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AGRICULTURAL ECONOMICS REPORT NO. 42 JUNE, 1965

For Check Out Only!

Market Factors

OF NORTH DAKOTA

Durum Wheat

Shipments

JULY - DECEMBER, 1964

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FOREWORD

This publication represents a continuation of research into the factors affecting the marketing of North Dakota wheat. It illustrates the consistently high quality of North Dakota durum. The study was made possible through financial assistance grants from the North Dakota State Wheat Commission. Reports published under this cooperative arrangement are:

1. Wheat Statistics for North Dakota, Agricultural Economics Report No. 20, August, 1961.

2. Protein Content of North Dakota Wheat, North Dakota Farm Research, March-April, 1962.

3. Market Factors of North Dakota Hard Red Spring Wheat, Agricultural Economics Report No. 21, April, 1962.

4. North Dakota Hard Red Spring Wheat Shipments, North Dakota Farm Research, September-October, 1962.

5. Durum Market Factors, 1962, North Dakota Farm Research, January-February, 1963.

6. Quality Factors of North Dakota Durum Shipments, 1960, 1961, 1962, Agricultural Economics Report No. 26, January, 1963.

7. Durum Data, Agricultural Economics Report No. 27, February, 1963.

8. Market Factors of North Dakota Hard Red Spring Wheat, 1962 Shipments, Agricultural Economics Report No. 28, February, 1963.

9. Market Factors of North Dakota Hard Red Spring Wheat, 1963 Shipments, Agricultural Economics Report No. 33, March, 1964.

10. Market Factors of North Dakota Durum Wheat, 1963 Shipments with Comparisons, Agricultural Economics Report No. 34, April, 1964.

11. Quality of Commodity Credit Corporation Wheat in North Dakota Country Warehouses and Subterminals, North Dakota Farm Research, May-June, 1964.

12. Movement of North Dakota Grain by Truck, October-November, 1963, North Dakota Farm Research, July-August, 1964.

13. Economic Implications of the Wheat Sedimentation Test on the North Dakota Economy, Clinton D. Kurtz, unpublished Master's thesis, Department of Agricultural Economics, North Dakota State University, Fargo, North Dakota, October, 1964.

14. Market Factors of North Dakota Hard Red Spring Wheat Shipments, July-December, 1964, Agricultural Economics Report No. 43, June, 1965.

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MARKET FACTORS OF NORTH DAKOTA DURUM WHEAT SHIPMENTS JULY - DECEMBER, 1964

David C. Nelson and Fred R. Taylor[1]

INTRODUCTION

The 1964 North Dakota production figures for durum wheat represent a successful year for the North Dakota durum grower. The estimated 1,965,000 harvested acres produced some 56,985,000 bushels of durum wheat for a 29 bushel per acre average.[2] This comes close to the 1962 average of 31 bushels per acre. The record exceeds the 1950-59 10-year average in all categories. The 10-year average harvested acres of 1,466,000 produced an average 19,088,000 bushels for an average yield of 13 bushels per acre. This means that about 25 per cent more harvested acres in 1964 compared to the 10-year average produced nearly 300 per cent more durum wheat.

Rapid increases in the production of durum wheat, of course, mean that more market outlets must be found for this product. As more alternatives are found to sell North Dakota's famous durum wheat, it becomes more imperative that the quality of this product be constantly observed and recorded. This kind of information will provide continuing bases for analyzing the relationship of the market to productivity of the North Dakota farmer.

Objectives

The major objective of this report is to provide information regarding the relative importance of each of several grading factors for durum wheat harvested in 1964. The randomly selected sample drawn from records of carloads of durum leaving the state represents the total amount of durum wheat shipped from the state during the period July 1-December 31, 1964. The analysis is made by origin and by grade,which indicates the characteristics of durum originating in the various production areas in North Dakota. The 1964 crop profile is presented by the following categories: source, the quality of the total crop and of each particular area, and the relative importance of each of the grading factors including protein in determining the overall quality of the crop

Procedure

As in the four previous years an approximate 10 per cent sample of all durum carlot shipments held for inspection at the Grand Forks inspection point is included in this study. In addition, this report also includes durum carlot

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shipments from the Minot and Jamestown inspection points. A further difference is that the time period was extended to include all shipments from July 1-December 31, 1964. The previous studies included the period August 1-October 31. This provides for a much larger sample which accomplishes two things: It makes the sample more representative of the crop and represents a larger growing area.

All factors of the carlot sample listed on the inspection record were recorded, including the protein content and the origin of the sample by crop reporting district and county. This information was tabulated and analyzed in the following format for each of the quality factors existing in the sample (Appendix Tables B-1 through B-24). They are as follows:

1. The percentage distribution and number of carlots falling within specified ranges of various quality factors by grade for the entire sample.

2. Number of carlots falling within specified ranges of various quality factors by crop reporting districts included in the sample area and the percentage distribution of carlots within these ranges for the 1964 sample and the 1963, 1962, 1961, and 1960 samples for comparison.

3. Number of carlots falling within specified ranges of various quality factors by grade for the crop reporting districts.

Information found in the Appendix also includes the average values and range of test weight, moisture, and protein by county and grade for the crop reporting districts in the sample.

Findings

The origin of the 1964 carlot samples is shown in Figure 1. The sample includes part of all of the nine crop reporting districts in North Dakota.

The 1964 durum carlot survey yielded 455 samples. This far exceeds any of the previous years: 199 in 1963, 269 in 1962, 217 in 1961, and 181 in 1960 (Table 1). In general, the sample quality was lower than the four previous years. About 88 per cent graded Hard Amber Durum, while about 98 per cent of the 1963 crop sample graded Hard Amber Durum, as compared with 91 per cent, 97 per cent, and about 90 per cent of the 1962, 1961, and 1960 crop samples, respectively. The smaller percentage grading Hard Amber Durum was the result of a smaller percentage falling within the No. 1 Hard Amber Durum category. Only 6.6 per cent of the 1964 sample graded No. 1 Hard Amber Durum while about 22 per cent, 37 per cent, 49 per cent, and 46 per cent graded No. 1 Hard Amber Durum in 1963, 1962, 1961, and 1960, respectively. The largest portion of the 1964 sample, about 37 per cent, graded No. 2 Hard Amber Durum. This was somewhat less than the portion of the 1963 sample which graded No. 2 Hard Amber Durum, but greater than the 1962, 1961, and 1960 samples. About 9 per cent of the 1963 sample graded Amber Durum. Only 1.5 per cent of the 1963 fell within this grade.

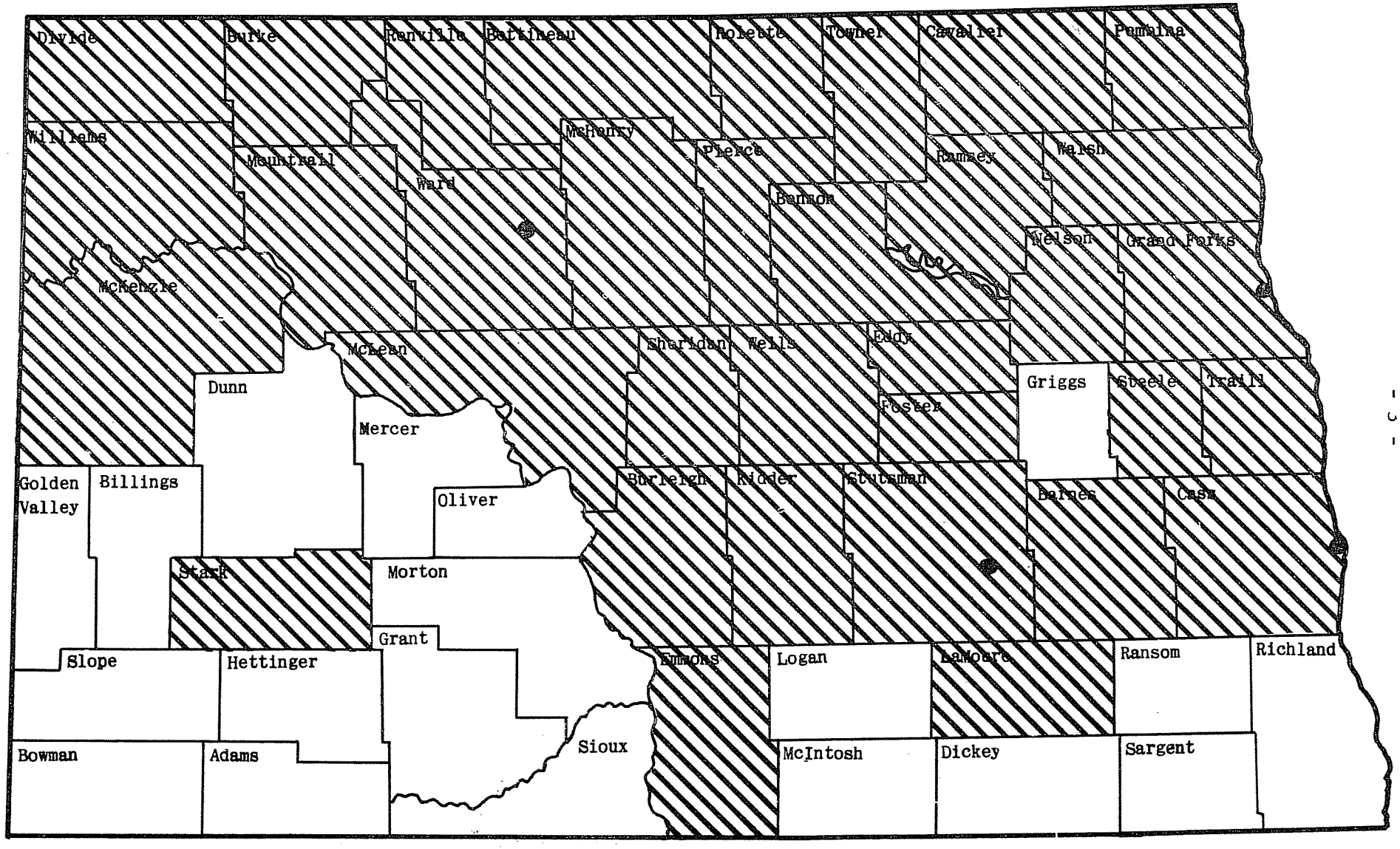

Figure 1. Counties Included in 1964 Sample of Carlots Inspected at North Dakota Hold Points

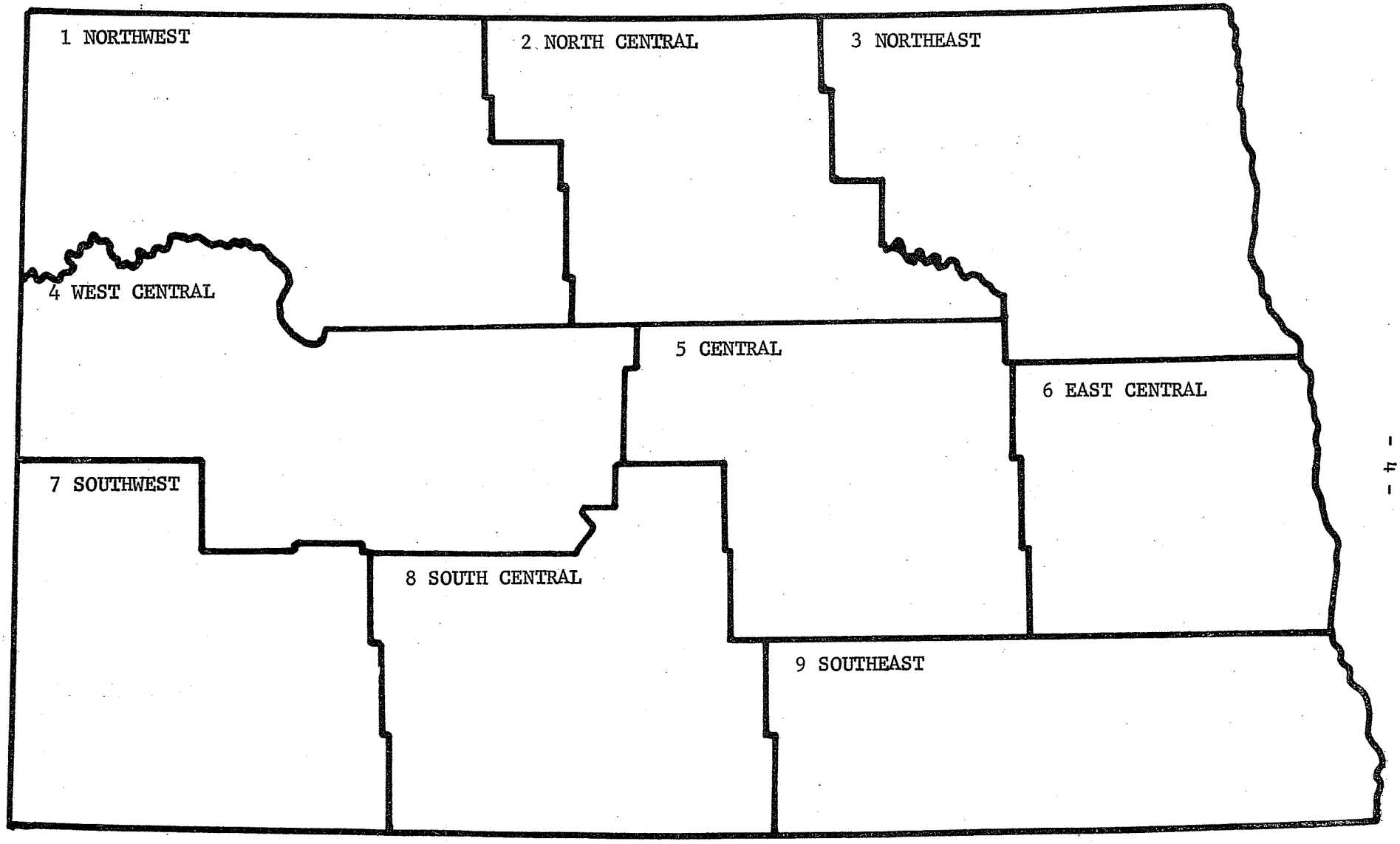

Figure 2. North Dakota Crop Reporting Districts.

