	1,000 lbs.	4452.0	4435.0	4538.6	4650.1	4751.8	4759.6
Wool shorn	Pound	80250.0	74994.0	75758.1	71733.2	xxx	68175.8
Eggs produced	Dozen	202500.0	233916.8	276269.7	288663.7	296114.5	296114.5
Cattle put on feed 6/	Number	168.0	185.0	200.0	200.0	xxx	200.0
Sheep & lambs put on feed 6/	do.	175.0	220.0	242.0	242.0	xxx	242.0
Net production of hogs 6/	Pound			820595.7	833606.6	844995.4	844995.4

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Table 7. Estimates of local supply of feeds available for feeding livestock and for other purposes by crop years, 1944-45 and maximum, with comparisons.
Texas State Summary

Item	1941-42	1942-43	1943-44	1944-45	Maximum
	1,000 Tons	1,000 Tons	1,000 Tons	1,000 Tons	1,000 Tons
Feed Grains					
Corn, all:					
Carry-over beginning of year 1/.....	226.0	80.2			
Production(inc.gr.in silage & fodder)	2068.5	2199.7	2579.0	2401.4	2402.5
Total supply.....	2294.5	2280.0			
Seed.....	19.7	19.5	18.6	18.6	18.6
Carry-over end of year.....	80.2				
Net supply 2/.....	2194.6	2260.5	2560.4	2382.8	2383.7
Sorghums for grain:					
Production.....	1623.3	1670.9	2097.5	1755.4	1798.9
Seed.....	4.7	6.3	5.2	5.2	5.2
Net supply 2/.....	1618.6	1664.6	2092.3	1750.2	1793.7
Oats:					
Carry-over beginning of year 1/.....	128.4	57.7			
Production.....	607.6	179.4	338.3	633.9	599.9
Total supply.....	736.0	237.1			
Seed.....	47.4	47.4	49.2	46.0	46.0
Carry-over end of year.....	57.7				
Net supply 2/.....	630.9	189.7	289.1	587.9	553.9
Barley:					
Carry-over beginning of year 1/.....	14.6	28.1			
Production.....	210.6	115.6	114.2	195.0	156.0
Total supply.....	225.2	143.7			
Seed.....	13.7	14.3	15.2	11.9	11.9
Carry-over end of year.....	28.1				
Net supply 2/.....	183.4	129.4	99.0	183.1	144.1
Wheat:					
Fed on farms where grown	97.9	170.7	88.0	108.3	110.0
Assumed carry-over of feed grains.3/...				152.2	162.2
Net supply of feed grains 2/.....	4725.4	4414.9	5128.8	5164.5	5147.6
Total needed for feeding livestock 4/..	4141.4	4634.1	4876.6	4901.9	4930.8
Available for other purposes 5/....	584.0		252.2	262.2	216.8
Inshipments needed to feed livestock 6/.....		219.2			

Continued -

Table 7, continued. Estimates of local supply of feeds available for feeding livestock and for other purposes by crop years, 1944-45 and maximum, with comparisons.
Texas State Summary

Item	1941-42	1942-43	1943-44	1944-45	Maximum
	1,000 Tons	1,000 Tons	1,000 Tons	1,000 Tons	1,000 Tons
Other farm produced concentrates					
Production of seeds for feed:					
Cottonseed fed 7/	140.4	143.5	146.9	150.0	150.0
Hay					
Carry-over beginning of year 1/	317.0	326.0			
Tame hay production	1330.0	1441.0	1078.2	1354.8	2038.7
Wild Hay production	221.0	220.0	200.0	200.0	200.0
Total supply	1868.0	1987.0	1278.2	1554.8	2238.7
Carry-over end of year	326.0				
Net supply 2/	1542.0				
Total needed for feeding livestock 4/	5871.5	5894.0	5880.2	5816.9	5820.2
Available for other purposes 5/	4445.1	4149.8	599.2	825.4	1626.4
Other roughages					
Corn silage production	135.0	122.0			
Sorghum silage production	1318.0	965.0	893.0	855.4	864.8
Total silage production	1453.0	1087.0			
Sorghum fodder production	5752.0	4603.0	2997.6	2520.5	2518.8
Cottonseed hulls	210.6	276.8	252.6	250.5	256.9
Small grain straw	1359.0	1003.0	1058.0	1461.1	1567.4

1/ Crop year beginning May 1 for hay, June 1 for barley, July 1 for oats, October 1 for corn.
2/ Available for feeding livestock, food, industrial use within the area, and outshipments.
3/ Carry-over assumed to be amount available for other purposes minus amount estimated as used in household.
4/ Obtained from Tables 5, 5a, 5b, 5c, and 5d. All forage needs for feeding livestock calculated on dry forage basis. Same per unit requirement used for all years.
5/ Available for food, industrial use within the area, and outshipments.
6/ For feeding livestock and for carry-over at the end of year, but does not include any allowance for food and industrial uses within the area.
7/ Calculated for all years from estimated feed requirements.

Table 8.- Estimated quantities of feeds needed for feeding livestock for the 12-month period beginning October 1, 1941

Texas State Summary

Class of livestock	Feed per animal, bird, or cwt.					Total livestock and feed				
	Concentrates					Units of 4/	Concentrates			
	Grains 1/	Seeds & skim milk 2/	Comml. byprod-ucts 3/	Total	Tame & wild hay	live-stock	Grains 1/	Seeds & skim milk 2/	Comml. byprod-ucts 3/	Tame & wild hay
	Pounds	Pounds	Pounds	Pounds	Pounds	1,000 units	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Horses & mules	2173.1			2173.1	2676.4	1084.0	1177.8			1450.6
Milk cows	763.0	186.0	472.4	1421.4	3327.3	1502.0	573.0	139.7	354.8	2498.8
Beef cows	1.4	.3	39.2	40.9	444.5	2388.0	1.7	.3	46.8	530.7
Feeder cattle	794.0		189.3	983.3	1026.2	168.0	66.7		15.9	86.2
Other cattle & calves	1.7	.2	29.3	31.2	413.7	3369.0	2.8	.4	49.4	696.9
Ewes, 1 yr. & over	9.8		25.8	35.6	162.8	6765.0	33.0		87.4	550.5
Feeder sheep & lambs	78.9		17.1	96.0	145.1	175.0	6.9		1.5	12.7
Other sheep & lambs	.3		.3	.6	17.2	3567.0	.5		.6	30.6
Hogs, cwt. of net production	439.8	3.8	33.5	477.1	2.2	5442.8	1197.0	10.4	91.1	6.0
Hens & pullets	49.2	2.2	8.6	60.0	xxx	28307.0	696.0	31.7	121.8	xxx
Chickens raised 5/	13.2		1.3	14.5	xxx	46058.0	304.7		29.5	xxx
Commercial broilers raised	3.6		.9	4.5	xxx	9500.0	17.2		4.2	xxx
Turkeys raised	34.4		5.1	39.5	xxx	3724.0	64.0		9.6	xxx
Total	xxx	xxx	xxx	xxx	xxx	xxx	4141.3	182.5	812.6	5863.0

Table 8a.- Estimated quantities of feeds needed for feeding livestock for the 12-month period beginning October 1, 1942

Texas State Summary

Class of livestock	Feed per animal, bird, or cwt.					Total livestock and feed				
	Concentrates					Units of 4/	Concentrates			
	Grains 1/	Seeds & skim milk 2/	Comml. byprod-ucts 3/	Total	Tame & wild hay	live-stock	Grains 1/	Seeds & skim milk 2/	Comml. byprod-ucts 3/	Tame & wild hay
	Pounds	Pounds	Pounds	Pounds	Pounds	1,000 units	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Horses & mules	2173.6			2173.6	2682.9	1037.0	1127.0			1391.1
Milk cows	762.7	186.3	471.0	1420.0	3340.6	1532.0	584.2	142.7	360.8	2558.9
Beef cows	1.4	.4	41.2	43.0	485.2	2310.0	1.6	.4	47.6	516.0
Feeder cattle	748.1		181.6	929.7	1005.4	185.0	69.2		16.8	93.0
Other cattle & calves	1.8	.2	30.4	32.4	415.0	3476.0	3.1	.4	52.9	721.2
Ewes, 1 yr. & over	9.4		25.1	34.5	156.6	7036.0	33.0		88.2	550.9
Feeder sheep & lambs	78.2		17.3	95.5	145.4	220.0	8.6		1.9	16.0
Other sheep & lambs	.2		.3	.5	17.6	3399.0	.4		.5	30.0
Hogs, cwt. of net production	438.3	4.0	33.3	475.6	2.2	7309.4	1601.8	14.5	121.7	8.0
Hens & pullets	49.0	2.3	8.5	59.8	xxx	33331.0	816.6	37.6	142.5	xxx
Chickens raised 5/	13.2		1.3	14.5	xxx	47458.0	312.3		30.3	xxx
Commercial broilers raised	3.6		.9	4.5	xxx	9500.0	17.2		4.2	xxx
Turkeys raised	34.4		5.2	39.6	xxx	3772.0	64.9		9.7	xxx
Total	xxx	xxx	xxx	xxx	xxx	xxx	4639.9	195.6	877.1	5885.1

Table 8b.- Estimated quantities of feeds needed for feeding livestock for the 12-month period beginning October 1, 1943

Texas State Summary

Class of livestock	Feed per animal, bird, or cwt.					Total livestock and feed				
	Concentrates				Tame & wild hay	Units of 4/ livestock	Concentrates			Tame & wild hay
	Grains 1/	Seeds & skim milk 2/	Comml. byprod-ucts 3/	Total			Grains 1/	Seeds & skim milk 2/	Comml. byprod-ucts 3/	
	Pounds	Pounds	Pounds	Pounds	Pounds	1,000 units	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Horses & mules	2183.7			2183.7	2692.2	997.4	1089.0			1342.6
Milk cows	761.1	186.5	470.9	1418.5	3342.3	1569.0	597.1	146.3	369.4	2622.0
Beef cows	1.6	.4	46.0	47.9	495.0	2245.6	1.8	.4	51.6	555.8
Feeder cattle	715.0		175.0	890.0	990.0	200.0	71.5		17.5	99.0
Other cattle & calves	1.7	.1	27.9	29.6	376.6	3373.4	2.8	.2	47.0	635.3
Ewes, 1 yr. & over	9.8		23.4	33.3	170.2	6661.5	32.7		78.1	566.9
Feeder sheep & lambs	78.5		16.5	95.0	145.4	242.0	9.5		2.0	17.6
Other sheep & lambs	.2		.3	.6	20.9	3219.5	.4		.5	33.6
Hogs, cwt. of net production	446.7	4.0	33.5	484.2	1.8	8209.0	1833.6	16.4	137.6	7.4
Hens & pullets	48.6	2.3	8.4	59.3	xxx	34784.0	845.9	39.3	146.3	xxx
Chickens raised 5/	13.1		1.2	14.3	xxx	47550.0	312.2		29.3	xxx
Commercial broilers raised	3.6		.9	4.5	xxx	9500.0	17.2		4.2	xxx
Turkeys raised	34.4		5.2	39.6	xxx	3777.5	64.9		9.8	xxx
Total	xxx	xxx	xxx	xxx	xxx	xxx	4878.6	202.6	893.3	5880.2

Table 8c. Estimated quantities of feeds needed for feeding livestock for the 12-month period beginning October 1, 1944
Texas State Summary

Class of livestock	Food per animal, bird or cwt.					Total livestock and feed				
	Concentrates						Concentrates			
	Grains 1/	Seeds & skim milk 2/	Commercial by-products 3/	Total	Tame & wild hay	Units of livestock 4/	Grains 1/	Seeds & skim milk 2/	Commercial by-products 3/	Tame & wild hay
	Pounds	Pounds	Pounds	Pounds	Pounds	1,000 units	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Horses & mules	2185.6			2185.6	2698.5	956.9	1045.7			1291.1
Milk cows	756.2	186.3	473.1	1415.6	3336.7	1604.0	606.5	149.4	379.4	2676.0
Beef cows	1.7	.4	45.4	47.4	498.3	2226.3	1.9	.4	50.5	554.7
Feeder cattle	715.0		175.0	890.0	990.0	200.0	71.5		17.5	99.0
Other cattle & calves	1.6	.1	26.7	28.4	370.4	3342.7	2.6	.2	44.7	619.0
Ewes, 1 year +	9.7	.1	25.0	34.8	165.2	6331.1	30.6	.4	79.3	523.1
Feeder sheep & lambs	78.5		16.5	95.0	145.4	242.0	9.5		2.0	17.6
Other sheep & lambs	.3		.3	.6	19.5	3059.5	.4		.5	29.8
Hogs, cwt. of net production	449.9	4.0	33.6	487.6	1.6	8336.0	1875.1	16.9	140.2	6.8
Hens & pullets	48.4	2.3	8.3	59.0	xxx	35660.0	863.7	40.5	148.8	xxx
Chickens raised 5/	13.1		1.2	14.3	xxx	47550.0	312.2		29.3	xxx
Commercial broilers raised	3.6		.9	4.5	xxx	9500.0	17.2		4.2	xxx
Turkeys raised	34.4		5.2	39.6	xxx	3777.5	64.9		9.8	xxx
Total	xxx	xxx	xxx	xxx	xxx	xxx	4901.8	207.8	906.2	5817.1

Table 8d. Estimated quantities of feeds needed for feeding livestock for the 12-month period October 1--Wartime maximum capacity.
Texas State Summary

Class of livestock	Feed per animal, bird or cwt.					Total livestock and feed				
	Concentrates						Concentrates			
	Grains 1/	Seeds and & skim milk 2/	Commercial by-products 3/	Total	Tame & wild hay	Units of livestock 4/	Grains 1/	Seeds & skim milk 2/	Commercial by-products 3/	Tame and wild hay
	Pounds	Pounds	Pounds	Pounds	Pounds	1,000 units	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Horses and mules	2185.6			2185.6	2698.5	956.9	1045.7			1291.1
Milk cows	756.0	186.0	472.8	1414.9	3337.2	1606.0	607.1	149.4	379.7	2679.8
Beef cows	1.7	.4	45.4	47.4	498.5	2225.5	1.9	.4	50.5	554.7
Feeder cattle	715.0		175.0	890.0	990.0	200.0	71.5		17.5	99.0
Other cattle and calves	1.6	.1	26.7	28.4	370.1	3341.5	2.6	.2	4.6	618.4
Ewes, 1 year +	9.7	.1	25.0	34.8	165.2	6331.1	30.6	.4	79.3	523.1
Feeder sheep and lambs	78.5		16.5	95.0	145.4	242.0	9.5		2.0	17.6
Other sheep and lambs	.3		.3	.6	19.4	3059.5	.4		.5	29.7
Hogs, cwt. of net product.	450.5	4.1	33.6	488.1	1.6	8450.0	1903.4	17.2	141.8	6.8
Hens and pullets	48.4	2.3	8.3	59.0	xxx	35660.0	863.7	40.5	148.8	xxx
Chickens 5/	13.1		1.2	14.3	xxx	47550.0	312.2		29.2	xxx
Commercial broilers raised	3.6		.9	4.5	xxx	9500.0	17.2		4.2	xxx
Turkeys raised	34.4		5.2	39.6	xxx	3777.5	64.9		9.8	xxx
Total	xxx	xxx	xxx	xxx	xxx	xxx	4930.8	208.1	908.0	5820.2

1/ Includes corn, sorghums, oats, barley, and wheat, fed from any source including harvested grain, or commercial mixed feeds. 2/ Includes cottonseed fed whole, and skim milk(dry basis). 3/ Includes oilseed meals, tankage, meat scraps, fish meal, dried milk products, wheat, millfeeds, alfalfa meal and other commercial by-products fed as an individual feed or in a commercial mixed feed. 4/ Numbers and net production recorded on livestock tables. 5/ Excluding commercial broilers raised.

Table 9. Assumed number of farm workers that will be employed on farms in 1944 and estimated numbers that would be needed for attainment of maximum production capacity, with comparisons
Texas State Summary

Item	January	April	June	July	Sept.	Oct.
1944	100 workers					
Workers required for increased crop acres 1/	16	54	335	252	-290	21
"Slack" in 1942 employment 2/	1337	361	682	1758	-1673	-237
Additional workers needed 3/	6/	93	133	6/	7/ 180	464
Workers employed in 1942 4/	6780	8000	9600	8600	9400	9700
Workers expected to be employed in 1944	6780	8093	9733	8600	9580	10164
Wartime Maximum						
Workers required for increased crop acres 5/	220	465	1011	960	364	1520
Additional workers needed	6/	504	809	6/	7/ 834	2005
Workers expected to be employed 6/	6780	8504	10409	8600	10234	11705

1/ Based on net increase in hours of labor required to handle increased acreage of major crops over 1942. Requirements converted to man equivalent workers on variable basis, usually on 22 10-hour days per month.

2/ Calculated from the 1942 number of persons employed by months less 1942 total labor requirements converted to persons as above. Complete fluidity of labor and a constant ratio of workers employed to labor requirements are assumed.

3/ Allowance made for an estimated 5 percent loss in quality of labor plus the increase in labor requirements for 1944, adjusted for "slack" in the 1942 employment.

4/ "Number of Workers Needed on Farms in 1942".

5/ By same method as conversion from 1942 to 1944.

6/ Where labor requirements are decreased or where the increase plus allowance for quality loss is less than the calculated "slack", the 1942 level of employment has been maintained.

7/ This apparent discrepance between the calculated 1942 total labor requirements and employment results partially from differences in dates and periods to which each applies. The increase in number of workers needed in September in both the 1944 and Maximum situations is calculated from quality loss plus increased labor requirements assuming no "slack" in the 1942 employment for that month.

Table 10. Assumed number of specified farm machines and implements that will be on farms in 1944 and estimated number that would be needed for attainment of maximum production capacity, with comparisons
Texas State Summary

Kind of machine or implement	On farms in 1942	Expected to be on farms in 1943	Assumed to be on farms in 1944	Needed for max. production.
	- - - - - - 1,000 machines - - - - - -			
Farm tractors	123.9	130.1	136.1	162.0
Tractor drawn or mounted:				
Moldboard plows	30.0	31.8	32.9	38.5
Disk plows and disk tillers	84.0	89.0	92.4	98.4
Disk harrows	35.0	37.1	38.5	39.0
Mowers	10.0	11.5	12.7	13.2
Grain drills	40.0	39.8	38.8	38.0
Grain binders	20.0	18.8	18.4	18.8
Combines	16.0	16.2	16.6	21.6
Windrow pick-up balers	2.6	3.4	3.8	3.9
Listers and middlebusters	100.0	106.0	110.0	135.0
Corn pickers	.2	.2	.3	.3
Row crop cultivators 1/	85.0	97.7	107.0	132.0
Row crop planters 2/	85.0	90.1	93.5	120.0
Row crop binders	10.0	10.0	10.5	10.5
Horse drawn or operated:				
Walking moldboard plows, 1-horse	114.0	109.4	107.2	80.0
Walking moldboard plows, other	230.0	220.8	218.5	200.0
Riding moldboard plows	50.0	46.0	44.5	42.0
Riding disk plows	10.0	9.0	8.4	8.0
Disk harrows	50.0	47.5	46.5	45.5
Mowers	90.0	85.5	83.7	83.0
Sulky or dump rakes	78.0	75.7	74.9	74.1
Side delivery rakes	5.0	5.0	5.2	30.2
Grain drills	40.0	38.4	38.4	38.0
Grain binders	18.0	16.7	16.0	16.0
Listers and middlebusters, walking	160.0	156.8	155.2	145.0
Listers and middlebusters, riding	40.0	36.0	34.8	30.0
Row crop cultivators, walking, 1-horse	150.0	147.0	145.5	130.0
Row crop cultivators, walking, 2-horse	68.0	65.3	65.3	60.0
Row crop cultivators, riding	190.0	182.4	178.6	178.0
Row crop planters, 1-horse 2/	100.0	97.0	97.0	90.0
Row crop planters, 2-horse & larger 2/	160.0	152.0	150.4	140.0
Row crop binders	18.0	17.1	16.7	16.0
Hay balers, stationary, horse operated	10.0	8.8	8.0	7.5
Manure spreaders, horse and tractor	4.0	3.9	3.9	4.0
Miscellaneous power machines:				
Stationary power balers	4.7	4.5	5.5	7.6
Grain separator-threshers	4.0	3.7	3.5	3.1
Peanut pickers	.9	1.4	2.0	4.1
Cream separators	82.0	82.0	82.0	82.0
Milking machines, installations	2.0	2.7	2.9	3.2

1/ Does not include field cultivators, such as rotary hoes, duck-foot cultivators and rod weeders.

2/ Includes surface and lister corn planters, cotton planters and combination corn and cotton planters.

Table 11.- Assumed quantities of fertilizer that will be available for use in 1944 and estimated quantities that would be needed for attainment of maximum production capacity, with comparisons

Texas State Summary

Kind of fertilizer	Used in 1942	Expected to be used in 1943	Assumed to be available for use in 1944	Needed for maximum production 1/
	Ton	Ton	Ton	Ton
Mixed, low nitrogen 2/	71,963	79,771	80,000	124,185
Mixed, medium nitrogen 2/	25,721	26,510	30,500	32,451
Mixed, nitrates & phosphates only	11,557	13,334	15,200	20,159
Mixed, phosphate & potash	748	750	1,000	24,721
Superphosphates, all	16,873	29,208	33,000	40,846
Nitrate & sulphate of ammonia	5,754	6,647	7,644	7,644
Potash salts	201	230	212	212
Lawn & garden mixtures	2,492	2,320	2,320	2,320
Cottonseed meal, bone meal, tankage, etc.	3,851	3,500	3,500	3,500
Other	1,860	1,860	1,600	1,600
Total	141,020	164,130	174,976	257,638

1/ Under assumptions set forth in "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity".

2/ Five percent or less classed as low nitrogen mixture, 6 percent and over classed as medium nitrogen mixtures.

WARTIME CAPACITY BY ADJUSTMENT AREAS

The extreme variations in soils and climatic conditions throughout the state results in a wide diversity of agriculture. The methods of farming and crop and livestock organizations established are conditioned by these physical factors. It is necessary to examine our agricultural resources in light of their adaptability to the production of items most needed to determine the maximum contribution Texas agriculture is capable of making to war needs. As indicated elsewhere, the most feasible approach to this problem is through the types-of-farming areas which are delineated on the basis of similar physical and economic conditions. The foregoing state summary was arrived at on this basis. The following discussions provide a more complete statement of the conditions prevailing in each area and the possibilities of adjusting the agriculture to meet wartime needs.

PANHANDLE WHEAT AREA (1)

The Panhandle Wheat Area is located in the Northwestern part of the state and occupies the northern portion of the Texas High Plains. The area is divided into two parts by the Canadian River Grazing Area.

The physical features of the area include a low average annual rainfall of 20 inches or less, a level topography, and elevations above sea level ranging from 3,000 to more than 4,000 feet. The soils are primarily dark-colored clay loams with the exception of parts of Dallam and Hartley Counties where sandy soils predominate.

Farms are highly mechanized and with dry-land conditions the area is adapted to production of small grains (principally wheat), grain sorghums, and livestock. More than two-thirds of the wheat acreage of the state is normally grown in this area. Land not in cultivation is used mainly for beef cattle. There is an overlapping of cotton and wheat production in the southern part where a more general type of farming is common.

Resources Available for Crop Production

The maximum amount of land suitable for crop production during the war period was estimated to be 4,644,000 acres. Land use capability classifications provided by the Soil Conservation Service indicate that 4,292,000 acres or 85 percent of the cropland enumerated by the 1939 census is suitable for continuous cropping. Of the land not suited to continuous cropping 108,000 acres are considered sufficiently productive to warrant cultivation during the war period. The balance of the cropland could be obtained by bringing into cultivation 244,000 acres of open pasture land which according to the Soil Conservation Service is equal in quality to the land now in cultivation.

Irrigation is used to supplement rainfall in the shallow water portions of the area. The principal crops grown under irrigation are wheat, grain sorghums, cotton, alfalfa, and Irish potatoes.

Irrigation is entirely dependent upon underground water, the supply of which is the principal limiting factor. The amount of water used varies from year to year depending on the adequacy of rainfall for crop needs. Based on average application of water to crops under irrigation, the total withdrawal during 1943 will approximate 143,500 acre feet. Data pertaining to the performance of the water table during the past 7 years indicate that the annual withdrawal might safely be increased to about 165,000 acre feet. No new facilities would be required as an

average withdrawal of about 90 acre feet per well from the 1,850 wells now in the area would provide this amount of water. Since crops differ greatly in water requirements, a larger acreage of crops having low water requirements such as wheat or grain sorghums could be grown with available water resources than would be possible with potatoes or alfalfa which use relatively large amounts of water.

Use of Resources for Crops

Under the extremely variable weather conditions which prevail, dry-land farming in this area is largely a matter of opportunity with farmers taking advantage of favorable moisture to plant wheat, spring grains or grain sorghums. It is usually impractical to follow grain sorghums with wheat the following year because sorghums are not harvested in time to properly prepare land for fall seeding. Land on which grain sorghums have been harvested must either be put in spring grains or fallowed in order to prepare it for wheat.

Any plan for maximum production for the Panhandle Wheat Area should be flexible and should encourage grain production of all kinds, with major emphasis on wheat. Farmers should be permitted to adjust acreages of grains according to existing moisture conditions.

Wheat

Wheat has first choice of the land in this area. The demand for expansion of wheat production, however, found farmers in a poor position to respond. The 2,368,000 acres wheat crop of 1942 was materially below the usual acreage. Failure to remove marketing quotas in time to permit increased seeding in the fall of 1942 resulted in a relatively small acreage again in 1943. At the same time the grain sorghums increased 316,000 acres over 1942 in response to high production goals and to high feed prices. As a consequence the acreage seeded to wheat for harvest in 1944 will still be relatively small. By planting all available land to wheat including land which was in winter wheat, fallow or spring grains during 1943 or on which summer growing crops such as cotton, corn, or sorghums were abandoned early in 1943, a crop of approximately 3,000,000 planted acres could be grown in 1944. By taking advantage of a large acreage of spring seeded grains and fallow and by breaking out more pasture land in 1944, the maximum of 3,500,000 acres could be reached by 1945. The attainment of the maximum acreage, however, will require normal or above normal fall moisture.

In the maximum situation wheat would not be grown under irrigation as groundwater resources would be utilized fully for other crops. However, it is estimated that water would be available to irrigate 70,000 acres of wheat in 1944.

Barley and Oats

The production of barley and oats is closely associated with wheat production. When winterkilling or insect damage destroys the stand of wheat, and provided spring moisture is favorable, barley and oats should be seeded on as large an acreage as possible to provide early grain supplies and to keep the land in condition to be planted to wheat in the fall. First preference should be given to barley because of its high feed value. These crops may be important in 1944 as a means of facilitating the shift to maximum wheat production.

Table 12, Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 1, Panhandle Wheat

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	41.7	64.7	67.7	29.7	29.7
Grain sorghums, all	do.	845.1	846.5	1162.5	629.0	657.3
Sweet sorghums, except sirup	do.	376.3	232.9	250.0	250.0	250.0
All sorghums for grain	Harvested	500.8	507.3	1117.5	586.0	622.3
All sorghums for silage	do.	30.5	20.1	20.0	20.0	20.0
All sorghums for forage	do.	659.7	545.1	275.0	273.0	285.0
Soybeans, grown alone	Planted	.6	10.6	15.1	0	0
Soybeans for beans	Harvested	.6	5.8			-
Soybeans for hay	do.					-
Cowpeas, grown alone	Planted	1.9	.6	.7	0	0
Cowpeas for peas	Harvested	.2	-			-
Cowpeas for hay	do.					-
Peanuts, grown alone	Planted		0	.6	0	0
Peanuts picked & threshed	Harvested					
Peanuts for hay	do.					
Cotton, all upland	Planted	152.4	217.6	181.0	150.0	150.0
Under 15/16" staple	do. 3/	126.0	185.0	144.0	120.0	112.0
15/32" to 1 3/32" staple	do. 3/	26.4	32.6	37.0	30.0	38.0
1 1/8" staple & over	do. 3/					
Cotton, Am. Egyptian or Sea Is.	do.	0	0		0	0
Irish potatoes	do.	12.0	6.2	7.5	11.0	17.0
Sweet potatoes	do.	-	0	.3	.3	.3
Beans, dry edible	do.			1.7	4.0	4.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested		.5	.5	.7	.7
Cabbage	do.					
Onions	do.		.3	.3	.3	.3
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes	Harvested		.2	.2	.4	.4
Other intertilled crops, total	do.					
Total cropland used for intertilled crops 5/		1430.0	1380.3	1687.6	1074.7	1109.0
Oats	Planted	75.0	52.3	77.6	80.0	75.0
Barley	do.	177.0	272.4	235.0	330.0	225.0
Winter wheat	do.	2633.0	2368.8	2345.0	3000.0	3500.0
Oats for grain	Harvested	66.2	31.2	14.1	56.0	52.0
Barley for grain	do.	158.5	181.2	127.8	230.0	158.0
Grains cut green for hay	do.	2.9	2.3	2.7	3.0	3.0

Continued -

Table 12, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 1, Panhandle Wheat

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted					
Rice	do.					
Other crops						
Citrus fruit	-------					
Total cropland used for close-seeded crops 5/		2885.0	2693.5	2657.6	3000.0	3500.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	34.0	31.8	33.6	35.0	35.0
Hay, all tame	do.	36.9	34.1	36.3	38.0	38.0
Alfalfa seed	do.	-	-			
Total cropland used for sod crops 5/		34.0	31.8	33.6	35.0	35.0
Total cropland used for crops 5/		4349.0	4105.6	4378.8	4109.7	4644.0
Idle cropland		701.0	944.4	671.2	390.3	0
Total cropland 5/		5050.0	5050.0	5050.0	4500.0	4644.0
Wild hay	Harvested	3.2	3.4	3.4	3.4	3.4
Total land in farms		10538	10538	10538	10538	10538

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 13. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 1 , Panhandle Wheat

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Units	Units	Units	Units
Corn, all.....	Planted	Bu.	1937-41	13.5	13.5	13.5	13
All sorghums for grain.	Harvested	do.	1937-41	14	14	14	14
All sorghums for silage	do.	Ton	1937-41	3.7	3.7	3.7	3.7
All sorghums for forage	do.	do.	1937-41	1	1	1	1
Soybeans for beans.....	do.	Bu.	1937-41	6.8	-	-	
Cowpeas for peas.....	do.	do.	1937-41	4.7	-	-	
Peanuts picked & thresh.							
All upland cotton.....	Planted	Lb.	1937-41	156	156	156	170
Irish potatoes.....	do.	Bu.	1939-41	192	185	175	175
Sweet potatoes.....							
Fresh vegetables:							
Cabbage.....							
Onions.....							
Beets.....							
Carrots.....							
Peppers.....							
Spinach.....							
Tomatoes.....							
Oats for grain.....	Harvested	Bu.	1937-41	16.2	16.2	16.2	16.2
Barley for grain.....	do.	do.	1937-41	15.5	15.5	15.5	15.5
Winter wheat.....	Planted	do.	1937-41	6.2	6.2	6.2	6.2
Rye for grain.....							
Rice.....							
Hay, all tame.....	Harvested	Ton	1937-41	1.2	1.2	1.2	1.2
Wild hay.....	do.	Ton	1937-41	1.1	1.1	1.1	1.1

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 14.
Estimates of Wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 1, High Plains Wheat

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
		1,000 units					
On farms January 1:							
Horses, mules & colts	Number	26.2	23.6	23.5	23.0	22.5	22.5
Cattle & calves, all	do.	425.5	585.0	685.1	650.0	585.0	585.0
Cows kept for milk, 2 years +	do.	65.8	65.2	72.0	75.0	78.0	80.0
Other cows, 2 years +	do.				186.9	166.6	166.6
Sheep & lambs, all	do.	151.3	154.7	157.5	158.0	158.0	158.0
Ewes, 1 year +	do.				90.4	90.5	90.5
Hens & pullets	do.	1039.4	1151.6	1314.7	1400.0	1500.0	1500.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	10.4	23.0	35.2	35.0	xxx	35.0
Sows farrowed, fall 4/	do.	16.1	24.8	30.0	30.0	xxx	30.0
Chickens raised 5/	do.	1700.2	2171.8	2390.0	2630.0	2630.0	2630.0
Commercial broiler production	do.						
Turkeys raised	do.	57.9	78.0	80.0	80.0	80.0	80.0
Milk cows, average during the year.	do.	60.1	63.3	65.0	72.8	75.7	77.7
Milk produced (Thousand lbs.)		234.4	252.8	279.1	290.8	302.4	310.2
Wool shorn	Pound		1123.1	1143.4	1147.1	xxx	1147.1
Eggs produced	Dozen	8354.8	9157.4	10451.9	11130.0	11925.0	11925.0
Cattle put on feed 6/	Number					XXX	
Sheep & lambs put on feed 6/	do					xxx	
Net production of hogs 6/	Pound			65493.1	65650.0	65650.0	65650.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Sorghums

The sorghums are the principal source of feed grains and forage in the area. The war demand for pork, eggs, and dairy products makes it important that the acreage of sorghum grain be maintained at a high level. The recent development of combine type grain sorghums has stimulated grain production at the expense of the forage sorghum acreage. Assuming maximum production of wheat about 622,000 acres of sorghums for grain could be grown. While the suggested maximum would be approximately 100,000 acres above 1942, it would be almost 500,000 acres less than expected in 1943.

