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# ONTARIO PEAS, BEANS AND CORN 1997 & 1998 COMPETITIVE ANALYSIS STUDY

## FINAL REPORT

**Prepared by**

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**November, 1998**

# Ontario Peas, Beans and Corn
# 1997 &1998 Competitive Analysis Study

**Submitted to:**
**For the Ontario Vegetable Growers' Marketing Board**
**Ontario Food Processor's Association**
**Ontario Ministry of Agriculture, Food and Rural Affairs**
**November 1998**

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## 1.0 Introduction

This study was conducted at the request of the Ontario Vegetable Growers' Marketing Board, the Ontario Food Processors Association, and the Ontario Ministry of Agriculture, Food and Rural Affairs. The study seeks to determine the competitiveness of the peas, beans and sweet corn processing industry in Ontario. The primary competing jurisdictions examined were the US mid-west and Quebec. In order to accomplish the task, the study examined the following topics in Ontario and competing regions:

- **Industry Structure and Overview**
  - market trends,
  - acreage, yields and production trends,
  - international trade
  - plant numbers and size, sales/value added

- **Overview of Field to Pad Costs**

- **A review of the Ontario contract agreements in relation to provisions in other regions.**

- **The strengths and weakness of Ontario relative to other regions and the source of difference between regions.**

This is a very complex industry in which production capabilities, competitive forces and market opportunities intertwine and impact all segments of the industry from the field to the factory and beyond. As such, it is a challenge to uncover definitive declarations about competitiveness between regions, let alone between Ontario processors themselves. Different markets, production goals and opportunities all come into the competitive equation. What appears obvious on the surface is usually far more complicated and uncertain. Costs, production capabilities and markets impact on farmers and processors and determine what is produced, how and why.

For those reasons, while we have broken the report into major sections, the broad concepts and topics noted above have to be examined throughout each.

# 2.0 Industry Structure and Overview

## 2.1 Market Trends

### 2.1.1 Grocery/Retail

According to A.C. Nielsen's Market Track, the canned peas, beans and corn sectors had retail sales of $150 million in Canada for the year ended in July 1998.[1] Of the canned vegetable total at retail, corn accounted for about 56% of the sales volume. Peas and beans each had 22%. The frozen pea, bean and corn sectors had sales of $74.6 million in the same time year. Peas comprised 45% of the total, followed by corn at 41% and beans at 14%.

At the retail grocery level, all commodities and categories serve a merchandising role. Canned vegetables serve the grocer's merchandising mix by satisfying a base (volume and frequency) consumer purchase pattern. Processed vegetables are considered, "almost a staple," or a second tier staple after the main staple items including milk, bread and sugar. The two and/or three main brands (in some banners there is just one brand), plus a two-tier private line, comprise a crucial component of any retailer's overall merchandising strategy.

During 1997, the total share of private label products for all categories, according to Nielsen was just over 23%. For canned peas, beans and corn, as of the end of July 1998, control label garnered a 30% share of dollar sales. Control or private label is an even larger component of the frozen pea, bean and corn market. Control label share of dollar sales amounts to over 46%. The growth of canned private label vegetables significantly outpaced the growth of branded product in the year ended July 1998. Frozen private label vegetables also outpaced the growth of branded product over the last year as well.

While the share of control label is greater than average in the processed pea, bean and corn category, the overall growth trends in this sector are similar to that in the rest of the food industry.

Processed vegetables are very important to grocers with regard to total sales, tonnage volume and profits. They are not only considered to be near staples by retailers and consumers, they are also considered to be margin boosters for the grocery department. These products are required to turn quickly (high velocity) at relatively low prices and comparatively high margin (in relation to the rest of the grocery items). This is in contrast to other categories that might be considered as loss leaders, or excitement creators.

This dual function as a near-staple combined with its profit making role, make it an important component of the most important retail merchandising tool, the grocery flyer. The flyers

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[1]Note: Nielsen tracks consumer purchases at grocery stores, drug stores, mass merchants, warehouse clubs and convenience stores. Grocery stores comprise about three quarters of the Nielsen basket.

advertise these pea, bean and corn products prominently during major holiday times (Thanksgiving 1998 had nearly 100% coverage for peas, beans and corn in the flyers). At these times, the price points tend to be "sharper" as the manufacturer was likely involved in the promotion spending. Throughout the rest of the year, however, canned or frozen peas, beans or corn are also advertised frequently in the flyers although not at discounted prices. Our sample of late second quarter 1998 flyers showed a coverage of about 80%.

These products tend to be priced between processor and retailer very infrequently (perhaps just once per year) in comparison to other items such as orange juice or fresh product. Once the grocer's cost of goods sold is established, retailers and processors develop merchandising and marketing plans based on historical volumes. In addition to the occasional or seasonal price point promotion, other promotional areas include in-store demos, coupons and introductions of premium items (vegetables and sauce for example). The regular and feature retail price points are the most important part of this effort. These lines are seen as relatively easy to manage, given that the costs, purchasing activity, and level of support are planned and stable for the year.

Statistics Canada collects factory gate prices in a forum called the Industrial Product Price Index. Included in the IPPI is the index for processed fruits and vegetables (StatsCan data does not isolate peas, beans and corn). Within those constraints, figure 1 does provide an indication of wholesale price trends in the overall fruit and vegetable industry over the last 5 ½ years.