TABLE 1. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOTS INCLUDED IN THE 10 PER CENT SAMPLE SURVEY, BY GRADE, JULY - DECEMBER, 1964, AND AUGUST - OCTOBER, 1963, 1962, 1961, and 1960

Grade	1964		1963		1962		1961		1960	
	Carlots	Per Cent	Carlots	Per Cent	Carlots	Per Cent	Carlots	Per Cent	Carlots	Per Cent
No. 1 HAD	30	6.6	43	21.6	100	37.2	107	49.3	84	46.3
No. 2 HAD	166	36.6	108	54.2	73	27.1	45	20.7	14	7.7
No. 3 HAD	132	29.1	42	21.2	61	22.7	56	25.7	63	34.8
No. 4 HAD	61	13.4	2	1.0	7	2.6	3	1.4	2	1.1
No. 5 HAD	10	2.2	1	0.5	4	1.5	---	---	---	---
S. G. HAD	---	---	---	---	1	0.4	---	---	1	0.6
No. 1 AD	3	0.7	1	0.5	5	1.8	---	---	2	1.1
No. 2 AD	11	2.4	1	0.5	4	1.5	1	0.5	4	2.2
No. 3 AD	11	2.4	---	---	9	3.3	2	0.9	8	4.4
No. 4 AD	11	2.4	1	0.5	1	0.4	---	---	1	0.6
No. 5 AD	6	1.3	---	---	---	---	1	0.5	1	0.6
S. G. AD	1	0.2	---	---	---	---	---	---	---	---
No. 1 Durum	1	0.2	---	---	1	0.4	---	---	---	---
No. 2 Durum	4	0.9	---	---	2	0.7	1	0.5	---	---
No. 3 Durum	2	0.4	---	---	1	0.4	1	0.5	---	---
No. 4 Durum	2	0.4	---	---	---	---	---	---	---	---
No. 5 Durum	2	0.4	---	---	---	---	---	---	---	---
S. G. Durum	2	0.4	---	---	---	---	---	---	1	0.6
Total All Durum	455	100.0	199	100.0	269	100.0	217	100.0	181	100.0

Approximately 80 per cent of the total sample originated in the central and eastern crop reporting districts (Table 2). The remainder was shipped from the western districts, about 18 per cent of which came from the Northwest District. As in previous years the majority of the sample originated in the Northeast District, 44 per cent, and the North Central District, 21 per cent.

TEST WEIGHT

The average test weight for the 1964 carlot sample was lower than any of the four previous years (Table 2). This fact probably explains the reduction in the proportion of the sample attaining the No. 1 Hard Amber Durum classification as compared with other years. The total sample average bushel weights by districts ranged from 53.6 to 63.0 pounds, which yielded an average total crop test weight of 58.5 pounds per bushel. The highest average test weight was found in samples originating in the Northwest District, 60.5 pounds per bushel, while the lowest average originated in the Northeast District, 57.4 pounds per bushel. This result is exactly the reverse of the analysis for the 1963 sample where the high average was found in the Northeast District and the low in the Northwest District. Examination of the county data which appears in Appendix Table B-2, indicates that counties found in the Northwest District, such as Burke, Ward, and Williams, and those found in the East Central District, such as Barnes, Cass, and Steele, yielded the highest test weight averages. On the other hand, those counties in the Northeast District yielded consistently lower test weights.

With the new grading system where each factor must be measured to determine the grade (total defects criteria are much less than the summation of the contributing factors, i.e., total damage, foreign material, and shrunken and broken), test weight becomes less important as a key determinant in discovering the final grade of any particular lot of durum. Consequently, the 1964 survey sample yielded a much smaller proportion of the total sample grade range determined by test weight than in 1963. Test weight determined the grade of only 133 or 29.2 per cent of the 455 carlots in the 1964 sample. Total defects were grading factors that determined 273 carlots, or 60 per cent of the sample (Table 5). In 1963 test weight determined the grade for approximately 62 per cent of the sample.

More detailed analysis of the distribution of carlots by test weight criteria is found in Appendix Tables B-4 through B-6.

MOISTURE CONTENT

Relative to the findings in previous analyses the average moisture content for the total 1964 sample was relatively high. The 12.1 per cent moisture average for the 455 samples was exceeded only by the average for the 1962 crop survey, 12.4 per cent (Table 3). The range in moisture content for the samples was higher than in any of the previous years. The minimum and maximum average moisture content by crop reporting district yielded a spread of 7.4 percentage units of moisture, while the largest previous spread was found in the 1961 survey, 6.9 units.

TABLE 2. AVERAGE VALUE AND RANGE OF BUSHEL WEIGHTS OF CARLOT SAMPLES OF DURUM WHEAT SHIPMENTS, BY AREA, JULY - DECEMBER, 1964, AND AUGUST - OCTOBER, 1963, 1962, 1961, AND 1960

Year and Area	Total Number of Shipments	Bushel Weight, Pounds	
		Average	Range
1964			
Northwest	81	60.5	54.2-63.0
North Central	95	58.5	53.6-62.5
Northeast	199	57.4	54.0-62.3
West Central	3	58.1	57.5-58.5
Central	40	59.0	56.7-62.3
East Central	28	60.4	56.7-62.7
Southwest	1	59.1	-- --
South Central	5	59.1	56.5-60.7
Southeast	3	59.4	58.1-59.7
Total	455	58.5	53.6-63.0
1963			
Northwest	14	58.7	54.3-61.5
North Central	57	59.1	56.5-62.0
Northeast	126	59.3	55.0-62.0
East Central	2	59.2	58.7-59.6
Total	199	59.2	54.3-62.0
1962			
Northwest	20	61.5	60.0-63.0
North Central	78	60.6	57.0-63.2
Northeast	171	59.6	54.7-62.7
Total	269	60.0	54.7-63.2
1961			
Northwest	10	61.1	60.0-62.3
North Central	37	61.3	58.5-63.0
Northeast	170	61.5	57.0-63.0
Total	217	61.4	57.0-63.0
1960			
Northwest	21	60.0	58.5-62.0
North Central	52	60.9	58.0-62.5
Northeast	108	60.8	58.5-63.3
Total	181	60.6	58.0-63.3

TABLE 3. AVERAGE VALUE AND RANGE OF MOISTURE CONTENT OF CARLOT SAMPLES OF DURUM WHEAT SHIPMENTS, BY AREA, JULY - DECEMBER, 1964, AND AUGUST - OCTOBER, 1963, 1962, 1961, and 1960

Year and Area	Total Number of Shipments	Moisture Content, Per Cent	
		Average	Range
1964			
Northwest	81	11.7	9.9-14.3
North Central	95	12.3	10.5-16.5
Northeast	199	12.4	10.0-14.5
West Central	3	11.8	11.3-12.6
Central	40	11.9	10.5-14.0
East Central	28	11.6	9.1-13.5
Southwest	1	11.0	-- --
South Central	5	11.9	11.2-12.4
Southeast	3	11.5	11.1-11.9
Total	455	12.1	9.1-16.5
1963			
Northwest	14	11.6	10.3-12.7
North Central	57	11.2	9.2-13.5
Northeast	126	11.3	9.6-13.4
East Central	2	10.4	10.1-10.7
Total	199	11.3	9.2-13.5
1962			
Northwest	20	11.6	10.0-12.7
North Central	78	11.8	10.0-14.3
Northeast	171	12.7	10.7-15.0
Total	269	12.4	10.0-15.0
1961			
Northwest	10	9.8	8.9-11.4
North Central	37	10.5	8.6-12.0
Northeast	170	11.2	8.8-15.5
Total	217	11.0	8.6-15.5
1960			
Northwest	21	10.8	9.0-12.2
North Central	52	11.2	9.4-13.0
Northeast	108	11.8	10.6-13.7
Total	181	11.5	9.0-13.7

The highest average moisture content was found in the Northeast District (12.4 per cent), while the lowest was found in the East Central and Northwest Districts (the Southwest and Southeast Districts were excluded because of the small number of samples). By counties the highest average moisture content was found in Rolette County (12.8 per cent), while the lowest was found in Divide County (10.7 per cent) (Appendix Table B-2).

Roughly one half of the total sample (51.9 per cent) had a moisture content greater than 12.0 per cent (Appendix Table B-7). Only 47.5 per cent fell within the 10.0-11.9 percentage range, which is much less than the 1963 sample when 74 per cent fell within this range.

PROTEIN CONTENT

The average protein content of the 1964 carlot sample of 13.7 per cent was lower than three of the four previous surveys (Table 4). Only the average protein content of the 1962 sample was lower (13.1 per cent). Considering only those crop reporting districts from which a large number of samples originated, the Central District and the Northwest District had the highest average protein percentages, 14.3 and 13.8 per cent, respectively. The single carlot sample from the Southwest District had a protein content of 15.0 per cent. The lowest levels were found in those samples originating in the East Central, North Central, and Northeast Districts.

Only about 24 per cent of the total sample fell within the 14.0-14.4 per cent protein range, while about 63 per cent of the 1963 sample fell within this range (Appendix Table B-10).[3] On the other hand, about 17 per cent of the 1964 sample fell below 13 per cent, while about 6.5 per cent of the 1963 sample fell below this level.

OTHER GRADE FACTORS

The other grade factors considered here are total damage, foreign material, shrunken and broken kernels, total defects, and contrasting classes. Of these several criteria, total defects played the most important role in grade determination within the three subclasses of durum wheat (Table 5). Total defects was the final determinant of 60 per cent of the sample. Another important factor was shrunken and broken kernels. The difference between these findings and those relating to the 1963 sample where these factors played minor roles, would tend to contribute greatly to an explanation of the reduction in the overall quality of the 1964 crop carlot sample.

Considerably more information of greater detail is available in Appendix Tables B-13 through B-22 concerning each of the several specific grading factors included in Table 5.

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[3]Only 409 samples appear in Appendix Table B-10. This occurs because only this proportion of the total number of samples, 455, had recorded protein measurements. To include those without recorded amounts of protein assumes a zero level of protein for that carlot which is not realistic.

TABLE 4. AVERAGE VALUE AND RANGES FOR PROTEIN CONTENT OF CARLOT SAMPLES OF DURUM WHEAT SHIPMENTS, BY AREA, JULY - DECEMBER, 1964, AND AUGUST - OCTOBER, 1963, 1962, 1961, and 1960

Year and Area	Total Number of Shipments	Protein Content, Per Cent	
		Average	Range
1964			
Northwest	81	13.8	11.9-16.8
North Central	95	13.5	11.5-15.5
Northeast	199	13.6	12.0-16.6
West Central	3	14.6	13.9-15.7
Central	40	14.3	13.1-15.5
East Central	28	13.1	12.5-14.1
Southwest	1	15.0	-- --
South Central	5	13.3	12.6-14.2
Southeast	3	13.2	-- --
Total	455	13.7	11.5-16.8
1963			
Northwest	14	14.1	12.7-16.5
North Central	57	14.6	12.0-16.3
Northeast	126	14.2	11.4-16.0
East Central	2	14.0	-- --
Total	199	14.3	11.4-16.0
1962			
Northwest	20	13.6	12.2-15.5
North Central	78	13.3	11.3-16.0
Northeast	171	12.9	11.4-15.0
Total	269	13.1	11.3-16.0
1961			
Northwest	10	16.2	15.2-17.2
North Central	37	15.0	13.6-16.7
Northeast	170	14.9	10.2-16.3
Total	217	15.0	10.2-17.2
1960			
Northwest	21	15.8	13.4-17.2
North Central	52	15.0	13.0-16.9
Northeast	108	14.3	11.5-16.6
Total	181	14.7	11.5-17.2

DOCKAGE

Although the dockage present in a lot of wheat is not a factor affecting the grade of that lot, it is of importance in determining the weight of the shipment (in this sense it does affect the test weight factor). Since the cost of moving a carlot of wheat is based on the transportation rate times the weight, excess percentages of dockage represent negative returns to producers and processors.

Approximately 55.5 per cent of the total 1964 sample had less than one per cent dockage (Appendix Table B-23). This compares to the 1963 sample which showed 48 per cent of the sample with less than one per cent dockage. About 91 per cent of the 1964 sample had less than 2 per cent dockage while about 82 per cent of the 1963 sample had less than 2 per cent dockage. This provides evidence of a good job of merchanising grain through the North Dakota country elevator system.

TABLE 5. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES DETERMINING THE GRADE BY VARIOUS GRADING FACTORS FOR TOTAL CARLOT SAMPLES OF DURUM WHEAT LEAVING NORTH DAKOTA ORIGINS BY GRADE, JULY - DECEMBER, 1964

Grade & Percentage Distribution	Grading Factors								
	Not Applicable	Test Weight	Total Damage	Shrunken & Broken	Foreign Material	Total Defects	Wheat of Other Classes	Other Grains	No. of Samples**
No. 1 HAD	30	--	--	--	--	--	--	--	30
Per Cent	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
No. 2 HAD	--	66	8	90	21	123	7	--	166
Per Cent	0.0	39.8	7.4	54.2	12.6	74.1	4.2	0.0	
No. 3 HAD	--	37	7	15	6	84	10	--	132
Per Cent	0.0	28.0	5.3	11.4	4.5	63.6	7.6	0.0	
No. 4 HAD	--	12	14	--	--	27	11	--	61
Per Cent	0.0	19.7	23.0	0.0	0.0	44.3	18.1	0.0	
No. 5 HAD	--	--	2	--	--	9	--	--	10
Per Cent	0.0	0.0	20.0	0.0	0.0	90.0	0.0	0.0	
No. 1 AD	3	--	--	--	--	--	--	--	3
Per Cent	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
No. 2 AD	--	6	1	1	1	5	--	--	11
Per Cent	0.0	54.5	9.1	9.1	9.1	45.5	0.0	0.0	
No. 3 AD	--	4	--	1	2	5	1	--	11
Per Cent	0.0	36.4	0.0	9.1	18.2	45.5	9.1	0.0	
No. 4 AD	--	4	5	--	--	9	--	--	11
Per Cent	0.0	36.4	45.5	0.0	0.0	81.8	0.0	0.0	
No. 5 AD	--	--	5	--	--	6	--	--	6
Per Cent	0.0	0.0	83.3	0.0	0.0	100.0	0.0	0.0	
S. G. AD*	--	--	--	--	--	--	--	--	1
Per Cent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
No. 1 Durum	1	--	--	--	--	--	--	--	1
Per Cent	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
No. 2 Durum	--	4	--	1	1	1	--	--	4
Per Cent	0.0	100.0	0.0	25.0	25.0	25.0	0.0	0.0	

(continued)

TABLE 5. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES DETERMINING THE GRADE BY VARIOUS GRADING FACTORS FOR TOTAL CARLOT SAMPLES OF DURUM WHEAT LEAVING NORTH DAKOTA ORIGINS BY GRADE, JULY - DECEMBER, 1964 (Continued)

Grade & Percentage Distribution	Grading Factors								
	Not Applicable	Test Weight	Total Damage	Shrunken & Broken	Foreign Material	Total Defects	Wheat of Other Classes	Other Grains	No. of Samples**
No. 3 Durum	--	--	--	--	1	--	--	--	2
Per Cent	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	
No. 4 Durum	--	--	--	--	--	1	1	--	2
Per Cent	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	
No. 5 Durum	--	--	2	--	--	2	--	--	2
Per Cent	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	
S. G. Durum	--	--	2	--	--	2	--	--	2
Per Cent	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	
ALL GRADES	34	133	46	108	32	274	30	--	455
Per Cent	7.5	29.2	10.1	23.7	7.0	60.2	6.6	0.0	

*Sample grade determination can be made on the basis of factors other than grading factors.