Sorghum production for forage should be geared to the forage needs of livestock. The acreages of forage sorghums indicated for 1944 and for the wartime maximum are estimates of these requirements.

Sorghums are relatively highly responsive to irrigation. A maximum of 100,000 acres, or 11 percent, of all sorghums can be irrigated. This would be an increase of approximately 40 percent over the acreage expected to be irrigated in 1943 and 1944.

Irish Potatoes

Irish potatoes are a relatively new commercial crop for the Panhandle Wheat Area and few resident farmers are experienced growers. In order to expand the potato acreage farmers will need instruction concerning production practices, help in grading and marketing and assurance of seed supplies at reasonable prices. Since potatoes require large amounts of moisture, groundwater resources are a limiting factor in their production. Any additional acreage should be distributed over the area to avoid over-taxing the water supply in any one locality. Potatoes are expensive to grow and their production is considered hazardous by many farmers.

In view of the factors involved, 17,000 acres was considered the practical limit for Irish potato production. This would be an increase of 10,800 acres above that reported in 1942. About 11,000 acres could be grown in 1944 if necessary. Approximately 1,000 tons more fertilizer would be needed for the maximum acreage over the amount assumed to be available for use in 1944.

Alfalfa

All alfalfa produced in this area is irrigated. About 9,000 acres were reported in 1942 and 10,000 acres in 1943. The average acreage per farm reporting alfalfa production in 1939 was 25. Alfalfa is commonly grown on this comparatively large scale in order to justify the special harvesting equipment which is required. As in the case of potatoes the heavy water requirements of the crop is a factor limiting the acreage.

In view of the shortage of protein supplements an increase in alfalfa production seems desirable. The need for protein concentrates is greatly reduced when alfalfa hay replaces part or all of the carbonaceous roughages fed to dairy cows.

If needed a wartime maximum of 17,000 acres of alfalfa could be grown without seriously affecting the groundwater supply. An increase of 3,000 acres over the 1942 level is possible by 1944. Enough power mowers, pick-up balers and side-delivery rakes would be needed to harvest the increased acreage.

Cotton

The northern limits of cotton production are reached in the southern portion of the area. A cotton crop of 150,000 acres was indicated as best serving war needs. The reduction should take place in dry-land production. An increase of 18,000 acres is indicated for irrigated cotton over the 1943 level.

While the total acreage of cotton in 1944 would be the same as the wartime maximum the acreage irrigated would be no greater than in 1943.

Beef Cattle

During the past two years conditions have been favorable for wheat pasture. Abundant wheat grazing has been utilized in expanding beef cattle numbers. A large acreage of grain sorghum forage in 1941 and 1942 also contributed materially to this expansion. Present cattle numbers are above the normal carrying capacity of the range. The carrying capacity of wheat fields varies greatly from year to year so that expansion based on wheat pasture is largely a matter of opportunity. During seasons of favorable conditions for wheat pasture cattle numbers may be temporarily expanded to utilize this feed.

The number of all cattle and calves indicated for maximum production is 585,000 head or the same number reported for 1942. This number would approximate the normal carrying capacity of the ranges. It is thought that the reduction in number of beef cattle will not materially affect breeding herds but that stockmen will follow their usual practice of selling the increase as calves rather than as yearlings.

A reduction in the number of all cattle and calves of 35,000 head can be effected by January 1, 1944. Heavy marketing during the remainder of the year will be necessary to obtain this reduction. The supply of forages available from the present crop, the prospects for wheat pasture and the demand for stocker cattle will influence cattle marketing during the remainder of the year.

Dairy Cattle

The area has capacity for more dairy production. Feeds are available for expansion and the demand for dairy products warrants an increase.

Dairy cow numbers increased from 65,200 to 72,000 in 1943 and it is considered feasible that this number be increased to 75,000 by 1944. A maximum of 80,000 is believed attainable.

Poultry and Eggs

Chicken hens have greatly increased in numbers during the past few years. The suggested maximum of 1,500,000 hens and pullets is nearly double the number reported for 1940 and is 23 percent above the 1942 level. Maximum numbers would mean an increase of nearly 200,000 hens above the number reported for 1943. About one-half of the increase could be attained in 1944.

Hogs

The number of sows bred to farrow both spring and fall litters are believed to have reached the maximum for this area. Although prospective grain supplies appear to be more than ample for present levels of production uncertainty of crop yields and lack of storage capacity on the farms makes it advisable to keep requirements somewhat below average production to allow for variations in supply. High grain prices which prevailed through July 1943 caused some marketing of sows and gilts which farmers had originally intended to keep for fall farrowing. It is not known at this time to what extent 1944 pork production will be affected by this movement.

Limiting Factors to Wartime Capacity

The suggested expansion of alfalfa for capacity production would require 260 mowers and 50 pick-up balers in addition to the number on farms in 1944.

The capacity acreage of Irish potatoes will require 1,050 tons of fertilizer in excess of the amount available in 1944, assuming fertilizers are applied as recommended. Inexperience on the part of farmers needs to be overcome by a program of instruction concerning the growing, grading, and marketing of potatoes. It will also be desirable to insure growers supplies of seed at reasonable prices.

CANADIAN RIVER GRAZING AREA (2)

The Canadian River Grazing Area is composed of the deep and narrow Canadian River Valley and the adjacent rolling areas and rough broken land. The area extends across the Texas Panhandle in a northeasterly direction from the Texas-New Mexico border in Oldham County to the Texas-Oklahoma border in Hemphill and Lipscomb Counties. Almost 90 percent of the area is in native pasture and the principal enterprise is beef production. Ranches of the area are of two main types: those that maintain a breeding herd of beef cows and raise calves which are usually sold at weaning time; and those which graze steers. Crop production on the limited acreage suitable for cultivation is quite similar to dry-land farming in the northern part of the Panhandle Wheat Area. Similar weather conditions prevail in both areas.

The cropland resources available for maximum production consists of 366,000 acres. This is the position of the total cropland listed in the 1939 census which has been classed by the Soil Conservation Service as suitable for continuous cropping.

Maximum crop production is limited to dry-land methods since irrigation is not an important development within the area.

Use of Resources for Crops

Wheat is the principal cash crop of those operators who depend mainly on farming as distinct from ranching and is also an important source of winter pasture. It is considered that expanding the wheat acreage to the practical limit of 250,000 acres would best serve the war effort. This would be an increase of approximately 60,000 acres above the land seeded to wheat in both 1942 and 1943.

It is thought that the wheat acreage suggested for the maximum situation could be obtained in 1944. Land reported idle or fallow in 1943 would be utilized in making this sizable increase.

The suggested maximum of 100,000 acres devoted to all sorghums is 50 percent larger than the 1942 acreage. About the same rate of increase is indicated for both sorghums harvested for grain and those harvested for forage. The suggested forage acreage should provide for normal requirements of forage consuming livestock. The maximum situation suggested for sorghums could be attained in 1944 by utilizing cropland reported as idle or fallow during 1944.

Cotton production is of minor importance and it is thought that the present level should be maintained both in 1944 and for the maximum level.

Use of Resources for Livestock Production

Production of beef cattle under range conditions is the most important enterprise of the area. Cattle are grazed throughout the year on native pasture and receive supplemental feed in the form of cottonseed cake during winter months. Suggested adjustments in cattle numbers apply primarily to beef animals since no significant change was indicated for dairy production. Numbers of all cattle increased from 138,000 in 1942 to 163,000 in 1943. It was considered that most efficient use of pasture resources would be obtained by maintaining cattle numbers at near present level. The 175,000 head of all cattle suggested as feasible for 1944 is the same as expected to result in maximum production.

Table 15. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 2, Canadian River Grazing

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	4.3	3.2	3.3	3.0	3.0
Grain sorghums, all	do.	47.0	47.0	61.3	70.0	70.0
Sweet sorghums, except sirup	do.	33.7	20.5	20.0	30.0	30.0
All sorghums for grain	Harvested	32.7	31.8	40.3	50.0	50.0
All sorghums for silage	do.	2.0	1.0	1.0	0	0
All sorghums for forage	do.	44.0	32.0	40.0	50.0	50.0
Soybeans, grown alone	Planted	-	-	.4	0	0
Soybeans for beans	Harvested	-	-			
Soybeans for hay	do.	-	-			
Cowpeas, grown alone	Planted	.8	.2	.2	0	0
Cowpeas for peas	Harvested	-	-			
Cowpeas for hay	do.	-	-			
Peanuts, grown alone	Planted					
Peanuts picked & threshed	Harvested					
Peanuts for hay	do.					
Cotton, all upland	Planted	7.1	8.4	7.0	7.0	7.0
Under 15/16" staple	do. 3/	6.0	7.0	5.0	5.0	5.0
15/32" to 1-3/32" staple	do. 3/	1.1	1.4	2.0	2.0	2.0
1-1/8" staple and over	do. 3/					
Cotton, Am. Egyptian or Sea Is.	do.					
Irish potatoes	do.	.1	.1	.2	1.0	1.0
Sweet potatoes	do.	-	-	-	-	-
Beans, dry edible	Planted		-	-		
Processing vegetables, total 4/	do.					
Tomatoes	do.					
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested					
Cabbage	do.	-	-			
Onions	do.	-	-			
Beets	do.					
Carrots	do.					
Peppers	do.					
Spinach	do.					
Tomatoes	do.					
Other intertilled crops, total	Harvested					
Total cropland used for intertilled crops 5/	.....	93.0	79.4	92.4	111.0	111.0
Oats	Planted	7.9	5.4	7.9	15.0	15.0
Barley	do.	19.9	28.6	24.7	25.0	25.0
Winter wheat	do.	220.0	192.2	190.0	250.0	250.0
Oats for grain	Harvested	7.1	3.4	1.7	5.0	5.0
Barley for grain	do.	17.3	20.8	14.1	20.0	20.0
Grains cut green for hay	do.	.4	.4	.4	0	0

Continued -

Table 15, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 2, Canadian River Grazing

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted	-	-			
Rice	do.	-	-			
Other crops	do.					
Citrus fruit	.....					
Total cropland used for close-seeded crops 5/		247.8	226.2	222.6	250.0	250.0
Hay, all tame--except soybean, cowpea, peanut & small grain hay	Harvested	3.6	3.4	2.5	2.5	2.5
Hay, all tame	do.	4.0	3.8	2.9	2.5	2.5
Alfalfa seed	do.					
Total cropland used for sod		3.6	3.4	2.5	2.5	2.5
Total cropland used for crops 5/		344.4	309.0	317.5	363.5	363.5
Idle cropland		86.6	122.0	113.5	2.5	2.5
Total cropland 5/		431.0	431.0	431.0	366.0	366.0
Wild hay	do.	7.8	8.1	8.1	8.1	8.1
Total land in farms		3402.0	3402.0	3402.0	3402.0	3402.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 16. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 2, Canadian River Grazing

Crop	Acreage	Unit	Base period 1/	Yield per acre			
				Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	11.9	11.9	11.9	11.9
All sorghums for grain	Harvested	do.	1937-41	14.0	14.0	14.0	14.0
All sorghums for silage	do.	Ton	1937-41	3.7	3.7	3.7	3.7
All sorghums for forage	do.	do.	1937-41	1.0	1.0	1.0	1.0
Soybeans for beans	do.	Bu.					
Cowpeas for peas							
Peanuts picked & thresh.							
All upland cotton	Planted	Lb.	1937-41	107.0	107.0	107.0	107.0
Irish potatoes	do.	Bu.	1939-41	192.0	185.0	175.0	175.0
Sweet potatoes							
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes							
Oats for grain							
Barley for grain							
Winter wheat	do.	do.	1937-41	5.5	5.5	5.5	5.5
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton	-	1.0	1.0	1.0	1.0
Wild hay							

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 17, Estimates of wartime production of livestock and livestock products 1944 capacity and maximum capacity, with comparisons
Area 2, Canadian River Grazing

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
		- - - - - - - - 1,000 units - - - - - - - - - - - -					
On farms January 1:							
Horses, mules & colts	Number	5.0	4.4	4.5	4.4	4.4	4.4
Cattle & calves, all	do.	174.7	139.0	162.9	175.0	175.0	175.0
Cows kept for milk, 2 years +	do.	6.4	6.4	6.9	7.0	7.0	7.0
Other cows, 2 years +	do.				71.7	71.0	71.0
Sheep & lambs, all	do.	5.7	13.3	13.5	13.5	13.5	13.5
Ewes, 1 year +	do.				9.7	9.8	9.8
Hens & pullets	do.	83.3	92.4	112.3	124.0	135.0	135.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	.7	1.6	2.1	2.1	xxx	2.1
Sows farrowed, fall 4/	do.	1.0	1.6	1.8	1.8	xxx	1.8
Chickens raised 5/	do.	143.8	216.9	238.0	260.0	260.0	260.0
Commercial broiler production	do.						
Turkeys raised	do.	4.2	5.2	5.5	6.0	6.0	6.0
Milk cows, average during the year	do.	5.9	5.9	6.4	6.5	6.5	6.5
Milk produced (Thousand	lbs.	22.7	23.0	24.8	25.1	25.1	25.1
Wool shorn	Pound		96.6	98.0	98.0	xxx	98.0
Eggs produced	Dozen	670.3	782.2	950.8	1049.9	1143.0	1143.0
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			3765.5	3722.9	3720.6	3720.6

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

An adequate supply of cottonseed cake is very important to beef production in this area. Without proper supplemental feeding losses in weight, fewer calves and increased death losses are likely to occur. Feed grains do not have the protein content to properly supplement cured pasture grasses and are not a practical substitute for cottonseed cake. The attainment of maximum production will be materially hindered unless ranchmen are able to obtain sufficient protein concentrates for efficient production.

Chicken numbers have increased rapidly during recent years and it is thought that normal feed production justifies additional expansion. The 135,000 hens and pullets suggested in the maximum would be an increase of 42,600 head compared to 1942 numbers. Nearly one-half of this increase was obtained by January 1, 1943. The maximum level would be attained by 1945 with an increase of about 12,000 hens and pullets per year.

A total of 3,200 sows were farrowed in 1942 and an additional 700 are expected to be farrowed during 1943. It is thought that pork production has reached a level where further expansion is not practical in view of prospective feed supplies.

HIGH PLAINS COTTON AREA (3)

The High Plains Cotton Area comprises the southern portion of the Texas High Plains where fine sandy loam soils predominate. The rainfall averages about 20 inches annually. The physical features of the area are conducive to widespread use of multi-row tractor-drawn planting and cultivating machinery. The typical farm unit has about 80 percent of its area in cropland.

The principal crops grown are cotton and grain sorghums. Some wheat is grown but the sandy soils and longer growing season favor cotton production over wheat production. A big majority of the cotton harvesting is hired and transient labor is largely depended on for this work.

Livestock production has increased in importance since the establishment of the Agricultural Adjustment Administration programs. During the past three years there has been a decided increase in the numbers of poultry, hogs, and beef cattle owing to favorable livestock feed price ratios.

It was estimated that the area has 2,813,000 acres of land which would be well suited to cultivation during the war period. This figure includes 2,590,000 acres, or 93.7 percent of the cropland reported by the 1939 census and classed by the Soil Conservation Service, as suitable for continuous cropping and 223,000 acres of plowable pasture also considered suitable for cultivation.

Shallow wells provide water to irrigate cotton, grain sorghums and limited acreages of Irish potatoes and alfalfa. Water resources rather than land suitable for irrigation is the limiting factor here.

Water withdrawal for irrigation varies from year to year depending on rainfall. As a result of favorable moisture conditions during 1942, only 10,600 acres were irrigated. However, it is estimated that 95,000 acres will be given supplemental water in 1943. Based on average application of water, the total withdrawal will be about 66,500 acre feet during 1943. It is estimated that the annual withdrawal might safely be increased to 98,000 acre feet. The 124,700 acres of irrigated crops suggested for maximum wartime production will require an average annual withdrawal of about 100,000 acre feet. The withdrawal will require approximately 1,100 wells or 210 more than the present number.

Use of Resources for Crops

Cotton

Cotton is well adapted to the area and is grown on an extensive scale with low cost methods. With extra labor for hoeing and harvesting, an operator can grow 200 acres of cotton with a single set of two-row tractor-drawn equipment. A much larger acreage can be planted and cultivated with four-row machinery. The area has been planting from 95 to 100 percent of the acreage allotted to it during the period of Agricultural Adjustment Administration programs.

The favorable position of cotton make it feasible to maintain a high level of production. The 1,050,000 acres of cotton suggested for the maximum wartime effort is also the acreage expected in 1943 and is about 3 percent less than the 1942 crop. The cotton acreage feasible for 1944 would be the same as suggested for the maximum situation.

Table 18.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons

Area 3, High Plains Cotton

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 1944 2/	Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	71.2	101.8	109.9	60.0	60.0
Grain sorghums, all	do.	1036.0	1213.0	1342.0	1217.0	1361.0
Sweet sorghums, except sirup	do.	741.0	268.0	180.0	170.0	170.0
All sorghums for grain	Harvested	941.8	888.6	1150.0	1187.0	1331.0
All sorghums for silage	do.	50.4	27.8	30.0	28.0	28.0
All sorghums for forage	do.	719.5	530.0	342.0	172.0	172.0
Soybeans, grown alone	Planted	1.0	10.9	10.2	0	0
Soybeans for beans	Harvested	.9	8.4	9.0	0	0
Soybeans for hay	do.	.1	1.0	1.0	0	0
Cowpeas, grown alone	Planted	15.8	36.5	16.7	0	0
Cowpeas for peas	Harvested	7.4	19.3	14.0	0	0
Cowpeas for hay	do.	1.2	1.6	2.0	0	0
Peanuts, grown alone	Planted	1.1	29.3	48.0	0	0
Peanuts picked & threshed	Harvested	1.1	27.4	48.0	0	0
Peanuts for hay	do.	.7	3.5	43.0	0	0
Cotton, all upland	Planted	1030.0	1084.0	1050.0	1050.0	1050.0
Under 15/16" staple 3/	do.	855.0	921.0	840.0	840.0	788.0
15/32" to 1-3/32" staple 3/	do.	175.0	163.0	210.0	210.0	262.0
1-1/8" staple & over	do.					
Cotton, Am. Egyptian or Sea Is.						
Irish potatoes	do.	1.9	1.1	1.3	4.0	8.0
Sweetpotatoes	do.	.2	.1	.3	.3	.3
Beans, dry edible	do.			6.0	6.0	6.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	.3	.4	.6	.7	.7
Cabbage						
Onions	do.	.1	.2	.2	.2	.2
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes	do.	.2	.2	.4	.5	.5
Other intertilled crops, total						
Total cropland used for intertilled crops 5/		2898.5	2745.1	2765.0	2508.0	2656.0
Oats	Planted	1.3	1.2	2.1	8.0	8.0
Barley	do.	12.6	29.7	40.0	25.0	25.0
Winter wheat	do.	91.1	89.2	101.0	100.0	100.0
Oats for grain	Harvested	1.1	1.0	1.0	5.0	5.0
Barley for grain	do.	10.3	17.0	17.6	18.0	18.0
Grains cut green for hay	do.	.7	.6	.6	0	0

Continued

Table 18.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons-Continued

Area 3 - High Plains Cotton

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 2/	Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted					
Rice	do.					
Other crops	Harvested					
Citrus fruit						
Total cropland used for close-seeded crops 5/		91.1	89.2	120.0	115.0	115.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	33.3	32.2	23.4	24.0	24.0
Hay, all tame	do.	36.0	38.9	70.0	24.0	24.0
Alfalfa seed	do.					
Total cropland used for sod crops 5/		33.3	32.2	23.4	24.0	24.0
Total cropland used for crops 5/		3022.9	2866.5	2908.4	2647.0	2795.0
Idle cropland		0	0	0	43.0	18.0
Total cropland 5/		2764.0	2764.0	2764.0	2690.0	2813.0
Wild hay	Harvested	.4	.4	.4	.4	.4
Total land in farms		4935.0	4935.0	4935.0	4935.0	4935.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ Approximate planted acreage of varieties which usually yield specified staple lengths.

4/ Commercial crop.

5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 19. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 3, High Plains Cotton

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	12.2	12.2	12.2	12.2
All sorghums for grain	Harvested	do.	1937-41	18.0	18.0	18.0	18.0
All sorghums for silage	do.	Ton	-	-	4.5	4.5	4.5
All sorghums for forage	do.	do.	-	-	1.7	1.7	1.7
Soybeans for beans	do.	Bu.	1937-41	8.0	6.0	6.0	
Cowpeas for peas	do.	do.	1937-41	6.0	6.0	6.0	
Peanuts picked & thresh							
All upland cotton	Planted	Lb.	1937-41	203.0	200.0	200.0	200.0
Irish potatoes	do.	Bu.	1939-41	192.0	185.0	175.0	175.0
Sweet potatoes	do.	do.	1939-41	85.0	85.0	85.0	85.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes							
Oats for grain	Harvested	Bu.	1937-41	21.2	21.2	21.2	21.2
Barley for grain	do.	do.	1937-41	15.4	15.4	15.4	15.4
Winter wheat	Planted	do.	1937-41	8.2	8.2	8.2	8.2
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton	1937-41	1.1	1.3	1.6	1.6
Wild hay							

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 20.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 3 - High Plains Cotton

Item of livestock and livestock products	Unit	Reported for 1/		Reported: for 1943:	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942		1944	1945	
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	25.2	20.6	20.3	20.0	20.0	20.0
Cattle & calves, all	do.	189.8	223.1	236.9	210.0	210.0	210.0
Cows kept for milk, 2 yrs. old & over	do.	71.2	73.4	76.5	80.0	84.0	84.0
Other cows, 2 yr. & over	do.				38.8	38.5	38.5
Sheep & lambs, all	do.	139.2	176.3	193.5	200.0	200.0	200.0
Ewes, 1 yr. & over	do.				132.1	132.3	132.3
Hens & pullets	do.	1392.5	1600.9	2130.2	2900.0	3200.0	3200.0
During year:				Expected: in 1943			
Sows farrowed, spring 3/	do.	7.7	18.0	28.0	32.0	xxx	35.0
Sows farrowed, fall 4/	do.	8.7	17.7	23.8	28.0	xxx	30.0
Chickens raised 5/	do.	1975.5	2421.2	3660.0	4000.0	4000.0	4000.0
Commercial broiler production	do.						
Turkeys raised	do.	16.5	20.8	21.0	21.0	21.0	21.0
Milk cows, average during year	do.	66.2	69.2	72.1	75.4	79.2	79.2
Milk produced	1,000 lbs.	274.3	290.2	302.4	316.2	332.1	332.1
Wool shorn	Pound		1279.6	1404.8	1452.0	xxx	1452.0
Eggs produced	Dozen	10703.2	13938.5	18550.5	25254.2	27866.7	27866.7
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			82437.4	93982.7	98942.0	98942.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

With marketing quotas removed, cotton production in the future will be influenced to quite an extent by farmer experience in obtaining labor to harvest the present crop and prospects of labor to harvest future crops. The labor peak for harvesting could be greatly reduced should mechanical harvesting equipment become available. Such a development would result in an increase in cotton over the present acreage unless other controlling factors change greatly.

Experimental results indicate that for irrigated cotton the most profitable practice in normal years is to irrigate the land twice before planting. Handled in this manner, irrigation of cotton does not seriously compete with other crop operations for labor and at the same time permits maximum summer irrigation of other vital crops. Estimates are that 49,000 acres of cotton will be irrigated during 1943 and it is suggested that the acreage be increased to 68,000 as the wartime maximum.

Grain Sorghums

The maximum production for all sorghums herein indicated would be 1,531,000 acres or approximately the same acreage expected in 1943 and about 50,000 above the 1942 level. Recent introduction of combine types of grain sorghum has greatly reduced labor requirements for harvesting and has made it practical to expand grain at the expense of forage production. This is reflected in the greater proportion of the 1943 sorghum crop expected to be harvested for grain as compared to the acreage harvested for grain in 1942. The suggested maximum wartime acreages of forage sorghums would provide for the estimated needs of forage consuming livestock.

Groundwater supplies would provide for 40,000 acres of irrigated sorghums as compared to the 32,600 acres expected to be watered in 1943.

The present support price of 80 cents per bushel for No. 3 grade grain sorghums is not considered sufficient to cause expansion of grain sorghums at the expense of 18.5-cent cotton.

Farmers have had little opportunity to acquire combines since combine type sorghums came into general use. In view of labor shortages it is considered essential that provision be made for harvesting equipment if maximum production is to be realized.

Wheat

A majority of the wheat grown is on the heavy soils in the northeastern portion of the area. Here wheat competes successfully with cotton in the cropping system. Wheat production on these soils should continue at the present level of approximately 100,000 acres.

Irish Potatoes

At present Irish potatoes are a minor crop and are grown commercially on relatively few farms. The soils of the area are suitable and groundwater resources will permit some expansion of this crop under irrigation. Lack of experience on the part of farmers in growing, grading, and marketing potatoes is an important consideration in planning any expansion program. It is also important that seed be available at reasonable rates.

An acreage of 8,000 acres was suggested as the maximum Irish potato crop practical for the area. In 1942, 1,100 acres of potatoes were planted. It is thought feasible to plant 4,000 acres to this crop in 1944.

Alfalfa

Alfalfa has been grown on relatively few farms in the area and is limited to those with irrigation facilities. Only a small alfalfa acreage is required to supply the needs on most farms. Such small acreages do not justify owning necessary harvesting equipment. Consequently it is usually grown on a commercial scale. Farmers generally lack experience growing the crop. The availability of groundwater is a limiting factor in alfalfa production.

In view of the shortage of feeds high in proteins it is desirable to expand alfalfa acreage to facilitate maximum wartime production. Alfalfa occupied 2,000 acres in 1942 and it was considered practical that this be increased to 8,000 acres for the maximum situation. It was considered feasible to have 4,000 acres devoted to alfalfa in 1944.

Use of Resources for Livestock Production

Varied weather conditions which result in extreme variations in crop yields are typical of the High Plains Cotton Area. Thus, feed supplies fluctuate greatly from year to year. To maintain a reliable supply of feed for livestock it is necessary to accumulate feed reserves in years of high production to provide for periods of low yields. In view of these conditions the livestock pattern for the area should be conservative and a safe margin of feed supplies above livestock requirements should be maintained.

Inadequate storage for feeds prevent accumulation of feed reserves needed to stabilize livestock production. Provision for feed storage on farms would encourage further expansion of livestock numbers by reducing the risk involved in production. With adequate feed storage farmers would be encouraged to utilize more feed within the area rather than sell periodic surpluses at low prices for feeding in other areas.

Beef Cattle

The numbers of beef cattle on hand January 1, 1943 were higher than for any time during the past six years. Good pasture conditions and favorable prices have encouraged ranchmen to carry more than the usual number of cattle on the range. At the same time there has been a trend toward more beef cattle on farming units to utilize the large acreages of grass and forage crops grown in compliance with the Agricultural Adjustment Administration's program. Recent increases have consisted largely of stocker calves and yearlings rather than breeding animals.

For the indicated maximum the total number of all cattle and calves would be nearly 6 percent below the 1942 level and 12 percent less than 1943 numbers. Since an increase is suggested for dairy cattle the reduction in beef cattle would be even greater than indicated by the change in "all cattle" numbers. It was considered that a large part of the suggested reduction should take place on farming units. A reduction in numbers of forage consuming livestock is necessitated by the suggested expansion of grain at the expense of forage for wartime capacity production. Wartime capacity in 1944 was indicated to be the same as the maximum situation.

Sheep

Sheep numbers have increased rapidly during recent years in response to large supplies of forage and high prices. The indicated maximum level for sheep numbers is 200,000 head or 23,700 more than was reported for 1942. However, the suggested maximum is only a small increase above 1943 numbers.

Dairy Cattle

Dairy cattle numbers have increased at a much slower rate than have most other types of livestock. Farms in the area now average between five and six milk cows per farm. Dairying is a side line on most farms rather than a highly commercialized enterprise. Available feeds make it desirable to further expand dairying in response to war needs.

In the maximum situation dairy cow numbers would be increased above the 1942 and 1943 numbers by 14 percent and 10 percent, respectively. This expansion would provide an average of about six dairy cows per farm for the area. An increase of 3,500 milk cows was considered feasible by 1944.

Hogs

The rapid increase in hog numbers is illustrated by the fact that nearly four times as many sows were farrowed in the spring of 1943 than was true for the corresponding period in 1941. Large supplies of grain and favorable hog prices stimulated this expansion. The fact that hogs may be produced in the area without expensive housing and equipment further facilitated this trend.

Grain production anticipated as a result of the maximum situation will permit further increase in hog numbers. It is considered feasible to maintain 35,000 sows for spring farrowing under conditions of maximum production. This is 94 percent and 25 percent more than were farrowed in the spring of 1942 and 1943, respectively.

The large grain sorghum acreage of 1943 should provide for an increase in hog production in 1944. Anticipated feed supplies indicated that it would be feasible to farrow 32,000 sows in the spring of 1944. Whether or not wartime capacity indicated for 1944 will be obtained will largely depend on price relationships which exist during the remainder of 1943 and the first half of 1944. High grain sorghum prices which prevailed in the spring and through July 1943 have resulted in heavy marketings of hogs and it is understood that many sows bred to farrow during the fall of 1943 were liquidated before farrowing. At present it is not known to what extent next year's pork production will be affected by this movement.

Poultry and Eggs

Previous to the wartime demand farmers in the area averaged about 100 laying hens per farm. Large amounts of waste grain available to be salvaged by poultry was an important factor in keeping chicken numbers relatively high and costs low. By January 1, 1943 farms averaged approximately 150 hens and pullets per farm. Continued production of large acreages of grain sorghums makes it feasible to increase egg production above the present level.

The number of hens and pullets (3,200,000 head) indicated as wartime capacity would be about double the number reported for 1942. In order to obtain this expansion it will be necessary to provide additional housing and equipment both for laying flocks and for brooding chicks. Unusually heavy losses have been experienced by those who attempted to brood chick numbers in excess of the normal capacity of housing and brooding facilities. Over-crowding laying hens hinders disease control, and is likely to result in increased death losses and decreased egg production.

It is expected that the number of chickens raised in 1943 will be ample to provide for an increase of 770,000 hens and pullets in 1944 over the number reported for 1943.

Limiting Factors to Wartime Capacity

Machinery and equipment needed to attain capacity production will include complete power and pumping units for 210 additional irrigation wells. The introduction of combine type grain sorghums has created a need for about 2,000 combines in excess of those on farms in 1944. It is estimated that 240 additional mowers and 50 additional pick-up balers will be needed in connection with the increase in alfalfa. These requirements are in addition to normal replacements.

If applied as recommended the increased Irish potato acreage will require 700 tons of fertilizer in addition to the amount available for 1944. Lack of experience on the part of farmers in growing, grading, and marketing potatoes will hinder capacity production. A program is needed to instruct farmers concerning production practices and also to insure adequate seed supplies at reasonable rates.

Additional housing and brooding equipment will be needed on farms before capacity production of poultry and eggs is obtained.

ROLLING PLAINS AREA (4)

Wide variations in soils and topography have resulted in mixed types of farming in the Rolling Plains. On the more level areas of sandy loam soils cotton and grain sorghums are practically the only crops grown and the organization is similar to that in the High Plains Cotton Area. On the heavier soils, or so-called "tight land" an important amount of small grain, primarily wheat and oats, is produced. A significant acreage of loose sandy soils provide the basis for the peanut production of the area. The more rolling and broken areas are used for cattle grazing under somewhat typical ranching organizations. The rainfall conforms in amount and distribution to the general pattern for the sub-humid section of the state. Wide variations are experienced from year to year, but the average annual precipitation ranges from about 27 inches in the extreme eastern portion to 21 inches in the western part.

Resources Available for Crop Production

The area has a total of 4,399,000 acres of land suitable for crop production during the war period. The census reports 4,624,000 acres of cropland in 1939. The Soil Conservation Service classifies 4,023,000 acres of this cropland as suitable for continuous cropping assuming proper conservation practices. Of the remainder about 10 percent or 60,000 acres of heavy shallow soils might be used for small grain production and kept in cultivation during the war period.

In addition to the land now in cultivation, 316,000 acres of plowable pasture land is considered suitable for continuous cultivation. This land could be brought into cultivation during the war period and would bring the total acreage that could be used for crops to 4,399,000 acres.

Irrigation is practiced to the extent of approximately 22,000 acres. This acreage is located in Wichita County and is served by one water improvement district. The capacity of the reservoir is adequate to supply water to an additional acreage but a general rehabilitation of parts of the distribution system and possibly the construction of some new canals and lateral ditches would be necessary. With these improvements in effect the acreage irrigated could be increased by 10,000 acres, as to a total of 32,000. About 1,000 acres of this additional land can be put under irrigation by 1944.

Use of Resources for Crops

Crop production in the Rolling Plains is reasonably well adjusted to war needs. The area has considerable capacity for peanut production, and some adjustment in the present pattern of production will result from the use of this capacity.

Peanuts were normally grown on a small scale but have increased rapidly in response to wartime demands. Approximately 15,000 acres were grown in 1941 as compared with 87,000 acres in 1942 and 118,000 acres in 1943. Production is confined to the sandy land areas where cotton and grain sorghum are the principal competing crops. According to the Soil Conservation Service, slightly less than 1,000,000 acres of land are adapted to peanut production. The application of reasonably adequate conservation practices would permit the production of about 445,000 acres annually during the war period.

Scale of operations is no hindrance to peanut production as is the case in some of the areas in the eastern part of the state. Sufficient land resources and cultivating equipment are available to permit the growing of peanuts on a commercial basis. The chief limiting factor is the ease with which grain sorghums, also a war crop, can be grown and harvested as contrasted with peanuts. Peanuts also have the disadvantage of being a new crop to most farmers in this area. Some technical assistance in harvesting, assembling, and marketing, will be needed in the attainment of capacity production. Financial assistance in obtaining adequate harvesting equipment and in view of the fact that the demand for more peanuts may be only temporary, assurance against investment losses are also considered necessary. Assuming that efficient methods of harvesting peanuts can be universally applied, the present support price should favor the production of peanuts over other important crops in the area on lands adapted to peanuts.

The capacity of the area for 1944 is about 145,000 acres. The chief limiting factor will be the small amount of machinery such as side-delivery rakes that is expected to be available and with which the labor required for harvesting could be greatly reduced. Furthermore, the rather unsatisfactory experience in harvesting the 1942 crop together with the relatively low yields obtained in 1943 will no doubt create resistance to production in 1944.

Grain production can be increased through adjustments in corn and sorghum acreages. Grain sorghum acreages have fluctuated from 1,125,000 acres in 1941 to 1,500,000 in 1943. The wartime capacity is estimated to be approximately 1,400,000 acres with about 90 percent harvested as compared to two-thirds harvested in 1941 and 1942. The acreage of forage sorghums would be reduced to a level more nearly in line with forage needs of livestock and corn would also be reduced substantially. A decrease in the acreage of corn is suggested primarily because of the relatively low yields obtained and because of advantage which combine harvesting gives to grain sorghum production. Approximately 180,000 acres were grown in 1942 A reduction to about 80,000 acres is considered desirable during the war period.

The acreage of small grains fluctuates widely from year to year because of variable moisture conditions. On the heavy soils or so-called "tight land" of the area maximum production of food or other essential crops can be attained only if full advantage is taken of planting opportunities as they present themselves. Ample fall moisture being available substantial acreages of winter wheat and other small grains should be seeded on these soils. Assuming a dry fall or heavy winter-killing of small grains the acreage of sorghums or spring-planted crops would be increased. Five hundred thousand acres of wheat is suggested as the wartime capacity of the area. About 150,000 acres of oats and 40,000 acres of barley could also be grown. This is about in line with the normal production of these crops.

The proposed adjustments in grain production could all be reached, and in some instances exceeded, by 1944. The fact that the maximum acreage of peanuts could not be grown in 1944 makes it possible to devote larger acreages to grain production. Oats, corn, and grain sorghum would take up most of this slack.

Cotton production should be maintained at about the present level of 1,600,000 acres during the war period.

Use of Resources for Livestock Production

Previous to the Agricultural Adjustment program most farming units had very few livestock. The larger acreages of feed crops which resulted primarily from this program, made it possible to rapidly increase livestock numbers when prices became favorable to livestock production. Occasional feed crop failures make it

Table 21.- Estimates of wartime uses of cropland, 1944 capacity and maximum capacity, with comparisons

Area 4 - Rolling Plains

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 1944 2/	Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	127.1	180.0	194.3	150.0	80.0
Grain sorghums, all	do.	1125.6	1301.9	1500.8	1386.0	1367.0
Sweet sorghums, except sirup	do.	542.8	285.5	260.0	260.0	260.0
All sorghums for grain	Harvested	832.7	904.9	1220.8	1276.0	1257.0
All sorghums for silage	do.	48.2	42.6	40.0	40.0	40.0
All sorghums for forage	do.	778.8	530.0	500.0	330.0	330.0
Soybeans, grown alone	Planted	1.6	2.1	3.8	0	0
Soybeans for beans	Harvested	.4	1.2	2.0	0	0
Soybeans for hay	do.	1.2	.6	1.8	0	0
Cowpeas, grown alone	Planted	34.5	37.9	15.4	12.0	12.0
Cowpeas for peas	Harvested	8.3	7.6	7.0	7.0	7.0
Cowpeas for hay	do.	1.7	4.9	5.0	5.0	5.0
Peanuts, grown alone	Planted	15.0	87.2	118.4	145.0	445.0
Peanuts picked & threshed	Harvested	13.7	80.0	110.0	138.0	423.0
Peanuts for hay	do.	13.2	71.0	100.0	130.0	400.0
Cotton, all upland	Planted	1597.3	1670.0	1610.0	1530.0	1610.0
Under 15/16" staple	do. 3/	958.0	1202.0	966.0	918.0	886.0
15/32" to 1-3/32" staple	do. 3/	639.3	468.0	644.0	612.0	724.0
1-1/8" staple & over	do. 3/					
Cotton, Am.Egyptian or Sea Is.	do.	-	-			
Irish potatoes	do.	.4	.4	.6	1.0	1.0
Sweetpotatoes	do.	1.2	.9	1.8	1.8	1.8
Beans, dry edible	do.			1.4	2.0	2.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables 6/	Harvested	-	.6	.6	.2	.2
Fresh vegetables, total 4/	do.	-	.6	.6	.2	.2
Cabbage	do.	-	-			
Onions	do.	-	-			
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes						
Other intertilled crops, total	Harvested	-				
Total cropland used for intertilled crops 5/		3445.5	3565.9	3706.5	3487.8	3778.8
Oats	Planted	277.2	253.7	317.1	200.0	150.0
Barley	do.	59.8	79.1	94.4	60.0	40.0
Winter wheat	do.	507.5	393.2	445.0	500.0	500.0
Oats for grain	Harvested	227.0	99.4	84.2	170.0	128.0
Barley for grain	do.	45.6	40.8	42.1	43.0	34.0
Grains cut green for hay	do.	5.6	4.5	4.2	5.0	5.0

Continued

Table 21.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons-Continued

Area 4 - Rolling Plains

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 1944 2/	Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted					
Rice	do.					
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/		844.5	726.0	856.5	660.0	590.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	56.2	54.0	37.5	35.0	30.0
Hay, all tame	do.	77.2	135.0	148.5	175.0	440.0
Alfalfa seed	do.					
Total cropland used for sod crops 5/		56.2	54.0	37.5	35.0	30.0
Total cropland used for crops 5/		4346.2	4345.9	4600.5	4182.8	4398.8
Idle cropland		277.8	278.1	23.5	.2	.2
Total cropland 5/		4624.0	4624.0	4624.0	4183.0	4399.0
Wild hay	Harvested	4.8	5.0	5.3	5.0	5.0
Total land in farms		15284.0	15284.0	15284.0	15284.0	15284.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ Approximate planted acreage of varieties which usually yield specified staple lengths.

4/ Commercial crop.

5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

6/ Included in the total for fresh vegetables.

Table 22. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 4, Rolling Plains

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	13.8	13.8	13.8	13.8
All sorghums for grain	Harvested	do.	1937-41	15.1	15.1	15.1	15.1
All sorghums for silage	do.	Ton	1937-41	4.3	4.3	4.3	4.3
All sorghums for forage	do.	do.	-	1.5	1.5	1.5	1.5
Soybeans for beans							
Cowpeas for peas	do.	Bu.	1937-41	6.7	6.7	6.7	6.7
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.426	.426	.400	.400
All upland cotton	Planted	Lb.	1937-41	162.0	162.0	162.0	162.0
Irish potatoes	do.	Bu.	1937-41	64.0	64.0	64.0	64.0
Sweet potatoes	do.	do.	1937-41	63.0	63.0	63.0	63.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes							
Oats for grain	Harvested	Bu.	1937-41	23.8	23.8	23.8	23.8
Barley for grain	do.	do.	1937-41	16.6	16.6	16.6	16.6
Winter wheat	Planted	do.	1937-41	8.4	8.4	8.4	8.4
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton	1937-41	1.1	1.1	1.1	1.1
Wild hay	do.	Ton	1937-41	.9	.9	.9	.9

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 23.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 4 - Rolling Plains

Item of livestock and livestock products	Unit	Reported for 1/		Reported: for 1943:	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942		1944	1945	
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	90.5	74.8	68.6	62.0	58.0	58.0
Cattle & calves, all	do.	661.9	786.1	801.7	750.0	700.0	700.0
Cows kept for milk, 2 yrs. & over	do.	144.9	159.7	164.9	170.0	175.0	175.0
Other cows, 2 yrs. & over	do.				282.8	261.4	261.4
Sheep & lambs, all	do.	701.4	711.7	757.0	750.0	750.0	750.0
Ewes, 1 yr. & over	do.				512.4	513.2	513.2
Hens & pullets	do.	2678.9	3022.7	4022.1	4250.0	4500.0	4500.0
During year:				Expected: in 1943			
Sows farrowed, spring 3/	do.	12.9	24.4	35.0	37.5	xxx	40.0
Sows farrowed, fall 4/	do.	13.0	23.2	29.7	32.5	xxx	35.0
Chickens raised 5/	do.	4420.6	5196.4	5250.0	5500.0	5500.0	5500.0
Commercial broiler production	do.						
Turkeys raised	do.	243.9	225.8	225.0	225.0	225.0	225.0
Milk cows, average during year	do.	139.5	149.8	154.7	159.5	164.2	164.2
Milk produced	1,000 lbs.	531.5	523.4	540.5	557.3	573.6	573.6
Wool shorn	Pound		5165.7	5495.8	5445.0	xxx	5445.0
Eggs produced	Dozen	20854.0	27166.7	36165.4	38214.6	40462.5	40462.5
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			99916.8	108080.2	113248.0	113248.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ December 1 (of previous year) to June 1.

4/ June 1 to December 1.

5/ Excluding commercial broilers.

6/ Twelve-month period beginning on October 1.

necessary that larger feed reserves be maintained than has been customary in the past if livestock numbers are to continue at present or suggested future levels.

Beef Cattle

Three successive years of relatively favorable moisture conditions coincident with high prices resulted in a rapid increase in cattle numbers. Breeding herds were not greatly expanded but larger than usual numbers of stocker cattle were maintained to utilize abundant grazing resulting from these conditions. Pastures are now believed to be over-stocked and beef cattle numbers should be reduced to the usual grazing capacity of the range. It is considered that 700,000 head of all cattle will efficiently utilize the normal grazing capacity of the area. This would involve a reduction of about 86,000 and 100,000 cattle compared to 1942 and 1943 numbers, respectively. A reduction of about 50,000 head between 1943 and 1944 appears desirable. In view of the fact that an increase is indicated for dairy cows, the reduction in beef cattle numbers would be greater than is indicated by the above suggested reduction for all cattle. Heavy marketings during the remainder of 1943 will be necessary to accomplish this reduction.

Sheep

Sheep numbers increased approximately 6 percent between 1942 and 1943. It is believed that additional expansion is not feasible and that production should remain at near the 1943 level. Sheep numbers tend to be concentrated on ranches in the southern fringe of counties adjacent to the Edwards Plateau and have increased to capacity limits in this section. Difficulties of securing essential fencing will hinder expansion in other parts of the area. The 750,000 head indicated for wartime capacity could be obtained by 1944.

Dairy Cattle

It is believed that feed resources will permit some additional expansion in dairying in response to war needs. The 175,000 milk cows suggested for capacity production is an average of about five cows per farm and is 15,000 more than were reported in 1942. An increase of approximately 5,000 head was reported between 1942 and 1943 and a similar increase would be necessary to obtain the 170,000 dairy cows indicated as feasible for 1944.

Poultry and Eggs

One million hens and pullets were added to poultry flocks during 1942. Capacity production of feed grains would permit further expansion if needed. The 4,500,000 chicken hens suggested for capacity production is an increase of about 500,000 over 1943 numbers. It is believed that one-half of this increase could be attained by 1944.

Hogs

The number of spring litters has increased at the rate of about 11,000 per year during the past two years. The 35,000 sows farrowed in the spring of 1943 is approximately one sow per farm. Under conditions of capacity production an additional 5,000 sows could be maintained for spring farrowing.

The price relationship between grain sorghum and hogs which prevails during the remainder of 1943 will largely determine the level of hog production in 1944. The price relationship must be favorable to pork production in order to reach the level of production indicated for 1944.

Limiting Factors to Wartime Capacity

With the possible exception of peanut production, the attainment of wartime capacity in the Rolling Plains Area should not be difficult. Some additional farm labor above the amount used in 1942 would be needed in connection with cultivating the increased peanut and grain sorghum acreage, and also in harvesting peanuts. About 10,000 additional workers would be needed in June and 13,000 in October.

Increased farm machinery needs are confined principally to harvesting equipment for peanuts and grain sorghum. About 2,000 new combines, above the amount expected to be on farms in 1944, would be needed. In view of the present labor situations the area is inadequately equipped for the harvesting of grain sorghums at present. The increased peanut acreage would require the use of about 3,300 more side-delivery rakes and 380 to 400 peanut pickers and stationary power balers.

HIGH PLAINS AND TRANS-PECOS GRAZING AREA (5)

The High Plains and Trans-Pecos Grazing Area is located in the western part of the state and is comprised of two distinctive situations insofar as crop production and livestock enterprises are associated with each other. The northern part of the area, designated as Subarea 5-a, comprises the more arid and southernmost portions of the High Plains. A little farming similar to that in the High Plains Cotton Area is found along the northeastern boundary. Cattle ranching on an extensive scale is the main enterprise for the area as a whole. The soils vary from light sands to heavy clay loams, and the surface is smooth to gently rolling. The rainfall averages 15 inches. It decreases rapidly and the hazards of farming are correspondingly greater from the northeastern to the southwestern portion of the subarea.

The remainder of Area 5 constitutes the major portion of the state lying west of the Pecos River, and is designated as Subarea 5-b. Here again beef cattle production is the main enterprise although a substantial number of sheep and Angora goats are found in the southern half of this subarea. Such farming as is carried on is confined to small areas of fertile lands that are irrigated from the springs and streams. On the whole, the water supply is quite limited. Cotton and alfalfa are the important crops grown on such land. The topography of the area varies from comparatively level plains and basins to mountainous peaks rising to over 8,000 feet. Most of the area averages well over 4,000 feet in elevation. The soils are mostly shallow and stony or gravelly, except in some of the basins. The principal land use centers around ranch organizations, which involve exceptionally large areas. The average ranch makes use of approximately 20,000 acres, or over 30 sections, and some of the larger ranches contain 100 or more sections.

Available Land Resources

According to the Census of Agriculture, 398,000 acres in this area were used for crops in 1939. According to the data supplied by the Soil Conservation Service, a high percentage of this land is considered suitable for continuous cultivation and all of it could be cultivated during the war period. The total cropland as reported in the last census is considerably less than the acreages estimated to be in crops during the period 1941-1943. The committees had no basis for correcting this discrepance in figures and both are listed as given.

All the crops produced in the southwest portion of this area are grown under irrigation. The Pecos and the Rio Grande Rivers are the chief sources of water, from which about 67,000 and 26,000 acres, respectively, are irrigated. A small acreage is irrigated from wells in the Pecos Basin and springs supply a small additional amount in other parts of the area. The capacity for irrigated acreage in 1945 is approximately 109,000 acres compared with 93,000 acres in 1942. This increase of about 16 percent is possible through the construction of new storage facilities, the rehabilitation of existing facilities, and a limited amount of underground development. Construction of two comparatively small reservoirs would be necessary. One on Six Shooter Draw near Fort Stockton would irrigate about 6,500 acres, and one on Comanche Creek would serve about 2,000 acres.

Use of Resources for Crops

Crop production under dry-land conditions is limited, for the most part, to sorghums, principally for grain, cotton, and corn, which are in this order of importance from the standpoint of the amount of land occupied. Since the agriculture in this portion of the area is very similar to that of the High Plains Cotton Area, maximum production would call for changes along the same general lines.

Cotton production would be continued at about the present level. Corn production would be decreased some 20 percent because yields are lower than sorghum yields and because grain sorghums can be harvested with combines, thus decreasing labor demands. The acreage taken out of corn, plus any additional land available, would be used for grain sorghum production.

In the irrigated part of the area, substantial increases in the acreage of cotton and alfalfa would be made partially by replacing American-Egyptian types with upland varieties, but mainly through bringing additional land under irrigation. The increase in both the acreage of upland cotton and in the acreage of alfalfa would make additional protein available in a most critical area. Other feed crops would be grown at about the present level of production.

The combined changes for both irrigated and dry-land farming would result in an increase in grain sorghum acreage from 148,000 in 1942 to 210,000,and in the acreage of upland cotton from 143,000 to 158,000, and in a decrease in corn production from 49,000 to 35,000 acres. All tame hay, principally alfalfa, would be increased from 26,000 to 28,500 acres, and sorghum for forage would be increased from 85,000 acres in 1942 to 90,000 acres.

For the most part, these proposed adjustments are considered attainable during the 1944 season.

Use of Resources for Livestock

Beef Cattle and Sheep

Ranchmen have increased sheep numbers rapidly in response to relatively high prices for sheep and wool and better than normal range conditions. At present pastures are considered to be badly over-stocked with sheep. Bunch grasses predominate in much of the Trans-Pecos Area and continuous grazing with present sheep numbers will result in serious damage to the turf. The area is better suited to cattle than sheep and the suggested numbers of 400,000 cattle and 750,000 sheep are believed to be a better ratio than present numbers.

The number of cattle indicated for capacity production would be slightly higher than was reported for 1942 and for 1943. Assuming normal range conditions capacity numbers of cattle could be attained in 1944.

The 750,000 sheep suggested for capacity production are 466,000 less than the number reported January 1, 1942, and 520,000 less than were reported for the current year. Such a change would require an adjustment equivalent to the liquidation of about 40 percent of the sheep and lambs on hand January 1, 1943, in addition to the disposal of all lambs raised. This reduction would not be expected to occur by 1944. Many factors such as the prices for slaughter sheep, the demand for feeder and stocker lambs and the condition of the range will affect the rate at which adjustments are made. Marketings to date indicate that the present trend is toward a reduction in sheep numbers.

Dairy Cattle

An expansion in dairy production is considered feasible in the High Plains portion of the area where capacity production would result in larger feed supplies. The 16,200 milk cows on farms January 1, 1942 is approximately the number reported one year later. The 17,500 dairy cows indicated as maximum is an increase of 1,500 head compared to 1943 numbers. It is considered possible to obtain two-thirds of this increase by 1944.

Table 24. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons

Area 5, High Plains and Trans-Pecos Grazing

Use of Cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	34.7	49.2	55.9	35.0	35.0
Grain sorghums, all	do.	136.6	148.0	169.2	215.0	210.0
Sweet sorghums, except sirup	do.	104.2	42.6	50.0	50.0	50.0
All sorghums for grain	Harvested	65.0	91.5	129.2	175.0	170.0
All sorghums for silage	do.	12.0	9.5	5.0	0.0	0.0
All sorghums for forage	do.	156.5	85.8	85.0	90.0	90.0
Soybeans, grown alone	Planted	.3	3.3	1.8	0.0	0.0
Soybeans for beans	Harvested	.2	2.6	1.0	0.0	0.0
Soybeans for hay	do.	.0	.2	.4	0.0	0.0
Cowpeas, grown alone	Planted	12.7	3.5	1.4	0.0	0.0
Cowpeas for peas	Harvested	5.1	1.4	1.0	0.0	0.0
Cowpeas for hay	do.	1.0	1.6	.4	0.0	0.0
Peanuts, grown alone	Planted	0.0	4.6	6.4	0.0	0.0
Peanuts picked & threshed	Harvested	0.0	4.0	4.0	0.0	0.0
Peanuts for hay	do.	0.0	.5	.5	0.0	0.0
Cotton, all upland	Planted	136.8	142.8	138.6	153.0	158.0
Under 15/16" staple	do. 3/	71.0	77.0	77.0	77.0	77.0
15/32" to 1 3/32" staple	do. 3/	51.8	51.8	50.6	60.0	61.0
1 1/8" staple & over	do. 3/	14.0	14.0	13.0	16.0	20.0
Cotton, Am. Egyptian or Sea Is.	do.	3.4	15.0	14.4	0	0.0
Irish potatoes	do.	.2	.2	.3	.3	.3
Sweet potatoes	do.			.1	.1	.1
Beans, Dry edible	do.			.6	1.0	1.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	-	-			
Cabbage	do.	-	-			
Onions						
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes						
Other intertilled crops, total						
Total cropland used for intertilled crops 5/		428.9	409.3	438.7	454.4	454.4
Oats	Planted	1.2	1.4	2.2	2.0	2.0
Barley	do.	.6	1.3	1.9	2.0	2.0
Winter Wheat	do.	-	-	-		
Oats for grain	Harvested	1.0	1.2	1.1	1.5	1.5
Barley for grain	do.	.5	1.0	.9	1.5	1.5
Grains cut green for hay	do.	.2	.2	.2	.5	.5

Continued

Table 24 continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 5, High Plains and Trans-Pecos Grazing

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime 1944 2/ Capacity	Wartime 2/ Maximum capacity
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted	-	-			
Rice	do.	-	-			
Other crops	Harvested	-	-			
Citrus fruit						
Total cropland used for close-seeded crops 5/		1.8	2.7	4.1	4.0	4.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	26.3	23.4	17.4	18.0	28.0
Hay, all tame	do.	27.5	25.9	18.9	18.5	28.5
Alfalfa seed	do.					
Total cropland used for sod crops 5/		26.3	23.4	17.4	18.0	28.0
Total cropland used for crops 5/		457.0	435.4	460.2	476.4	486.4
Idle cropland		0	0	0	0	0
Total cropland 5/		398.0	398.0	398.0	398.0	398.0
Wild hay		.3	.3	.4	.4	.4
Total land in farms		20252.0	20252.0	20252.0	20252.0	20252.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respectto "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 25. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 5, High Plains and Trans-Pecos Grazing

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	12.8	12.8	12.8	12.8
All sorghums for grain	Harvested	do.	1937-41	15.0	15.0	15.0	15.0
All sorghums for silage	do.	Ton		-	4.0	4.0	4.0
All sorghums for forage	do.	do.	1937-41	1.3	1.3	1.3	1.3
Soybeans for beans	do.	Bu.		-	-	-	
Cowpeas for peas	do.	do.		-	-	-	
Peanuts picked & thresh	do.	1,000 lb.		-	-	-	-
All upland cotton	Planted	Lb.	1937-41	187.0	187.0	187.0	187.0
Irish Potatoes							
Sweet potatoes	do.	Bu.	1937-41	85.0	85.0	85.0	85.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes							
Oats for grain	Harvested	Bu.	1937-41	21.2	21.2	21.2	21.2
Barley for grain	do.	do.	1937-41	15.4	15.4	15.4	15.4
Winter wheat	Planted	do.	-	-	-	-	
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton	1937-41	1.1	2.3	2.2	2.2
Wild hay							

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 26.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 5 - High Plains and Trans-Pecos Grazing

Item of livestock and livestock products	Unit	Reported for 1/		Reported for 1943	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942		1944	1945	
		1,000 units					
On farms January 1:							
Horses, mules & colts	Number	30.2	33.0	32.4	32.0	32.0	32.0
Cattle & calves, all	do.	421.6	392.2	391.2	400.0	400.0	400.0
Cows kept for milk, 2 yrs. & over	do.	16.2	16.2	16.0	17.0	17.5	17.5
Other cows, 2 yr. & over	do.				154.4	153.0	153.0
Sheep & lambs, all	do.	950.0	1216.2	1270.1	1000.0	750.0	750.0
Ewes, 1 yr. & over	do.				699.0	525.2	525.2
Hens & pullets	do.	216.3	235.3	299.9	300.0	300.0	300.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	1.6	2.5	4.3	5.0	xxx	5.0
Sows farrowed, fall 4/	do.	1.6	2.8	3.6	4.4	xxx	4.4
Chickens raised 5/	do.	288.3	378.7	390.0	375.0	375.0	375.0
Commercial broiler production	do.						
Turkeys raised	do.	5.1	7.3	7.5	7.5	7.5	7.5
Milk cows, average during year	do.	14.8	14.9	14.7	15.6	16.1	16.1
Milk produced	1,000 lbs.	59.8	52.1	51.4	54.6	56.2	56.2
Wool shorn	Pound		8827.5	9220.9	7260.0	xxx	5445.0
Eggs produced	Dozen	1673.6	2110.0	2689.1	2690.0	2690.0	2690.0
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			15162.2	16979.3	17061.0	17061.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Hogs

Hog numbers have increased rapidly to utilize surplus grains. The suggested capacity production of pork would involve 5,000 spring litters or twice the number farrowed in the spring of 1942. The major part of this increase was obtained in 1943 and it is believed that capacity production could be attained in 1944 assuming normal feed grain production for 1943.

Poultry and Eggs

Approximately 300,000 chicken hens were reported on farms on January 1, 1943. This was an increase of 65,000 over the number on the farms a year earlier. Continued production at the 1943 level is suggested as the wartime capacity of the area.

Limiting Factors to Wartime Capacity

The attainment of wartime capacity in this area should not involve any considerable difficulties with regard to production resources. The increased acreages of crops would involve some increase in labor requirements. With more effective use of labor within the area, and a reasonably effective placement program during peak seasons, these requirements could be met. With the exception of 300 combines to harvest grain sorghums, no additional farm machinery would be needed.

UPPER RIO GRANDE VALLEY AREA (6)

The Upper Rio Grande Valley extends along the Rio Grande River for about 70 miles above and below El Paso. All of the area has an average annual rainfall of less than 10 inches, making irrigation imperative for crop production. The portion of the area cultivated consists of a narrow strip of alluvial soils adjacent to the river. The elevation is relatively high, ranging from 3,000 to 4,000 feet. An average frost-free growing season of 220 days per year prevails in this area.

All farming is done under irrigation. Cotton occupies approximately three-fourths of the cropland, and alfalfa ranks second in importance. The balance of the cultivated acreage is devoted to fruit, truck crops, grain and forage sorghums, and corn in limited amounts. Dairy cattle and poultry are the chief livestock enterprises on the farms in this area, while some range cattle are found on the grazing lands away from the river.

Resources Available for Crop Production

Approximately 66,000 acres are irrigated. Surface water diverted from the Rio Grande River constitutes the water supply. No additional land is available for cultivation, and no appreciable increases in the supplies of irrigation water are anticipated, hence, the limits of land and water resources have been reached. Adjustments will principally be confined to shifting acreages from one crop to another.

Use of Resources for Crops

The great distance from the large consuming centers has had an important influence on cropping systems in Area 6. Cotton, because of its relatively high value per unit of weight, has a comparative advantage over alfalfa, and gets first choice of the land on most farms. Both crops are equally adapted to the physical conditions existing here. The vegetable crops are produced largely for local consumption, and occupy only a small part of the total cropland acreage.

All upland cotton has been increased from 30,400 acres in 1942 to 44,000 acres for wartime capacity. American-Egyptian cotton has been entirely eliminated under the maximum, the bulk of the 16,000 acres previously devoted to this crop being designated for return to Acala cotton. This area normally produces the highest grade of short staple cotton in the state, a high percentage of which will class 1 1/8 inches staple. Because of this, and the fact that Acala outyields the American-Egyptian cotton by two and one-half times, the shift away from the latter seems desirable. Production hazards and labor difficulties will be reduced by a return to Acala cotton.

The acreages of all tame hay, largely alfalfa, would be increased from 14,900 acres in 1942 to 18,000 acres for the maximum period. Farmers consider it desirable to have a high percentage of the cropland in alfalfa so as to maintain soil fertility and provide feed for livestock.

Processing and fresh vegetables totaled 3,000 acres in 1942. For the maximum it is believed 5,500 acres can be produced. Vegetables are an important war crop, and the additional supplies are needed to take care of the increased population in the area.

The shifts indicated above do not involve any changes that farmers could not accomplish in one year. For this reason, 1944 and the maximum acreages are identical.

Table 27. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 6, Upper Rio Grande Valley
Irrigated Area - Irrigated

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	1.0	.5	.6	.6	.6
Grain sorghums, all	do.	.2	0.0	.3	.3	.3
Sweet sorghums, except sirup	do.	.1	0.0	.2	.2	.2
All sorghums for grain						
All sorghums for silage	Harvested	.1	0.0	0.2	0.2	0.2
All sorghums for forage	do.	.2	0.0	.3	.3	.3
Soybeans, grown alone	Planted	-	-			
Soybeans for beans	Harvested	-	-			
Soybeans for hay	do.	-	-			
Cowpeas, grown alone	Planted	-	-			
Cowpeas for peas	Harvested	-	-			
Cowpeas for hay	do.	-	-			
Peanuts, grown alone	Planted.	-	-			
Peanuts picked & threshed	do.	-	-			
Peanuts for hay	do.	-	-			
Cotton, all upland	Planted	28.6	30.4	30.2	44.0	44.0
Under 15/16" staple 3/						
15/32" to 1 3/32" staple 3/	do.	17.0	18.4	18.2	26.0	26.0
1 1/8" staple & over 3/	do.	11.6	12.4	12.0	18.0	18.0
Cotton, Am Egyptian or Sea Is.	do.	12.2	10.3	15.2	0.0	0.0
Irish potatoes		-	-			
Sweet potatoes	do.	.1	0.0	.1	.1	.1
Beans, dry edible		-	-			
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables 6/	Harvested	1.4	1.4	2.2	2.5	2.5
Fresh vegetables, total 4/	do.	1.5	1.6	2.5	3.0	3.0
Cabbage						
Onions	do.	.1	.1	.1	.1	.1
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes	do.	-	.1	.2	.4	.4
Other intertilled crops, total						
Total cropland used for intertilled crops 5/		43.7	48.8	49.1	48.2	48.2
Oats	Planted	.1	0.0	.2	0.0	0.0
Barley	do.	-	-	.1	0.0	0.0
Winter Wheat		-	-			
Oats for grain	Harvested	.1	0.0	.1	0.0	0.0
Barley for grain		-	-			
Grains cut green for hay	do.	0.0	0.0	.1	0.0	0.0

Continued -

Table 27, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 6, Upper Rio Grande Valley Irrigated Area - Irrigated

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain						
Flaxseed		-	-			
Rice		-	-			
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/	-------	.1	0.0	.3	0.0	0.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	19.5	14.9	16.4	18.0	18.0
Hay, all tame	do.	19.5	14.9	16.5	18.0	18.0
Alfalfa seed						
Total cropland used for sod crops 5/	-------	19.5	14.9	16.4	18.0	18.0
Total cropland used for crops 5/	-------	63.3	63.7	65.8	66.2	66.2
Idle cropland	-------	.6	1.4	.7	.3	.3
Total cropland 5/	-------	63.9	65.1	66.5	66.5	66.5
Wild hay		-	-	-		
Total land in farms						

1/ By the Bureau of Agricultural Economics (or distributions by areas of AAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.
6/ Included in fresh vegetables total.

Table 28.Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 6 ,Upper Rio Grande Valley

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all.....	Planted	Bu.	1937-41	28.3	28.3	23.3	28.3
All sorghums for grain	Harvested	do	1937-41	17.5	17.5	17.5	17.5
All sorghums for silage	do	Ton	1937-41	4.0	4.0	4.0	4.0
All sorghums for forage	do	do	1937-41	1.7	1.7	1.7	1.7
Soybeans for beans.....							
Cowpeas for peas.....							
Peanuts picked & thresh.							
All upland cotton.....	Planted	Lb.	1937-41	698.0	698.0	698.0	650.0
Irish potatoes.....							
Sweet potatoes.....	do	Bu.	1937-41	95.0	95.0	95.0	95.0
Fresh vegetables:							
Cabbage.....							
Onions.....	Harvested	100 lb.	1937-41	60.0	60.0	60.0	60.0
Beets.....							
Carrots.....							
Peppers.....							
Spinach.....							
Tomatoes.....	do	Ton	1937-41		3.0	3.0	3.0
Oats for grain.....							
Barley for grain.....							
Winter wheat.....							
Rye for grain.....							
Rice.....							
Hay, all tame.....	Harvested	Ton	-	-	3.5	3.5	3.5
Wild hay.....							