**The total number of samples does not always equal the summation of the number of carloads found in each category. Any particular carload can be graded initially by any one specific grading factor (generally test weight); however, the weighting of other grading factors (especially total defects) may push it into a lower grade.

APPENDIX A

OFFICIAL GRADE STANDARDS FOR DURUM WHEAT

APPENDIX TABLE A-1. GRADE REQUIREMENTS FOR DURUM WHEAT

Grade Number	Minimum Test Weight (Lbs. Per Bu.)	Maximum Percentage Limits of						
		Defects and Foreign Material					Wheat of Other Classes	
		Kernel Damage***		Foreign Material	Shrunken & Broken	Total* Defects	Contrasting Classes**	Total Class Admixture
		Heat	Total					
1	60.0	0.1	2.0	0.5	3.0	3.0	0.5	3.0
2	58.0	0.2	4.0	1.0	5.0	5.0	1.0	5.0
3	56.0	0.5	7.0	2.0	8.0	8.0	2.0	10.0
4	54.0	1.0	10.0	3.0	12.0	12.0	10.0	10.0
5	51.0	3.0	15.0	5.0	20.0	20.0	10.0	10.0

Sample: Not meeting above requirements, containing stones, musty, sour, heating, with objectionable commercial odor other than smut and garlic, excessively smutty, or of otherwise distinctly low quality.

*Total Defects: Sum of total damage, foreign material, shrunken and broken kernels (new factor).

**Contrasting Classes: All other classes.

***Damaged Kernels: Heat damaged, sprouted, frosted, diseased, moldy, badly ground and weather (or otherwise materially) damaged kernels and pieces of kernels including other grains.

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ADDITIONAL DATA ON DURUM SHIPMENTS

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APPENDIX TABLE B-1. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOTS INCLUDED IN 10 PER CENT SAMPLE SURVEY, BY GRADE AND CROP REPORTING DISTRICT, JULY - DECEMBER, 1964, AND COMPARISONS FOR 1963, 1962, 1961, and 1960

Grade	1964 Area NW	NC	NE	WC	C	EC	SW	SC	SE	1964 Total	1964 Per Cent	1963 Total	1963 Per Cent	1962 Total	1962 Per Cent	1961 Total	1961 Per Cent	1960 Total	1960 Per Cent
No. 1 HAD	11	4	7	—	2	5	—	1	—	30	6.6	43	21.6	100	37.2	107	49.3	84	46.3
No. 2 HAD	37	40	52	2	22	10	—	2	1	166	36.6	108	54.2	73	27.1	45	20.7	14	7.7
No. 3 HAD	9	39	67	1	10	5	1	—	—	132	29.1	42	21.2	61	22.7	56	25.7	63	34.8
No. 4 HAD	7	8	42	—	2	1	—	1	—	61	13.4	2	1.0	7	2.6	3	1.4	2	1.1
No. 5 HAD	—	—	9	—	1	—	—	—	—	10	2.2	1	0.5	4	1.5	—	—	—	—
S. G. HAD	—	—	—	—	—	—	—	—	—	—	—	—	—	1	0.4	—	—	1	0.6
No. 1 AD	3	—	—	—	—	—	—	—	—	3	0.7	1	0.5	5	1.8	—	—	2	1.1
No. 2 AD	6	1	2	—	1	1	—	—	—	11	2.4	1	0.5	4	1.5	1	0.5	4	2.2
No. 3 AD	2	1	5	—	1	1	—	1	—	11	2.4	—	—	9	3.3	2	0.9	8	4.4
No. 4 AD	1	1	8	—	—	1	—	—	—	11	2.4	1	0.5	1	0.4	—	—	1	0.6
No. 5 AD	—	—	4	—	1	1	—	—	—	6	1.3	—	—	—	—	1	0.5	1	0.6
S. G. AD	—	1	—	—	—	—	—	—	—	1	0.2	—	—	—	—	—	—	—	—
No. 1 Durum	1	—	—	—	—	—	—	—	—	1	0.2	—	—	1	0.4	—	—	—	—
No. 2 Durum	2	—	—	—	—	—	—	—	2	4	0.9	—	—	2	0.7	1	0.5	—	—
No. 3 Durum	1	—	1	—	—	—	—	—	—	2	0.4	—	—	1	0.4	1	0.5	—	—
No. 4 Durum	1	—	—	—	—	1	—	—	—	2	0.4	—	—	—	—	—	—	—	—
No. 5 Durum	—	—	1	—	—	1	—	—	—	2	0.4	—	—	—	—	—	—	—	—
S. G. Durum	—	—	1	—	—	1	—	—	—	2	0.4	—	—	—	—	—	—	1	0.6
AREA TOTAL	81	95	199	3	40	28	1	5	3	455	100.0	199	100.0	269	100.0	217	100.0	181	100.0

APPENDIX TABLE B-2. AVERAGE VALUES AND RANGES FOR PROTEIN CONTENT, BUSHEL WEIGHT, AND MOISTURE OF CARLOT SAMPLES OF DURUM WHEAT, BY CROP REPORTING DISTRICT AND COUNTY, JULY - DECEMBER, 1964

District and County	Protein Content, %		Bushel Weight, lb.		Moisture Content, %		No. of Carlots
	Average	Range	Average	Range	Average	Range	
Burke	13.5	12.4 - 14.8	59.5	54.2 - 62.2	11.5	9.9 - 13.6	7
Divide	14.5	13.4 - 15.0	60.4	60.2 - 60.7	10.7	10.2 - 11.4	3
Mountrail	14.2	12.3 - 16.8	60.0	57.7 - 61.7	11.8	10.8 - 13.2	13
Renville	13.8	12.7 - 15.0	59.2	57.3 - 61.5	12.6	10.4 - 14.3	14
Ward	13.3	11.9 - 15.1	60.4	58.1 - 63.0	11.6	10.6 - 13.5	32
Williams	14.4	12.5 - 16.1	60.9	59.0 - 62.2	11.0	9.9 - 13.3	12
NORTHWEST	13.8	11.9 - 16.8	60.5	54.2 - 63.0	11.7	9.9 - 14.3	81
Benson	14.2	12.3 - 15.5	58.5	55.5 - 60.7	12.1	10.6 - 16.5	35
Bottineau	13.5	11.5 - 14.3	59.1	55.2 - 62.5	12.4	11.3 - 14.5	30
McHenry	13.3	13.0 - 13.6	59.0	55.5 - 60.7	11.9	11.0 - 12.3	5
Pierce	14.2	13.0 - 15.4	57.4	53.6 - 60.3	12.1	10.5 - 14.0	14
Rolette	13.2	12.7 - 13.7	58.4	56.5 - 61.0	12.8	10.8 - 14.1	11
NORTH CENTRAL	13.5	11.5 - 15.5	58.5	53.6 - 62.5	12.3	10.5 - 16.5	95
Cavalier	13.0	12.2 - 14.3	56.7	54.5 - 60.0	12.9	11.6 - 14.0	46
Grand Forks	13.1	11.7 - 15.8	59.6	56.0 - 62.3	11.7	10.0 - 13.6	29
Nelson	13.7	13.0 - 16.6	58.5	56.0 - 61.0	12.4	10.9 - 14.5	21
Pembina	13.3	11.6 - 15.2	57.6	54.0 - 62.0	12.7	11.4 - 14.2	6
Ramsey	14.5	13.6 - 15.6	57.7	54.0 - 60.3	12.1	10.2 - 14.0	59
Towner	13.8	12.3 - 15.0	57.9	55.5 - 62.0	12.8	11.0 - 13.9	33
Walsh	12.7	11.0 - 14.1	60.0	58.2 - 61.5	11.5	10.4 - 12.4	5
NORTHEAST	13.6	11.0 - 16.6	57.4	54.0 - 62.3	12.4	10.0 - 14.5	199
Dunn	----	---- ----	----	---- ----	----	---- ----	---
McKenzie	13.9	---- ----	57.5	---- ----	11.3	---- ----	1
McLean	14.9	14.1 - 15.7	58.4	58.3 - 58.5	12.1	11.5 - 12.6	2
Mercer	----	---- ----	----	---- ----	----	---- ----	---
Oliver	----	---- ----	----	---- ----	----	---- ----	---
WEST CENTRAL	14.6	13.9 - 15.7	58.1	57.5 - 58.5	11.8	11.3 - 12.6	3

(continued)

APPENDIX TABLE B-2. AVERAGE VALUES AND RANGES FOR PROTEIN CONTENT, BUSHEL WEIGHT, AND MOISTURE OF CARLOT SAMPLES OF DURUM WHEAT, BY CROP REPORTING DISTRICT AND COUNTY, JULY - DECEMBER, 1964 (Continued)

District and County	Protein Content, %		Bushel Weight, lb.		Moisture Content, %		No. of Carlots
	Average	Range	Average	Range	Average	Range	
Eddy	14.2	13.1 - 15.2	59.0	56.7 - 61.0	12.2	10.7 - 14.0	8
Foster	14.8	14.0 - 15.3	59.3	59.0 - 59.5	11.2	10.8 - 11.5	3
Kidder	15.5	---- ----	57.1	---- ----	11.3	---- ----	1
Sheridan	14.1	13.8 - 14.4	60.8	59.5 - 62.3	11.5	11.3 - 11.7	3
Stutsman	14.3	13.2 - 15.3	58.8	57.0 - 61.0	12.0	10.6 - 14.0	22
Wells	14.3	14.2 - 14.5	59.5	59.0 - 60.0	11.4	10.5 - 12.3	3
CENTRAL	14.3	13.1 - 15.5	59.0	56.7 - 62.3	11.9	10.5 - 14.0	40
Barnes	14.1	14.0 - 14.1	60.5	60.0 - 61.0	11.7	11.6 - 11.7	2
Cass	13.1	---- ----	60.7	58.5 - 62.2	11.7	10.8 - 13.5	11
Griggs	----	---- ----	----	---- ----	----	---- ----	--
Steele	----	---- ----	61.4	60.1 - 62.7	11.2	11.0 - 11.4	2
Traill	12.9	12.5 - 13.5	60.0	56.7 - 61.5	11.4	9.1 - 13.3	13
EAST CENTRAL	13.1	12.5 - 14.1	60.4	56.7 - 62.7	11.6	9.1 - 13.5	28
Adams	----	---- ----	----	---- ----	----	---- ----	--
Billings	----	---- ----	----	---- ----	----	---- ----	--
Bowman	----	---- ----	----	---- ----	----	---- ----	--
Golden Valley	----	---- ----	----	---- ----	----	---- ----	--
Hettinger	----	---- ----	----	---- ----	----	---- ----	--
Slope	----	---- ----	----	---- ----	----	---- ----	--
Stark	15.0	---- ----	59.1	---- ----	11.0	---- ----	1
SOUTHWEST	15.0	---- ----	59.1	---- ----	11.0	---- ----	1
Burleigh	13.9	13.5 - 14.2	59.2	56.5 - 60.7	11.9	11.7 - 12.3	3
Emmons	12.8	12.6 - 13.0	58.8	58.0 - 59.6	11.8	11.2 - 12.4	2
Grant	----	---- ----	----	---- ----	----	---- ----	--
Morton	----	---- ----	----	---- ----	----	---- ----	--
Sioux	----	---- ----	----	---- ----	----	---- ----	--
SOUTH CENTRAL	13.3	12.6 - 14.2	59.1	56.5 - 60.7	11.9	11.2 - 12.4	5
SOUTHEAST	13.2	---- ----	59.4	58.1 - 59.7	11.5	11.1 - 11.9	3

APPENDIX TABLE B-3. AVERAGE VALUES AND RANGES FOR PROTEIN CONTENT, BUSHEL WEIGHT, AND MOISTURE OF CARLOT SAMPLES OF DURUM WHEAT, BY GRADE AND CROP REPORTING DISTRICT, JULY - DECEMBER, 1964

Grade	Protein Content, %		Bushel Weight, lb.		Moisture Content, %		No. of Carlots
	Average	Range	Average	Range	Average	Range	
NORTHWEST DISTRICT							
No. 1 HAD	13.7	11.9 - 15.2	61.2	60.4 - 62.0	11.1	9.9 - 12.3	11
No. 2 HAD	13.6	11.9 - 15.1	60.3	58.2 - 61.5	11.7	10.0 - 14.3	37
No. 3 HAD	14.8	12.9 - 16.8	59.4	57.7 - 61.0	11.4	9.9 - 13.2	9
No. 4 HAD	13.7	11.9 - 15.1	61.3	60.2 - 63.0	11.1	10.4 - 12.0	7
No. 1 AD	13.8	12.6 - 14.8	60.7	60.5 - 61.7	12.5	11.2 - 13.5	3
No. 2 AD	13.6	12.7 - 14.7	59.2	58.5 - 60.0	12.9	12.2 - 13.8	6
No. 3 AD	13.4	13.1 - 13.6	59.1	58.2 - 60.0	12.0	10.8 - 13.2	2
No. 4 AD	12.4	---- ----	54.2	---- ----	11.8	---- ----	1
No. 1 Durum	15.1	---- ----	58.1	---- ----	11.1	---- ----	1
No. 2 Durum	13.7	13.4 - 14.0	58.0	58.0 - 58.0	12.4	11.7 - 13.0	2
No. 3 Durum	12.5	---- ----	59.0	---- ----	13.4	---- ----	1
No. 4 Durum	13.3	---- ----	59.2	---- ----	13.3	---- ----	1
ALL GRADES	13.8	11.9 - 16.8	60.5	54.2 - 63.0	11.7	9.9 - 14.3	81
NORTH CENTRAL DISTRICT							
No. 1 HAD	13.8	13.3 - 14.4	60.4	60.0 - 61.0	11.7	10.9 - 12.4	4
No. 2 HAD	13.8	12.6 - 15.4	59.2	58.0 - 60.7	12.1	10.6 - 13.5	40
No. 3 HAD	13.8	11.5 - 15.1	58.2	56.0 - 62.5	12.4	10.5 - 14.1	39
No. 4 HAD	14.5	13.5 - 15.5	56.2	53.6 - 58.7	12.4	11.0 - 14.5	8
No. 2 AD	13.0	---- ----	59.0	---- ----	11.4	---- ----	1
No. 3 AD	14.2	---- ----	57.2	---- ----	13.2	---- ----	1
No. 4 AD	13.5	---- ----	59.6	---- ----	13.4	---- ----	1
No. 6 AD	12.3	---- ----	59.0	---- ----	16.5	---- ----	1
ALL GRADES	13.5	11.5 - 15.5	58.5	53.6 - 62.5	12.3	10.5 - 16.5	95

(continued)

APPENDIX TABLE B-3. AVERAGE VALUES AND RANGES FOR PROTEIN CONTENT, BUSHEL WEIGHT, AND MOISTURE OF CARLOT SAMPLES OF DURUM WHEAT, BY GRADE AND CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 (Continued)

Grade	Protein Content, %		Bushel Weight, lb.		Moisture Content, %		No. of Carlots
	Average	Range	Average	Range	Average	Range	
NORTHEAST DISTRICT							
No. 1 HAD	13.1	12.0 - 14.0	61.2	60.3 - 62.3	11.7	10.3 - 12.4	7
No. 2 HAD	13.9	12.3 - 15.6	59.1	58.0 - 61.2	11.6	10.0 - 14.2	52
No. 3 HAD	13.8	11.6 - 16.6	57.0	56.0 - 62.0	12.3	10.2 - 13.9	67
No. 4 HAD	13.6	12.2 - 15.1	56.2	54.0 - 58.6	13.2	11.8 - 14.0	42
No. 5 HAD	14.0	12.5 - 15.8	56.1	54.0 - 59.0	13.0	11.6 - 14.1	9
No. 2 AD	12.1	11.7 - 12.4	60.5	---- ----	11.2	11.4 - 10.9	2
No. 3 AD	12.7	12.0 - 14.2	58.9	57.2 - 60.2	12.4	11.6 - 14.0	5
No. 4 AD	13.0	11.7 - 14.5	56.8	55.0 - 58.7	13.4	12.5 - 14.5	8
No. 5 AD	13.7	13.2 - 14.6	56.1	55.5 - 56.0	13.5	13.0 - 14.3	4
No. 3 Durum	11.0	---- ----	60.2	---- ----	10.4	---- ----	1
No. 5 Durum	12.7	---- ----	57.1	---- ----	13.6	---- ----	1
S. G. Durum	14.4	---- ----	56.0	---- ----	13.0	---- ----	1
ALL GRADES	13.6	12.0 - 16.6	57.4	54.0 - 62.3	12.4	10.0 - 14.5	199
WEST CENTRAL DISTRICT							
No. 2 HAD	14.9	14.1 - 15.7	58.4	58.3 - 58.5	12.1	11.5 - 12.6	2
No. 3 HAD	13.9	---- ----	57.5	---- ----	11.3	---- ----	1
ALL GRADES	14.6	13.9 - 15.7	58.1	58.3 - 58.5	11.8	11.3 - 12.6	3
CENTRAL DISTRICT							
No. 1 HAD	13.5	13.1 - 13.8	60.9	60.7 - 61.0	11.7	---- ----	2
No. 2 HAD	14.5	13.4 - 15.3	59.5	58.5 - 61.0	11.5	10.5 - 12.3	22
No. 3 HAD	14.3	13.6 - 15.5	58.4	57.0 - 62.3	12.2	11.3 - 14.0	10
No. 4 HAD	13.8	13.3 - 14.3	58.5	58.3 - 58.7	11.8	10.6 - 13.0	2
No. 5 HAD	14.3	---- ----	57.3	---- ----	14.0	---- ----	1
No. 2 AD	13.2	---- ----	58.0	---- ----	13.0	---- ----	1
No. 3 AD	14.4	---- ----	57.2	---- ----	11.7	---- ----	1
No. 5 AD	13.8	---- ----	56.7	---- ----	14.0	---- ----	1
ALL GRADES	14.3	13.1 - 15.5	59.0	56.7 - 62.3	11.9	10.5 - 14.0	40

(continued)

APPENDIX TABLE B-3. AVERAGE VALUES AND RANGES FOR PROTEIN CONTENT, BUSHEL WEIGHT, AND MOISTURE OF CARLOT SAMPLES OF DURUM WHEAT, BY GRADE AND CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 (Continued)

Grade	Protein Content, %		Bushel Weight, lb.		Moisture Content, %		No. of Carlots
	Average	Range	Average	Range	Average	Range	
EAST CENTRAL DISTRICT							
No. 1 HAD	14.1	---- ----	61.5	61.0 - 62.7	11.3	10.8 - 11.7	5
No. 2 HAD	13.1	12.5 - 13.5	61.1	59.8 - 62.2	11.3	10.1 - 11.9	10
No. 3 HAD	13.4	12.8 - 14.0	60.5	60.0 - 61.0	11.6	11.0 - 12.3	5
No. 4 HAD	----	---- ----	59.2	---- ----	13.5	---- ----	1
No. 2 AD	13.1	---- ----	60.8	---- ----	11.1	---- ----	1
No. 3 AD	13.1	---- ----	61.0	---- ----	9.1	---- ----	1
No. 4 AD	12.5	---- ----	56.7	---- ----	11.6	---- ----	1
No. 5 AD	13.3	---- ----	58.0	---- ----	12.8	---- ----	1
No. 4 Durum	12.6	---- ----	59.2	---- ----	11.0	---- ----	1
No. 5 Durum	----	---- ----	58.5	---- ----	13.2	---- ----	1
No. 6 Durum	12.5	---- ----	58.0	---- ----	13.3	---- ----	1
ALL GRADES	13.1	12.5 - 14.1	60.4	56.7 - 62.7	11.6	9.1 - 13.5	28
SOUTHWEST DISTRICT							
No. 3 HAD	15.0	---- ----	59.1	---- ----	11.0	---- ----	1
SOUTH CENTRAL DISTRICT							
No. 1 HAD	----	---- ----	60.7	---- ----	11.8	---- ----	1
No. 2 HAD	13.1	12.6 - 13.5	60.1	59.6 - 60.5	11.5	11.2 - 11.7	2
No. 4 HAD	12.6	---- ----	58.0	---- ----	11.2	---- ----	1
No. 3 AD	14.2	---- ----	56.5	---- ----	12.3	---- ----	1
ALL GRADES	13.3	12.6 - 14.2	59.1	56.5 - 60.7	11.9	11.2 - 12.3	5
SOUTHEAST DISTRICT							
No. 2 HAD	13.2	---- ----	59.7	---- ----	11.6	---- ----	1
No. 2 Durum	----	---- ----	58.2	58.1 - 58.3	11.5	11.1 - 11.9	2
ALL GRADES	13.2	---- ----	59.4	58.1 - 59.7	11.5	11.1 - 11.9	3

APPENDIX TABLE B-4. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM GRADES FALLING WITHIN ONE POUND BUSHEL WEIGHT RANGES FOR THE ENTIRE SAMPLE AREA, JULY - DECEMBER, 1964

Grade	Bushel Weight, Pounds											Total
	53	54	55	56	57	58	59	60	61	62	63	
No. 1 HAD	--	--	--	--	--	--	--	4	17	8	1	30
No. 2 HAD	--	--	--	--	1	23	43	64	26	9	--	166
No. 3 HAD	--	--	--	9	28	42	27	11	12	2	1	132
No. 4 HAD	--	2	10	19	9	6	7	4	1	2	1	61
No. 5 HAD	--	1	2	4	1	1	1	--	--	--	--	10
S. G. HAD	--	--	--	--	--	--	--	--	--	--	--	--
No. 1 AD	--	--	--	--	--	--	--	1	1	1	--	3
No. 2 AD	--	--	--	--	--	1	5	2	3	--	--	11
No. 3 AD	--	--	--	--	4	2	--	3	2	--	--	11
No. 4 AD	--	1	3	1	1	2	3	--	--	--	--	11
No. 5 AD	--	--	--	3	2	1	--	--	--	--	--	6
S. G. AD	--	--	--	--	--	1	--	--	--	--	--	1
No. 1 Durum	--	--	--	--	--	1	--	--	--	--	--	1
No. 2 Durum	--	--	--	--	--	4	--	--	--	--	--	4
No. 3 Durum	--	--	--	--	--	--	1	1	--	--	--	2
No. 4 Durum	--	--	--	--	--	--	2	--	--	--	--	2
No. 5 Durum	--	--	--	--	--	1	1	--	--	--	--	2
S. G. Durum	--	--	--	1	--	1	--	--	--	--	--	2
AREA TOTAL	--	4	15	37	46	86	90	90	62	22	3	455
Percentage Distribution	--	0.9	3.3	8.0	10.1	18.9	19.8	19.8	13.6	4.9	.7	100.0

APPENDIX TABLE B-5. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE POUND BUSHEL WEIGHT RANGES, BY CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 WITH COMPARISONS

Crop Reporting District	Bushel Weight, Pounds											Total
	50	54	55	56	57	58	59	60	61	62	63	
Northwest	--	1	--	--	1	7	8	28	22	13	1	81
North Central	--	1	2	5	7	27	27	20	5	--	1	95
Northeast	--	2	13	32	29	40	38	27	14	4	--	199
West Central	--	--	--	--	--	2	1	--	--	--	--	3
Central	--	--	--	--	7	4	13	9	6	1	--	40
East Central	--	--	--	--	1	3	3	4	12	4	1	28
Southwest	--	--	--	--	--	1	--	--	--	--	--	1
South Central	--	--	--	--	1	1	--	1	2	--	--	5
Southeast	--	--	--	--	--	2	--	1	--	--	--	3
Total	--	4	15	37	46	87	90	90	61	22	3	455
Percentage Distribution-1964	--	0.9	3.3	8.0	10.1	18.9	19.8	19.8	13.6	4.9	.7	100.0
Percentage Distribution-1963	--	1.0	0.5	3.0	6.5	26.2	32.2	21.6	6.5	2.5	--	100.0
Percentage Distribution-1962	0.7	--	0.4	2.2	2.6	6.3	14.9	34.2	20.1	17.1	1.5	100.0
Percentage Distribution-1961	--	--	--	--	0.5	0.9	1.4	9.3	32.2	47.9	7.8	100.0
Percentage Distribution-1960	--	--	--	--	--	2.2	7.2	34.3	38.1	17.1	1.1	100.0

APPENDIX TABLE B-6. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN ONE FOUND BUSHEL WEIGHT RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964

Grade	Bushel Weight, Pounds											Total
	53	54	55	56	57	58	59	60	61	62	63	
NORTHWEST DISTRICT												
No. 1 HAD	--	--	--	--	--	--	--	--	7	4	--	11
No. 2 HAD	--	--	--	--	--	1	1	20	9	6	--	37
No. 3 HAD	--	--	--	--	1	2	1	2	3	--	--	9
No. 4 HAD	--	--	--	--	--	--	--	3	1	2	1	7
No. 1 AD	--	--	--	--	--	--	--	1	1	1	--	3
No. 2 AD	--	--	--	--	--	--	4	2	--	--	--	6
No. 3 AD	--	--	--	--	--	1	--	--	1	--	--	2
No. 4 AD	--	1	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	--	--	--	--	1	--	--	--	--	--	1
No. 2 Durum	--	--	--	--	--	2	--	--	--	--	--	2
No. 3 Durum	--	--	--	--	--	--	1	--	--	--	--	1
No. 4 Durum	--	--	--	--	--	--	1	--	--	--	--	1
TOTAL	--	1	--	--	1	7	8	28	22	13	1	81
NORTH CENTRAL DISTRICT												
No. 1 HAD	--	--	--	--	--	--	--	3	1	--	--	4
No. 2 HAD	--	--	--	--	--	9	14	13	4	--	--	40
No. 3 HAD	--	--	--	2	6	16	11	3	--	--	1	39
No. 4 HAD	--	1	2	3	--	--	1	1	--	--	--	8
No. 2 AD	--	--	--	--	--	--	1	--	--	--	--	1
No. 3 AD	--	--	--	--	1	--	--	--	--	--	--	1
No. 4 AD	--	--	--	--	--	1	--	--	--	--	--	1
No. 6 AD	--	--	--	--	--	1	--	--	--	--	--	1
TOTAL	--	1	2	5	7	27	27	20	5	--	1	95
NORTHEAST DISTRICT												
No. 1 HAD	--	--	--	--	--	--	--	1	3	3	--	7
No. 2 HAD	--	--	--	--	1	11	19	18	3	--	--	52
No. 3 HAD	--	--	--	7	17	21	11	4	6	1	--	67

(continued)

APPENDIX TABLE B-6. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN ONE POUND BUSHEL WEIGHT RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Bushel Weight, Pounds											Total
	53	54	55	56	57	58	59	60	61	62	63	
No. 4 HAD	--	1	8	16	9	4	4	--	--	--	--	42
No. 5 HAD	--	1	2	4	--	1	1	--	--	--	--	9
No. 2 AD	--	--	--	--	--	--	--	--	2	--	--	2
No. 3 AD	--	--	--	--	1	1	--	3	--	--	--	5
No. 4 AD	--	--	3	1	--	1	3	--	--	--	--	8
No. 5 AD	--	--	--	3	1	--	--	--	--	--	--	4
No. 3 Durum	--	--	--	--	--	--	--	1	--	--	--	1
No. 5 Durum	--	--	--	--	--	1	--	--	--	--	--	1
S. G. Durum	--	--	--	1	--	--	--	--	--	--	--	1
TOTAL	--	2	13	32	29	40	38	27	14	4	--	199
WEST CENTRAL DISTRICT												
No. 2 HAD	--	--	--	--	--	1	1	--	--	--	--	2
No. 3 HAD	--	--	--	--	--	1	--	--	--	--	--	1
TOTAL	--	--	--	--	--	2	1	--	--	--	--	3
CENTRAL DISTRICT												
No. 1 HAD	--	--	--	--	--	--	--	--	2	--	--	2
No. 2 HAD	--	--	--	--	--	1	8	9	4	--	--	22
No. 3 HAD	--	--	--	--	4	1	4	--	--	1	--	10
No. 4 HAD	--	--	--	--	--	1	1	--	--	--	--	2
No. 5 HAD	--	--	--	--	1	--	--	--	--	--	--	1
No. 2 AD	--	--	--	--	--	1	--	--	--	--	--	1
No. 3 AD	--	--	--	--	1	--	--	--	--	--	--	1
No. 5 AD	--	--	--	--	1	--	--	--	--	--	--	1
TOTAL	--	--	--	--	7	4	13	9	6	1	--	40

(continued)