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 29.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 6 - Upper Rio Grande Valley

Item of livestock and livestock products	Unit	Reported for 1/		Reported for 1943:	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942		1944	1945	
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	3.0	3.3	3.4	3.0	3.0	3.0
Cattle & calves, all	do.	9.7	8.9	8.7	10.0	10.0	10.0
Cows kept for milk, 2 yrs. & over	do.	4.5	5.0	5.7	6.0	6.5	6.5
Other cows, 2 yr.&over	do.				1.0	1.0	1.0
Sheep & lambs, all	do.	5.5	8.6	9.0	9.0	9.0	9.0
Ewes, 1 yr. & over	do.				6.2	6.2	6.2
Hens & pullets	do.	49.8	53.9	68.4	70.0	75.0	75.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	.4	.3	.5	.4	xxx	.4
Sows farrowed, fall 4/	do.	.2	.4	.3	.3	xxx	.3
Chickens raised 5/	do.	107.6	138.1	145.0	135.0	135.0	135.0
Commercial broiler production	do.						
Turkeys raised	do.	4.8	4.7	4.5	4.5	4.5	4.5
Milk cows, average during year	do.	4.4	5.0	5.7	6.0	6.5	6.5
Milk produced	1,000 lbs.	24.4	25.0	28.5	30.0	32.4	32.4
Wool shorn	Pound			62.4	65.3	65.3	xxx	65.3
Eggs produced	Dozen	406.3	558.2	708.5	725.1	776.9	776.9
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			2226.8	2094.7	2096.5	2096.5

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ December 1 (of previous year) to June 1.

4/ June 1 to December 1.

5/ Excluding commercial broilers.

6/ Twelve-month period beginning on October 1.

Use of Resources for Livestock

Concentration of war activities within the area has created a great demand for livestock products, particularly milk and eggs. Nevertheless, the basis for livestock is extremely limited because of lack of feed. Expansion of alfalfa production in the maximum situation would provide additional feed for dairy production. Under these conditions the number of milk cows could be increased to 6,500 head, or 1,500 more than were reported in 1942. Only a part of this increase can be attained by 1944.

Chicken numbers have experienced a moderate increase in response to the demand for poultry products. About 54,000 hens were reported in 1942, 68,000 in 1943, and under wartime capacity 75,000 hens are considered feasible. It is estimated that 70,000 hens might be on farms in 1944.

Limiting Factors to Wartime Capacity

Maximum production should be attained in this area without too much difficulty. Labor needs for cotton harvesting will be no greater in 1944 and under the maximum than in 1942. The demand, however, cannot be entirely met from local sources, and outside labor will have to be brought in to harvest the crop.

The cropping system would not be materially changed and present machinery inventories should be nearly adequate, providing repairs can be secured. Normal replacements will be necessary, and a few additional pick-up balers may be needed to save on labor.

EDWARDS PLATEAU GRAZING AREA (7)

The agriculture of the Edwards Plateau Grazing Area is predominantly grazing. Less than 5 percent of the land in farms is cultivated. Cropland is concentrated along the northern and eastern fringe of the area where rainfall ranges from 20 to 30 inches and is largely made up of portions of such areas as the Rolling Plains, the West Cross Timbers, the Black Prairie and the Rio Grande Plains. The rainfall for the entire area ranges from 15 inches in the west to 30 inches in the east. The area proper is characterized by a rough broken topography and shallow, stony clay loam soils. A wide range of vegetation consisting of grasses and various types of browse plants permit a diversified system of grazing involving cattle, sheep and Angora goats. A high percentage of the sheep and goats of the state are concentrated in this area. In the eastern part of the Plateau small ranches predominate and here ranching is intermixed with stock farming and cotton farming. Units are larger in the drier portion to the west where ranch operations are on an extensive scale.

Cotton, corn, sorghums, and small grains are the principal crops. Some peanuts are raised on the sandy soils of the central basin and of the West Cross Timbers which project into some of the Plateau counties. Irrigation is practiced in local situations involving less than 2 percent of the cropland of the area.

Resources Available for Crop Production

Cropland resources available for maximum production are estimated at 1,085,000 acres. According to the Soil Conservation Service, 1,046,000 acres, or 93 percent of the cropland enumerated by the 1939 census, are suitable for continuous use in crops. About 4,000 acres of the remainder is considered sufficiently productive to continue in use during the war period. The remaining cropland indicated for maximum production consists of 35,000 acres of plowable pasture considered suitable for cropping.

Although irrigation has been practiced in this area for many years, no large developments have yet materialized. Limited water and associated land resources over the main part of the area have been the limiting factors. At the present time approximately 17,000 acres of land are under irrigation. Individual projects for diverting water from streams, either by gravity or by pumping, provide the bulk of the water used for this purpose. Hay, sorghums, corn, and oats are the principal crops irrigated.

It is estimated that installation of additional pumping plants and canals would make supplemental water available to 5,000 acres not irrigated at present. Approximately 3,000 acres of this land lies along the San Saba River and 2,000 acres along the Concho and North Concho Rivers.

Use of Resources for Crops

Commercial crops occupy a relatively small part of the cultivated acreage since feed for livestock is the principal consideration of ranchmen and many farmers. A full and well-balanced feed acreage is needed to support the high level of livestock production. No major changes were suggested for the crop pattern of the area. Minor adjustments from 1942 levels were indicated to establish normal relationships between crops. The 1942 crop pattern for the area deviated from the usual in that corn and sorghum acreages were relatively large and the harvested acreage of small grains low. The usual acreage of small grain was seeded in the fall of 1941 but due to green bug damage large acreages were abandoned and put in

Table 30. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 7, Edwards Plateau

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	168.1	203.8	179.6	180.0	170.0
Grain sorghums, all	do.	169.5	213.9	292.1	290.0	290.0
Sweet sorghums, except sirup	do.	154.5	85.7	75.0	75.0	75.0
All sorghums for grain	Harvested	106.9	71.9	152.1	150.0	150.0
All sorghums for silage	do.	16.2	16.0	15.0	15.0	15.0
All sorghums for forage	do.	194.4	186.0	200.0	200.0	200.0
Soybeans, grown alone	Planted	-	-	.1	0	0
Soybeans for beans						
Soybeans for hay	Harvested	-	-			
Cowpeas, grown alone	Planted	20.9	14.8	13.4	10.0	10.0
Cowpeas for peas	Harvested	3.1	3.3	3.0	3.0	3.0
Cowpeas for hay	do.	2.8	.7	0	0	0
Peanuts, grown alone	Planted	10.0	31.9	35.8	40.0	50.0
Peanuts picked & threshed	Harvested	9.1	30.5	32.0	38.0	48.0
Peanuts for hay	do.	9.0	29.0	31.0	36.0	45.0
Cotton, all upland	Planted	192.0	226.8	218.0	200.0	200.0
Under 15/16" staple 3/	do.	31.0	102.0	98.0	90.0	86.0
15/32" to 1 3/32" staple 3/	do.	161.0	124.8	120.0	110.0	114.0
1 1/8" staple & over 3/						
Cotton, Am Egyptian or Sea Is	do.	-	-			
Irish potatoes	do.	.4	.4	.6	1.0	1.0
Sweet potatoes	do.	.2	.2	.3	.5	.5
Beans, dry edible	do.	0	.2	1.3	1.0	1.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested			.3		
Cabbage	do.	-	-			
Onions	do.	-	-			
Beets						
Carrots						
Peppers						
Spinach	do.			.3	0	0
Tomatoes						
Other intertilled crops, total						
Total cropland used for intertilled crops 5/	---------	715.6	777.7	816.5	797.5	797.5
Oats	Planted	243.6	249.2	233.6	245.0	245.0
Barley	do.	18.5	13.4	21.9	20.0	20.0
Winter wheat	do.	42.2	33.7	35.0	35.0	35.0
Oats for grain	Harvested	194.1	146.5	168.8	208.0	208.0
Barley for grain	do.	15.8	7.0	14.5	17.0	17.0
Grains cut green for hay	do.	9.6	7.6	9.6	9.0	9.0

Continued

Table 30.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons-Continued

Area 7 - Edwards Plateau

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Planted	-	-			
Flaxseed	do.	-	-			
Rice						
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/		289.3	242.3	256.5	260.0	260.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	38.3	37.3	26.2	25.0	25.0
Hay, all tame	do.	59.7	74.6	66.8	70.0	79.0
Alfalfa seed						
Total cropland used for sod crops 5/		38.3	37.3	26.2	25.0	25.0
Total cropland used for crops 5/		1043.2	1057.3	1099.2	1082.5	1082.5
Idle cropland		81.8	67.7	25.8	2.5	2.5
Total cropland 5/		1125.0	1125.0	1125.0	1085.0	1085.0
Wild hay	Harvested	1.6	1.7	1.7	1.7	1.7
Total land in farms		23414.0	23414.0	23414.0	23414.0	23414.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ Approximate planted acreage of varieties which usually yield specified staple lengths.

4/ Commercial crop.

5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 31. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 7, Edwards Plateau

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	15.7	15.7	15.7	15.7
All sorghums for grain	Harvested	do.	1937-41	18.6	18.6	18.6	18.6
All sorghums for silage	do.	Ton		4.3	4.3	4.3	4.3
All sorghums for forage	do.	do.	1937-41	1.2	1.2	1.2	1.2
Soybeans for beans	do.	Bu.					
Cowpeas for peas	do.	do.	1937-41	6.2	6.2	6.2	6.2
Peanuts picked & threshed	do.	1,000 lb.	1937-41	.438	.438	.425	.425
All upland cotton	Planted	Lb.	1937-41	129.0	129.0	129.0	129.0
Irish Potatoes	do.	Bu.	1937-41	48.0	48.0	48.0	48.0
Sweet potatoes	do.	do.	1937-41	72.0	72.0	72.0	72.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes							
Oats for grain	Harvested	Bu.	1937-41	25.3	25.3	25.3	25.3
Barley for grain	do.	do.	1937-41	17.3	17.3	17.3	17.3
Winter wheat	Planted	do.	1937-41	8.1	8.1	8.1	8.1
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton	1937-41	1.1	1.1	1.1	1.1
Wild hay	do.	do.	1937-41	.8	.8	.8	.8

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 32.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 7 - Edwards Plateau

Item of livestock and livestock products	Unit	Reported for 1/		Reported for	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942	1943	1944	1945	
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	75.5	69.6	64.6	60.0	55.0	55.0
Cattle & calves, all	do.	585.9	620.3	584.1	600.0	650.0	650.0
Cows kept for milk, 2 yrs. & over	do.	58.6	57.5	58.9	60.0	60.0	60.0
Other cows, 2 yr. & over	do.				213.1	228.7	228.7
Sheep & lambs, all	do.	5888.7	6257.1	6290.4	6000.0	5750.0	5750.0
Ewes, 1 yr. & over	do.				4144.3	3978.4	3978.4
Hens & pullets	do.	1104.5	1211.2	1518.1	1600.0	1600.0	1600.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	12.6	13.0	17.4	18.0	xxx	20.0
Sows farrowed, fall 4/	do.	12.1	13.6	15.6	15.5	xxx	17.5
Chickens raised 5/	do.	1668.7	1699.5	1750.0	1750.0	1750.0	1750.0
Commercial broiler production	do.						
Turkeys raised	do.	213.1	202.9	200.0	200.0	200.0	200.0
Milk cows, average during year	do.	53.1	53.7	55.0	56.0	56.0	56.0
Milk produced	1,000 lbs.	150.2	155.5	159.3	162.2	162.2	162.2
Wool shorn	Pound		45415.8	45668.3	43560.0	xxx	41745.0
Eggs produced	Dozen	8528.5	10894.7	13650.2	14386.7	14386.7	14386.7
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			33012.8	34475.9	37043.6	37043.6

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ December 1 (of previous year) to June 1.

4/ June 1 to December 1.

5/ Excluding commercial broilers.

6/ Twelve-month period beginning on October 1.

corn and sorghums. In general, the crop acreages expected in 1943 more nearly represent the normal relationships between crops than did 1942 planting. By seeding land which was idle the previous year a material increase in the 1943 grain sorghum acreage was possible.

At maximum capacity, cropland planted to feed crops such as corn, grain sorghums, sweet sorghums, oats, and barley would be at approximately the same level as expected in 1943. The same holds true for wheat. Although some reduction is indicated for wartime capacity, the need for a cash crop on the small farms of the area requires that cotton acreage remain at near the 1943 level.

The acreage of cropland physically adapted to peanuts will safely permit growing 50,000 acres, or 14,000 acres more than expected in 1943. Four thousand acres of this increase can be accomplished by 1944.

Use of Resources for Livestock

Native pastures provide a large part of the feed resources of the Plateau where beef cattle and sheep utilize the same ranges. In general, favorable moisture conditions have prevailed during the three years previous to 1943. In response to favorable sheep and wool prices, ranchmen have over-stocked ranges with sheep and under-stocked with cattle. This is the opinion of both ranchmen and livestock specialists. Evidence of over-grazing, particularly with sheep, is the rapid increase of bitterweed and needle grass. It is believed that an adjustment in sheep and cattle numbers would obtain better utilization of range resources.

Sheep

Sheep numbers have exceeded the point where increased numbers will result in increased production. For this reason a downward adjustment is needed to attain the full productive capacity of the area. The 5,750,000 sheep and lambs indicated for capacity production are 500,000 less than the number reported January 1, 1942, and about the same as reported for 1940. Reduction to 6,000,000 head is considered desirable for 1944. Heavy marketing during the next few months will be necessary to obtain this adjustment. Many factors such as prices for slaughter sheep, the demand for feeder lambs and the condition of the range will affect the adjustment made by January 1, 1944. Marketings to date for 1943 are well above those for the corresponding period of last year and indicate that the trend is toward fewer sheep.

Beef Cattle

The capacity of the area to produce beef would be increased by reducing sheep numbers. The 650,000 head of cattle indicated for maximum is more than were reported in 1942, and an increase of 66,000 over the 1943 level.

Beef production in 1944 will be affected by the extent to which sheep are reduced and also by range conditions. Below average moisture during the remainder of 1943 would retard expansion of cattle numbers while a severe drought would result in a reduction of both sheep and cattle numbers. Assuming normal moisture conditions, an increase of 16,000 cattle is considered feasible for 1944.

Poultry

Compared to poultry numbers in 1942, a large increase in chickens is indicated for the maximum situation. Most of this increase has already been made, however, since maximum numbers are less than 6 percent above 1943 numbers. These maximum numbers of 1,600,000 chicken hens can be attained by 1944.

Hogs

Feed production is considered sufficient for increased hog numbers. Spring farrowing of 20,000 sows indicated for maximum capacity would be 20 percent above those of the current year and 50 percent more than were reported for 1942. Hog production suggested for 1944 would involve a small increase over that expected in 1943.

Limiting Factors to Wartime Capacity

The adjustments suggested for this area are designed principally to obtain a more desirable relationship between livestock numbers and normal range and forage crop production. Reduction in sheep numbers and a corresponding increase in cattle numbers represent the major adjustments suggested. The future market conditions for sheep, which depend somewhat upon the capacity of slaughtering facilities, and also the relative moisture supply effecting range conditions are important factors conditioning these changes. These adjustments as well as the slight changes in the cropping pattern should not require significant increases in production resources, such as labor, fertilizer, equipment, and other materials. Some additional pumping facilities would be required in connection with the relatively small increase in irrigated acreage.

RIO GRANDE PLAIN AREA (8)

The Rio Grande Plain lies, for the most part, within the 20- to 25-inch rainfall belt. Some 40 percent of the area is west of the line which approximates the western limits of systematic dry-land farming. The soils vary from sandy loams to heavy clays. The lighter soils are predominant, while the heavy clays are confined to a relatively narrow strip along the eastern part of the area and to the river bottoms.

A wide diversity of agriculture characterizes the agriculture of the Rio Grande Plain. Cattle ranching is the principal enterprise. Dry-land farming is carried on throughout the eastern part of the area. In this section the principal crops are cotton, corn, grain sorghum, peanuts, and watermelons. The intensive agriculture in the western grazing section is limited to scattered blocks of irrigated lands in which spinach, onions, carrots, and other truck crops are grown.

Resources Available for Crop Production

The 1939 census reports 920,000 acres of cropland in the Rio Grande Plain Area. Of this acreage the Soil Conservation Service classifies approximately 819,000 acres, or 89 percent as suitable for continuous cultivation. The remaining 101,000 acres are not sufficiently productive to warrant the application of the intensive erosion control methods necessary to maintain them in cultivation. However, due to the urgent need for increasing peanut production it was considered desirable to continue in cultivation 20,000 acres of this land which is of a sandy nature and particularly adapted to peanut production. An additional 20,000 acres of pasture land is considered suitable for cultivation. Thus, a total of 859,000 acres represents the approximate maximum acreage of cropland which might be profitably cultivated during the war period.

Irrigated crops are grown in the Rio Grande Plain to the extent of approximately 96,000 acres. Slightly upwards of two-thirds of this acreage is located in the Nueces River basin where both ground and surface water is used. Approximately 34,000 acres is irrigated with water released from storage reservoirs or through direct diversion pumps along the Nueces River and its tributaries. The remaining 33,000 acres in this basin are irrigated from underground water. The Rio Grande River constitutes the other principal source of water. Pump diversion is used exclusively as a means of supplying the water to the land.

The acreage of irrigated land could be increased about 44,000 acres, bringing the total to about 140,000 acres by 1945. The principal source of additional water is a proposed storage reservoir to be constructed on the Nueces River near the Dimmit and LaSalle County line. Water from this reservoir would irrigate approximately 40,000 acres in LaSalle County. The construction of this reservoir, establishing the necessary canals, and clearing the land for cultivation is considered feasible by 1945. The remaining new acreage would be irrigated principally by pumping from underground sources.

Use of Resources for Crops

Fresh Vegetables

Fresh vegetable production appears to offer the best opportunity in the Rio Grande Plain for increasing the production of most essential war crops. With the exception of onions these crops are grown principally under irrigation and can be increased proportionately as the irrigated acreage is increased. A total of 52,000 acres of vegetables were grown in 1942. This acreage could be increased to

about 94,000 acres in 1945. Spinach made up about 50 percent of the 1942 acres, or 26,000 acres. This crop would be increased to 50,000 acres in 1945. Onions would be increased from 9,000 to 19,000 acres, carrots from 6,000 to 9,000, and tomatoes from 7,000 to 10,000 acres.

The maximum acreage of fresh vegetables for 1944 is estimated at 65,000 acres. This is a 24 percent increase over the 1942 acreage and a slightly larger increase over the reported acreage for 1943. The largest increase is proposed for spinach. In 1942 about 26,000 acres were grown, which would be increased to 34,000 acres in 1944. Carrots would be increased from 6,000 to 9,000 acres and onions from 9,000 to 11,000 acres.

Increased seed supplies, labor and facilities for grading, packing, and shipping these products out of the area are most important needs which must be met in connection with the expanded program. The prevailing system of harvesting, assembling and marketing lends itself to rapid expansion in acreage. It is assumed that any program for increasing acreages would take full advantage of this fact.

Peanuts

Peanuts are next to fresh vegetables in importance as a war crop. Prior to the war this area was second only to the West Cross Timbers in commercial production and the acreage more than doubled between 1941 and 1942. Approximately 142,000 acres were grown in 1942 and the reported 1943 acreage is 133,000. Evidently the area has about reached its capacity for peanut production. The estimated capacity of 150,000 acres is 105 percent of the 1942 acreage and 12 percent of the 1943 acreage.

Other Crops

The remaining adjustments in crops grown which would result in maximum contribution to the war food program are confined largely to increasing grain sorghum production and decreasing the cotton and corn sufficiently to permit the above increases to take place. Cotton was grown in Area 8 to the extent of about 146,000 acres in 1942. The average yield for the five-year period, 1937-41, was only 87 pounds per acre. With an average yield for grain sorghum of 16 bushels, it is considered desirable to increase the acreage of this crop at the expense of cotton. For these general reasons, it is proposed that the acreage of grain sorghum be increased from 122,000 acres in 1942 to 150,000 acres. Cotton would be decreased from 146,000 acres to 120,000 acres; and corn from 258,000 to 215,000 acres. The acreage of other crops such as small grains, flaxseed, and sweet and Irish potatoes would remain about the same.

Since the above adjustments represent relatively small shifts in acreages, it is considered possible to make these changes by 1944.

Use of Resources for Livestock

The feed resources of a large portion of the Rio Grande Plain are suited to extensive rather than intensive types of livestock production. During the present emergency feed grain supplies within the area have not been sufficient to encourage rapid expansion of grain consuming livestock. With the maximum situation feed production would not be sufficient to warrant major adjustment in the general livestock pattern.

Table 35. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 8, Rio Grande Plain

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	259.5	258.5	228.7	215.0	215.0
Grain sorghums, all	do.	121.2	122.0	156.6	150.0	150.0
Sweet sorghums, except sirup	do.	147.8	103.9	100.0	100.0	100.0
All sorghums for grain	Harvested	53.8	52.0	116.6	145.0	145.0
All sorghums for silage	do.	15.5	11.3	10.0	10.0	10.0
All sorghums for forage	do.	174.8	144.6	130.0	95.0	95.0
Soybeans, grown alone	Planted	-	-	.2	-	-
Soybeans for beans		-	-			
Soybeans for hay		-	-			
Cowpeas, grown alone	do.	20.4	21.7	20.2	0.0	0.0
Cowpeas for peas	Harvested	3.1	8.2	8.0	0.0	0.0
Cowpeas for hay	do.	1.0	.6	1.0	0.0	0.0
Peanuts, grown alone	Planted	66.0	142.4	133.3	150.0	150.0
Peanuts picked & threshed	Harvested	65.4	137.6	126.3	142.0	142.0
Peanuts for hay	do.	59.0	94.0	120.0	135.0	135.0
Cotton, all upland	Planted	164.8	140.4	148.0	120.0	120.0
Under 15/16" staple 3/	do.	12.0	15.0	15.0	12.0	12.0
15/32" to 1 3/32" staple 3/	do.	152.8	131.4	133.0	108.0	108.0
1 1/8" staple & over 3/		-	-	0	0	0
Cotton, Am Egyptian or Sea Is.						
Irish potatoes	do.	.9	.8	1.3	1.3	1.3
Sweet potatoes	do.	.3	.2	1.5	1.5	1.5
Beans, dry edible	do.	0.0		9.0	10.0	12.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	47.5	52.1	47.0	64.6	93.0
Cabbage	do.	3.0	2.6	1.2	2.2	3.0
Onions	do.	6.0	8.8	7.8	10.8	13.8
Beets	--------	.2	.2	.4	.2	.2
Carrots	--------	4.1	6.0	8.2	9.0	9.0
Peppers	--------	1.5	1.6	.9	.9	1.6
Spinach	--------	25.6	26.3	23.1	34.0	50.5
Tomatoes	Fall crop	5.8	5.0	3.7	5.0	8.0
	Other Tom	1.5	1.6	2.3	2.5	2.5
Other intertilled crops, total						
Total cropland used for intertilled crops 5/	--------	828.4	850.4	846.2	809.0	859.0
Oats	Planted	29.4	27.0	39.4	35.0	35.0
Barley	do.	.8	.9	1.7	0.0	0.0
Winter Wheat	do.	1.0	.8	1.0	0.0	0.0
Oats for grain	Harvested	17.6	18.3	20.7	30.0	30.0
Barley for grain	do.	.2	.3	.2	0.0	0.0
Grains cut green for hay	do.	2.5	2.0	1.7	0.0	0.0

Continued -

Table 33.continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 8, Rio Grande Plain

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted	1.2	1.2	2.0	2.0	2.0
Rice	do.	-	-			
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/	-------	32.4	29.0	42.1	35.0	35.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	15.2	14.7	15.2	15.0	15.0
Hay, all tame	do.	77.6	111.3	137.9	150.0	150.0
Alfalfa seed						
Total cropland used for sod crops 5/	-------	15.2	14.7	15.2	15.0	15.0
Total cropland used for crops 5/	-------	876.0	895.0	903.5	859.0	859.0
Idle cropland	-------	44.0	25.0	16.5	0.0	0.0
Total cropland 5/	-------	920.0	920.0	920.0	859.0	859.0
Wild hay	Harvested	1.2	1.2	1.2	1.2	1.2
Total land in farms		11842.0	11842.0	11842.0	11842.0	11842.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 34. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 8, Rio Grande Plains

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	12.8	12.8	12.8	12.8
All sorghums for grain	Harvested	do.	-	-	16.0	16.0	16.0
All sorghums for silage	do.	Ton	-	-	5.0	5.0	5.0
All sorghums for forage	do.	do.	-	-	1.2	1.2	1.2
Soybeans for beans							
Cowpeas for peas	do.	do.	1937-41	5.8	5.8	5.8	5.8
Peanuts picked & thresh	do.	1,000 lb	1937-41	468.0	450.0	450.0	450.0
All upland cotton	Planted	lb.	1937-41	87.0	100.0	100.0	100.0
Irish potatoes	do.	Bu.	1937-41	98.0	98.0	98.0	98.0
Sweet potatoes	do.	do.	1937-41	64.0	64.0	64.0	64.0
Fresh vegetables:							
Cabbage	Harvested	do.	1937-41	3.8	3.8	3.8	3.8
Onions	do.	100 lb.	1937-41	118.0	118.0	118.0	118.0
Beets	do.	bu.	1937-41	160.0	160.0	160.0	160.0
Carrots	do.	do.	1937-41	170.0	170.0	170.0	170.0
Peppers	do.	do.		110.0	110.0	110.0	110.0
Spinach	do.	do.	1937-41	175.0	175.0	175.0	175.0
Tomatoes	do.	Ton			3.0	3.0	3.0
Oats for grain	do.	Bu.	1937-41	19.2	19.2	19.2	19.2
Barley for grain	do.	do.					4.7
Winter wheat	Planted	do.	1939-41	4.7	4.7	4.7	
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton	1937-41	.8	.8	.8	.8
Wild hay	do.	Ton	1937-41	.9	.9	.9	.9

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 35.Estimates of Wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 8, Rio Grande Plains

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 3/ 1944	Wartime capacity 3/ 1945	Wartime maximum capacity 3/
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	58.4	53.3	48.4	43.0	40.0	40.0
Cattle & calves, all	do.	688.7	691.0	618.7	600.0	600.0	600.0
Cows kept for milk, 2 years +	do.	56.1	59.0	58.1	58.0	58.0	58.0
Other cows, 2 years +					265.4	262.8	262.8
Sheep & lambs, all	do.	71.2	80.6	86.5	80.0	80.0	80.0
Ewes, 1 year +	do.				46.0	46.1	46.1
Hens & pullets	do.	610.6	676.3	743.3	770.0	800.0	800.0
				Expected in 1943			
During year:							
Sows farrowed, spring 4/	do.	7.7	10.2	12.6	12.5	xxx	12.5
Sows farrowed, fall 5/	do.	12.2	10.3	10.7	10.0	xxx	10.0
Chickens raised 6/	do.	952.3	928.5	935.0	950.0	950.0	950.0
Commercial broiler production	do.						
Turkeys raised	do.	46.0	52.0	50.0	50.0	50.0	50.0
Milk cows, average during the year	do.	52.7	54.0	53.2	53.1	53.1	53.1
Milk produced (Thousand lbs.)		180.0	173.1	170.4	170.1	170.1	170.1
Wool shorn	Pound		585.2	628.0	580.8	xxx	580.8
Eggs produced	Dozen	4810.3	5229.7	5748.2	5954.7	6186.7	6186.7
Cattle put on feed 7/	Number					xxx	
Sheep & lambs put on feed 7/	do.					xxx	
Net production of hogs 7/	do.			18629.5	18101.2	18067.5	18067.5

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and a "wartime maximum capacity."
4/ December 1 (of previous year) to June 1.
5/ June 1 to December 1.
6/ Excluding commercial broilers.
7/ Twelve-month period beginning on October 1.

Beef Cattle

Better than average pasture conditions at a time of rising cattle prices have encouraged heavy rates of stocking. It is believed that cattle numbers as of January 1, 1942, were above the normal grazing capacity of the pastures. Between January 1, 1942 and January 1, 1943, the number of all cattle was reduced approximately 70,000 head. This change was limited primarily to beef cattle since the number of dairy cows did not change materially. It is considered that 600,000 head of all cattle would approximate the normal carrying capacity of the range and should be maintained during the war period. Attainment of the maximum situation would require further reduction in beef cattle numbers from the 1943 level and could be accomplished by 1944.

Poultry and Eggs

The 800,000 hens and pullets indicated for the maximum situation is an increase of 124,000 (or 10 hens per farm) compared to the number reported for 1942. Approximately 50 percent of this expansion was obtained by 1943.

Other Livestock

It is believed that maximum wartime production will be facilitated if the numbers of other types of productive livestock remain at about the 1943 level.

Limiting Factors to Wartime Capacity

In the attainment of maximum production it will be necessary that certain limiting factors be overcome. Additional seasonal workers will be needed to meet increased labor demands. The harvesting of peanuts and grain sorghums and the planting of fall tomatoes combine during August to create a most critical period of labor needs. Approximately 5,500 additional workers would be needed during that month. Additional year-round workers would be necessary as well as seasonal labor during other months. However, it is anticipated that these requirements would be met largely through more effective use of present workers.

The principal need for new machinery is in connection with the harvesting of grain sorghum. Some 400 additional combines would be needed for harvesting the grain sorghum acreage. A limited number of tractors in addition to replacements would also be needed. Peanut-harvesting equipment should be reasonably adequate. A small number of side-delivery rakes could be used to advantage. Some additional facilities for washing, packing, and loading fresh vegetables will also be needed.

The increased vegetable acreage would make necessary the use of additional fertilizer. Assuming that most farmers used fertilizer in accordance with Experiment Station recommendations, approximately 6,000 tons would be needed for the additional acreage.

LOWER RIO GRANDE VALLEY AREA (9)

The Lower Rio Grande Valley is composed of Cameron, Hidalgo, and illacy Counties, and is located in the southernmost tip of the state. The smooth fertile soils associated with the long growing seasons permit the production of a wide range of crops. The soils vary from sandy loams, predominating in the northern portion of the area to loams and clay loams in the southern part. Two distinctive types of farming characterize the agriculture of this area. In the northern part only dry-land farming is carried on and the principal crops are cotton, corn, and grain sorghums. Considerable acreages of onions, watermelons, and other truck crops are also grown. Irrigated crops are grown almost exclusively in the remaining part of the area. Winter vegetables and citrus fruits are the principal crops. Cotton and feed crops are grown extensively during the summer season and are often double cropped with winter vegetables.

Resources Available for Crop Production

The 1939 census reports 500,000 acres of cropland in the Lower Rio Grande Valley. According to the records of the Soil Conservation Service, only about 5,000 acres of this land is unsuited to crop production. This acreage is made up principally of the lower poorly drained areas located in the southern part which have become strongly alkaline in the course of irrigation.

In addition to present cropland, there are approximately 16,000 acres of pasture land which could be brought into cultivation. This land would not require clearing, and would be available for use immediately. Thus, the maximum acreage which could be used for crops during the war period is about 511,000 acres.

About 340,000 acres of land in the Lower Valley is irrigated each year. The Rio Grande River constitutes the only source of water. The irregular flow of the river and International agreements relating to the diversion of water from this stream limit irrigation and also make it impractical to increase the supply of water during the war period. However, through more effective use of present supplies, it is estimated that an additional 5,000 acres could be irrigated.

Use of Resources for Crops

In view of the limitations on land and water resources, increased production from this area must be obtained through shifting to more nutritive food crops and through more intensive use of the land by double cropping.

Fresh Vegetables

Fresh vegetables can be increased to about 82,000 acres from the 72,000 acres grown in 1942. The principal shifts for various vegetable crops include increasing cabbage from 25,000 to 27,000 acres, onions (exclusively dry-land) from 2,500 to 8,000 acres, carrots from 6,000 to 8,000 acres, and tomatoes from 26,000 to 31,000 acres. Beets would be decreased from 4,600 to 2,000 acres, spinach from 3,400 to 2,000 acres, and peppers from 900 to 500 acres.

Table 36. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 9, Lower Rio Grande Valley

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	42.3	54.0	48.1	46.0	46.0
Grain sorghums, all	do.	32.0	32.0	38.9	51.0	51.0
Sweet sorghums, except sirup	do.	39.9	42.0	40.0	40.0	40.0
All sorghums for grain	Harvested	18.0	13.4	28.9	41.0	41.0
All sorghums for silage	do.	4.3	5.4	5.0	5.0	5.0
All sorghums for forage	do.	44.6	49.3	45.0	45.0	45.0
Soybeans, grown alone	Planted			-		
Soybeans for beans	Harvested					
Soybeans for hay	do.					
Cowpeas, grown alone	Planted	5.1	8.3	7.7	0	0
Cowpeas for peas	Harvested	1.0	3.2			
Cowpeas for hay	do.	.3	.3			
Peanuts, grown alone	Planted	0	3.7	3.5	0	0
Peanuts picked & threshed	Harvested	0	1.8	3.5		
Peanuts for hay	do.	0	1.1	1.4		
Cotton, all upland	Planted	168.7	193.5	199.8	218.0	218.0
Under 15/16" staple	do. 3/	12.0	19.0	20.0	22.0	22.0
15/32" to 1 3/32" staple	do. 3/	156.7	174.5	179.8	196.0	196.0
1 1/8" staple & over	do. 3/					
Cotton, Am. Egyptian or Sea Is.	do.	.8	.5	.2	0	0
Irish potatoes	do.	9.4	10.0	11.8	15.0	15.0
Sweet potatoes	do.	-	-	.3	.3	.3
Beans, dry edible	do.	-	0	.2	0	0
Processing vegetables, total 4/	do.					
Tomatoes	do.					
Miscellaneous vegetables 6/	Harvested	4.0	4.0	4.0	4.0	4.0
Fresh vegetables, total 4/	do.	52.5	72.0	76.2	82.5	82.5
Cabbage	do.	15.0	25.0	20.7	27.0	27.0
Onions	do.	1.0	2.5	3.7	8.0	8.0
Beets	do.	5.4	4.6	4.6	2.0	2.0
Carrots	do.	6.2	6.0	8.0	8.0	8.0
Peppers	do.	.6	.9	.9	.5	.5
Spinach	do.	2.2	3.4	4.5	2.0	2.0
Tomatoes	do.	18.1	25.6	31.8	31.0	31.0
Other intertilled crops, total	Harvested					
Total cropland used for intertilled crops 5/		350.7	416.6	416.5	430.0	430.0
Oats	Planted	.4	.4	.4	0	0
Barley	do.			-		
Winter wheat	do.			-		
Oats for grain	Harvested	.1	.1	.1	0	0
Barley for grain	do.			-		
Grains cut green for hay	do.	.05	.04	-	0	0

Continued -

Table 36.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons-Continued

Area 9 - Lower Rio Grande Valley

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 1944 2/	Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested	1.0	.2	1.0	1.0	1.0
Flaxseed	Planted					
Rice	do.	2.0	2.0	2.0	2.0	2.0
Other crops	Harvested	75.0	75.0	75.0	75.0	75.0
Citrus fruits		77.4	77.6	77.4	77.0	77.0
Total cropland used for close-seeded crops & citrus fruits 5/						
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	4.3	3.9	4.1	4.0	4.0
Hay, all tame	do.	4.6	5.4	5.5	4.0	4.0
Alfalfa seed						
Total cropland used for sod crops 5/		4.3	3.9	4.1	4.0	4.0
Total cropland used for crops 5/		432.4	498.1	498.0	511.0	511.0
Idle cropland		67.6	1.9	2.0	0	0
Total cropland 5/		500.0	500.0	500.0	511.0	511.0
Wild hay	Harvested	.5	.5	.5	.5	.5
Total land in farms		1256.0	1256.0	1256.0	1256.0	1256.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ Approximate planted acreage of varieties which usually yield specified staple lengths.

4/ Commercial crop.

5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

6/ Included in fresh vegetable total.

Table 37. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons

Area 9, Lower Rio Grande Valley

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable on maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	23.3	23.3	23.3	23.8
All sorghums for grain	Harvested	do	-	-	18.0	18.0	18.0
All sorghums for silage	do	Ton	-	-	6.0	6.0	6.0
All sorghums for forage	do	do	-	-	1.6	1.6	1.6
Soybeans for beans	do	Bu	-	-	-	-	
Cowpeas for peas	do	do	-	-	-	-	
Peanuts picked & thresh.	do	1,000 lb	-	-	-	-	
All upland cotton	Planted	Lb.	1937-41	223.0	223.0	223.0	250.0
Irish potatoes	do	Bu	1937-41	98.0	98.0	98.0	98.0
Sweet potatoes	do	do	1937-41	64.0	64.0	64.0	64.0
Fresh vegetables:							
Cabbage	Harvested	do	1937-41	4.4	4.4	4.4	4.4
Onions	do	100 lb.			60.0	60.0	60.0
Beets	do	Bu	1937-41	160.0	160.0	160.0	160.0
Carrots	do	do	1937-41	181.0	181.0	181.0	181.0
Peppers	do	do	1937-41	135.0	135.0	135.0	135.0
Spinach	do	do	1937-41	120.0	120.0	120.	120.0
Tomatoes	do	Ton			3.0	3.0	3.0
Oats for grain							
Barley for grain							
Winter Wheat							
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton	1937-41	.8	.8	.8	.8
Wild hay	do.	do.	1937-41	.9	.9	.9	.9

1/ Will be designated by Division of Agricultural Statistics, BAE.

2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."

4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.

5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 38.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 9 - Lower Rio Grande Valley

Item of livestock and livestock products	Unit	Reported for 1/		Reported for	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942	1943	1944	1945	
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	18.1	13.8	12.5	11.0	10.0	10.0
Cattle & calves, all	do.	79.0	96.5	77.9	80.0	80.0	80.0
Cows kept for milk, 2 yrs. & over	do.	19.0	19.8	19.9	20.0	20.0	20.0
Other cows, 2 yr. & over	do.				22.2	21.9	21.9
Sheep & lambs, all	do.	3.5	3.4	3.8	3.5	3.5	3.5
Ewes, 1 yr. & over	do.				2.2	2.2	2.2
Hens & pullets	do.	251.7	278.7	296.2	325.0	350.0	350.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	2.3	3.3	4.7	4.0	xxx	4.0
Sows farrowed, fall 4/	do.	4.8	4.1	4.0	4.0	xxx	4.0
Chickens raised 5/	do.	440.1	489.2	450.0	450.0	450.0	450.0
Commercial broiler production	do.						
Turkeys raised	do.	5.4	7.3	7.0	7.0	7.0	7.0
Milk cows, average during year	do.	17.8	18.3	18.4	18.5	18.5	18.5
Milk produced	1,000 lbs.	61.2	60.3	60.6	60.9	60.9	60.9
Wool shorn	Pound		24.7	27.6	25.4	xxx	25.4
Eggs produced	Dozen	1982.2	2084.0	2214.1	2429.4	2616.2	2616.2
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			8731.0	8432.0	8432.0	8432.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ December 1 (of previous year) to June 1.

4/ June 1 to December 1.

5/ Excluding commercial broilers.

6/ Twelve-month period beginning on October 1.

Other Crops

The adjustments indicated for summer growing crops include increasing grain production through a larger acreage of grain sorghum, and a slight increase in cotton production. The acreage of grain sorghum harvested for grain would be increased from 13,000 to 40,000 acres, whereas the corn acreage would be decreased slightly. The increased use of combines for harvesting sorghums is the principal reason for shifting to more grain sorghum production. Cotton production would be increased from 194,000 acres in 1942 to 218,000 acres.

Use of Resources for Livestock

Livestock production is secondary to truck and other crop enterprises on irrigated farms but is somewhat more important in connection with dry-land agriculture. Some cattle ranches are located in the northern and western part of the area. Feed resources will not support large numbers of livestock. The capacity of the area to produce livestock will not be materially changed with capacity production of crops and few major adjustments are considered feasible.

Poultry

Chickens kept for egg production have been increasing at the rate of about 25,000 per year for the past two years. It is believed that hens and pullet numbers could be increased to 350,000 by 1945 if need be. This would be an expansion of approximately 54,000 above the 1943 figure and about 71,000 higher than the number reported for 1942.

Other Livestock

Beef cattle and dairy production should be maintained at approximately the 1943 level for both the maximum situation and in 1944. It is believed that the feasible limits for pork production will be reached by farrowing 4,000 sows in the spring and in the fall. This is 700 litters less than are expected in 1943 and 600 litters more than were reported in 1942.

Limiting Factors to Wartime Capacity

Since the adjustments indicated above do not involve major shifts in the agricultural pattern, it is considered possible to make these adjustments by 1944. The nature of vegetable production permits considerable fluctuation in acreages to meet changing demands. Some additional labor would be required during July and August to harvest grain sorghum and cotton. Otherwise adequate labor should be available to take care of the increased requirements. Some additional combines for harvesting grain sorghums would ease the situation during these months. No unsurmountable difficulty is anticipated with respect to any other phase of production in realizing these increases.

CORPUS CHRISTI COTTON AREA (10)

The Corpus Christi Cotton Area is comprised, for the most part, of Nueces and San Patricio Counties and makes up the central portion of the territory frequently referred to as the Coastal Bend Country. The fertile level land and climatic conditions favorable to weed control have encouraged an intensive type of agriculture carried on with large-scale farming methods. Highly specialized cotton production with multiple row equipment characterizes the agriculture of the area. Cotton was grown on about 50 percent of the cropland and grain sorghum on about 30 percent in 1942. Production of winter vegetables, primarily onions and cabbage, is important during years of favorable moisture and prices. The acreage used for winter-growing vegetables frequently is double cropped with cotton or feed crops.

Resources Available for Crop Production

The 1939 census reports 473,000 acres of cropland in the Corpus Christi Area. Due to the level topography, most all of the cropland has no erosion control hazards. The total cropland acreage is considered well suited to use in crops during the war period. Due to the limited amount of plowable pasture land and the high labor requirements for removing heavy brush from uncleared land, it is not considered possible to increase the cropland acreage above this amount.

Irrigation is only practiced to a limited extent in the Corpus Christi Area. About 4,500 acres in Nueces County are irrigated annually through direct pumping from the Nueces River. The water supply is adequate for this acreage but is not sufficient to permit additional irrigation.

Use of Resources for Crops

The production of essential war crops can be increased in Area 10 through fuller utilization of the land for both summer and winter-growing crops.

Fresh Vegetables

As is the case in Areas 8 and 9, fresh vegetable crops are grown during the winter season and frequently are double cropped with cotton and feed crops. The acreage of these winter-growing crops can be expanded considerably without greatly reducing the production of summer crops.

Onions, cabbage, and spinach are the principal vegetable crops grown. As in other areas, the acreages are subject to wide fluctuations depending largely upon the prospective demand situation and upon moisture conditions. This is reflected by the acreage grown during the three-year period, 1941-43, which changed from 16,000 to 37,000 to 26,000 acres for each respective year. Under the assumptions relating to maximum production, it is considered possible to grow approximately 140,000 acres of vegetables in this area each season. This is an increase of 103,000 acres over 1942.

The attainment of such a large acreage is made possible largely by the specialized nature of farming in the area and the customary arrangement between growers and shippers in handling vegetables. With certain crops, shipper-contractors make agreements with growers to furnish the seed and take the responsibility of performing such operations as thinning and weeding, harvesting, assembling, packing, and shipping. The grower furnishes the land, plants the crop and performs the necessary machine cultivation. Under this plan the grower

Table 59. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 10, Corpus Christi

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	19.1	32.5	31.9	25.0	25.0
Grain sorghums, all	do.	95.0	103.0	143.9	125.0	120.0
Sweet sorghums, except sirup	do.	58.5	29.5	30.0	30.0	30.0
All sorghums for grain	Harvested	61.4	54.4	98.9	80.0	75.0
All sorghums for silage	do.	9.2	9.3	10.0	10.0	10.0
All sorghums for forage	do.	72.1	63.6	65.0	65.0	65.0
Soybeans, grown alone	Planted	-	-			
Soybeans for beans	Harvested	-	-			
Soybeans for hay	do.	-	-			
Cowpeas, grown alone	Planted	5.9	11.0	7.3	5.0	5.0
Cowpeas for peas	Harvested	.9	2.2		2.5	2.5
Cowpeas for hay	do.	.5	.6		1.0	1.0
Peanuts, grown alone	Planted		.4	.5	0.0	0.0
Peanuts picked & threshed	Harvested		.4		0.0	0.0
Peanuts for hay	do.		.3		0.0	0.0
Cotton, all upland	Planted	230.2	230.0	229.0	250.0	250.0
Under 15/16" staple 3/	do.	16.0	21.0	23.0	25.0	13.0
15/32" to 1 3/32" staple 3/	do.	214.2	209.0	206.0	225.0	237.0
1 1/8" staple & over 3/						
Cotton, Am Egyptian or Sea Is.						
Irish potatoes	do.	.2	.2	.3	.5	.5
Sweet potatoes	do.			-		
Beans, dry edible	do.	-	0.0	.4	.5	.5
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	16.4	37.2	26.0	50.0	140.0
Cabbage	do.	5.0	9.0	2.8	15.0	60.0
Onions	do.	5.0	19.0	11.0	12.0	20.0
Beets	do.	2.2	2.3	2.4	2.5	2.5
Carrots	do.	1.0	.7	1.9	5.0	22.0
Peppers						
Spinach	do.	3.0	6.0	7.5	15.0	35.0
Tomatoes	do.	.2	.2	.4	.5	.5
Other intertilled crops, total						
Total cropland used for intertilled crops 5/		416.0	421.0	450.0	450.0	450.0
Oats	Planted	4.9	5.5	5.1	5.0	5.0
Barley						
Winter Wheat						
Oats for grain	Harvested	.8	1.1	1.5	1.0	1.0
Barley for grain						
Grains cut green for hay						

Continued-

Table 79, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 10, Corpus Christi

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain						
Flaxseed	Planted	6.9	8.0	17.0	17.0	17.0
Rice						
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/		14.8	13.5	22.1	22.0	22.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	1.0	1.0	.9	1.0	1.0
Hay, all tame	do.	1.5	1.9	1.7	2.0	2.0
Alfalfa seed						
Total cropland used for sod crops 5/		1.0	1.0	.9	1.0	1.0
Total cropland used for crops 5/		428.8	435.5	473.0	473.0	473.0
Idle cropland		44.2	37.5	0.0	0.0	0.0
Total cropland 5/		473.0	473.0	473.0	473.0	473.0
Wild hay	Harvested	.3	.3	.4	.4	.4
Total land in farms		778.0	778.0	778.0	778.0	778.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 40. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 10, Corpus Christi Cotton

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Units	Units	Units	Units
Corn, all.....	Planted	Bu.	1937-41	18.1	18.1	18.1	18.5
All sorghums for grain	Harvested	do.	-	-	25.0	25.0	25.0
All sorghums for silage	do.	Ton	-	-	6.0	6.0	6.0
All sorghums for forage	do.	do.	-	-	2.0	2.0	2.0
Soybeans for beans							
Cowpeas for peas	do.	Bu.			6. 0	6.0	6.0
Peanuts picked & thresh.							
All upland cotton	Planted	Lb.	1937-41	228.0	228.0	228.0	228.0
Irish potatoes	do	Bu.			52.0	52.0	52.0
Sweet potatoes							
Fresh vegetables:							
Cabbage	Harvested	Ton	1937-41	3.5	3.5	3.5	3.5
Onions	do.	100 lb.	-	-	70.0	70.0	70.0
Beets	do.	Bu.	1937-41	100.0	100.0	100.0	100.0
Carrots.....		do.	1937-41	125.0	125.0	125.0	125.0
Peppers							
Spinach	do.	do.	1937-41	100.0	100.0	100.0	100.0
Tomatoes	do.	Ton	-	-	3.5	3.5	3.5
Oats for grain	Harvested	Bu.	-	-	21.0	21.0	21.0
Barley for grain							
Winter wheat							
Rye for grain							
Rice							
Hay, all tame							
Wild hay							

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 41, Estimates of Wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 10, Corpus Christi Cotton

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
				-1,000 units-			
On farms January 1:							
Horses, mules & colts	Number	7.0	6.7	6.4	6.0	6.0	6.0
Cattle & calves, all	do.	63.5	69.4	68.1	68.0	68.0	68.0
Cows kept for milk, 2 years +	do.	13.9	14.3	14.9	15.0	15.0	15.0
Other cows, 2 years +	do.				13.2	13.1	13.1
Sheep & lambs, all	do.	4.0	5.8	6.2	6.0	6.0	6.0
Ewes, 1 year +	do.				3.7	3.7	3.7
Hens & pullets	do.	191.4	231.9	255.8	275.0	300.0	300.0
				Expected in 1943			
During year:							
Sows farrowed, spring 3/	do.	1.9	2.7	3.6	4.0	xxx	4.0
Sows farrowed, fall 4/	do.	2.2	2.9	3.2	3.5	xxx	3.5
Chickens raised 5/	do.	436.9	430.5	450.0	450.0	450.0	450.0
Commercial broiler production	do.						
Turkeys raised	do.	4.7	6.2	6.0	6.0	6.0	6.0
Milk cows, average during the year	do.	12.9	13.5	14.1	14.2	14.2	14.2
Milk produced (Thousand	lbs.	37.9	38.8	40.4	40.7	40.7	40.7
Wool shorn	Pound		42.1	45.0	43.6	xxx	43.6
Eggs produced	Dozen	1682.3	1763.8	1946.2	2092.3	2282.5	2282.5
Cattle put on feed 6/	Number					XXX	
Sheep & lambs put on feed 6/	do.					XXX	
Net production of hogs 6/	do.			10915.5	11589.6	11617.5	11617.5

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for states) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

is freed of the responsibility of recruiting and supervising harvesting crews and from the problems associated with marketing as well. The shipper-contractor serves as a clearing house for directing seasonal labor to localities in greatest need for their services, and devotes the remainder of his time to directing the products to the most desirable market. It is assumed that any program designed to attain maximum production would be projected along the same general lines. To handle the production from the increased acreage additional packing facilities would be needed as well as transportation capacity for shipping the products out of the area.

It is estimated that approximately 50,000 acres of fresh vegetables could be grown in 1944. The major limiting factor to more nearly full utilization of wartime capacity during the 1944 season is the short time available for the development of an expanded program. The season for land preparation is immediately at hand and plans for the acreage to be seeded should be formulated within the next eight to ten weeks. With favorable demand outlook, growers will likely seed larger than normal acreages this fall if favorable moisture conditions prevail.

Other Crops

An increase over 1942 of about 9 percent in the cotton acreage and of about 14 percent in the acreage of grain crops could be obtained for wartime capacity. The desirable quality of staple associated with good yields and the highly specialized production methods in this area gives cotton a favorable competitive position with the best cotton producing areas throughout the cottonbelt. The long growing season makes it possible to wait for favorable moisture conditions before planting feed crops. If moisture is available early a large acreage of corn may be planted but if the rains come late in the spring it is usually advisable to change to the sorghums for the main feed crop. It is suggested that increased grain production should come from the grain sorghums because they permit a wide variation in planting dates and because they can be harvested mechanically through the use of combines.

The capacity of the area for summer-growing crops could be reached by 1944.

Flax has been grown in this area as a winter crop for the past five or six years. About 7,000 acres were grown in 1941 and 8,000 acres in 1942. The reported acreage for 1943 is 17,000 acres and it is proposed that this level of production be continued during the war period. If farmer experience is favorable this year, this level of production may be exceeded in 1944. It is believed, however, that expansion of the acreage should not be called for until farmers have had further experience with this comparatively new crop.

Use of Resources for Livestock

Production of cash crops rather than livestock is the major consideration on a large proportion of farms. Feed production does not limit livestock numbers at present as a considerable portion of the sorghum grain produced is sold outside the area. Many farms lack the fencing necessary for large numbers of livestock. Hogs and poultry are distributed on a large percentage of the farms while dairying on a commercial scale is largely confined to units equipped to produce whole milk. According to the 1939 census, beef cattle were reported on less than 20 percent of the farms.

Poultry and Eggs

Between 1942 and 1943, egg production was expanded by increasing chicken hens from 231,900 to 255,800 head. Grain production justifies further expansion and it is believed that the number could be increased to 300,000 head by 1945 if needed. Approximately one-half of this increase could be obtained by 1944.

Hogs

Spring farrowings have nearly doubled during the past two years in response to grain sorghum and hog prices which favored production of pork at the expense of grain sales. It is believed that the capacity of the area for pork production would permit additional expansion. Four thousand sows for spring farrowing were indicated as the maximum and in 1944 as well. This is nearly 50 percent more than was reported during the corresponding period of 1942.

Limiting Factors to Wartime Capacity

The attainment of maximum production would require the use of considerably more labor and other materials than are normally used. The increased acreage of fresh vegetables would make the heaviest demands for additional labor. The peak months for performing harvesting operations are most important. About 13,000 additional workers would be needed during January and February, 11,000 in March, and 5,000 in April. Additional labor would also be needed during the cotton picking and land preparation seasons. For these purposes about 2,400 workers would be needed in July and about 2,000 in September.

The farm machinery requirements would not be increased a great deal in the attainment of the maximum acreages. A small increase in equipment in addition to maintenance of the present amount would be needed for land preparation, seeding, and cultivation. It was estimated that 1,000 special planters used for seeding certain vegetables would be needed. Two hundred additional combines would harvest the additional grain sorghum acreage and ease the pressure for labor during the peak month of July.

The soils of this area are very fertile and as a rule no fertilizer is used in the production of either summer- or winter-growing crops. For this reason it is not anticipated that additional fertilizer would be needed for the attainment of maximum production.

NORTH-CENTRAL GRAZING AREA (11)

The North-Central Grazing Area lies between the Rolling Plains and West Cross Timbers, and displays a mixture of characteristics of these surrounding areas. Cattle ranching is the main enterprise, as approximately 85 percent of the land is in permanent pasture and is characterized by shallow or rough broken lands unsuited to cultivation.

The farming that is done here tend to be concentrated in small communities located usually on small interior prairies and in the more fertile narrow valleys that traverse the area. In the western part of the area, the cropping systems are similar to the Rolling Plains with cotton, wheat, and grain sorghums as the principal crops. The systems found in the eastern part resemble those of the West Cross Timbers Area with corn, cotton, peanuts, and some vegetables being grown.

Resources Available for Crop Production

All cropland totaled 633,000 acres according to the 1939 census. About 5 percent of the cropland in the area was classified by the Soil Conservation Service as unsuited for crop production. If this were retired from cultivation, 601,000 acres would still be available for production. In addition, 30,000 acres of pasture land could be plowed up, thus making a total of 631,000 acres of land suitable for cultivation during the war period.

Use of Resources for Crops

Peanuts

This area has unused capacity for peanut production. Soils similar to those of the West Cross Timbers are available in the area to the extent that peanut acreage could be increased to 53,000 as compared to 20,000 acres indicated for 1943 and a possible 30,000 acres in 1944.

Wheat and Oats

In the past the small grains, winter wheat, and oats, have occupied an important place in the cropping system. Wheat is an important cash crop and both are important sources of supplemental winter pasture. Oats are also a source of feed grain on the farms and ranches where grown. In 1942, 110,000 acres of winter wheat were planted, and it is believed a maximum of 150,000 acres would be desirable. The oats crop totaled 127,000 acres in 1942, and a maximum acreage equal to that of wheat has been designated. An increase in grain sorghums was considered desirable. In 1942, 80,000 acres were grown and a maximum of 115,000 acres could be grown. These acreages could be reached in 1944.

Moisture conditions at planting time determine to a large extent which of the foregoing crops will be produced. If conditions are not favorable for fall wheat, spring-planted feed crops, mainly sorghums, will be increased. Any rigid policy to maximize either wheat or grain sorghums would seem unwise under these conditions.

Other Crops

Corn, which is grown mainly in the eastern part of the area, can be slightly increased. Cotton, grown on about 106,000 acres in 1942, probably should not exceed 80,000 acres during the war period, assuming maximum production of so-called war crops.

Use of Resources for Livestock

Varying moisture conditions result in year to year variations in the amounts of feed available for livestock. Ranchmen vary rates of stocking to conform with available or prospective grazing. Feed reserves should be accumulated during periods of above average feed supplies in order to maintain breeding herds during droughty years.

It is believed that the general livestock pattern which will provide for maximum utilization of feed resources would involve: maintaining beef cattle, sheep, dairy cattle, and turkey production at about the 1943 level; increasing chicken hens above the number reported for either 1942 and 1943; and a reduction of about 8 percent in number of sows compared to 1943 spring farrowings.

It is considered that 285,000 cattle and calves and 85,000 sheep and lambs approximate the normal carrying capacity of the range and these respective numbers are indicated for maximum production. This rate of stocking would be a reduction from the 1942 level of approximately 5 percent in both cattle and sheep numbers.

Dairy cow numbers have increased very slowly since 1940 and the 26,000 head suggested for the maximum situation is 500 less than was reported in 1942.

During the past two years chicken hens have increased at the rate of better than 90,000 per year. It is considered that 600,000 chicken hens would represent capacity production. This is approximately 100 hens per farm for the entire area.

Four thousand sows were farrowed during the spring of 1942. It is believed that this number could be safely increased to 4,500 under maximum conditions. This is 400 sows less than were reported farrowing during the spring of 1943.

Limiting Factors to Wartime Capacity

This area has not ordinarily depended to any extent on outside labor. The farms are organized so as to use a minimum of hired labor. If the available labor is used efficiently no serious shortage should occur.

Except for peanuts, adequate machinery should be on hand in the area, assuming normal replacements. Increases in the peanut acreage will call for additional machinery to grow and handle the crop. About 30 pickers and balers will be needed over and above the number assumed to be on farms in 1944. A somewhat larger number of side-delivery rakes will also be needed.

Approximately 860 tons more fertilizer will be needed for peanuts as compared with the amounts assumed to be available for the 1944 crop.

Table 42. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 11, North-Central Grazing Area

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime 1944 capacity 2/	Wartime maximum capacity 2/
		1,000 acres				
Corn, all	Planted	40.8	61.1	60.9	65.0	65.0
Grain sorghums, all	do.	48.2	79.7	103.7	115.0	115.0
Sweet sorghums, except sirup	do.	75.3	43.1	55.0	30.0	30.0
All sorghums, for grain	Harvested	17.0	35.6	68.7	105.0	105.0
All sorghums for silage	do.	4.3	2.5	2.0	2.0	2.0
All sorghums for forage	do.	94.8	81.0	68.0	38.0	38.0
Soybeans, grown alone	Planted	.8	1.2	.6	0.0	0.0
Soybeans for beans	Harvested	.2	.7		-	-
Soybeans for hay	do.	.6	.3		-	-
Cowpeas, grown alone	Planted	4.2	2.6	1.2	0.0	0.0
Cowpeas for peas	Harvested	1.3	.5		-	-
Cowpeas for hay	do.	.6	.8		-	-
Peanuts, grown alone	Planted	4.0	17.6	19.4	30.0	53.0
Peanuts picked & threshed	Harvested	3.4	15.7	18.4	28.0	50.0
Peanuts for hay	do.	3.4	14.6	16.5	25.0	45.0
Cotton, all upland	Planted	80.8	105.6	102.0	85.0	80.0
Under 15/16" staple 3/	do.	42.0	77.0	67.0	56.0	51.0
15/32" to 1 3/32" staple 3/	do.	38.8	28.6	35.0	29.0	29.0
1 1/8" staple & over 3/						
Cotton, Am Egyptian or Sea Is.	do.	-	-	-		
Irish potatoes	do.	.3	.2	.4	.2	.2
Sweet potatoes	do.	.1	.1	.1	.1	.1
Beans, dry edible	do.	-	-	.3	.3	.3
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/						
Cabbage	Harvested	-	-			
Onions	do.	-	-			
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes						
Other intertilled crops, total						
Total cropland used for intertilled crops 5/	----------	252.5	311.2	325.6	325.6	343.6
Oats	Planted	154.9	126.9	112.4	150.0	150.0
Barley	do.	14.1	15.5	16.2	15.0	15.0
Winter Wheat	do.	152.1	109.6	122.0	152.4	150.0
Oats for grain	Harvested	122.2	18.5	46.0	78.0	78.0
Barley for grain	do.	10.3	2.8	4.9	9.0	9.0
Grains cut for hay	do.	4.2	3.4	3.4	3.0	3.0

Continued

Table 42.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons-Continued

Area 11 - North-Central Grazing Area

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 1944 2/	Maximum capacity 2/
		1,000 acres				
Rye for grain	Planted	-	-			
Flaxseed	do.	-	-			
Rice						
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/		321.1	252.0	250.6	269.4	271.4
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	19.9	19.4	17.1	16.0	16.0
Hay, all tame	do.	28.7	38.5	37.0	44.0	64.0
Alfalfa seed						
Total cropland used for sod crops 5/		19.9	19.4	17.1	16.0	16.0
Total cropland used for crops 5/		593.5	582.6	591.3	611.0	631.0
Idle cropland		39.5	50.4	41.7	0	0
Total cropland 5/		633.0	633.0	633.0	611.0	631.0
Wild hay	Harvested	.9	1.0	1.0	1.0	1.0
Total land in farms		3981.0	3981.0	3981.0	3981.0	3981.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ Approximate planted acreage of varieties which usually yield specified staple lengths.

4/ Commercial crop.

5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during year.

Table 43. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 11, North Central Grazing

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	12.5	12.5	12.5	12.5
All sorghums for grain	Harvested	do.			14.6	14.6	14.6
All sorghums for silage	do.	Ton			3.7	3.7	3.7
All sorghums for forage	do.	do.			1.2	1.2	1.2
Soybeans for beans							
Cowpeas for peas							
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.419	.415	.400	.400
All upland cotton	Planted	lb.	1937-41	118.0	118.0	118.0	118.0
Irish potatoes	do.	Bu.			55.0	55.0	55.0
Sweet potatoes	do.	do.			62.0	62.0	62.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes							
Oats for grain	Harvested	Bu.			23.0	23.0	23.0
Barley for grain	do.	do.			19.0	19.0	19.0
Winter wheat	Planted	do.	1937-41	9.3	9.3	9.3	9.3
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton			.8	.8	.8
Wild hay	do.	Ton			.8	.8	.8

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 44. Estimates of Wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 11, North Central Grazing

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 3/ 1944	Wartime capacity 3/ 1945	Wartime Maximum Capacity 3/
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	18.1	17.1	16.4	16.0	15.0	15.0
Cattle & calves, all	do.	265.3	302.4	286.5	285.0	285.0	285.0
Cows kept for milk, 2 years +	do.	24.9	26.5	26.3	26.0	26.0	26.0
Other cows, 2 years +	do.				109.8	108.8	108.8
Sheep & lambs, all	do.	82.6	90.0	86.5	85.0	85.0	85.0
Ewes, 1 year +	do.				51.6	51.7	51.7
Hens & pullets	do.	397.2	489.4	586.4	600.0	600.0	600.0
				Expected in 1943			
During year:							
Sows farrowed, spring 4/	do.	1.8	4.0	4.9	4.5	xxx	4.5
Sows farrowed, fall 5/	do.	2.6	3.1	3.5	3.6	xxx	3.6
Chickens raised 6/	do	703.5	854.1	900.0	850.0	850.0	850.0
Commercial broiler production	do.						
Turkeys raised	do.	116.7	114.5	115.0	115.0	115.0	115.0
Milk cows, average during the year	do.	23.5	24.4	24.2	23.9	23.9	23.9
Milk produced (Thousand lbs.		69.6	75.1	72.5	71.7	71.7	71.7
Wool shorn	Pound		653.4	623.0	617.1	xxx	617.1
Eggs produced	Dozen	3585.3	4240.6	5091.9	5210.0	5210.0	5210.0
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on 6/	do.					xxx	
Net production of hogs 6/	Pounds			11315.5	11320.4	11234.7	11234.7

1/ By the Bureau of agricultural Economics (or distributions by areas of BAE reports for States) except as other wise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

WEST CROSS TIMBERS (12)

Except for segments of the Grand Prairie which finger into the area, the soils of the West Cross Timbers are generally sandy and the topography gently rolling. More than 80 percent of the total land area is in farms but only 25 to 30 percent of the farm land is cultivated. Most of the portion not cultivated has a moderately heavy covering of oak timber.

Peanuts are the main cash crop while cotton is of minor importance. Feed crops such as corn, sorghums, small grains, and hay occupy a large portion of the cropland. Peaches and watermelons are important crops in certain limited portions of the area.

Livestock and livestock products are produced for home use and for sale as available pasture and feed crops permit. The principal products are cattle, dairy products, poultry and eggs.

The system of farming in this area has been changing through a gradual shift away from cotton. Prior to 1914, cotton occupied about two-thirds of the cultivated area and was the only important source of income. A reduction in cotton yields caused farmers to turn to other enterprises. Peanuts have superseded cotton as the main cash crop on the sandier soils and feed crops have also been expanded. Farm size has increased over the years due in part to substituting for cotton, crops requiring less labor per acre. As a result, livestock enterprises have been built up, and in general, the agriculture is more diversified than formerly.

Resources Available for Crop Production

Of the 1,050,000 acres of cropland recorded in the 1939 census report, 987,000 acres, or 94 percent, are considered suitable for crop production assuming proper conservation practices in use. The remaining 6 percent includes 8,000 acres of land which was believed to be sufficiently productive to warrant cultivation only during the war period. In addition, 45,000 acres of plowable pasture can be brought into cultivation by 1945 if needed, thus bringing the total cropland available for use during the war period to 1,040,000 acres.

Use of Resources for Crops

Peanuts

Peanuts rate above all other crops for the use of land in this area. The present peanut acreage, however, is near the maximum level and cannot be expanded greatly. About 255,000 acres were planted in 1942, 274,000 acres in 1943, and under optimum conditions about 300,000 acres can be produced. It was estimated that 290,000 acres might be grown in 1944.

Corn and Oats

Corn and oat acreages should be increased to cut down grain imports into the area. In 1942 and again in 1943 corn totaled about 164,000 acres. The proposed corn acreage for 1944 is 180,000 and for the maximum, 189,000. A maximum of 121,000 acres is suggested for oats.