APPENDIX TABLE B-6. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN ONE POUND BUSHEL WEIGHT RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Bushel Weight, Pounds											Total
	53	54	55	56	57	58	59	60	61	62	63	
EAST CENTRAL DISTRICT												
No. 1 HAD	--	--	--	--	--	--	--	--	3	1	1	5
No. 2 HAD	--	--	--	--	--	--	--	2	5	3	--	10
No. 3 HAD	--	--	--	--	--	--	--	2	3	--	--	5
No. 4 HAD	--	--	--	--	--	--	1	--	--	--	--	1
No. 2 AD	--	--	--	--	--	--	--	--	1	--	--	1
No. 3 AD	--	--	--	--	--	--	--	--	1	--	--	1
No. 4 AD	--	--	--	--	1	--	--	--	--	--	--	1
No. 5 AD	--	--	--	--	--	1	--	--	--	--	--	1
No. 4 Durum	--	--	--	--	--	--	1	--	--	--	--	1
No. 5 Durum	--	--	--	--	--	--	1	--	--	--	--	1
No. 6 Durum	--	--	--	--	--	1	--	--	--	--	--	1
TOTAL	--	--	--	--	1	2	3	4	13	4	1	28
SOUTHWEST DISTRICT												
No. 3 HAD	--	--	--	--	--	--	1	--	--	--	--	1
SOUTH CENTRAL DISTRICT												

No. 1 HAD	--	--	--	--	--	--	--	--	1	--	--	1
No. 2 HAD	--	--	--	--	--	--	--	1	1	--	--	2
No. 4 HAD	--	--	--	--	--	1	--	--	--	--	--	1
No. 3 AD	--	--	--	--	1	--	--	--	--	--	--	1
TOTAL	--	--	--	--	1	1	--	1	2	--	--	5
SOUTHEAST DISTRICT												
No. 2 HAD	--	--	--	--	--	--	--	1	--	--	--	1
No. 2 Durum	--	--	--	--	--	2	--	--	--	--	--	2
TOTAL	--	--	--	--	--	2	--	1	--	--	--	3

APPENDIX TABLE B-7. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOTS OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT MOISTURE RANGES FOR THE ENTIRE SAMPLE AREA, JULY - DECEMBER, 1964

	Moisture Content, Per Cent																
Grade	9.0 to 9.4	9.5 to 9.9	10.0 to 10.4	10.5 to 10.9	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
No. 1 HAD	--	1	2	6	4	9	8	--	--	--	--	--	--	--	--	--	30
No. 2 HAD	--	--	5	25	36	42	25	22	6	3	2	--	--	--	--	--	166
No. 3 HAD	--	1	2	8	26	19	14	27	22	11	2	--	--	--	--	--	132
No. 4 HAD	--	--	1	3	5	4	6	14	10	12	5	1	--	--	--	--	61
No. 5 HAD	--	--	--	--	--	1	2	2	--	3	2	--	--	--	--	--	10
S. G. HAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
No. 1 AD	--	--	1	1	--	--	--	--	--	1	--	--	--	--	--	--	3
No. 2 AD	--	--	--	1	3	--	2	1	3	1	--	--	--	--	--	--	11
No. 3 AD	1	--	--	1	--	3	2	1	2	--	1	--	--	--	--	--	11
No. 4 AD	--	--	--	--	--	2	--	2	4	1	1	1	--	--	--	--	11
No. 5 AD	--	--	--	--	--	--	--	1	2	1	2	--	--	--	--	--	6
S. G. AD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1
No. 1 Durum	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	--	--	--	--	1	2	--	--	1	--	--	--	--	--	--	--	4
No. 3 Durum	--	--	1	--	--	--	--	--	1	--	--	--	--	--	--	--	2
No. 4 Durum	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	2
No. 5 Durum	--	--	--	--	--	--	--	--	1	1	--	--	--	--	--	--	2
S. G. Durum	--	--	--	--	--	--	--	--	2	--	--	--	--	--	--	--	2
AREA TOTAL	1	2	12	45	77	82	59	70	55	34	15	2	--	--	--	1	455
Percentage Distribution	0.2	0.4	2.7	9.9	16.9	18.0	13.0	15.4	12.1	7.5	3.3	0.4	--	--	--	0.2	100.0

APPENDIX TABLE B-8. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT MOISTURE CONTENT RANGES, BY CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 WITH COMPARISONS

Crop Reporting District	Moisture Content, Per Cent																	
	8.5 to 8.9	9.0 to 9.4	9.5 to 9.9	10.0 to 10.4	10.5 to 10.9	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
Northwest	--	--	2	6	17	15	10	9	10	8	3	1	--	--	--	--	--	81
North Central	--	--	--	--	5	15	17	16	19	13	6	2	1	--	--	--	1	95
Northeast	--	--	--	5	13	25	32	25	39	27	23	9	1	--	--	--	--	199
West Central	--	--	--	--	--	1	1	--	1	--	--	--	--	--	--	--	--	3
Central	--	--	--	--	7	9	10	5	--	5	1	3	--	--	--	--	--	40
East Central	--	1	--	1	3	9	8	2	1	2	1	--	--	--	--	--	--	28
Southwest	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
South Central	--	--	--	--	--	1	2	2	--	--	--	--	--	--	--	--	--	5
Southeast	--	--	--	--	--	1	2	--	--	--	--	--	--	--	--	--	--	3
TOTAL	--	1	2	12	45	77	82	59	70	55	34	15	2	--	--	--	1	455
Percentage Distribution 1964	--	0.2	0.4	2.7	9.9	16.9	18.0	13.0	15.4	12.1	7.5	3.3	0.4	--	--	--	0.2	100.0
Percentage Distribution 1963	--	1.0	3.5	15.1	15.1	24.6	19.1	13.1	5.5	2.5	0.5	--	--	--	--	--	--	100.0
Percentage Distribution 1962	--	--	--	2.2	3.7	13.4	10.0	21.9	17.2	14.1	11.5	5.2	0.4	0.4	--	--	--	100.0
Percentage Distribution 1961	1.4	2.3	6.0	20.2	12.9	22.1	13.8	14.3	3.2	2.8	--	0.5	--	--	0.5	--	--	100.0
Percentage Distribution 1960	--	1.1	2.2	5.5	7.7	26.5	21.0	26.0	6.1	3.3	0.6	--	--	--	--	--	--	100.0

APPENDIX TABLE B-9. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT MOISTURE CONTENT RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964

Grade	Moisture Content, Per Cent																
	9.0 to 9.4	9.5 to 9.9	10.0 to 10.4	10.5 to 10.9	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
NORTHWEST DISTRICT																	
No. 1 HAD	--	1	1	4	1	1	3	--	--	--	--	--	--	--	--	--	11
No. 2 HAD	--	--	3	6	9	5	3	8	1	1	1	--	--	--	--	--	37
No. 3 HAD	--	1	--	3	2	1	--	1	1	--	--	--	--	--	--	--	9
No. 4 HAD	--	--	1	2	2	1	1	--	--	--	--	--	--	--	--	--	7
No. 1 AD	--	--	1	1	--	--	--	--	--	1	--	--	--	--	--	--	3
No. 2 AD	--	--	--	--	--	--	2	1	2	1	--	--	--	--	--	--	6
No. 3 AD	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--	2
No. 4 AD	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	--	---	--	--	--	1	--	--	1	--	--	--	--	---	--	--	2
No. 3 Durum	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
TOTAL	--	2	6	17	15	10	9	10	8	3	1	--	--	--	--	--	81
NORTH CENTRAL DISTRICT																	
No. 1 HAD	--	--	--	1	--	1	2	--	--	--	--	--	--	--	--	--	4
No. 2 HAD	--	--	--	2	7	10	7	9	4	1	--	--	---	--	--	--	40
No. 3 HAD	--	--	--	2	5	5	6	8	7	5	1	--	--	--	--	--	39
No. 4 HAD	--	--	--	--	2	1	1	2	--	--	1	1	--	--	--	--	8
No. 2 AD	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 4 AD	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 6 AD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1
TOTAL	--	--	--	5	15	17	16	19	13	6	2	1	--	--	--	1	95

(continued)

APPENDIX TABLE B-9. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT MOISTURE CONTENT RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Moisture Content, Per Cent																
	9.0 to 9.4	9.5 to 9.9	10.0 to 10.4	10.5 to 10.9	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
NORTHEAST DISTRICT																	
No. 1 HAD	--	--	1	--	1	2	3	--	--	--	--	--	--	--	--	--	7
No. 2 HAD	--	--	1	9	12	15	9	4	1	--	1	--	--	--	--	--	52
No. 3 HAD	--	--	2	3	11	10	6	18	11	6	--	--	--	--	--	--	67
No. 4 HAD	--	--	--	--	--	2	4	12	9	11	4	--	--	--	--	--	42
No. 5 HAD	--	--	--	--	--	1	2	2	--	3	1	--	--	--	--	--	9
No. 2 AD	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--	--	2
No. 3 AD	--	--	--	--	--	2	1	1	--	--	1	--	--	--	--	--	5
No. 4 AD	--	--	--	--	--	--	--	2	3	1	1	1	--	--	--	--	8
No. 5 AD	--	--	--	--	--	--	--	--	2	1	1	--	--	--	--	--	4
No. 3 Durum	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 5 Durum	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	1
S. G. Durum	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
TOTAL	--	--	5	13	25	32	25	39	27	23	9	1	--	--	--	--	199
WEST CENTRAL DISTRICT																	
No. 2 HAD	--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	2
No. 3 HAD	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	--	--	--	--	1	1	--	1	--	--	--	--	--	--	--	--	3
CENTRAL DISTRICT																	
No. 1 HAD	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	2
No. 2 HAD	--	--	--	6	5	6	4	--	--	1	--	--	--	--	--	--	22
No. 3 HAD	--	--	--	--	4	1	1	--	3	--	1	--	--	--	--	--	10
No. 4 HAD	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--	2
No. 5 HAD	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1

(continued)

APPENDIX TABLE B-9. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT MOISTURE CONTENT RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Moisture Content, Per Cent																
	9.0 to 9.4	9.5 to 9.9	10.0 to 10.4	10.5 to 10.9	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
No. 2 AD	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 5 AD	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1
TOTAL	--	--	--	7	9	10	5	--	5	1	3	--	--	--	--	--	40
EAST CENTRAL DISTRICT																	
No. 1 HAD	--	--	--	1	2	2	--	--	--	--	--	--	--	--	--	--	5
No. 2 HAD	--	--	1	2	3	3	1	--	--	--	--	--	--	--	--	--	10
No. 3 HAD	--	--	--	--	2	2	1	--	--	--	--	--	---	--	--	--	5
No. 4 HAD	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	1
No. 2 AD	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 AD	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 5 AD	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 5 Durum	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 6 Durum	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
TOTAL	1	--	1	3	9	8	2	1	2	1	--	--	--	--	--	--	28
SOUTHWEST DISTRICT																	
No. 3 HAD	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1

(continued)

APPENDIX TABLE B-9. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT MOISTURE CONTENT RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Moisture Content, Per Cent																
	9.0 to 9.4	9.5 to 9.9	10.0 to 10.4	10.5 to 10.9	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
SOUTH CENTRAL DISTRICT																	
No. 1 HAD	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 2 HAD	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--	2
No. 4 HAD	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1
TOTAL	--	--	--	--	1	2	2	--	--	--	--	--	--	--	--	--	5
SOUTHEAST DISTRICT																	
No. 2 HAD	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--	2
TOTAL	--	--	--	--	1	2	--	--	--	--	--	--	--	--	--	--	3

APPENDIX TABLE B-10. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT PROTEIN RANGES FOR THE ENTIRE SAMPLE AREA, JULY - DECEMBER, 1964

	Protein Range, Per Cent												
Grade	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
No. 1 HAD	--	1	2	--	6	4	5	2	1	--	--	--	21
No. 2 HAD	--	1	1	16	28	28	38	15	18	2	--	--	147
No. 3 HAD	--	2	--	11	23	19	34	20	5	2	1	2	119
No. 4 HAD	--	1	1	11	12	10	8	9	6	1	--	--	59
No. 5 HAD	--	--	--	1	2	1	3	1	1	1	--	--	10
S. G. HAD	--	--	--	--	--	--	--	--	--	--	--	--	--
No. 1 AD	--	--	--	1	--	--	1	1	--	--	--	--	3
No. 2 AD	--	1	1	2	3	2	1	1	--	--	--	--	11
No. 3 AD	--	--	3	--	3	1	4	--	--	--	--	--	11
No. 4 AD	--	1	2	3	2	2	--	1	--	--	--	--	11
No. 5 AD	--	--	--	--	3	2	--	1	--	--	--	--	6
S. G. AD	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	--	--	--	--	--	--	--	1	--	--	--	1
No. 2 Durum	--	--	--	--	1	--	1	--	--	--	--	--	2
No. 3 Durum	1	--	--	1	--	--	--	--	--	--	--	--	2
No. 4 Durum	--	--	--	1	1	--	--	--	--	--	--	--	2
No. 5 Durum	--	--	--	1	--	--	--	--	--	--	--	--	1
S. G. Durum	--	--	--	1	--	--	1	--	--	--	---	---	2
AREA TOTAL	1	7	11	49	84	69	96	51	32	6	1	2	409
Percentage Distribution	0.2	1.7	2.7	12.0	20.6	16.9	23.5	12.5	7.8	1.5	0.2	0.4	100.0

APPENDIX TABLE B-11. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT PROTEIN RANGES, BY CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 WITH COMPARISONS

Crop Reporting District	Protein Range, Per Cent													
	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	17.0 to 17.4	Total
Northwest	--	3	2	11	15	16	15	8	8	1	1	1	--	81
North Central	--	1	1	6	19	18	26	10	6	1	--	--	--	88
Northeast	1	3	8	26	39	25	39	25	11	2	--	1	--	180
West Central	--	--	--	--	--	1	1	--	--	1	--	--	--	3
Central	--	--	--	--	4	7	12	8	6	1	--	--	--	38
East Central	--	--	--	5	5	1	2	--	--	--	--	--	--	13
Southwest	--	--	--	--	--	--	--	--	1	--	--	--	--	1
South Central	--	--	--	1	1	1	1	--	--	--	--	--	--	4
Southeast	--	--	--	--	1	--	--	--	--	--	--	--	--	1
TOTAL	1	7	11	49	84	69	96	51	32	6	1	2	--	409
Percentage Distribution 1964	0.2	1.7	2.7	12.0	20.6	16.9	23.5	12.5	7.8	1.5	0.2	0.4	--	100.0
Percentage Distribution 1963	0.5	--	1.5	4.5	8.0	13.1	31.7	19.6	12.6	5.0	3.0	0.5	--	100.0
Percentage Distribution 1962	0.7	4.5	14.5	21.6	33.5	12.3	6.7	3.7	1.8	--	0.7	--	--	100.0
Percentage Distribution 1961*	--	--	0.5	--	1.4	2.8	11.4	21.2	38.2	15.2	7.4	0.9	0.5	100.0
Percentage Distribution 1960	--	1.1	1.1	1.6	10.6	9.4	13.3	18.8	24.3	9.4	3.3	5.5	1.6	100.0

*0.5 per cent fell within the 10.0-10.4 per cent range.