Sweet Potatoes

Sweet potatoes have been grown commercially on a few farms and for home use on a few others in the area and the soils are well adapted to them. While it was estimated that 15,000 acres of sweet potatoes might be grown in an all-out food production program it is believed that this capacity should be left unused so long as there is capacity remaining in areas of heavier rainfall. Curing, storing, and marketing facilities which are almost entirely lacking in this area would have to be supplied to the extent that the enterprise is developed.

The capacity of the area for the production of the above named crops can be realized only through complete utilization of all land suited to crop production (which could be brought into cultivation by 1945) and through further reductions in the acreage planted to cotton.

Use of Resources for Livestock

Livestock enterprises make up a considerable part of the income to farmers in the West Cross Timbers Area. They provide an effective means of utilizing the large quantity of relatively low quality roughage, as well as salvaging the waste peanuts both of which are by-products to peanut production. Furthermore, these enterprises make for a more even distribution of total labor requirements throughout the year. Livestock production is at present extended to the approximate capacity of the area and in certain instances some decrease in numbers is desirable.

The important grain and forage consuming classes of livestock (all cattle and calves, hens and pullets, and sows farrowed) increased in numbers from 1941 to 1942, and with the exception of cattle, again in 1943. The favorable moisture conditions in 1942 which resulted in better than normal grazing from pastures and range land, as well as an abundance of forage crops, are chiefly responsible for the increase in cattle numbers. Increased production of peanuts, grain sorghum, and corn provided additional grains and salvage nuts for larger numbers of hogs and poultry. Furthermore, the price relationship between livestock and feed grains favored the importation of grains for expanded livestock production. This is a normal practice in the West Cross Timbers.

The present numbers of forage consuming livestock can be maintained during the war period assuming reasonably favorable moisture conditions. A slight decline in the number of horses and mules is indicated as the trend is in this direction. All cattle and calves would be maintained at about 290,000 head for wartime capacity and 1944 as compared with 306,000 head reported for 1942, and 287,000 head for 1943. Cows kept for milk should remain at about 80,000 head which is the number reported for 1942 and 1943. Likewise, sheep numbers would remain at about 235,000 head during the war period which is 10,000 head less than the number reported for 1942. Hens and pullets increased from 1,286,000 in 1942 to 1,540,000 in 1943. One and one-half million appears to be a desirable number for the war period. Hogs, the other principal grain consuming class of livestock, should be decreased by reducing the number of sows for spring farrowing from almost 16,000 to about 12,000 head.

Limiting Factors to Wartime Capacity

No great difficulties are anticipated in maximizing production in this area. The adjustments needed are not drastic. The farming practices and rotations followed need not be altered greatly. Sweet potatoes for commercial production is the only new enterprise added.

Table 45.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons

Area 12 - West Cross Timbers

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 1944 2/	Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	165.6	164.0	163.9	180.0	189.0
Grain sorghums, all	do.	99.7	122.6	161.8	160.0	170.0
Sweet sorghums, except sirup	do.	58.8	40.3	40.0	40.0	40.0
All sorghums for grain	Harvested	20.6	45.7	87.8	86.0	96.0
All sorghums for silage	do.	6.3	4.9	5.0	5.0	5.0
All sorghums for forage	do.	130.0	109.1	109.0	109.0	109.0
Soybeans, grown alone	Planted	.3	.4	.2	0	0
Soybeans for beans	Harvested	.1	.1	0	0	0
Soybeans for hay	do.	.2	.2	.2	0	0
Cowpeas, grown alone	Planted	40.3	18.6	9.0	19.0	19.0
Cowpeas for peas	Harvested	12.1	5.4	4.0	9.0	9.0
Cowpeas for hay	do.	6.7	5.6	5.0	9.0	9.0
Peanuts, grown alone	Planted	144.0	254.8	274.2	290.0	300.0
Peanuts picked & threshed	Harvested	141.4	250.3	260.0	274.0	285.0
Peanuts for hay	do.	137.5	230.0	247.0	261.0	270.0
Cotton, all upland	Planted	79.1	86.9	86.0	70.0	60.0
Under 15/16" staple 3/	do.	41.0	64.0	57.0	46.0	38.0
15/32" to 1-3/32" staple 3/	do.	38.1	22.9	29.0	24.0	22.0
1-1/8" staple & over 3/						
Cotton, Am.Egyptian or Sea Is.						
Irish potatoes	do.	2.6	3.0	4.0	4.0	4.0
Sweetpotatoes	do.	1.5	.9	1.2	10.0	15.0
Beans, dry edible	do.	0	0	.6	1.0	1.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	.2	.2	.4	.6	.6
Cabbage						
Onions						
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes	do.	.2	.2	.4	.6	.6
Other intertilled crops, total						
Total cropland used for intertilled crops 5/		592.1	691.7	741.3	774.6	798.6
Oats	Planted	126.8	100.4	83.6	100.0	121.4
Barley	do.	13.4	13.1	14.3	20.0	20.0
Winter wheat	do.	42.8	33.8	37.0	40.0	50.0
Oats for grain	Harvested	98.1	14.1	35.8	85.0	85.0
Barley for grain	do.	9.2	1.9	3.5	17.0	17.0
Grains cut green for hay	do.	8.9	7.1	7.2	0	0

Continued

Table 45, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 12, West Cross Timbers

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted					
Rice	do.					
Other crops	Harvested					
Citrus fruit	----					
Total cropland used for close-seeded crops 5/	----	183.0	147.3	134.9	130.0	191.4
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	50.8	49.4	43.9	50.0	50.0
Hay, all tame	do.	204.1	292.3	303.3	320.0	329.0
Alfalfa seed	do.					
Total cropland used for sod crops 5/	----	50.8	49.4	43.9	50.0	50.0
Total cropland used for crops 5/	----	825.9	888.4	920.1	984.6	1040.0
Idle cropland	----	224.1	161.6	129.9	40.4	0.0
Total cropland 5/	----	1050.0	1050.0	1050.0	1025.0	1040.0
Wild hay	Harvested	5.0	5.3	5.4	5.0	5.0
Total land in farms	----	3886.0	3886.0	3886.0	3886.0	3886.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 46. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 12, West Cross Timbers

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Wartime maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	14.9	14.9	14.9	14.9
All sorghums for grain	Harvested	do.			14.6	14.6	14.6
All sorghums for silage	do.	Ton			3.7	3.7	3.7
All sorghums for forage	do.	do.			1.0	1.0	1.0
Soybeans for beans							
Cowpeas for peas							
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.464	.460	.450	.450
All upland cotton	Planted	Lb.		87.0	87.0	87.0	87.0
Irish potatoes	do.	Bu.			55.0	55.0	55.0
Sweet potatoes	do.	do.			66.0	66.0	66.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes	Harvested	Ton	1937-41	2.4	2.4	2.4	2.4
Oats for grain	do.	Bu.			23.0	23.0	23.0
Barley for grain	do.	do.			17.0	17.0	17.0
Winter wheat	Planted	do.			9.4	9.4	9.4
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton			.9	.9	.9
Wild hay	do.	do.			.8	.8	.8

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity", section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity", section (5), page 6.

Table 47. Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 12, West Cross Timbers

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
		1,000 units					
On farms January 1:							
Horses, mules & colts	Number	48.3	44.1	42.2	40.0	37.0	37.0
Cattle & calves, all	do.	292.6	306.0	287.2	290.0	290.0	290.0
Cows kept for milk, 2 years +	do.	75.9	80.6	80.0	80.0	80.0	80.0
Other cows, 2 years +	do.				60.2	59.6	59.6
Sheep & lambs, all	do.	282.8	245.6	235.2	235.0	235.0	235.0
Ewes, 1 year +	do.				152.4	152.6	152.6
Hens & pullets	do.	1043.2	1285.7	1539.5	1500.0	1500.0	1500.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	5.7	12.7	15.7	12.0	xxx	12.0
Sows farrowed, fall 4/	do.	9.0	11.0	10.5	10.0	xxx	10.0
Chickens raised 5/	do.	1949.8	2023.4	1800.0	1800.0	1800.0	1800.0
Commercial broiler production	do.						
Turkeys raised	do.	331.8	312.2	300.0	300.0	300.0	300.0
Milk cows, average during the year.	do.	71.6	74.1	73.6	73.6	73.6	73.6
Milk produced (Thousand lbs.		212.7	224.3	222.5	222.5	222.5	222.5
Wool shorn	Pound		1733.1	1707.6	1706.1	xxx	1706.1
Eggs produced	Dozen	9418.9	11156.5	13368.0	13025.0	13025.0	13025.0
Cattle put on feed 6/	Number					XXX	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			27609.2	25334.5	25300.0	25300.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ December 1 (of previous year) to June 1.

4/ June 1 to December 1.

5/ Excluding commercial broilers.

6/ Twelve-month period beginning on October 1.

The local labor supply fully utilized should be almost adequate to meet the demands of maximum wartime production. The farmers and farm workers are experienced in the commercial production and harvesting of peanuts, but lack experience with sweet potatoes.

A few tractors, side-delivery rakes, and peanut pickers over and above the number assumed to be available for use in 1944 will be needed for peanut production. Some sweet potato transplanting machines may also be needed. Additional storage space will probably be needed for both crops. The rapidly increasing peanut acreage has made soil conservation an increasingly difficult problem. Low rainfall during the fall and winter makes it difficult to establish and maintain cover crops after peanuts have been removed. At the same time the light sandy soils on which peanuts are grown have a tendency to blow badly if the land is not covered during late winter and early spring. This problem will require solution if the full capacity of the area for peanut production is utilized over a long period of time.

Some additional fertilizer will be needed for sweet potatoes, peanuts, and other crops. About 2,000 tons more than the amount assumed to be available in 1944 should take care of these requirements.

GRAND PRAIRIE AREA (13)

The Grand Prairie is located in the north-central part of the state and is situated immediately west of the Black Prairie Area. Mixed types of farming characterize the agriculture of this area. Ranching, cotton farming, and small grains are the main types. On the deeper and more productive soils the type is centered on cotton production and closely resembles the agriculture of the Black Prairie immediately to the east. The shallow soils that are cultivated are reasonably fertile but droughty. They are used largely for small grain production for which they are better adapted than for cotton. Grain sorghums and corn are grown as supplementary crops on both types of land. Wherever large bodies of the more shallow and broken lands are found the main enterprise is ranching. On the smooth treeless prairies north of the Brazos River the ranches are stocked mainly with cattle, while to the south of this river the pastures are comparatively rough and stony and year around browse permits a ranch organization of cattle, sheep, and goats quite similar to that of ranches on the Edwards Plateau into which area this area gradually merges. On the average farm there is about two acres of pasture for each acre of cropland. Within the counties included in this area are sandy lands comprising portions of the East and West Cross Timbers. It is on these soils that the peanuts produced in the area are grown.

Resources Available for Crop Production

The 1939 census reports 1,398,000 acres of cropland in the Grand Prairie Area. According to the Soil Conservation Service, 1,232,000 acres, or 88 percent, of this land is classed as being suitable for continuous cultivation assuming proper conservation practices. The remaining cropland is made up of the poorer, droughty type soils, on steep slopes which produce fair yields only under exceptionally favorable weather conditions. During normal times this land should not be cultivated. However, an estimated 50,000 acres of this land is so located or is sufficiently productive to warrant cultivation during the war period, thus bringing the total of such land to 1,282,000 acres.

Use of Resources for Crops

Peanuts

Peanuts are grown in significant quantities. Their production is confined to the sandy land which is in reality parts of the East and West Cross Timbers. About 35,000 acres of peanuts were grown in 1942 and almost 40,000 acres in 1943, according to the July 1 crop report. Available land resources will permit a maximum acreage of 63,000 during the war period.

The problems involved in expanding production are similar to those in other peanut areas. However, since this area is in reality an extension of the Cross Timbers Area insofar as peanuts are concerned, the attainment of the maximum should be somewhat less difficult. Some of the more modern methods of production carried on in the Cross Timbers have doubtless been extended to this area. A program designed to bring about further use of modern methods is needed to insure maximum use of resources for peanut production. This will involve financial assistance in obtaining the necessary machinery, assurance against loss of investment, and organized group action to facilitate harvesting and assembling.

Table 48, Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 13, Grand Prairie Area

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	261.2	368.0	361.0	320.0	320.0
Grain sorghums, all	do.	78.3	118.6	133.2	86.0	86.0
Sweet sorghums, except sirup	do.	59.3	44.3	68.0	50.0	50.0
All sorghums for grain	Harvested	20.7	45.7	101.2	30.0	30.0
All sorghums for silage	do.	4.8	5.5	5.0	6.0	6.0
All sorghums for forage	do.	103.2	96.0	95.0	100.0	100.0
Soybeans, grown alone	Planted	2.4	4.4	.6	0	0
Soybeans for beans	Harvested	.2	2.3	.3	0	0
Soybeans for hay	do.	1.1	1.0	.3	0	0
Cowpeas, grown alone	Planted	9.5	11.6	7.6	8.0	0
Cowpeas for peas	Harvested	2.4	3.2	3.0	3.0	0
Cowpeas for hay	do.	3.2	3.5	3.5	3.5	0
Peanuts, grown alone	Planted	12.0	35.2	39.5	50.0	63.0
Peanuts picked & threshed	Harvested	11.6	31.9	37.5	47.0	60.0
Peanuts for hay	do.	11.0	31.0	35.0	45.0	57.0
Cotton, all upland	Planted	191.2	244.6	238.0	230.0	235.0
Under 15/16" staple 3/	do.	27.0	91.0	83.0	80.0	82.0
15/32" to 1 3/32" staple 3/	do.	164.2	153.6	155.0	150.0	153.0
1 1/8" staple & over 3/	do.					
Cotton, Am Egyptian or Sea Is.	do.					
Irish potatoes	do.	1.4	1.5	2.0	2.0	2.0
Sweet potatoes	do.	.9	.8	1.1	3.0	6.0
Beans, dry edible	Planted			.6	.6	.6
Processing vegetables, total 4/	do.					
Tomatoes	do.					
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	.2	.3	.2	.2	.2
Cabbage	do.					
Onions	do.	.2	.3	.2	.2	.2
Beets	do.					
Carrots	do.					
Peppers	do.					
Spinach	do.					
Tomatoes	do.					
Other intertilled crops, total	Harvested					
Total cropland used for intertilled crops 5/	----------	616.4	829.3	851.7	749.8	762.8
Oats	Planted	390.1	402.4	352.1	400.0	400.0
Barley	do.	30.2	37.8	54.5	35.0	35.0
Winter Wheat	do.	112.4	100.7	110.0	110.0	110.0
Oats for grain	Harvested	312.2	67.8	137.8	320.0	320.0
Barley for grain	do.	23.0	7.6	15.0	26.0	28.0
Grains cut green for hay	do.	3.5	2.8	3.1		

Continued

Table 48, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 13, Grand Prairie Area

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum Capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted	-	-			
Rice	do.	-	-			
Other crops	Harvested					
Citrus fruit						
Total cropland used for close-seeded crops 5/		492.7	360.9	386.6	470.2	469.2
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	52.6	51.0	42.4	50.0	50.0
Hay, all tame	do.	71.4	89.2	84.3	98.5	107.0
Alfalfa seed	do.					
Total cropland used for sod crops 5/		52.6	51.0	42.4	50.0	50.0
Total cropland used for crops 5/		1161.7	1241.2	1280.7	1270.0	1282.0
Idle cropland		236.3	156.8	117.3	12.0	0
Total cropland 5/		1398.0	1398.0	1398.0	1282.0	1282.0
Wild hay	Harvested	6.2	6.5	6.5	6.5	6.5
Total land in farms		4088.0	4088.0	4088.0	4088.0	4088.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 49. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 13, Grand Prairie

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Units	Units	Units	Units
Corn, all	Planted	Bu.	1937-41	20.0	20.0	20.0	20.0
All sorghums for grain	Harvested	do.	1937-41	16.5	16.5	16.5	16.5
All sorghums for silage	do.	Ton			5.2	5.2	5.2
All sorghums for forage	do.	do.			1.4	1.4	1.4
Soybeans for beans	do.	Bu.					
Cowpeas for peas	do.	do.			6.4	6.4	6.4
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.477	.460	.450	.450
All upland cotton	Planted	Lb.	1937-41	135	135	135	135
Irish potatoes	do.	Bu.			62.0	62.0	62.0
Sweet potatoes	do.	do.			68.0	68.0	68.0
Fresh vegetables:							
Cabbage	Harvested	Ton					
Onions	do.	100 lb.					
Beets	do.	Bu.					
Carrots	do.	do.					
Peppers	do.	do.					
Spinach	do.	Ton					
Tomatoes	do.	Bu.					
Oats for grain	Harvested	Bu.			28.3	28.3	28.3
Barley for grain	do.	do.			24.0	24.0	24.0
Winter wheat	Planted	do.	1937-41		12.8	12.8	12.8
Rye for grain	Harvested	do.					
Rice	Planted	do.					
Hay, all tame	Harvested	Ton			1.2	1.2	1.2
Wild hay	do.	Ton			1.1	1.1	1.1

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5) page 6.

Table 50. Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 13, Grand Prairie

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
				-1,000 units			
On farms January 1:							
Horses, mules & colts	Number	51.3	46.7	44.2	42.0	40.0	40.0
Cattle & calves, all	do.	276.8	267.0	269.5	270.0	270.0	270.0
Cows kept for milk, 2 years +	do.	74.6	76.2	76.4	78.0	80.0	80.0
Other cows, 2 years +	do.				39.7	39.4	39.4
Sheep & lambs, all	do.	810.6	773.3	743.3	750.0	750.0	750.0
Ewes, 1 year +	do.				441.5	442.3	442.3
Hens & pullets	do.	1566.7	1642.6	1831.3	2000.0	2000.0	2000.0
				Expected in 1943			
During year:							
Sows farrowed, spring 3/	do.	6.3	10.0	13.8	12.0	xxx	12.0
Sows farrowed, fall 4/	do.	9.2	11.2	12.0	10.0	xxx	10.0
Chickens raised 5/	do.	2285.3	2401.7	2500.0	2500.0	2500.0	2500.0
Commercial broiler production	do.						
Turkeys raised	do.	368.0	345.4	350.0	350.0	350.0	350.0
Milk cows, average during the year	do.	69.0	70.4	70.6	72.1	73.9	73.9
Milk produced (Thousand lbs.		230.1	221.4	221.9	226.6	232.4	232.4
Wool shorn	Pound		5614.2	5396.4	5445.0	xxx	5445.0
Eggs produced	Dozen	11799.8	12755.8	14223.1	15533.3	15533.3	15533.3
Cattle put on feed 6/	Number					XXX	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 7/	Pound			35277.7	31675.8	31504.0	31504.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Potatoes and Sweet Potatoes

Irish and sweet potatoes are grown primarily for home use in this area. It is not considered desirable to increase the acreage of Irish potatoes beyond these needs during the war period. A limited acreage of sweet potatoes could be grown in this area for commercial purposes if needed. The acreage could be expanded from about 1,000 acres in 1942 to 6,000 acres during the war period. About half of the maximum acreage could be grown in 1944. Marketing and processing facilities which are almost totally lacking in the area would have to be supplied while seed or slips should be made available to growers at reasonable prices.

Perhaps the resources of this area should not be used for sweet potatoes unless the maximum acreage is needed.

Other Crops

Insofar as the acreage of cropland suitable for use during the war period will permit, the present pattern of production with regard to other crops should be continued. Small grain and cotton acreages would remain at about present levels. Some reduction in corn and grain sorghum acreages would be necessary. In 1942, 368,000 acres of corn were grown. It is suggested that this be reduced to 320,000 acres for the maximum. Similarly grain sorghums would be reduced from 119,000 acres to about 86,000 acres. These adjustments could all be made by 1944.

Use of Resources for Livestock

Livestock enterprises have a more prominent place in the system of farming in the Grand Prairies than in the immediately adjoining areas. The small grains produced on the shallow soils as well as corn and grain sorghums grown on the drier soils provide adequate grain supplies for maintaining foundation livestock. The relatively large bodies of more shallow and broken lands and the smooth treeless prairies furnish forage for large numbers of the grazing type of livestock. Continued emphasis on these classes of livestock appears to offer the greatest possibilities during the war period. These enterprises have expanded, however, to the approximate capacity of the area. The present production of harvested forage crops is scarcely adequate for livestock requirements and some increase in forage sorghum and hay production are suggested. With this additional forage and assumin reasonably favorable moisture conditions present numbers of the grazing types of livestock can be maintained. Thus, wartime capacity for cattle production is about 270,000 head. This number includes about 80,000 head of dairy cows, which is about a 5 percent increase over the number on farms January 1, 1942, and also for the same date in 1943. The increased needs for whole milk within the immediate area is the principal factor warranting this increase. Sheep production represents a sizable enterprise in the area and the grazing resources appear adequate for maintaining about 750,000 head during the war period. The trend in numbers has been downward during the period 1941-43 when a reduction from 810,000 to 743,000 head was made.

Grain production in the Grand Prairie is considered adequate for present livestock numbers and some increased numbers could be maintained. Due to available markets for poultry products in the nearby heavily populated centers, some increas in production is desirable. A rapid increase in hens and pullets has been experienced during the last three years, from 1.4 million in 1941 to 1.8 million in 1943. The area has the capacity to maintain about 2 million hens and pullets during the war period. Hog production has expanded at an even more rapid rate during the

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BLACK PRAIRIE AREA (14)

The Black Prairie Area is comprised of all or parts of 33 counties. Some few of these counties have only black waxy soils but most of them also have strips of the shallow stony soils, and sandy soils of the adjacent areas. Where counties have both blackland soils and sandy soils, the type of farming is greatly different on the two types.

The Black Prairie Area has an average annual rainfall ranging from 40 inches in the northern part to 30 inches in the southern part. The average length of growing season also varies from 230 days to 260 days.

In general, the agriculture of the area is characterized by the predominance of cotton production. Until very recently, cotton occupied approximately 65 percent of the cropland and furnished about 90 percent of the cash farm income. With the establishment of the Agricultural Adjustment programs the emphasis has shifted somewhat from cotton to livestock. Cotton now occupies about 40 percent of the cropland. All classes of livestock have increased, but the increases have come slowly owing to lack of facilities on one hand, and to lack of management knowledge on the other.

Corn has always been the most important feed crop, second in acreage only to cotton, and exceeding the combined acreage of all small grain, grain sorghums, and hay. Feed crops, including corn, grain sorghums, small grains, hay, and pasture, have taken up a large percentage of the acreage diverted from cotton. Some vegetables, especially onions, have become important in some parts of the area.

The size of farms averages about 135 acres, with about 90 to 100 acres in cultivation and the remainder in permanent and plowable pasture, woodland, and other uses.

Within the past ten years, tractors have displaced many mules and horses, but most farms of the area still depend on some workstock for farm power. Where tractors are used for row crop operations, these are predominantly of the two-row all-purpose type.

Available Land Resources

The 1939 census reports 7,760,000 acres of cropland in the Black Prairie counties. According to the Soil Conservation Service, 6,708,000 acres, or 86 percent, of this land is suitable for cultivation. Of the remainder of the present cropland area, 95,000 acres, or about 9 percent, are considered sufficiently productive to remain in crops during the war period. Both shallow calcareous soils and, in certain localities, sandy soils are included in this acreage and it is adapted primarily to the production of small grains and peanuts.

A limited acreage of the plowable pasture in the Black Prairie counties can be devoted to crop production during the war period. This land is located in the counties adjacent to the Rio Grande Plain and is not typical Black Prairie soil. Approximately 31,000 acres of the sandy loam soils in these counties are considered sufficiently productive to warrant converting from pasture to crop production. This brings the total of the land suitable for crop production during the war period to 6,834,000 acres.

Irrigation is carried on in the Black Prairie Area to the extent of about 18,600 acres. Approximately 17,000 acres of this land are in Bexar County. Water

is obtained from both surface and underground sources. About 5,000 acres located south and east of San Antonio are irrigated from wells. The Edwards limestone stratum is the main source of water, and it is being fully utilized at present.

The Medina Reservoir furnishes water for the remaining 12,000 acres irrigated in Bexar County. It is controlled by the Bexar, Medina, Atascosa Water Improvement District, and has a capacity of approximately 250,000 acre feet. It is not feasible to irrigate additional land from this reservoir.

The San Antonio River constitutes the important possibility for expanding irrigation in this area. Through the construction of a reservoir southeast of San Antonio and the necessary canals about 20,000 acres located in Karnes County could be irrigated. This would increase the acreage irrigated to about 38,600 acres. The increased acreage cannot be put under irrigation before 1945.

Use of Resources for Crops

Desirable adjustments for maximizing production of essential materials in this area are closely associated with the varying soil types common to the Blackland counties. The black waxy soils which characterize the area are adapted primarily to the production of cotton, corn, small grains, and onions. They are not well suited to peanuts, potatoes, and sweet potatoes. These crops, however, are adapted to the sandy soils in these counties which in reality are a part of the Post-Oak strip and other adjoining areas that overlap into the Blackland counties.

Peanuts

Peanuts were grown commercially in this area to a limited extent prior to the emergency period. In 1941, 57,000 acres were grown. The acreage increased to 165,000 in 1942 and approximately 182,000 acres are being grown in 1943. The physical resources are not a limiting factor in this area as Soil Conservation Service data indicate that approximately 1,044,380 acres of sandy soils are suitable for peanut production. A wartime capacity of 400,000 acres is suggested for the area.

The problems associated with increased peanut production are of a similar nature to those of the adjoining sandy land areas. The small farm units and limited productive resources common to the sandy areas do not permit efficient production. However, the fact that larger scale equipment is used in the production of crops grown primarily on the black waxy soils of the area provides a somewhat better opportunity for the effective use of harvesting equipment than is true in the Post-Oak or Northeast Sandy Land Areas. The attainment of the maximum would require an increase in the cropland acreage on a considerable number of farm units in the sandy soils areas and the adaptation of mechanized farming practices. Some program to provide the necessary financial assistance and to insure farmers against losses after the need for expanded peanut production is over must be put into operation before this adjustment can be accomplished. Technical guidance in the use of harvesting equipment through organized communities, and the assembling and marketing of the products would also be needed.

Because of these problems it is not considered possible to attain wartime capacity by 1944. Two hundred thousand acres is about the maximum it appears reasonable to attain by 1944.

Table 51. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 14, Black Prairie Area

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	2250.1	2510.2	2464.0	2400.0	2400.0
Grain sorghums, all	do.	328.2	338.8	402.7	450.0	400.0
Sweet sorghums, except sirup	do.	350.8	285.4	300.0	250.0	250.0
All sorghums for grain	Harvested	135.8	197.1	347.7	377.0	527.0
All sorghums for silage	do.	23.8	25.0	25.0	23.0	23.0
All sorghums for forage	do.	401.7	330.0	330.0	300.0	300.0
Soybeans, grown alone	Planted	4.0	6.3	7.4	7.0	7.0
Soybeans for beans	Harvested	.2	3.5	4.0	4.0	4.0
Soybeans for hay	do.	2.5	1.6	2.0	2.0	2.0
Cowpeas, grown alone	Planted	147.7	137.0	61.0	50.0	50.0
Cowpeas for peas	Harvested	24.7	34.4	30.0	25.0	25.0
Cowpeas for hay	do.	15.0	24.3	20.0	20.0	20.0
Peanuts, grown alone	Planted	57.0	165.2	182.5	200.0	400.0
Peanuts picked & threshed	Harvested	54.0	156.6	175.0	190.0	380.0
Peanuts for hay	do.	51.0	135.0	164.0	180.0	360.0
Cotton, all upland	Planted	2455.4	2521.5	2370.0	2400.0	2400.0
Under 15/16" staple 3/	do.	368.0	630.0	474.0	480.0	360.0
15/32" to 1 3/32" staple 3/	do.	2087.0	1891.5	1896.0	1920.0	2040.0
1 1/8" staple & over 3/						
Cotton, Am.Egyptian or Sea Is.						
Irish potatoes	do.	8.0	9.2	12.0	15.0	20.0
Sweet potatoes	do.	7.5	5.8	14.0	15.0	20.0
Beans, dry edible	do.			5.8	6.0	8.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	29.7	30.4	30.7	37.5	37.5
Cabbage	do.	.5	.3	.4	.5	.5
Onions	do.	19.0	24.4	18.0	24.0	24.0
Beets	do.	0.0	0.0	.2	0.0	0.0
Carrots	do.	.4	.3	.9	1.0	1.0
Peppers						
Spinach	do.	3.1	5.2	4.4	5.0	5.0
Tomatoes	do.	6.7	5.9	6.8	7.0	7.0
Other intertilled crops, total						
Total cropland used for intertilled crops 5/	-------	5630.4	6017.1	5850.7	5832.5	5932.5
Oats	Planted	535.2	585.9	524.9	550.0	550.0
Barley	do.	44.0	55.4	63.9	75.0	85.0
Winter Wheat	do.	109.9	101.0	105.0	110.0	110.0
Oats for grain	Harvested	418.6	132.4	230.2	458.0	467.0
Barley for grain	do.	33.5	11.2	21.7	64.0	55.0
Grains cut green for hay	do.	13.5	10.8	12.0	12.0	12.0

Continued -

Table 51, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 14, Black Prairie Area

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Harvested					
Flaxseed	Planted					
Rice	do.					
Other crops	Harvested					
Citrus fruit	-------					
Total cropland used for close-seeded crops 5/	-------	614.1	542.5	530.2	640.0	640.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	243.3	254.1	205.6	200.0	200.0
Hay, all tame	do.	325.3	395.8	403.6	414.0	594.0
Alfalfa seed	do.					
Total cropland used for sod crops 5/	-------	243.3	234.1	205.6	200.0	200.0
Total cropland used for crops 5/	-------	6495.8	6793.5	6567.1	6672.5	6832.5
Idle cropland	-------	1264.2	966.5	1172.9	101.5	1.5
Total cropland 5/	-------	7760.0	7760.0	7760.0	6834.0	6834.0
Wild hay	Harvested	57.3	59.7	62.6	65.0	65.0
Total land in farms	-------	15080.0	15080.0	15080.0	15080.0	15080.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of AAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 52.Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 14, Black Prairie

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Units	Units	Units	Units
Corn, all.....	Planted	Bu.	1937-41	18.6	18.6	18.6	19.5
All sorghums for grain.	Harvested	do.	1937-41	16.5	16.5	16.5	16.5
All sorghums for silage	do.	Ton			5.2	5.2	5.2
All sorghums for forage	do.	do.			2.1	2.1	2.1
Soybeans for beans.....	do.	Bu.			9.0	9.0	9.0
Cowpeas for peas.....	do.	do.			6.2	6.2	
Peanuts picked & thresh	do.	1,000 lb.	1937-41	.500	.500	.475	.475
All upland cotton.....	Planted	Lb.	1937-41	162.0	162.0	162.0	162.0
Irish potatoes.....	do.	Bu.			60.0	60.0	60.0
Sweet potatoes.....	do.	do.			65.0	65.0	65.0
Fresh vegetables:							
Cabbage.....	do.	100 lbs.					
Onions.....	Harvested	do.			50.0	50.0	50.0
Beets.....	do.	Bu.	-	-	75.0	75.0	75.0
Carrots.....	do.	Bu.	1937-41	140.0	140.0	140.0	140.0
Peppers.....							
Spinach.....	do.	Bu.	1937-41	90.0	90.0	90.0	90.0
Tomatoes.....	do.	Ton	-	-	3.0	3.0	3.0
Oats for grain.....	do.	Bu.			28.3	28.3	28.3
Barley for grain.....	do.	do.			24.0	24.0	24.0
Winter wheat.....	Planted	do.	1937-41	13.2	13.2	13.2	13.2
Rye for grain.....							
Rice.....							
Hay, all tame.....	Harvested	Ton			1.2	1.2	1.2
Wild hay.....	do.	do.			1.1	1.1	1.1

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 53. Estimates of Wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 14, Black Prairie

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	322.1	296.4	281.0	275.0	260.0	260.0
Cattle & calves, all	do.	1135.0	1244.7	1203.0	1250.0	1250.0	1250.0
Cows kept for milk, 2 years +	do.	365.5	380.7	393.2	400.0	400.0	400.0
Other cows, 2 years +	do.				291.1	288.4	288.4
Sheep & lambs, all	do.	461.4	495.0	481.0	490.0	500.0	500.0
Ewes, 1 year +	do.				307.0	313.8	313.8
Hens & pullets	do.	7155.2	8669.3	10057.0	10000.0	10000.0	10000.0
				Expected in 1943			
During year:							
Sows farrowed, spring 3/	do.	39.1	58.1	77.2	80.0	xxx	80.0
Sows farrowed, fall 4/	do.	48.2	60.9	69.3	72.0	xxx	72.0
Chickens raised 5/	do.	11763.6	13572.4	13500.0	13500.0	13500.0	13500.0
Commercial broiler production	do.						
Turkeys raised	do.	1631.8	1665.2	1700.0	1700.0	1700.0	1700.0
Milk cows, average during the year	do.	341.7	357.2	368.0	375.3	375.3	375.3
Milk produced (Thousand lbs.		1243.1	1212.5	1252.3	1274.0	1274.0	1274.0
Wool shorn	Pound		3593.7	3492.1	3557.4	xxx	3630.0
Eggs produced	Dozen	62277.2	70051.2	81294.1	80833.3	80833.3	80833.3
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pounds			244264.6	250400.6	250648.0	250648.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Irish Potatoes

Irish potatoes are grown principally for home use in this area, with a small amount for nearby markets. This appears to be the desirable place they should occupy in the agricultural pattern during the war period. Increased demands of the non-farm population within and near the area should absorb a considerably larger production than the present level. About 9,000 acres were grown in 1942 and 12,600 acres are reported for 1943. The production of 20,000 acres during the maximum period appears feasible, and 15,000 acres can be grown in 1944.