APPENDIX TABLE B-12. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT PROTEIN RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964

Grade	Protein Range, Per Cent												Total
	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	
NORTHWEST DISTRICT													
No. 1 HAD	--	1	1	--	2	2	2	2	1	--	--	--	11
No. 2 HAD	--	1	--	5	8	10	9	1	3	--	--	--	37
No. 3 HAD	--	--	--	1	1	--	1	2	1	1	1	1	9
No. 4 HAD	--	1	--	1	1	1	--	1	2	--	--	--	7
No. 1 AD	--	--	--	1	--	--	1	1	--	--	--	--	3
No. 2 AD	--	--	--	2	--	2	1	1	--	--	--	--	6
No. 3 AD	--	--	--	--	1	1	--	--	--	--	--	--	2
No. 4 AD	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	--	--	--	--	--	--	--	1	--	--	--	1
No. 2 Durum	--	--	--	--	1	--	1	--	--	--	--	--	2
No. 3 Durum	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	--	--	1	--	--	--	--	--	--	--	1
TOTAL	--	3	2	11	15	16	15	8	8	1	1	1	81
NORTH CENTRAL DISTRICT													
No. 1 HAD	--	--	--	--	1	1	1	--	--	--	--	--	3
No. 2 HAD	--	--	--	4	10	5	11	3	4	--	--	--	37
No. 3 HAD	--	1	--	2	7	9	12	5	1	--	--	--	37
No. 4 HAD	--	--	--	--	--	2	1	2	1	1	--	--	7
No. 2 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	--	--	1	--	--	--	--	--	1
No. 4 AD	--	--	--	--	--	1	--	--	--	--	--	--	1
No. 6 AD	--	--	1	--	--	--	--	--	--	--	--	--	1
TOTAL	--	1	1	6	19	18	26	10	6	1	--	--	88

(continued)

APPENDIX TABLE B-12. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT PROTEIN RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Protein Range, Per Cent												
	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
NORTHEAST DISTRICT													
No. 1 HAD	--	--	1	--	2	--	1	--	--	--	--	--	4
No. 2 HAD	--	--	1	6	5	8	12	4	6	1	--	--	43
No. 3 HAD	--	1	--	7	15	7	16	12	1	--	--	1	60
No. 4 HAD	--	--	1	9	10	7	6	6	3	--	--	--	42
No. 5 HAD	--	--	--	1	2	1	2	1	1	1	--	--	9
No. 2 AD	--	1	1	--	--	--	--	--	--	--	--	--	2
No. 3 AD	--	--	3	--	1	--	1	--	--	--	--	--	5
No. 4 AD	--	1	1	2	2	1	--	1	--	--	--	--	8
No. 5 AD	--	--	--	--	2	1	--	1	--	--	--	--	4
No. 3 Durum	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 5 Durum	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 6 Durum	--	--	--	--	--	--	1	--	--	--	--	--	1
TOTAL	1	3	8	26	39	25	39	25	11	2	--	1	180
WEST CENTRAL DISTRICT													
No. 2 HAD	--	--	--	--	--	--	1	--	--	1	--	--	2
No. 3 HAD	--	--	--	--	--	1	--	--	--	--	--	--	1
TOTAL	--	--	--	--	--	1	1	--	--	1	--	--	3
CENTRAL DISTRICT													
No. 1 HAD	--	--	--	--	1	1	--	--	--	--	--	--	1
No. 2 HAD	--	--	--	--	1	3	5	7	5	--	--	--	21
No. 3 HAD	--	--	--	--	--	2	4	1	1	1	--	--	9
No. 4 HAD	--	--	--	--	1	--	1	--	--	--	--	--	2
No. 5 HAD	--	--	--	--	--	--	1	--	--	--	--	--	1
No. 2 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	--	--	1	--	--	--	--	--	1
No. 5 AD	--	--	--	--	--	1	--	--	--	--	--	--	1
TOTAL	--	--	--	--	4	7	12	8	6	1	--	--	38

(continued)

APPENDIX TABLE B-12. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT PROTEIN RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Protein Range, Per Cent												
	11.0 to 11.4	11.5 to 11.9	12.0 to 12.4	12.5 to 12.9	13.0 to 13.4	13.5 to 13.9	14.0 to 14.4	14.5 to 14.9	15.0 to 15.4	15.5 to 15.9	16.0 to 16.4	16.5 to 16.9	Total
EAST CENTRAL DISTRICT													
No. 1 HAD	--	--	--	--	--	--	1	--	--	--	--	--	1
No. 2 HAD	--	--	--	1	2	1	--	--	--	--	--	--	4
No. 3 HAD	--	--	--	1	--	--	1	--	--	--	--	--	2
No. 4 HAD	--	--	--	--	--	--	--	--	--	--	--	--	--
No. 2 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 4 AD	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 5 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	--	1	--	--	--	--	--	--	--	--	--
No. 5 Durum	--	--	--	--	--	--	--	--	--	--	--	--	1
S. G. Durum	--	--	--	1	--	--	--	--	--	--	--	--	13
TOTAL	--	--	--	5	5	1	2	--	--	--	--	--	
SOUTHWEST DISTRICT													
No. 3 HAD	--	--	--	--	--	--	--	--	1	--	--	--	1
SOUTH CENTRAL DISTRICT													
No. 1 HAD	--	--	--	--	--	--	--	--	--	--	--	--	--
No. 2 HAD	--	--	--	--	1	1	--	--	--	--	--	--	2
No. 4 HAD	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	--	--	1	--	--	--	--	--	1
TOTAL	--	--	--	1	1	1	1	--	--	--	--	--	4
SOUTHEAST DISTRICT													
No. 2 HAD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 2 Durum	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL	--	--	--	--	1	--	--	--	--	--	--	--	1

APPENDIX TABLE B-13. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN ONE PER CENT DAMAGE RANGES FOR THE ENTIRE SAMPLE AREA, JULY - DECEMBER, 1964

Grade	Damage Range, Per Cent																	Total
	Not Listed as a Grading[1] Factor	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	11.0 to 11.9	12.0 to 12.9	13.0 to 13.9	14.0 to 14.9	18.0 to 18.9	24.0 to 24.9	
No. 1 HAD	22	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30
No. 2 HAD	71	50	37	6	2	—	—	—	—	—	—	—	—	—	—	—	—	—	166
No. 3 HAD	44	16	31	25	9	6	1	—	—	—	—	—	—	—	—	—	—	—	132
No. 4 HAD	21	2	1	3	4	7	4	4	6	6	2	—	—	—	—	—	—	—	61
No. 5 HAD	2	—	—	—	—	—	—	—	2	1	3	1	—	—	—	—	—	—	10
S. G. HAD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No. 1 AD	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
No. 2 AD	7	1	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11
No. 3 AD	4	3	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	11
No. 4 AD	2	—	—	—	—	1	1	2	2	2	1	—	—	—	—	—	—	—	11
No. 5 AD	—	—	—	—	—	—	—	—	—	—	1	1	—	2	1	1	—	—	6
S. G. AD	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 1 Durum	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 2 Durum	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
No. 3 Durum	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 4 Durum	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	2
No. 5 Durum	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	2
S. G. Durum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2
AREA TOTAL	181	82	74	36	18	14	7	6	10	9	7	2	1	3	2	1	1	1	455
Percentage Distribution	39.8	18.0	16.3	7.9	4.0	3.1	1.6	1.3	2.2	2.0	1.6	0.4	0.2	0.6	0.4	0.2	0.2	0.2	100.0

[1]Content of damaged kernels unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-14. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT DAMAGE RANGES, BY CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 WITH COMPARISONS

Crop Reporting District	Damage Range, Per Cent																	
	Not Listed as a Grading Factor[1]	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	11.0 to 11.9	12.0 to 12.9	13.0 to 13.9	14.0 to 14.9	18.0 to 18.9	24.0 to 24.9	Total
Northwest	75	2	2	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	81
North Central	27	31	17	8	7	3	1	—	—	1	—	—	—	—	—	—	—	—	95
Northeast	54	25	37	26	10	8	4	5	10	7	6	2	—	2	1	1	—	1	199
West Central	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Central	14	11	8	1	1	2	1	—	—	—	1	—	—	1	—	—	—	—	40
East Central	5	7	10	—	—	1	1	—	—	1	—	—	1	—	1	—	1	—	28
Southwest	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
South Central	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
Southeast	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
TOTAL	181	82	74	36	18	14	7	6	10	9	7	2	1	3	2	1	1	1	455
Percentage Distribution 1964	39.8	18.0	16.3	7.9	4.0	3.1	1.6	1.3	2.2	2.0	1.6	0.4	0.2	0.6	0.4	0.2	0.2	0.2	100.0
Percentage Distribution 1963	81.4	—	—	3.5	3.5	5.1	3.5	1.0	1.5	—	—	0.5	—	—	—	—	—	—	100.0
Percentage Distribution 1962	86.7	—	0.4	3.7	1.8	1.8	0.4	0.4	1.5	0.7	—	0.7	0.7	0.4	0.4	0.4	—	—	100.0
Percentage Distribution 1961	82.9	0.5	—	4.2	6.9	1.8	1.8	0.5	0.9	—	—	—	—	—	0.5	—	—	—	100.0
Percentage Distribution 1960	94.4	—	—	1.6	1.1	0.6	1.1	—	—	—	—	—	0.6	—	—	0.6	—	—	100.0

[1] Content of damaged kernels unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-15. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT DAMAGE RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964

Grade	Not Listed as a Grading[1] Factor	Damage Range, Per Cent: 0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	11.0 to 11.9	12.0 to 12.9	13.0 to 13.9	14.0 to 14.9	18.0 to 18.9	24.0 to 24.9	Total
NORTHWEST DISTRICT																			
No. 1 HAD	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11
No. 2 HAD	34	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37
No. 3 HAD	8	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9
No. 4 HAD	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
No. 1 AD	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
No. 2 AD	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
No. 3 AD	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 4 AD	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
No. 1 Durum	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 2 Durum	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 3 Durum	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 4 Durum	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
ALL GRADES	75	2	2	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	81
NORTH CENTRAL DISTRICT																			
No. 1 HAD	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
No. 2 HAD	14	18	6	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	40
No. 3 HAD	7	9	10	7	4	2	—	—	—	—	—	—	—	—	—	—	—	—	39
No. 4 HAD	2	2	1	—	1	—	1	—	—	1	—	—	—	—	—	—	—	—	8
No. 2 AD	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 3 AD	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 4 AD	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
S. G. AD	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
ALL GRADES	27	31	17	8	7	3	1	—	—	1	—	—	—	—	—	—	—	—	95
NORTHEAST DISTRICT																			
No. 1 HAD	4	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
No. 2 HAD	12	15	20	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	52
No. 3 HAD	22	7	13	18	4	3	—	—	—	—	—	—	—	—	—	—	—	—	67
No. 4 HAD	11	—	1	2	3	5	3	4	6	5	2	—	—	—	—	—	—	—	42
No. 5 HAD	2	—	—	—	—	—	—	—	2	1	2	1	—	—	1	—	—	—	9

(continued)

APPENDIX TABLE B-15. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT DAMAGE RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Damage Range, Per Cent																	
	Not Listed as a Grading[1] Factor	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	11.0 to 11.9	12.0 to 12.9	13.0 to 13.9	14.0 to 14.9	18.0 to 18.9	24.0 to 24.9	Total
No. 2 AD	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 3 AD	1	—	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	5
No. 4 AD	2	—	—	—	—	—	1	1	2	1	1	—	—	—	—	—	—	—	8
No. 5 AD	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	—	—	4
No. 3 Durum	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 5 Durum	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
S. G. Durum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
ALL GRADES	54	25	37	26	10	8	4	5	10	7	6	2	—	2	1	1	—	1	199
WEST CENTRAL DISTRICT																			
No. 2 HAD	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 3 HAD	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
ALL GRADES	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
CENTRAL DISTRICT																			
No. 1 HAD	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 2 HAD	8	9	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22
No. 3 HAD	4	—	3	—	1	1	1	—	—	—	—	—	—	—	—	—	—	—	10
No. 4 HAD	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 5 HAD	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
No. 2 AD	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 3 AD	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 5 AD	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
ALL GRADES	14	11	8	1	1	2	1	—	—	—	1	—	—	1	—	—	—	—	40
EAST CENTRAL DISTRICT																			
No. 1 HAD	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
No. 2 HAD	—	5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10
No. 3 HAD	1	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
No. 4 HAD	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 2 AD	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 3 AD	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 4 AD	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	1
No. 5 AD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(continued)

APPENDIX TABLE B-15. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT DAMAGE RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Damage Range, Per Cent																		
	Not Listed as a Grading Factor[1]	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	11.0 to 11.9	12.0 to 12.9	13.0 to 13.9	14.0 to 14.9	18.0 to 18.9	24.0 to 24.9	Total
No. 4 Durum	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
No. 5 Durum	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
S. G. Durum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
ALL GRADES	5	7	10	—	—	1	1	—	—	1	—	—	1	—	1	—	1	—	28
SOUTHWEST DISTRICT																			
No. 3 HAD	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
SOUTH CENTRAL DISTRICT																			
No. 1 HAD	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 2 HAD	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 3 HAD	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 3 AD	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
ALL GRADES	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
SOUTHEAST DISTRICT																			
No. 2 HAD	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 2 Durum	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
ALL GRADES	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3

[1] Content of damaged kernels unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-16. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN ONE PER CENT SHRUNKEN AND BROKEN RANGES FOR THE ENTIRE SAMPLE AREA, JULY - DECEMBER, 1964

Grade	Shrunken and Broken Range, Per Cent											
	Not Listed as a Grading Factor[1]	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	Total
No. 1 HAD	18	--	3	8	1	--	--	--	--	--	--	--	30
No. 2 HAD	32	2	6	36	69	21	--	--	--	--	--	--	166
No. 3 HAD	31	--	1	22	25	38	10	5	--	--	--	--	132
No. 4 HAD	18	--	1	14	15	8	3	2	--	--	--	--	61
No. 5 HAD	3	--	--	2	2	2	1	--	--	--	--	--	10
S. G. HAD	--	--	--	--	--	--	--	--	--	--	--	--	--
No. 1 AD	3	--	--	--	--	--	--	--	--	--	--	--	3
No. 2 AD	6	--	--	4	--	1	--	--	--	--	--	--	11
No. 3 AD	3	--	1	2	3	1	1	--	--	--	--	--	11
No. 4 AD	2	--	--	6	2	1	--	--	--	--	--	--	11
No. 5 AD	--	--	2	2	2	--	--	--	--	--	--	--	6
S. G. AD	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 2 Durum	3	--	--	--	1	--	--	--	--	--	--	--	4
No. 3 Durum	1	--	--	--	1	--	--	--	--	--	--	--	2
No. 4 Durum	1	--	--	--	--	--	1	--	--	--	--	--	2
No. 5 Durum	--	--	--	--	2	--	--	--	--	--	--	--	2
S. G. Durum	--	--	1	1	--	--	--	--	--	--	--	--	2
AREA TOTAL	121	2	16	98	123	72	16	7	--	--	--	--	455
Percentage Distribution	26.6	0.4	3.5	21.6	27.0	15.8	3.5	1.6	--	--	--	--	100.0

[1] Content of shrunken and broken kernels unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-17. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT SHRUNKEN AND BROKEN RANGES, BY CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 WITH COMPARISONS

Crop Reporting District	Shrunken and Broken Range, Per Cent										
	Not Listed as a Grading[1] Factor	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	Total
Northwest	50	1	--	6	13	9	2	--	--	--	--	81
North Central	15	--	3	19	28	21	6	3	--	--	--	95
Northeast	51	--	10	51	53	26	5	3	--	--	--	199
West Central	--	--	--	2	--	1	--	--	--	--	--	3
Central	--	1	1	10	18	9	--	1	--	--	--	40
East Central	4	--	1	7	9	5	2	--	--	--	--	28
Southwest	--	--	1	--	--	--	--	--	--	--	--	1
South Central	--	--	--	3	1	--	1	--	--	--	--	5
Southeast	1	--	--	--	1	1	--	--	--	--	--	3
TOTAL	121	2	16	98	123	72	16	7	--	--	--	455
Percentage Distribution-1964	26.6	0.4	3.5	21.6	27.0	15.8	3.5	1.6	--	--	--	100.0
	Not Listed as a Grading[1] Factor	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	11.0 to 11.9	12.0 to 12.9	13.0 to 13.9	14.0 to 14.9	
Percentage Distribution-1963	92.0	--	--	0.5	2.5	3.0	0.5	1.0	0.5	--	--	100.0
Percentage Distribution-1962	74.7	0.7	--	1.1	8.6	5.3	5.9	0.7	2.3	0.7	--	100.0
Percentage Distribution-1961	77.4	0.9	--	0.5	6.0	8.3	1.8	2.8	1.8	0.5	--	100.0
Percentage Distribution-1960	51.9	--	0.6	0.6	7.7	12.6	14.4	5.5	5.0	0.6	1.1	100.0

[1]Content of shrunken and broken kernels unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-18. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT SHRUNKEN AND BROKEN RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964

Grade	Not Listed as a Grading[1] Factor	Shrunken and Broken Range, Per Cent											Total
		0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	
NORTHWEST DISTRICT													
No. 1 HAD	10	--	--	--	1	--	--	--	--	--	--	--	11
No. 2 HAD	17	1	--	4	10	5	--	--	--	--	--	--	37
No. 3 HAD	4	--	--	--	1	3	1	--	--	--	--	--	9
No. 4 HAD	6	--	--	1	--	--	--	--	--	--	--	--	7
No. 1 AD	3	--	--	--	--	--	--	--	--	--	--	--	3
No. 2 AD	5	--	--	--	--	1	--	--	--	--	--	--	6
No. 3 AD	1	--	--	--	--	--	1	--	--	--	--	--	2
No. 4 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 1 Durum	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 2 Durum	2	--	--	--	--	--	--	--	--	--	--	--	2
No. 3 Durum	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 Durum	1	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	50	1	--	6	13	9	2	--	--	--	--	--	81
NORTH CENTRAL DISTRICT													
No. 1 HAD	1	--	--	3	--	--	--	--	--	--	--	--	4
No. 2 HAD	5	--	2	8	20	5	--	--	--	--	--	--	40
No. 3 HAD	6	--	--	7	7	13	4	2	--	--	--	--	39
No. 4 HAD	1	--	--	1	1	2	2	1	--	--	--	--	8
No. 2 AD	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 AD	--	--	--	--	--	1	--	--	--	--	--	--	1
No. 6 AD	--	--	1	--	--	--	--	--	--	--	--	--	1
TOTAL	15	--	3	19	28	21	6	3	--	--	--	--	95

(continued)

APPENDIX TABLE B-18. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT SHRUNKEN AND BROKEN RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Shrunken and Broken Range, Per Cent												
	Not Listed as a Grading Factor[1]	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	Total
NORTHEAST DISTRICT													
No. 1 HAD	3	--	3	1	--	--	--	--	--	--	--	--	7
No. 2 HAD	10	--	4	16	18	4	--	--	--	--	--	--	52
No. 3 HAD	21	--	--	11	15	14	4	2	--	--	--	--	67
No. 4 HAD	11	--	1	11	13	5	--	1	--	--	--	--	42
No. 5 HAD	3	--	--	2	1	2	1	--	--	--	--	--	9
No. 2 AD	--	--	--	2	--	--	--	--	--	--	--	--	2
No. 3 AD	1	--	1	--	2	1	--	--	--	--	--	--	5
No. 4 AD	2	--	--	5	1	--	--	--	--	--	--	--	8
No. 5 AD	--	--	1	2	1	--	--	--	--	--	--	--	4
No. 3 Durum	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 5 Durum	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 6 Durum	--	--	--	1	--	--	--	--	--	--	--	--	1
TOTAL	51	--	10	51	53	26	5	3	--	--	--	--	199
WEST CENTRAL DISTRICT													
No. 2 HAD	--	--	--	1	--	1	--	--	--	--	--	--	2
No. 3 HAD	--	--	--	1	--	--	--	--	--	--	--	--	1
TOTAL	--	--	--	2	--	1	--	--	--	--	--	--	3
CENTRAL DISTRICT													
No. 1 HAD	--	--	--	2	--	--	--	--	--	--	--	--	2
No. 2 HAD	--	1	--	4	13	4	--	--	--	--	--	--	22
No. 3 HAD	--	--	--	2	2	5	--	1	--	--	--	--	10
No. 4 HAD	--	--	--	1	1	--	--	--	--	--	--	--	2
No. 5 HAD	--	--	--	--	1	--	--	--	--	--	--	--	1

(continued)

APPENDIX TABLE B-18. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT SHRUNKEN AND BROKEN RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Shrunken and Broken Range, Per Cent												
	Not Listed as a Grading[1] Factor	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	Total
No. 2 AD	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 5 AD	--	--	1	--	--	--	--	--	--	--	--	--	1
TOTAL	--	1	1	10	18	9	--	1	--	--	--	--	40
EAST CENTRAL DISTRICT													
No. 1 HAD	4	--	--	1	--	--	--	--	--	--	--	--	5
No. 2 HAD	--	--	--	2	7	1	--	--	--	--	--	--	10
No. 3 HAD	--	--	--	1	--	3	1	--	--	--	--	--	5
No. 4 HAD	--	--	--	--	--	1	--	--	--	--	--	--	1
No. 2 AD	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 4 AD	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 5 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	--	--	--	--	1	--	--	--	--	--	1
No. 5 Durum	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 6 Durum	--	--	1	--	--	--	--	--	--	--	--	--	1
TOTAL	4	--	1	7	9	5	2	--	--	--	--	--	28
SOUTHWEST DISTRICT													
No. 3 HAD	--	--	1	--	--	--	--	--	--	--	--	--	1

(continued)

APPENDIX TABLE B-18. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT SHRUNKEN AND BROKEN RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Shrunken and Broken Range, Per Cent												
	Not Listed as a Grading[1] Factor	0.0 to 0.9	1.0 to 1.9	2.0 to 2.9	3.0 to 3.9	4.0 to 4.9	5.0 to 5.9	6.0 to 6.9	7.0 to 7.9	8.0 to 8.9	9.0 to 9.9	10.0 to 10.9	Total
SOUTH CENTRAL DISTRICT													
No. 1 HAD	--	--	--	1	--	--	--	--	--	--	--	--	1
No. 2 HAD	--	--	--	1	1	--	--	--	--	--	--	--	2
No. 4 HAD	--	--	--	--	--	--	1	--	--	--	--	--	1
No. 3 AD	--	--	--	1	--	--	--	--	--	--	--	--	1
TOTAL	--	--	--	3	1	--	1	--	--	--	--	--	5
SOUTHEAST DISTRICT													
No. 2 HAD	--	--	--	--	--	1	--	--	--	--	--	--	1
No. 2 Durum	1	--	--	--	1	--	--	--	--	--	--	--	2
TOTAL	1	--	--	--	1	1	--	--	--	--	--	--	3

[1]Content of shrunken and broken kernels is unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-19. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT FOREIGN MATERIAL RANGES FOR THE ENTIRE SAMPLE AREA, BY GRADE, JULY - DECEMBER, 1964

Grade	Foreign Material Range, Per Cent												
	Not Listed as a Grading[1] Factor	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	Total
No. 1 HAD	20	9	1	--	--	--	--	--	--	--	--	--	30
No. 2 HAD	48	94	21	3	--	--	--	--	--	--	--	--	166
No. 3 HAD	35	81	8	1	5	2	--	--	--	--	--	--	132
No. 4 HAD	20	39	2	--	--	--	--	--	--	--	--	--	61
No. 5 HAD	3	6	--	--	--	1	--	--	--	--	--	--	10
S. G. HAD	--	--	--	--	--	--	--	--	--	--	--	--	--
No. 1 AD	3	--	--	--	--	--	--	--	--	--	--	--	3
No. 2 AD	6	4	1	--	--	--	--	--	--	--	--	--	11
No. 3 AD	3	5	--	1	1	1	--	--	--	--	--	--	11
No. 4 AD	2	8	--	1	--	--	--	--	--	--	--	--	11
No. 5 AD	1	4	1	--	--	--	--	--	--	--	--	--	6
S. G. AD	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	3	--	1	--	--	--	--	--	--	--	--	--	4
No. 3 Durum	1	--	--	--	1	--	--	--	--	--	--	--	2
No. 4 Durum	1	--	1	--	--	--	--	--	--	--	--	--	2
No. 5 Durum	--	2	--	--	--	--	--	--	--	--	--	--	2
S. G. Durum	--	2	--	--	--	--	--	--	--	--	--	--	2
AREA TOTAL	147	255	36	6	7	4	--	--	--	--	--	--	455
Percentage Distribution	32.3	56.0	8.0	1.3	1.1	0.9	--	--	--	--	--	--	100.0

[1]Content of foreign material unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-20. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT FOREIGN MATERIAL RANGES, BY CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 WITH COMPARISONS

Crop Reporting District	Foreign Material Range, Per Cent												
	Not Listed as a Grading[1] Factor	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	Total
Northwest	63	13	4	--	1	--	--	--	--	--	--	--	81
North Central	18	66	7	2	1	1	--	--	--	--	--	--	95
Northeast	51	135	6	4	1	2	--	--	--	--	--	--	199
West Central	1	1	--	--	--	1	--	--	--	--	--	--	3
Central	8	20	12	--	--	--	--	--	--	--	--	--	40
East Central	5	14	6	1	2	--	--	--	--	--	--	--	28
Southwest	--	1	--	--	--	--	--	--	--	--	--	--	1
South Central	--	4	--	1	--	--	--	--	--	--	--	--	5
Southeast	1	1	1	--	--	--	--	--	--	--	--	--	3
Total	147	255	36	8	4	5	--	--	--	--	--	--	455
Percentage Distribution 1964	32.2	56.0	8.0	1.8	0.9	1.1	--	--	--	--	--	--	100.0
Percentage Distribution 1963	96.5	--	0.5	1.0	1.5	--	--	--	--	--	--	0.5	100.0
Percentage Distribution 1962	93.8	0.7	1.1	2.2	1.8	0.4	--	--	--	--	--	--	100.0
Percentage Distribution 1961	78.8	0.5	13.8	5.4	0.5	0.5	0.5	--	--	--	--	--	100.0
Percentage Distribution 1960	96.7	--	1.1	1.6	--	0.6	--	--	--	--	--	--	100.0

[1] Content of foreign material unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-21. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT FOREIGN MATERIAL RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964

Grade	Foreign Material Range, Per Cent											Total
	Not Listed as a Grading Factor[1]	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	
NORTHWEST DISTRICT													
No. 1 HAD	11	--	--	--	--	--	--	--	--	--	--	--	11
No. 2 HAD	26	7	4	--	--	--	--	--	--	--	--	--	37
No. 3 HAD	5	3	--	--	1	--	--	--	--	--	--	--	9
No. 4 HAD	7	--	--	--	--	--	--	--	--	--	--	--	7
No. 1 AD	3	--	--	--	--	--	--	--	--	--	--	--	3
No. 2 AD	5	1	--	--	--	--	--	--	--	--	--	--	6
No. 3 AD	1	--	--	--	--	1	--	--	--	--	--	--	2
No. 4 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	2	--	--	--	--	--	--	--	--	--	--	--	2
No. 3 Durum	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 Durum	1	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	62	13	4	--	1	1	--	--	--	--	--	--	81
NORTH CENTRAL DISTRICT													
No. 1 HAD	1	2	--	--	--	1	--	--	--	--	--	--	4
No. 2 HAD	6	26	6	2	--	--	--	--	--	--	--	--	40
No. 3 HAD	7	30	1	--	1	--	--	--	--	--	--	--	39
No. 4 HAD	1	7	--	--	--	--	--	--	--	--	--	--	8
No. 2 AD	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
S..G. AD	1	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	18	66	7	2	1	1	--	--	--	--	--	--	95

(continued)