The attainment of this acreage should not be difficult. Adequate soil resources are available and experience in production methods is prevalent among farmers. Some additional storage facilities on farms and in central warehouses would be needed. Furthermore, assembling and marketing problems would require some attention.

Sweet Potatoes

Sweet potatoes occupy a similar place in the agriculture of the Black Prairie Area as do Irish potatoes. Production has fluctuated over a wide range during the past several years. About 6,000 acres were grown in 1942 and 14,000 acres are reported for 1943. The wartime capacity of the area is estimated to be about 20,000 acres. This production would provide an increased supply for home use as well as additional quantities for local markets. A part of the production might be disposed of through dehydrating plants to be established in connection with the expanded program in the nearby areas.

Problems of attaining capacity production of sweet potatoes are similar to those involved in expanding the production of Irish potatoes. Lack of farm storage and curing facilities present a difficult problem. The average farm unit is not, as a rule, equipped to store and retain seed for the following season. Some assistance with this problem, through the use of central storage facilities and the encouragement of larger growers to retain seed and grow slips in excess of their own needs, would be necessary. The storage, curing, and dispostion of the marketable surplus would require a similar program to that outlined for sweet potatoes in the State Summary report. The provision for central storage capacity plus some means of receiving the crop field run at harvest time, either on a loan or purchase basis, are the principal features most needed in such a program.

Fresh Vegetables

Fresh vegetable production in the Black Prairie Area is confined principally to onions, tomatoes, and spinach. Small acreages of cabbage and carrots are grown Spinach and tomatoes are grown in the southwestern part of the area. In 1942, about 5,000 acres of spinach were grown and 6,000 acres of tomatoes. About the present level of spinach production is suggested for the maximum period and about 7,000 acres appear to be desirable for tomato production. The acreage of onions fluctuates over a wide range from year to year, primarily because of the uncertainty of market conditions. In 1942 slightly more than 24,000 acres of onions were harvested. This probably was an all-time high acreage and no doubt resulted from the favorable experience in 1941 combined with the feeling on the part of farmers that an unlimited demand for all kinds of food crops was in prospect. This proved to be erroneous, however, and rather disastrous results were experienced in marketing the 1942 crop. As a result the 1943 crop dropped back to 18,000 acres. Al-

though the resources and experience of farmers are capable of producing at a greatly increased level the needs for onions do not appear to warrant production at higher than the 1942 level. Therefore, 24,000 acres are suggested for wartime capacity. This gives a total for all vegetables of 37,500 acres, which is practically the same acreage as was grown in 1942. No significant problems are anticipated in reaching this maximum, and the total acreage could be grown in 1944.

Other Crops

The remaining crops grown in the Blackland counties are confined largely to the black waxy soils. The present pattern of use of such land appears about the most desirable that could be carried on during the war period. Consequently no adjustments requiring considerable change from the 1942 level are proposed. The acreage of cotton and corn are about equal normally and 2.5 million acres of each were grown in 1942. Slightly less than these amounts are reported for 1943 and 2.4 million acres of each are proposed for the maximum period. About 340,000 acres of grain sorghum were grown in 1942 and slightly over 400,000 acres are reported for 1943. Production should continue at about the current level for best results during the war period. A sizable acreage of small grains is normally grown in this area, three-fourths of which is made up of winter oats. In 1942, 586,000 acres were seeded to oats, which was somewhat larger than normal. During the maximum period it is suggested that 550,000 acres of oats, 110,000 acres of wheat, and 65,000 acres of barley be seeded each fall.

The suggested wartime capacity for cotton, corn, grain sorghum, and small grain could be reached by 1944. Furthermore, some additional acreage would be available for some of these crops in 1944 largely as a result of not being able to attain the maximum acreage of peanuts.

Use of Resources for Livestock

All classes of produce livestock have increased since 1941 in response to war demands. Increases in beef cattle, sheep, and milk cows were relatively small compared to those for poultry and hogs. The lack of water, fencing, and other facilities and the high percentage of tenancy has retarded expansion of sheep and cattle numbers. Small farmers and tenants preferred to increase hogs and poultry because of the small investment and the quick turnover involved in connection with these enterprises.

Beef Cattle and Sheep

The area has the capacity to maintain 1,250,000 cattle and 500,000 sheep. These figures are approximately the same as the 1,244,700 cattle and 495,000 sheep reported for 1942. By January 1, 1943, cattle increased to 1,293,000 while sheep numbers dropped to 481,000. The maximum situation for cattle could be obtained by 1944.

Dairy Cattle

Feed resources permit greater dairy production than was obtained in 1942. The 400,000 milk cows suggested for wartime capacity are a 5 percent increase over the number reported in 1942. The wartime maximum could be obtained in 1944 by the addition of 6,700 milk cows to those on farms in 1943.

Poultry and Eggs

Farmers have expanded poultry production rapidly during the past two years. It is believed that the level of production attained in 1943 approximated the wartime capacity of the area. The 10,000,000 hens and pullets suggested for the maximum situation is 15 percent more than were reported in 1942.

Hogs

Hog numbers have increased greatly since 1941 because of favorable prices and because the enterprise was adaptable to many farms with surplus grains. Almost twice as many spring litters were farrowed in 1943 as were farrowed in 1941. The 80,000 sows suggested for spring farrowing to attain capacity production are an increase of nearly 22,000 compared to 1942 farrowings. It would be possible to obtain the wartime maximum in 1944.

Limiting Factors to Wartime Capacity

With the exception of peanuts and sweet potatoes no major problems are anticipated in the attainment of wartime capacity in this area. The more important problems relating to these crops have been previously touched upon.

An examination of the increased labor requirements in relation to the potential labor available indicates that the additional requirements can be met without serious difficulty. The increased acreages do not cause any peak seasons which would require bringing additional workers into the area.

The additional farm machinery needed is made necessary largely by the increased peanut acreage. Possibly approximately 300 peanut threshers and a comparable number of stationary balers would be needed. In addition about 3,000 side-delivery rakes, tractors, and associated planting and cultivating equipment would be required on farms which shift from small to large scale operations in order to grow peanuts efficiently. Production methods in this area, particularly on the Blacklands proper, have shifted toward mechanized operations during recent years. The increased wage rates in effect at present would facilitate this trend if additional machinery were available. This is regarded as a desirable long-time trend and should be encouraged insofar as additional machinery can be made available.

The increased peanut, Irish potato, and sweet potato acreage would require an additional supply of fertilizer. If recommended applications per acre were made about 16,000 tons would be needed for peanuts and about 2,250 tons for Irish and sweet potatoes.

NORTHEAST SANDY LANDS AREA (15)

This area is located in the extreme northeastern part of the state and is comprised of 23 counties. The upland soils are sandy and only moderately productive. Heavier alluvial soils are found along the streams and if not subject to overflow produce good yields of adapted crops. The surface is generally undulating to rolling and the rainfall averages between 40 and 45 inches. Pine timber, interspersed with certain hardwood species, covers most of the land not in cultivation and persistently encroaches on the cultivated area.

The agriculture carried on exclusively under dry-land conditions, is characterized by small farms, irregular-shaped fields, simple tools, and a comparatively liberal use of commercial fertilizers. The basic cropping system centers around cotton and corn which are supplemented in various parts of the area with a wide variety of special crops, mainly vegetables. Other crops that are grown rather commonly throughout the area are cowpeas, sorghums, peanuts, sweet potatoes, and watermelons.

Resources Available for Crop Production

According to the 1939 census the area has approximately 2,919,000 acres of cropland including idle land divided among 77,300 farms. Data compiled by the Soil Conservation Service indicate that about 2,481,000 acres, or 86 percent, of the cropland are considered suitable for continuous cultivation, whereas the remaining 14 percent which is not regarded as sufficiently productive to warrant the expenditure of the necessary labor and materials required. The 438,000 acres included in this group are equal to approximately half of the acreage normally idle.

In addition to the cropland suited to crop production, approximately 338,000 acres of open pasture land is so classed. This land is identified by the Soil Conservation Service as class II land which would require only simple erosion control measures to maintain it in a good state of cultivation. This brings the total acreage considered suitable for cultivation during the war period to 2,819,000 acres. This is regarded as the maximum acreage that could be profitably used for crop production.

The maximum acreage of cropland available for use during 1944 is approximately 2,581,000. This includes the 2,481,000 acres of land already in cultivation plus that portion of the open pasture land (100,000 acres) which it is believed could be brought into cultivation by 1944.

Use of Resources for Crops

The physical resources of the area are adapted to the production of a number of so-called war crops. Those offering the greatest possibilities include sweet potatoes, peanuts, and tomatoes.

Sweet Potatoes

Sweet potatoes are grown throughout the area on a home use basis, and in certain localities they have become established as a commercial enterprise. The counties having the largest commercial acreage include Camp, Smith, and Upshur. In 1942 only about 25,000 acres were grown in this area. The reported acreage for

Table 54.Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 15, Northeast Sandy Lands

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	777.3	750.0	766.0	765.0	715.0
Grain sorghums, all	do.	58.5	53.8	59.0	35.0	40.0
Sweet sorghums, except sirup	do.	57.9	66.1	85.0	85.0	60.0
All sorghums for grain	Harvested	4.7	18.0	54.0	20.0	0
All sorghums for silage	do.	7.0	7.6	5.0	8.0	8.0
All sorghums for forage	do.	93.1	81.5	85.0	92.0	92.0
Soybeans, grown alone	Planted	4.3	4.1	7.2	4.0	4.0
Soybeans for beans	Harvested	.1	.1	2.0	.1	.1
Soybeans for hay	do.	3.6	3.4	3.0	3.4	3.4
Cowpeas, grown alone	Planted	211.0	183.6	129.8	130.0	91.6
Cowpeas for peas	Harvested	99.2	91.8	90.0	90.0	50.0
Cowpeas for hay	do.	35.0	32.0	30.0	30.0	41.6
Peanuts, grown alone	Planted	13.0	136.4	154.5	215.0	975.0
Peanuts picked & threshed	Harvested	12.8	98.0	147.0	205.0	930.0
Peanuts for hay	do.	10.9	97.0	123.6	172.0	780.0
Cotton, all upland	Planted	849.7	738.1	690.0	700.0	700.0
Under 15/16" staple 3/	do.	170.0	229.0	207.0	210.0	210.0
15/32" to 1 3/32" staple 3/	do.	679.7	509.1	483.0	490.0	490.0
1 1/8" staple & over 3/						
Cotton, Am.Egyptian or Sea Is.						
Irish potatoes	do.	13.9	13.4	19.8	20.0	20.0
Sweet potatoes	do.	34.1	24.8	45.0	60.0	35.0
Beans, dry edible	Planted			.4		
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	18.2	16.5	18.1	20.9	25.9
Cabbage						
Onions	do.	.4	.6	.2	.6	.6
Beets						
Carrots						
Peppers	do.	.4	.3	0	.3	.3
Spinach						
Tomatoes	do.	17.4	15.6	17.9	20.0	25.0
Other intertilled crops, total						
Total cropland used for intertilled crops 5/		2037.9	1986.8	1974.4	2034.9	2716.5
Oats	Planted	48.2	61.9	96.8	100.0	51.0
Barley	do.	6.0	1.1	1.7	2.0	2.0
Winter Wheat						
Oats for grain	Harvested	39.0	41.0	50.9	60.0	40.0
Barley for grain	do.	.4	.3	.5	1.0	1.0
Grains cut green for hay	do.	1.8	1.4	1.3	2.0	1.0

Continued

Table 54.continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 15, Northeast Sandy Lands

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain						
Flaxseed						
Rice						
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/	--------	48.8	63.0	98.5	102.0	53.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	15.2	14.3	12.5	15.0	38.0
hay, all tame	do.	66.4	148.1	170.9	222.4	864.0
Alfalfa seed						
Total cropland used for sod crops 5/	--------	15.2	14.3	12.5	15.0	38.0
Total cropland used for crops 5/	--------	2101.9	2064.1	2085.4	2151.9	2807.5
Idle cropland	--------	817.1	854.9	833.6	429.1	11.5
Total cropland 5/	--------	2919.0	2919.0	2919.0	2581.0	2819.0
Wild hay	Harvested	22.7	23.7	24.3	24.0	24.0
Total land in farms	--------	7314.0	7314.0	7314.0	7314.0	7314.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 55. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 15, Northeast Sandy Lands

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Unit	Unit	Unit	Unit
Corn, all	Planted	Bu.	1937-41	12.5	12.5	12.5	12.5
All sorghums for grain	Harvested	do.			12.0	12.0	12.0
All sorghums for silage	do.	Ton			3.5	3.5	3.5
All sorghums for forage	do.	do.			1.1	1.1	1.1
Soybeans for beans	do.	Bu.			8.8	8.8	8.8
Cowpeas for peas	do.	do.			6.4	6.4	6.4
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.504	.500	.475	.475
All upland cotton	Planted	Lb.	1937-41	135.0	135.0	135.0	142.0
Irish potatoes	do.	Bu.			65.0	65.0	65.0
Sweet potatoes	do.	do.			75.0	75.0	75.0
Fresh vegetables:							
Cabbage							
Onions	do.	100 lb.	1937-41	42.0	42.0	42.0	42.0
Beets							
Carrots							
Peppers	Harvested	Bu.	1937-41	125.0	125.0	125.0	125.0
Spinach							
Tomatoes	do.	Ton	-	-	3.75	3.75	3.75
Oats for grain	Harvested	Bu.			25.0	25.0	25.0
Barley for grain							
Winter wheat							
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton			1.0	1.0	1.0
Wild hay	do.	Ton			1.1	1.1	1.1

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 56.- Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons

Area 15 - Northeast Sandy Lands

Item of livestock and livestock products	Unit	Reported for 1/		Reported for	Wartime capacity 2/		Wartime maximum capacity 2/
		1941	1942	1943	1944	1945	
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	181.0	177.5	171.8	167.0	165.0	165.0
Cattle & calves, all	do.	506.9	520.0	574.6	575.0	575.0	575.0
Cows kept for milk, 2 yrs. & over	do.	220.9	232.4	235.4	240.0	250.0	250.0
Other cows, 2 yrs. & over	do.				71.9	71.3	71.3
Sheep & lambs, all	do.	21.5	21.6	21.6	21.6	21.6	21.6
Ewes, 1 yr. & over	do.				15.4	15.4	15.4
Hens & pullets	do.	2543.9	3029.6	3427.4	3400.0	3400.0	3400.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	27.6	33.4	43.8	35.0	xxx	35.0
Sows farrowed, fall 4/	do.	24.1	30.3	37.0	30.0	xxx	30.0
Chickens raised 5/	do.	5151.6	5710.4	5700.0	5000.0	5000.0	5000.0
Commercial broiler production	do.						
Turkeys raised	do.	65.0	67.6	68.0	68.0	68.0	68.0
Milk cows, average during year	do.	207.5	215.9	218.7	223.0	232.2	232.2
Milk produced	1,000 lbs.	566.1	560.4	567.8	578.9	603.0	603.0
Wool shorn	Pound		156.8	156.8	156.8	xxx	156.8
Eggs produced	Dozen	22410.0	24596.7	27819.1	27596.7	27596.7	27596.7
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pound			69789,0	60490.4	59215.0	59215.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity".

3/ December 1 (of previous year) to June 1.

4/ June 1 to December 1.

5/ Excluding commercial broilers.

6/ Twelve-month period beginning on October 1.

1943 is 45,000 acres and it is estimated that 85,000 acres can be grown during the war period.

The attainment of the maximum acreage should not be exceedingly difficult. The land adapted to sweet potato production is greatly in excess of the maximum acreage. The greater portion of the increased acreage, however, would have to come from farms which are not now growing them on a commercial basis. This would necessitate production on a commercial scale by farmers whose experience has been confined primarily to production for home use. To bring about this change, seed or slips for planting must be supplied, labor or labor saving machinery to meet the peak demands for transplanting and harvesting provided, and adequate storage, processing, and marketing facilities established.

Seed or slips should be readily available to the grower. The advantages of having slips immediately available for setting under optimum moisture conditions should warrant the growing of them on the farm. The expanded program should provide an opportunity for the larger and better equipped growers to sell a considerable quantity of seed or slips to smaller growers who are not equipped to store seed or to grow their own slips.

The use of transplanting machines should partially overcome peak labor requirements at planting time. A limited number of these machines are in use, and considering that they reduce the labor requirements for planting about 50 percent, they should be adopted as rapidly as they can be made available.

Harvesting, curing, and marketing the crop represents the most difficult problem to be overcome. The experience of farmers in curing potatoes is limited, and farm storage facilities for additional potatoes are practically non-existent. For these reasons some program for centralized storage, grading, and curing is considered necessary. To be most effective the program should be designed to receive the crop from farmers at harvest time and to relieve them of the risks involved in curing, storing, and marketing. In lieu of such a program, a curing, grading, and marketing service should be provided at reasonable cost to the farmer. For the general content of such programs, see page 11 of the State Summary. Consideration also must be given to the use to be made of the products. It is assumed that a good portion of the production would be used for war purposes and require shipment over long distances. Thus, dehydration would be necessary. Present facilities would have to be increased substantially to take care of any considerable portion of the increased production. Such a program appears desirable for the long run from two standpoints. First, dehydrated foods have a number of desirable features which may result in the partial replacement of food preserved in cans. Second, the use of sweet potatoes as livestock feed in the dehydrated form offers definite possibilities for this area.

Sweet potatoes could be expanded to 60,000 acres by 1944 assuming satisfactory returns from the crop this year and assuming also that substantial progress is made in the solution of the problems listed above. This is 140 percent greater than the 1942 crop and 33 percent above the 1943 reported acreage.

Peanuts

Peanuts are grown throughout the area. Prior to the emergency, production was small and primarily for home use but in response to war demands it has increased rapidly. In 1942, 136,000 acres were grown while 154,000 acres are reported for 1943. Land resources are available for the production of approximately 975,000 acres during the war period.

A number of factors other than physical resources offer definite obstacles to the attainment of maximum production. Problems resulting from small scale farming methods are the most difficult of solution. At the present time the average investment in farm machinery is less than $150 per farm. One row and part row horse-drawn equipment are used almost universally while only a negligible number of farms are equipped with tractors. Farmers generally are dependent upon outside capital and entrepreneurs to furnish pickers and power to operate them. General experience indicates conclusively that peanuts cannot be grown, harvested, and marketed efficiently under such small scale methods. The acreage per farm will have to be increased sufficiently to permit the effective use of large scale harvesting equipment. The bulk of the peanuts will have to come from farms capable of growing 30 or more acres. This will mean an increase in cropland as well as the reorganization of the units around larger scale methods. These changes would permit production at considerably reduced costs and the additional volume would warrant the establishment of assembling and marketing facilities at local points.

The maximum acreage of peanuts for 1944 is estimated at 215,000 acres. This is an increase of 58 percent over the 1942 acreage and 40 percent above the 1943 crop. This is an optimistic estimate in view of the limited amount of new machinery expected to be available and the numerous other obstacles that must be overcome before planting time in 1944.

Tomatoes

Tomatoes are the principal fresh vegetable crop grown. Commercial production centers in Cherokee and Smith Counties. The acreage grown has fluctuated considerably depending upon market outlets. In 1942, about 16,000 acres were grown; 18,000 acres are reported for 1943; and it is estimated that the area has a wartime capacity of 25,000 acres. The experienced growers as well as the land are available to permit this acreage. Additional labor will be required during May and June for staking, pruning, and harvesting. It is estimated that 20,000 acres of tomatoes can be grown in 1944.

Other Crops

Adjustments in other crops to permit the maximum production of essential war crops are relatively minor. The acreage of corn and of grain sorghums would be slightly reduced while forage production would be increased to meet livestock needs. The forage sorghum acreage would be expanded slightly and additional forage would be available owing to increased peanut production.

Use of Resources for Livestock

The feed resources of this area will not support large numbers of livestock. Insufficient feed grains, scarcity of forages and lack of good pastures hinder livestock expansion. The area has always purchased grain, particularly for poultry and dairy feeds. Livestock are kept primarily for home use. The livestock combination on most farms consists of one or two milk cows, a meat hog or two and 40 to 50 hens. Many of the livestock of the area lack quality and low rates of production prevail.

Dairy Cattle

Cattle of dairy type predominate in the area. Even so the average was only about three milk cows per farm in 1942. Dairy production tends to be concentrated near milk processing plants. Here dairying is a commercial enterprise on many farms and has been facilitated by a program of pasture improvement.

Although dairy cow numbers have increased during recent years, dairy production has not kept pace with the increase in defense activities in the area. Heavy concentration of defense activities has resulted in a sharply increased demand for dairy products, particularly fluid milk. Dairy cow numbers can and should be increased to 250,000 or to 7 percent more than were reported in 1942. The numbers of all cattle should not be increased above present numbers. Assuming full use of the area's capacity for peanut production, the dairy enterprise would be strengthened by the greatly increased peanut hay production. Maximum milk cow numbers cannot be attained before 1945.

Beef Cattle

All cattle numbers have expanded in response to favorable prices. Recently the most rapid advance has been among beef cattle. The number of "all cattle" increased from 520,000 to 574,600 head from January 1, 1942 to the same date, 1943. Available pastures do not warrant a larger cattle population than is now carried. Thus, any change in either dairy cattle or beef cattle numbers for maximum wartime production would be made at the expense of the other, if the present numbers of all cattle are to be maintained. Since an increase in dairy cattle is indicated, a corresponding reduction in beef cattle numbers would be implied.

Hogs

Favorable prices and abundant feed supplies in other areas have encouraged expansion of hog numbers in the Northeast Sandy Lands. This increase has not been as rapid as in areas with surplus grain. Hogs range the woods and fields for an important part of their feed. The proportion of the feed thus obtained will vary, of course, with the mast crop.

Approximately 44,000 sows were expected for spring farrowing in 1943; and increase of more than 10,000 over the 1942 spring farrowings. It is believed that hog numbers have been expanded beyond safe limits in this feed deficit area. In view of changes that have taken place in the feed situation it is not believed that numbers can be maintained at this level. It was estimated that 35,000 was the maximum number that could safely be carried in view of the present outlook for feed.

Should the suggested maximum acreage of peanuts be obtained additional opportunities would exist for salvaging waste peanuts with hogs. Data for the appraisal of these opportunities were not available and this possible source of feed was not considered in estimating maximum capacity for hog production.

Poultry

Chicken numbers have increased steadily since 1940 with the greatest expansion taking place between January 1, 1941 and January 1, 1942. The demand for poultry products by workers in local defense industries has stimulated expansion of this enterprise. Farm flocks averaging between 40 and 50 hens provide the

majority of poultry production. Feed grains imported from other areas are used extensively.

In view of the outlook for feed grains it is not considered practical to expand chicken numbers above the 1943 level. The 3,400,000 hens and pullets indicated as the maximum is nearly 9 percent greater than the number reported in 1942.

Limiting Factors to Wartime Capacity

A number of factors limiting production have been mentioned in connection with various crops. To some extent certain problems involve more than one crop. Except for peak periods additional labor does not constitute a serious problem in this area. During May and June, however, about 30,000 additional workers will be needed. Cultivating sweet potatoes and peanuts, staking, pruning, and harvesting tomatoes are the principal operations which have contributed to the need for additional labor.

The production of peanuts and sweet potatoes on a commercial basis will require a considerable amount of farm machinery. To attain the indicated peanut goal approximately 14,000 farms would need to shift from the small scale methods to mechanized operations. About the same number of tractors and other equipment such as side-delivery rakes, middlebusters, row planters, and row cultivators, would be needed. A corresponding decrease in horse-drawn equipment would be expected. In addition to the above machinery needs, approximately 1,000 peanut pickers and power balers would be needed over and above the number assumed to be available for use in 1944. The principal machinery needed for the increased sweet potato acreage is transplanting machines. Due to their labor saving features, it is believed that these machines would be adopted as rapidly as additional quantities could be made available. Since only a very limited number are in use at present it would be exceedingly difficult to estimate how many could be used effectively.

The additional sweet potato, peanut, and tomato acreage proposed for this area would require about 43,000 tons of fertilizer, about 90 percent of which would be needed for peanuts.

PINEY WOODS LUMBERING AREA (16)

The Piney Woods Lumbering Area comprises 12 counties located in deep East Texas. Lumbering predominates and farming is of secondary importance. The soils are sandy throughout, except for small isolated prairies and the river bottoms where heavier soils predominate. Rainfall averages about 45 inches annually.

Such farming that is done is similar to Area 15. Corn and cotton are the basic crops with peanuts, sweet potatoes, and tomatoes of some importance. Sorghums are grown for feed in addition to corn. The cleared acreage per farm is small, and the farming is carried on with small-scale machinery. Free range from large cut-over and timber areas supply pasturage for large numbers of low grade beef cattle and hogs.

Resources Available for Crop Production

The 1939 census reports 469,000 acres of cropland on 22,000 farms in the Piney Woods Lumbering Area. Soil Conservation data indicate that about 33,000 acres of this land is unsuited to crop production, leaving 436,000 acres of cropland available for production during the war period. It was not considered advisable to increase the land devoted to crops by plowing out pasture land or by clearing cut-over lands.

In 1942, 315,000 acres were used for crops, about 154,000 acres standing idle. War demands full utilization of all resources, thus the amount of idle cropland should be reduced to a minimum under maximum production capacity. It was estimated that 425,000 acres could be used for crops under an all-out effort to produce farm products.

Uses of Resources for Crops

Peanuts

The soils of the area are suitable to the production of peanuts and sweet potatoes, both important war crops. Fully 50 percent of the soils are physically adapted to peanut production. The peanut acreage has been negligible in the area until 1942 when estimates show approximately 26,000 planted acres. The capacity of the area for peanut production during the war period is estimated to be 110,000 acres.

Peanut production is limited by reason of small farms and small-scale methods of production to an even greater extent than in Area 15. Most of the capacity for increased production will be found on the larger farms which will need to be reorganized around large-scale modern machinery. Farmers will need financial assistance in purchasing tractors and side-delivery rakes, and other large-scale machinery, and marketing facilities must be made available. The best possibilities for expanding peanut production will be found in the more northern and western portions of the area where the larger farms and relatively low average rainfall are found. Only a relatively small increase in peanut acreage can be expected by 1944 because a program aiming at the maximum acreage will take some time to inaugurate.

Sweet Potatoes

In 1942, about 6,200 acres of sweet potatoes were planted, and the capacity of the area was estimated to be 20,000 acres. Sweet potatoes are adapted to the small-scale production methods as practiced in the area. To facilitate reaching the maximum acreage, seed or slips should be made readily available to the growers. Many of the growers will be inexperienced in commercial production and are not equipped to store seed or to grow their own slips. Larger growers should be encouraged to supply seed or slips to others.

Harvesting, curing, and marketing the crop are difficult problems to overcome. Farmers have had only limited experience in curing sweet potatoes for the market while storage facilities are almost completely lacking. A program designated to take care of these problems is discussed in the state report.

Assuming a workable program, about 16,000 acres can be expected in 1944. Experienced farmers will have expanded their production, and a number of new growers should be in the field by then.

Other Crops

An increase of 10,000 acres in corn over 1942 has been suggested as the maximum acreage. Additional corn will be needed to supply feed for the increased livestock numbers believed possible in this area. More hay will be available for livestock feeding if the maximum peanut acreage is attained. No appreciable change over the 85,300 acres cotton grown in 1942 has been designated under the maximum situation.

The acreage of tomatoes has been doubled, amounting to 2,100 acres in 1942 and 4,000 acres in the maximum. This crop, while relatively unimportant from an acreage standpoint, fits well into the cropping systems on the small farms of the area.

Use of Resources for Livestock

Livestock production is not an important enterprise in this area because feed resources are not adequate to support large numbers. Cattle and hogs are primarily range supported, and the safe capacity of the range has been reached.

Dairy cattle in 1942 numbered about 40,000 head. The maximum of 44,000 head will fully tax resources. Cattle numbers other than dairy stock should remain about the same.

The capacity of the area for hog production varies with the mast crop. It is believed that the maximum capcity was being approached in 1943 when an estimated 23,500 sows were bred for spring litters. The wartime maximum of 25,000 sows for spring litters is based on the assumption of a normal or better mast crop. Although the area is dependent on outside sources for grain, poultry numbers can be increased to 900,000 or 20 percent above 1942 numbers to meet increased local needs for poultry products.

Maximum hog production may be reached in 1944 but maximum milk cow and poultry numbers will not be reached previous to 1945.

Table 57. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 16, Piney Woods Lumbering

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	159.7	151.5	156.0	160.0	160.0
Grain sorghums, all	do.	9.2	8.5	11.6	10.0	10.0
Sweet sorghums, except sirup	do.	10.0	10.9	12.0	15.0	15.0
All sorghums for grain	Harvested	.8	2.9	7.6	10.0	10.0
All sorghums for silage	do.	1.2	1.2	2.0	0.0	0.0
All sorghums for forage	do.	15.4	13.2	14.0	15.0	15.0
Soybeans, grown alone	Planted	2.4	2.3	2.2	0.0	0.0
Soybeans for beans	Harvested	.2	.2	0.0	0.0	0.0
Soybeans for hay	do.	1.9	1.8	0.0	0.0	0.0
Cowpeas, grown alone	Planted	17.4	13.9	10.9	10.0	10.0
Cowpeas for peas	Harvested	8.2	6.1	8.0	8.0	8.0
Cowpeas for hay	do.	2.8	2.2	2.0	2.0	2.0
Peanuts, grown alone	Planted	.5	25.7	30.8	35.0	110.0
Peanuts picked & threshed	Harvested	.4	15.3	28.5	33.0	105.0
Peanuts for hay	do.	.4	15.0	27.0	32.0	99.0
Cotton, all upland	Planted	92.9	85.3	83.0	85.0	85.0
Under 15/16" staple 3/	do.	19.0	26.0	21.0	21.0	17.0
15/32" to 1 3/32" staple 3/	do.	73.9	59.3	62.0	64.0	68.0
1 1/8" staple & over 3/						
Cotton, An Egyptian or Sea Is.	do.	.2	0	0	0	0
Irish potatoes	do.	2.2	2.2	2.5	2.5	2.5
Sweet potatoes	do.	8.1	6.3	13.2	16.0	20.0
Beans, dry edible						
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	1.2	2.1	2.0	3.0	4.0
Cabbage						
Onions						
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes	do.	1.2	2.1	2.0	3.0	4.0
Other intertilled crops, total						
Total cropland used for intertilled crops 5/	------	303.8	308.7	324.2	336.5	416.5
Oats	Planted	3.2	3.8	6.4	6.0	6.0
Barley						
Winter Wheat						
Oats for grain	Harvested	2.2	2.4	2.5	4.0	4.0
Barley for grain						
Grains cut green for hay	do.	.3	.2	.3	.3	.3

Continued -

Table 57, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 16, Piney Woods Lumbering

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain						
Flaxseed						
Rice						
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/	-------	3.2	3.8	6.4	8.0	8.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	2.4	2.3	2.0	2.0	2.0
Hay, all tame	do.	7.8	21.5	29.3	36.8	103.3
Alfalfa seed						
Total cropland used for sod crops 5/	-------	2.4	2.3	2.0	2.0	2.0
Total cropland used for crops 5/	-------	300.4	314.8	332.6	344.5	424.3
Idle cropland	-------	159.6	154.2	136.4	91.5	11.5
Total cropland 5/	-------	469.0	469.0	469.0	436.0	436.0
Wild hay	Harvested	2.1	2.2	2.4	2.4	2.4
Total land in farms	-------	1703.0	1703.0	1703.0	1703.0	1703.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 58. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 16, Piney Woods Lumbering

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Unit	Unit	Unit	Unit
Corn, all	Planted	Bu.	1937-41	12.7	12.7	12.7	12.7
All sorghums for grains	Harvested	do.			13.2	13.2	13.2
All sorghums for silage	do.	Ton			4.4	4.4	4.4
All sorghums for forage	do.	do.			1.2	1.2	1.2
Soybeans for beans							
Cowpeas for peas	do.	do.			6.4	6.4	6.4
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.460	.460	.460	.460
All upland cotton	Planted	Lb.	1937-41	183.0	183.0	183.0	183.0
Irish potatoes	do.	Bu.			60.0	60.0	60.0
Sweet potatoes	do.	do.			70.0	70.0	70.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes	Harvested	Ton	1937-41		3.5	3.5	3.5
Oats for grain	Harvested	Bu.			20.0	20.0	20.0
Barley for grain							
Winter wheat							
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton			1.0	1.0	1.0
Wild hay	do.	Ton			1.1	1.1	1.1

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capactiy acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 59. Estimates of Wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 16, Piney Woods Lumbering

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	39.2	38.5	37.0	36.0	35.0	35.0
Cattle & calves, all	do.	185.9	170.0	176.5	175.0	175.0	175.0
Cows kept for milk, 2 years +	do.	38.2	39.8	40.2	42.0	44.0	44.0
Other cows, 2 years +	do.				41.2	40.8	40.8
Sheep & lambs, all	do	14.0	14.1	14.1	14.0	14.0	14.0
Ewes, 1 year +	do.				8.2	8.2	8.2
Hens & pullets	do	632.6	753.5	830.3	870.0	900.0	900.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	18.3	19.7	23.5	25.0	xxx	25.0
Sows farrowed, fall 4/	do.	14.1	17.7	20.0	20.0	xxx	20.0
Chickens raised 5/	do.	1389.7	1405.5	1400.0	1400.0	1400.0	1400.0
Commercial broiler production	do.						
Turkeys raised	do.	11.4	12.5	12.5	12.5	12.5	12.5
Milk cows, average during the year	do.	35.7	36.9	37.3	38.9	40.8	40.8
Milk produced	Thousand lbs.	93.8	92.1	95.0	97.2	101.8	101.8
Wool shorn	do.		102.4	102.4	101.6	xxx	101.6
Eggs produced	Dozen	5573.7	5958.6	6566.3	6880.2	7117.5	7117.5
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/						xxx	
Net production of hogs 6/	Pounds			22209.1	22950.0	22950.0	22950.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Limiting Factors to Wartime Capacity

Several limiting factors in the attainment of maximum production have been previously pointed out. Except at peak periods, no additional labor will be needed. As in Area 15, May and June are the months requiring the most labor. Such operations as cultivating peanuts and sweet potatoes, staking, pruning, and harvesting tomatoes all fall within this period. Some seasonal hired labor may be required during this period and again during the fall harvesting period.

Some additional machinery will be needed in the area for the production of peanuts and sweet potatoes. From 2,000 to 2,500 farms will need to be mechanized if the maximum peanut acreage is attained. Translated into numbers of machines, this means that 2,000 to 2,500 tractors and side-delivery rakes, and from 100 to 150 pickers and hay balers would be needed. Transplanting machines will be needed to facilitate sweet potato production.

The acreages of peanuts and sweet potatoes proposed for wartime capacity would require about 4,700 tons of fertilizer above the amount assumed to be available for 1944.

POST-OAK AREA (17)

This area, consisting of 9 counties, lies within the post-oak portion of the East Texas timber country. The topography of the area is gently rolling and the soils are sandy for the most part. Fairly productive soils are found on the small interior prairies scattered throughout the area, while the bottom lands along the rivers are highly productive. The annual rainfall averages about 35 inches.

The plantation type of organization prevails in the river bottoms while small farm units using small-scale methods of production are the predominating type of farm organization on the uplands. Corn and cotton are the chief crops. Peanuts are becoming more important. Sweet potatoes are raised largely for home use. Fresh vegetables, principally onions and tomatoes, are raised to a limited extent.

Approximately three-fourths of the area is in pasture and is used primarily for grazing cattle. With the exception of the larger farm units, livestock production is mainly for home consumption.

Resources Available for Crop Production

The 1939 census shows 1,020,000 acres of cropland in the area. Soil Conservation Service data indicate that 918,000 acres are suitable for continuous crop production. The remaining 102,000 acres are not sufficiently productive to warrant cultivation. An estimated 137,000 acres of reasonably productive pasture land could be brought into cultivation by 1945, making a total of 1,055,000 acres which might be cropped during the war period.

Use of Resources for Crops

Peanuts

This area has land resources on which 250,000 acres of peanuts could be grown if needed. Slightly less than 40,000 acres were grown in 1942 and about 45,000 acres are reported for 1943. About 60,000 acres could be grown in 1944.

The principal factors limiting peanut production center around the small farm units and small-scale methods of production which predominate in the sandy land portion of the area. These problems are common to all the East Texas areas and are elaborated on in the State Summary of this report. Reorganization of a considerable number of farm units, financial assistance in the acquisition of the necessary equipment, some assurance against losses which might be incurred during the adjustment period, and assistance with assembling and marketing problems are needed if the wartime capacity is to be attained.

Sweet Potatoes

Sweet potatoes are grown primarily for home use in this area. Plenty of land adapted to their production is available. About 3,000 acres were grown in 1942, and almost 6,000 acres are reported for 1943. The acreage could be increased to 15,000 acres if necessary. About 10,000 acres are believed to be as far as the farmers of the area can go in the production of sweet potatoes in 1944.

Table 60.- Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons

Area 17 - Post Oak Area

Use of cropland	Acreage	Reported for 1/		Expected in 1943	Wartime	
		1941	1942		Capacity 1944 2/	Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	308.5	299.0	311.0	325.0	325.0
Grain sorghums, all	do.	33.5	30.5	44.4	35.0	35.0
Sweet sorghums, except sirup	do.	37.8	34.9	35.0	40.0	40.0
All sorghums for grain	Harvested	2.8	9.8	30.4	25.0	25.0
All sorghums for silage	do.	4.3	4.2	4.0	4.0	4.0
All sorghums for forage	do.	57.0	42.9	45.0	46.0	46.0
Soybeans, grown alone	Planted	-	-			
Soybeans for beans	Harvested	-	-			
Soybeans for hay	do.	-	-			
Cowpeas, grown alone	Planted	55.3	54.4	38.5	40.0	40.0
Cowpeas for peas	Harvested	26.0	23.7	25.0	25.0	25.0
Cowpeas for hay	do.	10.2	10.9	10.0	12.0	12.0
Peanuts, grown alone	Planted	8.0	39.8	45.5	60.0	250.0
Peanuts picked & threshed	Harvested	7.2	27.8	43.0	57.0	238.0
Peanuts for hay	do.	6.4	27.0	41.0	54.0	225.0
Cotton, all upland	Planted	296.4	297.0	267.0	275.0	300.0
Under 15/16" staple 3/	do.	59.0	92.0	67.0	69.0	60.0
15/32" to 1-3/32" staple 3/	do.	237.4	205.0	200.0	206.0	240.0
1-1/8" staple & over 3/						
Cotton, Am.Egyptian or Sea Is.	do.	0	0	0	0	0
Irish potatoes	do.	2.1	2.6	3.4	4.0	5.0
Sweetpotatoes	do.	4.1	2.8	5.8	10.0	15.0
Beans, dry edible	do.	-	-	-		
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	1.2	1.5	1.6	2.3	2.5
Cabbage						
Onions	do.	.2	.6	.5	.5	.5
Beets						
Carrots						
Peppers						
Spinach						
Tomatoes	do.	1.0	.9	1.1	1.8	2.0
Other intertilled crops, total						
Total cropland used for intertilled crops 5/		746.9	762.3	752.2	791.3	1012.5
Oats	Planted	11.8	13.6	19.8	20.0	20.0
Barley	do.	.4	.7	.8	1.0	1.0
Winter wheat	do.	-	-			
Oats for grain	Harvested	8.9	8.6	11.0	14.0	14.0
Barley for grain	do.	.2	.2	.2	.5	.5
Grains cut green for hay	do.	.6	.5	.6	.6	.6

Continued

Table 6, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 17, Post Oak Area

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain						
Flaxseed						
Rice						
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/		14.2	14.3	20.0	21.0	21.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	19.0	17.3	15.5	20.0	20.0
Hay, all tame	do.	36.2	55.7	67.1	86.6	257.6
Alfalfa seed						
Total cropland used for sod crops 5/		19.0	17.3	15.5	20.0	20.0
Total cropland used for crops 5/		778.1	79[illegible].1	733.3	832.3	1053.6
Idle cropland		241.9	225.9	231.7	102.7	1.5
Total cropland 5/		1020.0	1020.0	1020.0	935.0	1055.0
Wild hay	Harvested	4.3	4.5	4.3	4.3	4.3
Total land in farms		3149.0	3149.0	3149.0	3149.0	3149.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from some land during the year.

Table 61 Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 17, Post Oak

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Probable in 1944 3/	Probable or maximum acreage 4/	Maximum 5/
				Unit	Unit	Unit	Unit
Corn, all	Planted	Bu.	1937-41	13.6	13.6	13.6	13.6
All sorghums for grain	Harvested	do.	-	-	13.2	13.2	13.2
All sorghums for silage	do.	Ton			5.4	5.4	5.4
All sorghums for forage	do.	do.			1.4	1.4	1.4
Soybeans for beans							
Cowpeas for peas	do.	do.			6.4	6.4	6.4
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.446	.446	.425	.425
All upland cotton	Planted	Lb.	1937-41	153.0	153.0	153.0	153.0
Irish potatoes	do.	Bu.			65.0	66.0	65.0
Sweet potatoes	do.	do.			70.0	70.0	70.0
Fresh vegetables:							
Cabbage							
Onions							
Beets							
Carrots							
Peppers							
Spinach							
Tomatoes	Harvested	Ton			3.0	3.0	3.0
Oats for grain	Harvested	Bu.			24.8	24.8	24.8
Barley for grain	do.	do.			10.2	10.2	10.2
Winter wheat							
Rye for grain							
Rice							
Hay, all tame	Harvested	Ton			1.0	1.0	1.0
Wild hay	do.	Ton			1.1	1.1	1.1

1/ Will be designated by Division of Agricultural Statistics, BAE.
2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."
4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.
5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 62. Estimates of Wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 17, Post Oak

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
				-1,000 units-			
On farms January 1:							
Horses, mules & colts	Number	69.4	67.5	66.0	64.0	62.0	62.0
Cattle & calves, all	do.	249.0	268.2	277.8	250.0	250.0	250.0
Cows kept for milk, 2 years +	do.	40.1	49.8	52.4	55.0	58.0	58.0
Other cows, 2 years +	do.				57.2	56.6	56.6
Sheep & lambs, all	do.	17.2	19.2	19.8	20.0	20.0	20.0
Ewes, 1 year +	do.				11.8	11.9	11.9
Hens & pullets	do.	1035.6	1222.3	1370.3	1400.0	1500.0	1500.0
				Expected in 1943			
During year:							
Sows farrowed, spring 3/	do.	13.6	18.2	21.6	20.0	xxx	20.0
Sows farrowed, fall 4/	do.	14.3	18.3	18.0	17.0	xxx	17.0
Chickens raised 5/	do.	1909.8	2038.7	2000.0	2000.0	2000.0	2000.0
Commercial broiler production	do.						
Turkeys raised	do.	249.1	260.2	270.0	275.0	275.0	275.0
Milk cows, average during the year	do.	44.9	46.2	48.6	51.0	53.8	53.8
Milk produced (Thousand lbs.		124.8	125.2	129.6	136.0	143.4	143.4
Wool shorn	pound		139.4	143.7	145.2	xxx	145.2
Eggs produced	dozen	9041.4	9833.9	11019.5	11258.3	12062.5	12062.5
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pounds			30469.2	28867.2	28712.0	28712.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Sweet potatoes can be fitted into the present farm organizations with less difficulty than can peanuts. Obstacles to be overcome include lack of facilities for curing, storing, and marketing, and the related problems of providing seed and slips. These problems, with suggested possible means of solution, are discussed in the State Summary of this report.

Other Crops

With regard to other crops, very little change from the present pattern of production is needed. By more complete use of the cropland, slightly increased acreages of corn and cotton could be grown. The increase in cotton acreage would come largely on alluvial lands along the river bottoms where good yields and desirable quality of lint are produced. Corn is better adapted to the area than other grain crops and is depended upon as the primary source of grain feeds.

Use of Resources for Livestock

Livestock production on farms was mainly for home consumption previous to the present emergency. All classes of livestock have increased some since 1941 with most substantial increases in numbers of poultry and hogs. Limited feed production has hindered large expansion in numbers. The livestock pattern suggested for the area would involve some increase of dairy cattle, chickens, turkeys, and hogs compared to 1942 numbers. At the same time beef cattle numbers would be reduced.

Beef Cattle

In view of limited supplies of supplemental feed, beef cattle numbers should not be extended byond the normal carrying capacity of the range. It is believed that 250,000 cattle and calves will utilize these resources within safe limits, assuming normal grazing conditions. This is 18,000 head less than were reported for 1942 and nearly 28,000 less than were on farms January 1, 1943. It was considered feasible to obtain optimum production by 1944.

Dairy Cattle

It is believed that the demand within the area for milk and other dairy products justifies additional expansion of the enterprise. Increases in the amount of peanut hay grown will facilitate extending milk production. The 58,000 milk cows indicated for capacity production is about 16 percent and 10 percent more than were reported in 1942 and 1943, respectively.

Poultry and Eggs

Further expansion of poultry numbers in response to war needs is considered feasible. The 1,500,000 hens suggested for capacity production is an average of about 75 hens per farm. This is an increase of 278,000 hens above 1942 numbers. More than one-half of this development was obtained by 1943. Poultry numbers probably will level off during the present year instead of continuing the rapid rate of increase experienced during 1942. An expansion of 30,000 hens and pullets seemed feasible by January 1, 1944.

Hogs

It is considered that capacity production of feed grains will not justify more than 20,000 sows for spring farrowing. This is 1,800 more sows than brought litters in the spring of 1942 but is 1,600 less than were farrowed during the past spring.

Limiting Factors to Wartime Capacity

As indicated above, the important problems in the attainment of wartime capacity are related directly to peanuts and sweet potatoes. Small farms and small-scale methods of production have been the chief limiting factors insofar as peanuts are concerned. Reorganization of approximately 2,700 farm units around larger equipment and power units is needed. A special program to assist farmers in making this transition will be required if the wartime capacity is realized by 1945. About 2,700 new tractors and associated equipment such as listers, middlebusters, row cultivators, planters, and side-delivery rakes would be required. Some 230 or more peanut pickers and stationary balers over and above the number assumed to be on farms in 1944 would be needed to harvest the peanut acreage. Transplanting machines would doubtless be rapidly adopted in the production of sweet potatoes, if made available. The increased peanut and sweet potato acreages increase fertilizer needs by 10,000 tons over 1944 estimated supplies.

COAST PRAIRIE AREA (18)

The Coast Prairie is comprised of a strip of low-lying, practically flat land situated adjacent to the Gulf and extending northeastward from the Corpus Christi Area to the Louisiana state line. Wide differences in soil types, in rainfall, and in conditions of drainage have resulted in mixed types of farming. The soils can be roughly classed into three groups: dark clays and clay loams, light-colored sandy soils, and the alluvial soils deposited by the Brazos and Colorado Rivers and other smaller streams flowing through the area. The average annual rainfall ranges from 30 inches at one extremity to more than 50 inches at the other. Large portions of the area can be used for little other than grazing until it is systematically drained.

The principal types of farming are cattle ranching, to which approximately 70 percent of the land area is devoted; cotton and corn production, confined largely to the better-drained dark-clay and alluvial soils; and rice production. The rice acreage is found principally on fertile lands which may be either the sands or clays, with impervious sub-soils and gentle slopes that permit economical irrigation. Land on which rice is grown is usually cultivated one year and then stands idle for three years. This practice has led to a combination of beef cattle raising and rice farming. The cattle utilize the land during the years it is not cultivated.

In addition to their use for rice production, large areas of sandy soils are devoted to cattle ranching. In the case of scattered farming units having predominately sandy soils, stock farming along with some vegetable and peanut production are the principal enterprises. Dairy products, fruits, and vegetables are produced in relatively important quantities on both the dark clay and light sandy soils around the cities of Houston, Beaumont, and Galveston.

Resources Available for Crop Production

The 1939 census reports 1,422,000 acres of cropland in this area. Of this amount, 1,408,000 acres, or 99 percent, are considered suitable for continuous cultivation during the war period. The remainder is low-lying, poorly drained land not suited to cultivation. In addition to the above acreage of land suitable for crops, there is about 400,000 acres of open pasture land which could be brought into cultivation during the war period if needed. This land is now in large ranches. The establishment of new farm units would be necessary if it was put under cultivation. Assuming the development of this land, a maximum of 1,808,000 acres could be used for crops during the war period.

Irrigation in Area 18 has been confined exclusively to rice production. The acreage irrigated has varied widely with the demand for rice. In 1942 approximately 396,000 acres were grown.

Surface water diverted from the larger streams flowing across the area constitutes the principal source of water. Water is obtained from the Colorado, Brazos, Trinity, San Jacinto, Sabine, and Guadalupe Rivers. Other smaller streams are used for the irrigation of limited areas. Underground water is used to irrigate approximately 80,000 acres in the eastern part of the area, principally in Jackson, Wharton, Harris, and Waller Counties.

The acreage irrigated in this area can be increased to about 476,000 acres, or 80,000 more than was irrigated in 1942. The principal source of water for the increased acreage include the Guadalupe, the Colorado, and the Brazos Rivers, where increased pumping facilities would be necessary. Through the installation

of pumping plants and canals, about 50,000 acres could be irrigated in Victoria and Calhoun Counties. Fuller use of water stored in existing reservoirs, as well as the installation of some additional pumping capacity along the Colorado and Brazos Rivers, would provide the water supply for the remainder of the new acreage.

Use of Resources for Crops

Peanuts

Peanuts are grown principally in Harris and Waller Counties on the light sandy soils. In 1941, only 13,000 acres were grown. This was increased to 32,000 acres in 1942, but a decrease to 21,000 acres is reported for 1943. Suitable soils are available for the production of approximately 75,000 acres. The decrease in acreage from 1942 to 1943 probably is a result of the unsatisfactory experience farmers had in harvesting and marketing the 1942 crop.

Harvesting operations require the use of equipment which is too expensive for small operators to own. If such equipment is made available by other means, it cannot be used efficiently if only small acreages are grown on each farm. Any material increase in peanut production will require that the acreage grown per farm be increased sufficiently to permit economic production. With the larger farms growing from 25 to 30 or more acres and the adjoining smaller farms producing possibly an average of 10 acres, such equipment could be owned and operated effectively. Financial assistance in obtaining harvesting machinery, and also some assurance against losses due to possible decrease in the demand for peanuts will be necessary before the wartime capacity can be attained.

Approximately 40,000 acres is about the maximum acreage that can be grown in 1944.

Potatoes and Sweet Potatoes

Potatoes and sweet potatoes are grown principally for home use in this area with a small surplus to market in nearby towns. This appears to be the most desirable place these crops should occupy in the agricultural pattern during the war period. Increased local demands and greater use of these foods in the home food program would warrant considerable increase in production. In 1942, about 5,600 acres of Irish potatoes and 3,000 acres of sweet potatoes were grown. An increase to about 12,000 acres of each crop is suggested for the war period.

No significant problems are anticipated in connection with the attainment of these goals. Since the increased production would be primarily for home use and to satisfy local demands, the harvesting and marketing problems would not be nearly so difficult as in other areas. Some increased storage and curing facilities would be needed.

For 1944, a maximum of 10,000 acres for each of these crops is proposed.

Rice

As previously indicated, about 80,000 more acres of rice can be irrigated than was grown in 1942. About 19,000 new acres could be put under irrigation by 1944. Other than the installation of additional pumping facilities, reservoir capacity, and canal systems, no serious problems related to production are anticipated.

Table 63. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 18, Gulf Coast Prairie

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Corn, all	Planted	346.5	386.0	379.0	385.0	490.0
Grain sorghums, all	do.	47.2	47.9	36.4	45.0	50.0
Sweet sorghums, except sirup	do.	70.3	63.3	60.0	62.0	77.0
All sorghums for grain	Harvested	23.5	33.4	20.4	25.0	32.0
All sorghums for silage	do.	5.9	5.9	6.0	6.0	8.0
All sorghums for forage	do.	82.2	66.7	70.0	76.0	87.0
Soybeans, grown alone	Planted	1.2	4.5	2.2	2.0	2.0
Soybeans for beans	Harvested	.1	.1	.5	.5	.5
Soybeans for hay	do.	.9	3.0	1.5	1.5	1.5
Cowpeas, grown alone	Planted	38.6	53.8	25.0	25.0	25.0
Cowpeas for peas	Harvested	7.0	12.7	12.0	12.0	12.0
Cowpeas for hay	do.	2.0	6.4	8.0	8.0	8.0
Peanuts, grown alone	Planted	12.7	32.3	21.1	40.0	75.0
Peanuts picked & threshed	Harvested	11.4	18.4	20.0	38.0	71.0
Peanuts for hay	do.	9.5	17.0	19.0	36.0	68.0
Cotton, all upland	Planted	347.5	367.5	371.6	384.0	490.0
Under 15/16" staple 3/	do.	16.0	26.0	19.0	19.0	24.0
15/32" to 1 3/32" staple 3/	do.	331.0	341.5	352.6	365.0	466.0
1 1/8" staple & over 3/						
Cotton, Am. Egyptian or Sea Is.	do.	1.4	1.5	.4	1.5	1.5
Irish potatoes	do.	5.0	5.6	6.4	10.0	12.0
Sweet potatoes	do.	3.7	3.0	5.0	10.0	12.0
Beans, dry edible	Planted			.9	1.0	1.0
Processing vegetables, total 4/						
Tomatoes						
Miscellaneous vegetables						
Fresh vegetables, total 4/	Harvested	3.0	4.3	4.7	5.5	5.5
Cabbage	do.	.5	.8	.9	1.0	1.0
Onions	do.	.6	.9	1.3	1.0	1.0
Beets						
Carrots						
Peppers						
Spinach	do.	1.5	2.4	2.1	3.0	3.0
Tomatoes	do.	.4	.2	.4	.5	.5
Other intertilled crops, total	Harvested				10.0	10.0
Total cropland used for intertilled crops 5/		877.1	970.1	912.7	981.0	1251.0
Oats	Planted	4.9	5.9	15.4	20.0	30.0
Barley						
Winter Wheat						
Oats for grain	Harvested	2.6	2.8	9.5	17.0	26.0
Barley for grain						
Grains cut green for hay	do.	.2	.2	.2	1.0	1.0

Continued-

Table 63, continued. Estimates of wartime use of cropland, 1944 capacity and maximum capacity, with comparisons
Area 18, Gulf Coast Prairie

Use of cropland	Acreage	Reported for 1/ 1941	Reported for 1/ 1942	Expected in 1943	Wartime Capacity 1944 2/	Wartime Maximum capacity 2/
		1,000 acres				
Rye for grain	Planted	5.9	8.6	18.0	18.0	18.0
Flaxseed	do.	347.0	392.0	396.0	415.0	476.0
Rice	---					
Other crops						
Citrus fruit						
Total cropland used for close-seeded crops 5/		357.8	406.5	429.4	453.0	524.0
Hay, all tame, except soybean, cowpea, peanut & small grain hay	Harvested	35.2	32.7	30.2	33.0	33.0
Hay, all tame	do.	47.9	59.2	58.9	79.5	111.5
Alfalfa seed						
Total cropland used for sod crops 5/	---	35.2	32.7	30.2	33.0	33.0
Total cropland used for crops 5/	---	1270.1	1409.3	1372.3	1467.0	1808.0
Idle cropland	---	151.9	12.7	49.7	0	0
Total cropland 5/	---	1422.0	1422.0	1422.0	1467.0	1808.0
Wild hay	Harvested	73.4	76.5	71.9	75.0	75.0
Total land in farms	---	6455.0	6455.0	6455.0	6455.0	6455.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" for assumptions with respect to "wartime capacity in 1944" and "wartime maximum capacity."
3/ Approximate planted acreage of varieties which usually yield specified staple lengths.
4/ Commercial crop.
5/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, harvested from same land during the year.

Table 64. Estimates of wartime crop yields per acre, 1944 capacity and maximum capacity, with comparisons
Area 18, Coast Prairie

Crop	Acreage	Unit	Base period 1/	Yield per acre: Average for period 2/	Yield per acre: Probable in 1944 3/	Yield per acre: Probable or maximum acreage 4/	Yield per acre: Maximum 5/
				Unit	Unit	Unit	Unit
Corn, all	Planted	Bu.	1937-41	17.0	17.0	17.0	17.0
All sorghums for grain	Harvested	do.			15.0	15.0	15.0
All sorghums for silage	do.	Ton			5.3	5.3	5.3
All sorghums for forage	do.	do.			1.9	1.9	1.9
Soybeans for beans	do.	Bu.			8.4	8.4	8.4
Cowpeas for peas	do.	do.			7.2	7.2	7.2
Peanuts picked & thresh.	do.	1,000 lb.	1937-41	.501	.501	.501	.500
All upland cotton	Planted	Lb.	1937-41	215.0	215.0	215.0	215.0
Irish potatoes	do.	Bu.			50.0	50.0	50.0
Sweet potatoes	do.	do.			70.0	70.0	70.0
Fresh vegetables:							
Cabbage	Harvested	do.	1937-41	3.5	3.5	3.5	3.5
Onions							
Beets							
Carrots							
Peppers							
Spinach	do.	Bu.	1937-41	100.0	100.0	100.0	100.0
Tomatoes	do.	Ton			3.5	3.5	3.5
Oats for grain	Harvested	Bu.			16.0	16.0	20.0
Barley for grain							
Winter wheat							
Rye for grain							
Rice	Planted	do.	1937-41	48.8	48.8	48.8	48.8
Hay, all tame	Harvested	Ton			1.6	1.6	1.6
Wild hay	do.	Ton			.9	.9	.9

1/ Will be designated by Division of Agricultural Statistics, BAE.

2/ Reports of the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.

3/ Probable yield on estimated wartime capacity acreage in 1944 with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity."

4/ Probable yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (4), page 6.

5/ Maximum yield on the estimated maximum acreage with assumptions as set forth in "A Guide for an Appraisal of Maximum Wartime Production Capacity," section (5), page 6.

Table 65. Estimates of wartime production of livestock and livestock products, 1944 capacity and maximum capacity, with comparisons
Area 18, Coast Prairie

Item of livestock and livestock products	Unit	Reported for 1/ 1941	Reported for 1/ 1942	Reported for 1943	Wartime capacity 2/ 1944	Wartime capacity 2/ 1945	Wartime maximum capacity 2/
				1,000 units			
On farms January 1:							
Horses, mules & colts	Number	95.5	93.3	94.0	93.0	92.0	92.0
Cattle & calves, all	do.	878.4	754.2	717.6	750.0	800.0	800.0
Cows kept for milk, 2 years +	do.	139.3	139.5	134.3	140.0	145.0	145.0
Other cows, 2 years +	do.				325.0	343.4	343.4
Sheep & lambs, all	do.	45.3	45.6	46.0	45.0	45.0	45.0
Ewes, 1 year +	do.				27.4	27.5	27.5
Hens & pullets	do.	2447.2	2659.7	2927.8	3000.0	3000.0	3000.0
During year:				Expected in 1943			
Sows farrowed, spring 3/	do.	15.4	15.0	19.3	20.0	xxx	20.0
Sows farrowed, fall 4/	do.	13.4	15.3	17.0	17.0	xxx	17.0
Chickens raised 5/	do.	3571.9	3981.0	4000.0	4000.0	4000.0	4000.0
Commercial broiler production	do.						
Turkeys raised	do.	275.6	338.2	350.0	350.0	350.0	350.0
Milk cows, average during the year	do.	127.7	126.3	121.6	126.8	131.3	131.3
Milk produced (Thousand lbs.		333.9	334.1	321.6	335.3	347.3	347.3
Wool shorn	Pound		331.1	334.0	326.7	xxx	326.7
Eggs produced	Dozen	19729.0	21629.7	23812.9	24400.0	24400.0	24400.0
Cattle put on feed 6/	Number					xxx	
Sheep & lambs put on feed 6/	do.					xxx	
Net production of hogs 6/	Pounds			39280.0	39553.0	39553.0	39553.0

1/ By the Bureau of Agricultural Economics (or distributions by areas of BAE reports for States) except as otherwise indicated.
2/ See "A Guide for an Appraisal of Agriculture's Maximum Wartime Production Capacity" with respect to "wartime capacity in 1944" and a "wartime maximum capacity".
3/ December 1 (of previous year) to June 1.
4/ June 1 to December 1.
5/ Excluding commercial broilers.
6/ Twelve-month period beginning on October 1.

Other Crops

The remainder of the increased acreage of cropland should, for the most part, be distributed about equally between cotton and corn production. These crops are of about equal importance in the area, normally from the standpoint of the amount of land each occupies. In 1942, about 368,000 acres of cotton were grown and about 386,000 acres of corn. The reported acreages for 1943 are 372,000 and 379,000 acres, respectively. The additional cropland will permit the production of about 490,000 acres of each. The desirable staple quality and favorable yields are the most important factors warranting an increased acreage of cotton. Corn yields are good in this area which gives corn a comparative advantage over grain sorghum and small grains as a source of grain. Winter oats can be increased from 6,000 acres in 1942 to 30,000 acres for wartime capacity. This crop is increasing in importance in the area due partially to its contribution as a winter grazing crop.

With the exception of winter oats which would be increased to 20,000 acres in 1944, the adjustments suggested for the maximum could be reached, approximately by 1944. No significant problems should be encountered in the attainment of these goals.

Flaxseed have been grown in this area since the beginning of the emergency period. About 6,000 acres were grown in 1941 and 8,600 acres in 1942. The reported acreage for 1943 is 18,000 acres and it is proposed that this level of production be continued during the war period. If favorable results are experienced this year, the 1944 acreage may exceed this level. It is believed, however, that a further increase in acreage should not be called for until farmers have had more experience with this comparatively new crop.

Use of Resources for Livestock

Beef Cattle

The beef enterprise is characterized by the production of relatively light weight, milk fat calves. Grazing conditions favor this practice rather than marketing calves at an older age or as yearlings. As a result of this practice, cows kept for beef make up a relatively large proportion of all beef cattle.

Beef cattle numbers have been reduced in this area during the past two years for reasons other than lack of feed. Grazing resources will permit heavier than the present rate of stocking. The area is believed to have capacity for 800,000 cattle and calves, or 46,000 more than were reported in 1942. It is considered feasible to increase cattle numbers to 750,000 head by January 1, 1944.

Pastures in the Coast Prairie have a high natural carrying capacity and support a dense cattle population on the coarse grasses which predominate. Both the quality and quantity of grazing may be materially enhanced through pasture improvement practices such as mowing, seeding adapted grasses and clover, and clearing brush and timber. The response to range improvement is relatively rapid for most types of land and is particularly noticeable on alluvial soils along streams. Wider use of improved range practices offers a practical means of further extending the carrying capacity of the area beyond the present level.

Dairy Cattle

The large demand for fluid milk created by defense activities within the area suggest that dairy cow numbers be extended during the present emergency. The area has the capacity for 145,000 dairy cows or a 10,500 increase over 1942 numbers. Attainment of 140,000 milk cows by 1944 appears feasible.

Poultry and Eggs

Egg production has increased greatly since 1941 in response to local needs. Hens and pullet numbers increased from 2,659,700 in 1942 to 2,927,800 in 1943. It is believed that the area has the capacity of 3,000,000 hens and that it would be feasible to attain this number in 1944.

Hogs

Hog production was not increased as a result of the war demand for pork until 1943 when nearly 20,000 sows were kept for spring farrowing. This was more than a 30 percent increase over the number reported as farrowing during the spring of 1942. It is considered that the level of pork production attained in 1943 should be maintained as it approximates the wartime capacity of the area.

Limiting Factors to Wartime Capacity

The important problems involved in the attainment of wartime capacity center around bringing the additional land into cultivation. This land would, for the most part, require the establishment of new farm units to bring it into cultivation. On the basis of an average size unit of 40 acres of cropland as reported by the 1939 census approximately 8,000 new farms would have to be established. However, farm units having approximately two and one-half times this acreage of cropland would be much more efficient in production and would be necessary to provide relatively full employment for the family. On this basis, about 3,200 additional farm units would be required to operate the land devoted to dry-land crops. Some 400 new units would be required to bring the additional rice land into cultivation. Sufficient building materials, fencing, and operating equipment would be needed to establish these units as going concerns. A special real estate loan and construction program would have to be put into effect if this development is to be accomplished by 1945.

In connection with the additional labor requirements of the increased crop acreages the peak season presents the most significant problem. The harvesting operations for all crops for which significant increases are suggested require relatively heavy use of labor. The estimated additional workers needed are 14,000 for August, 18,200 for September, and 14,000 during October. The increased requirements during other seasons should not require additional workers from outside the area.

In view of the new farm units required to attain wartime capacity, farm machinery requirements will be increased materially in this area. Approximately 4,000 tractors and 3,600 middlebusters, row cultivators, and planters would be needed for the new farm units suggested. Comparable numbers of miscellaneous types of equipment would also be needed. The increased rice acreage would require about 400 grain binders. About 600 side-delivery rakes and 50 peanut pickers and stationary balers above the number assumed to be available in 1944 would be needed

to harvest the additional peanut acreage.

Some additional fertilizer would be needed primarily for the increased rice, peanut, and Irish and sweet potato acreages. About 2,800 tons more than the amount assumed to be available for 1944 would be needed to meet these requirements.