APPENDIX TABLE B-21. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT FOREIGN MATERIAL RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Foreign Material Range, Per Cent												
	Not Listed as a Grading Factor[1]	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	Total
NORTHEAST DISTRICT													
No. 1 HAD	3	4	--	--	--	--	--	--	--	--	--	--	7
No. 2 HAD	11	38	2	1	--	--	--	--	--	--	--	--	52
No. 3 HAD	21	42	2	1	--	1	--	--	--	--	--	--	67
No. 4 HAD	11	30	1	--	--	--	--	--	--	--	--	--	42
No. 5 HAD	2	6	--	--	--	1	--	--	--	--	--	--	9
No. 2 AD	--	2	--	--	--	--	--	--	--	--	--	--	2
No. 3 AD	1	3	--	1	--	--	--	--	--	--	--	--	5
No. 4 AD	2	5	--	1	--	--	--	--	--	--	--	--	8
No. 5 AD	--	3	1	--	--	--	--	--	--	--	--	--	4
No. 3 Durum	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 5 Durum	--	1	--	--	--	--	--	--	--	--	--	--	1
S. G. Durum	--	1	--	--	--	--	--	--	--	--	--	--	1
TOTAL	51	135	6	4	1	2	--	--	--	--	--	--	199
WEST CENTRAL DISTRICT													
No. 2 HAD	1	1	--	--	--	--	--	--	--	--	--	--	2
No. 3 HAD	--	--	--	--	--	1	--	--	--	--	--	--	1
TOTAL	1	1	--	--	--	1	--	--	--	--	--	--	3
CENTRAL DISTRICT													
No. 1 HAD	--	1	1	--	--	--	--	--	--	--	--	--	2
No. 2 HAD	2	13	7	--	--	--	--	--	--	--	--	--	22
No. 3 HAD	4	2	4	--	--	--	--	--	--	--	--	--	10
No. 4 HAD	1	1	--	--	--	--	--	--	--	--	--	--	2
No. 5 HAD	1	--	--	--	--	--	--	--	--	--	--	--	1

(continued)

APPENDIX TABLE B-21. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT FOREIGN MATERIAL RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Foreign Material Range, Per Cent											
	Not Listed as a Grading[1] Factor	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	Total
No. 2 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 5 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
TOTAL	8	20	12	--	--	--	--	--	--	--	--	--	40
EAST CENTRAL DISTRICT													
No. 1 HAD	5	--	--	--	--	--	--	--	--	--	--	--	5
No. 2 HAD	--	7	2	1	--	--	--	--	--	--	--	--	10
No. 3 HAD	--	3	1	--	1	--	--	--	--	--	--	--	5
No. 4 HAD	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 2 AD	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 4 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 5 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 5 Durum	--	1	--	--	--	--	--	--	--	--	--	--	1
S. G. Durum	--	1	--	--	--	--	--	--	--	--	--	--	1
TOTAL	5	14	6	1	2	--	--	--	--	--	--	--	28
SOUTHWEST DISTRICT													
No. 3 HAD	--	1	--	--	--	--	--	--	--	--	--	--	1
SOUTH CENTRAL DISTRICT													
No. 1 HAD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 2 HAD	--	1	--	1	--	--	--	--	--	--	--	--	2
No. 4 HAD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	--	1	--	--	--	--	--	--	--	--	--	--	1
TOTAL	--	4	--	1	--	--	--	--	--	--	--	--	5

(continued)

APPENDIX TABLE B-21. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT FOREIGN MATERIAL RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Foreign Material Range, Per Cent											Total
	Not Listed as a Grading Factor[1]	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	
SOUTHEAST DISTRICT													
No. 2 HAD	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	1	--	1	--	--	--	--	--	--	--	--	--	2
TOTAL	1	1	1	--	--	--	--	--	--	--	--	--	3

[1]Content of foreign material unknown. This grade requirement did not determine grade, therefore was not listed as a grading factor on inspection certificate.

APPENDIX TABLE B-22. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOTS OF DURUM WHEAT FALLING WITHIN ONE PER CENT TOTAL DEFECT RANGE FOR THE ENTIRE SAMPLE AREA BY GRADE, JULY - DECEMBER, 1964

Grade	Total Defects, Per Cent																				
	Not Listed as a Grading[1] Factor	1.1 to 2.0	2.1 to 3.0	3.1 to 4.0	4.1 to 5.0	5.1 to 6.0	6.1 to 7.0	7.1 to 8.0	8.1 to 9.0	9.1 to 10.0	10.1 to 11.0	11.1 to 12.0	12.1 to 13.0	13.1 to 14.0	14.1 to 15.0	15.1 to 16.0	16.1 to 17.0	17.1 to 18.0	18.1 to 19.0	20.1 to 21.0	26.1 to 27.0	Total
No. 1 HAD	18	2	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30
No. 2 HAD	33	1	9	48	75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	166
No. 3 HAD	31	—	2	6	7	38	31	16	1	—	—	—	—	—	—	—	—	—	—	—	132
No. 4 HAD	19	—	2	1	3	3	4	2	7	6	6	8	—	—	—	—	—	—	—	—	61
No. 5 HAD	1	—	—	—	—	—	—	—	—	—	—	—	4	5	—	—	—	—	—	—	10
No. 1 AD	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
No. 2 AD	6	—	—	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11
No. 3 AD	3	—	—	2	2	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	11
No. 4 AD	2	—	—	—	—	—	—	—	2	3	2	2	—	—	—	—	—	—	—	—	11
No. 5 AD	—	—	—	—	—	—	—	—	—	—	—	—	2	1	1	—	1	1	—	—	6
S. G. AD	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 1 Durum	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No. 2 Durum	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
No. 3 Durum	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
No. 4 Durum	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2
No. 5 Durum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	2
S. G. Durum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2
AREA TOTAL	121	3	23	60	93	41	37	20	10	9	8	11	6	6	2	—	2	1	—	1	1	455
Percentage Distribution	26.7	0.7	5.1	13.2	20.5	9.0	8.0	4.4	2.2	2.0	1.8	2.4	1.3	1.3	0.4	—	0.4	0.2	—	0.2	0.2	100.0

[1]Content of damaged kernels unknown. This grade requirement did not determine the grade, therefore was not listed as a grading factor on the inspection certificate.

APPENDIX TABLE B-23. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT GRADES FALLING WITHIN 0.5 PER CENT DOCKAGE RANGES FOR THE ENTIRE SAMPLE AREA, JULY - DECEMBER, 1964

	Dockage, Per Cent														
Grade	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	Total
No. 1 HAD	10	8	3	1	2	1	4	1	--	--	--	--	--	--	30
No. 2 HAD	37	59	32	17	5	3	4	3	2	1	2	--	1	--	166
No. 3 HAD	19	52	37	12	3	1	4	1	2	1	--	--	--	--	132
No. 4 HAD	13	16	16	9	4	1	--	2	--	--	--	--	--	--	61
No. 5 HAD	3	1	3	1	2	--	--	--	--	--	--	--	--	--	10
S. G. HAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
No. 1 AD	--	1	--	--	--	1	--	1	--	--	--	--	--	--	3
No. 2 AD	2	5	2	1	--	--	--	--	--	--	1	--	--	--	11
No. 3 AD	4	3	--	2	--	--	--	--	--	--	--	--	1	1	11
No. 4 AD	3	5	1	--	1	--	1	--	--	--	--	--	--	--	11
No. 5 AD	4	1	--	--	1	--	--	--	--	--	--	--	--	--	6
S. G. AD	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	1	1	1	--	--	--	--	1	--	--	--	--	--	--	4
No. 3 Durum	--	--	--	1	--	--	--	1	--	--	--	--	--	--	2
No. 4 Durum	--	--	--	--	1	--	1	--	--	--	--	--	--	--	2
No. 5 Durum	--	1	--	1	--	--	--	--	--	--	--	--	--	--	2
S. G. Durum	2	--	--	--	--	--	--	--	--	--	--	--	--	--	2
AREA TOTAL	98	154	95	46	19	7	14	10	4	2	3	--	2	1	455
Percentage Distribution	21.6	33.9	20.9	10.1	4.2	1.6	3.1	2.2	0.8	0.4	0.6	--	0.4	0.2	100.0

APPENDIX TABLE B-24. PERCENTAGE DISTRIBUTION AND NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN 0.5 PER CENT DOCKAGE RANGES, BY CROP REPORTING DISTRICT, JULY - DECEMBER, 1964 WITH COMPARISONS

Crop Reporting District	Dockage, Per Cent														
	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	Total
Northwest	20	19	18	9	2	1	5	4	1	--	1	--	--	1	81
North Central	12	34	23	13	5	4	--	1	--	--	2	--	1	--	95
Northeast	40	68	47	20	9	--	7	3	3	2	--	--	--	--	199
West Central	--	--	2	--	1	--	--	--	--	--	--	--	--	--	3
Central	11	16	4	4	--	2	1	1	--	--	--	--	1	--	40
East Central	14	12	--	--	2	--	--	--	--	--	--	--	--	--	28
Southwest	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
South Central	1	3	--	--	--	--	1	--	--	--	--	--	--	--	5
Southeast	--	1	1	--	--	--	--	1	--	--	--	--	--	--	3
TOTAL	98	154	95	46	19	7	14	10	4	2	3	--	2	1	455
Percentage Distribution 1964	21.6	33.9	20.9	10.1	4.2	1.6	3.1	2.2	0.8	0.4	0.6	--	0.4	0.2	100.0
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%		
Percentage Distribution 1963	47.8	34.7	7.0	5.5	3.0	2.0	--	--	--	--	--	--	--		100.0
Percentage Distribution 1962	36.0	49.9	11.9	1.8	0.1	--	--	--	--	--	--	--	--		100.0
Percentage Distribution 1961	47.0	31.4	12.4	2.3	3.2	0.5	1.8	0.9	--	--	--	--	0.5		100.0
Percentage Distribution 1960	50.8	42.5	5.5	0.6	0.6	--	--	--	--	--	--	--	--		100.0

APPENDIX TABLE B-25. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT DOCKAGE RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964

Grade	Dockage, Per Cent														
	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	Total
NORTHWEST DISTRICT															
No. 1 HAD	5	1	2	1	--	--	1	1	--	--	--	--	--	--	11
No. 2 HAD	8	8	12	5	--	--	3	--	--	--	1	--	--	--	37
No. 3 HAD	2	3	1	--	1	--	--	1	1	--	--	--	--	--	9
No. 4 HAD	3	2	--	1	--	--	--	1	--	--	--	--	--	--	7
No. 1 AD	--	1	--	--	--	1	--	1	--	--	--	--	--	--	3
No. 2 AD	1	2	2	1	--	--	--	--	--	--	--	--	--	--	6
No. 3 AD	--	1	--	--	--	--	--	--	--	--	--	--	--	1	2
No. 4 AD	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 1 Durum	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	1	--	1	--	--	--	--	--	--	--	--	--	--	--	2
No. 3 Durum	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
TOTAL	20	19	18	9	2	1	5	4	1	--	1	--	--	1	81
NORTH CENTRAL DISTRICT															
No. 1 HAD	1	1	1	--	--	1	--	--	--	--	--	--	--	--	4
No. 2 HAD	4	19	6	3	3	2	--	1	--	--	1	--	1	--	40
No. 3 HAD	6	11	14	6	2	--	--	--	--	--	--	--	--	--	39
No. 4 HAD	1	1	2	3	--	1	--	--	--	--	--	--	--	--	8
No. 2 AD	--	--	--	--	--	--	--	--	--	--	1	--	--	--	1
No. 3 AD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 AD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
S. G. AD	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
TOTAL	12	34	23	13	5	4	--	1	--	--	2	--	1	--	95
NORTHEAST DISTRICT															
No. 1 HAD	2	2	--	--	1	--	2	--	--	--	--	--	--	--	7
No. 2 HAD	10	18	11	6	1	--	1	2	2	1	--	--	--	--	52

(continued)

APPENDIX TABLE B-25. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT DOCKAGE RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

Grade	Dockage, Per Cent														
	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	Total
No. 3 HAD	7	30	20	5	--	--	3	--	1	1	--	--	--	--	67
No. 4 HAD	8	12	13	5	4	--	--	--	--	--	--	--	--	--	42
No. 5 HAD	3	1	2	1	2	--	--	--	--	--	--	--	--	--	9
No. 2 AD	1	1	--	--	--	--	--	--	--	--	--	--	--	--	2
No. 3 AD	3	--	--	2	--	--	--	--	--	--	--	--	--	--	5
No. 4 AD	3	3	1	--	--	--	1	--	--	--	--	--	--	--	8
No. 5 AD	2	1	--	--	1	--	--	--	--	--	--	--	--	--	4
No. 3 Durum	--	--	--	--	--	--	--	1	--	--	--	--	--	--	1
No. 5 Durum	--	--	--	1	--	--	--	--	--	--	--	--	--	--	1
S. G. Durum	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	40	68	47	20	9	--	7	3	3	2	--	--	--	--	199
WEST CENTRAL DISTRICT															
No. 2 HAD	--	--	1	--	1	--	--	--	--	--	--	--	--	--	2
No. 3 HAD	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	--	--	2	--	1	--	--	--	--	--	--	--	--	--	3
CENTRAL DISTRICT															
No. 1 HAD	--	2	--	--	--	--	--	--	--	--	--	--	--	--	2
No. 2 HAD	8	9	1	3	--	1	--	--	--	--	--	--	--	--	22
No. 3 HAD	2	4	1	1	--	1	1	--	--	--	--	--	--	--	10
No. 4 HAD	--	--	1	--	--	--	--	1	--	--	--	--	--	--	2
No. 5 HAD	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 2 AD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1
No. 5 AD	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	11	16	4	4	--	2	1	1	--	--	--	--	1	--	40
EAST CENTRAL DISTRICT															
No. 1 HAD	2	2	--	--	1	--	--	--	--	--	--	--	--	--	5
No. 2 HAD	6	4	--	--	--	--	--	--	--	--	--	--	--	--	10
No. 3 HAD	2	3	--	--	--	--	--	--	--	--	--	--	--	--	5

(continued)

APPENDIX TABLE B-25. NUMBER OF CARLOT SAMPLES OF DURUM WHEAT FALLING WITHIN ONE PER CENT DOCKAGE RANGES, BY CROP REPORTING DISTRICT AND GRADE, JULY - DECEMBER, 1964 (Continued)

	Dockage, Per Cent														
Grade	0.0 to 0.4	0.5 to 0.9	1.0 to 1.4	1.5 to 1.9	2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	Total
No. 4 HAD	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 2 AD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 AD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 5 AD	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 4 Durum	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1
No. 5 Durum	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
S. G. Durum	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	14	12	--	--	2	--	--	--	--	--	--	--	--	--	28
SOUTHWEST DISTRICT															
No. 3 HAD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
SOUTH CENTRAL DISTRICT															
No. 1 HAD	--	--	--	--	--	--	1	--	--	--	--	--	--	--	1
No. 2 HAD	1	1	--	--	--	--	--	--	--	--	--	--	--	--	2
No. 4 HAD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
No. 3 AD	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1
TOTAL	1	3	--	--	--	--	1	--	--	--	--	--	--	--	5
SOUTHEAST DISTRICT															
No. 2 HAD	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1
No. 2 Durum	--	1	--	--	--	--	--	1	--	--	--	--	--	--	2
TOTAL	--	1	1	--	--	--	--	1	--	--	--	--	--	--	3