**Figure 2** Source: Statistics Canada

Within the fruit and vegetable industry, a deeper look at the StatsCan data reveals that declines in prices in the fruit industry caused the downturn in the index since mid-1996. The canned and frozen vegetable sectors, by contrast, saw prices increase from 1996 to 1998.

It is worth noting that the price trends at the fruit and vegetable factory gate exhibit a similar pattern to that of the total food industry. At the same time, the data indicates that price increases in the fruit and vegetable industry over the last five years have lagged that of the total industry.

### 2.1.2 Foodservice

According to the Canadian Restaurant and Foodservice Association, total foodservice sales comprise nearly 40% of the total Canadian food and beverage industry. That share has been

slowly rising over the past three years. In fact, for the first seven months of 1998, Statistics Canada data indicates that total receipts for Canada's restaurant industry are up 10.7% compared with the prior year period. That compares to a 4% increase in total receipts during calendar 1997.
This reflects the growth in demand for food prepared away from home.

According to a recent report by the securities firm of **Levesque Beaubien Geoffrion**, foodservice "share of stomach" could move to 48-49% during the next five years. That implies a compound annual revenue growth of 5%. Within foodservice, the Quick-service market share amounts to over 60% of meal occasions, or 43% of dollar share. The next highest meal occasion share of 16.4% for the Family/Mid-scale type of restaurants. During this stronger economic phase, the quick-serve channel is losing share slightly to the other venues.

While separate foodservice sales data for canned or frozen peas, beans and corn is not available publically, this channel is an important market for the Ontario industry. In fact, at least one firm in Ontario derives nearly all of its domestic revenue from foodservice of one form or another. It is important to note that there is little if any, processed peas, beans and corn vegetable product sold at the Quick-serve outlets. These venues focus primarily on hand-held items such as hamburgers and sandwiches. The family type and up-scale restaurants tend to have these items as a standard part of an entry.

Based on discussions with foodservice purveyors, overall trends at foodservice with regard to processed peas, beans and corn include:

- Canned is losing share to frozen and frozen's share is greater than canned at the restaurant level (frozen holds a 70% share with one major purveyor)
- Canned's highest penetration is in the health or extended care services where storage is an issue. Canned demand is viewed as "stale."
- Most of canned product comes from Quebec (Ontario processors do not appear to be focussing on foodservice canned product)
- Blends and mixes are gaining share and have the greatest margin potential
- Buyers are looking for suppliers who can provide a full variety or mix of vegetable products including blends
- Some buyers prefer to deal with processors as opposed to re-pack firms. Others deal through brokers.
- Within Ontario, Ontario processors are regarded as competitive in relation to the US for frozen and are seen as strong suppliers with high levels of integrity. US suppliers have a stronger foothold in the western Canadian market.
- The relative advantages and disadvantages of processed product vs. fresh product.

Overall, the foodservice sector is growing rapidly and we believe that the pea, bean and corn sales are growing as strongly or stronger than the sector as a whole. This is because the strongest growing sectors, are those that feature side dishes, such as vegetables.

### 2.1.3 Consumer Demand for Peas, Beans and Corn at Grocery Retail

The following two graphs (figures 2&3) show the Canadian dollar sales of the three canned products as well as total frozen vegetable sales according to Nielsen. Relative to the Canadian food industry as a whole (using Statistics Canada data), over the past five years, the canned pea, bean and corn vegetable industry has lagged behind. During 1996 and 1997, however, the canned industry's growth was similar to that of the total industry. The frozen vegetable industry's growth has greatly exceeded the total industry's growth.

In reference to the frozen vegetable graph, it is important to note that the Nielsen data do not break out historical frozen vegetable sales by product type. According to Nielsen, peas, beans and corn comprised 42.3% of the dollar value of the category in 1997. Nielsen also says that peas, beans and corn comprised 48.7% of the volume of the category. Other components of the frozen vegetable category include mixed vegetables, carrots, stir fry and specialty lines like pasta-type blends. The frozen category is also seeing interesting new further value added entries with peas, beans and corn as a central component. The category does not include frozen potato products or meals, it is strictly frozen vegetables.

**Figure 3**: Source A.C. Nielsen

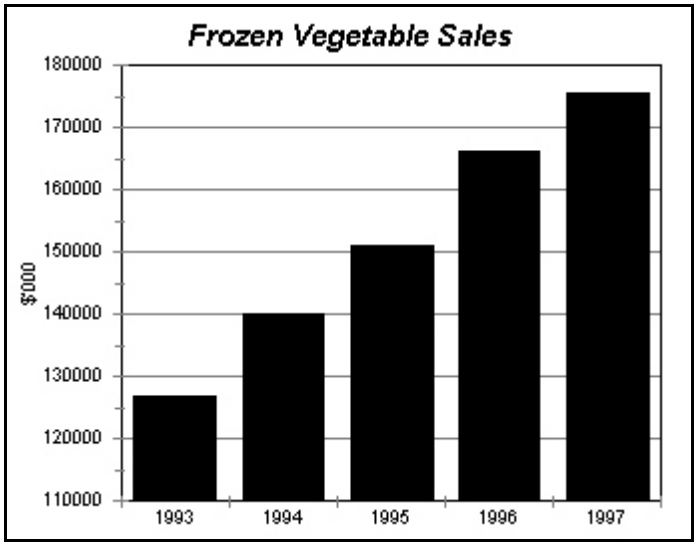
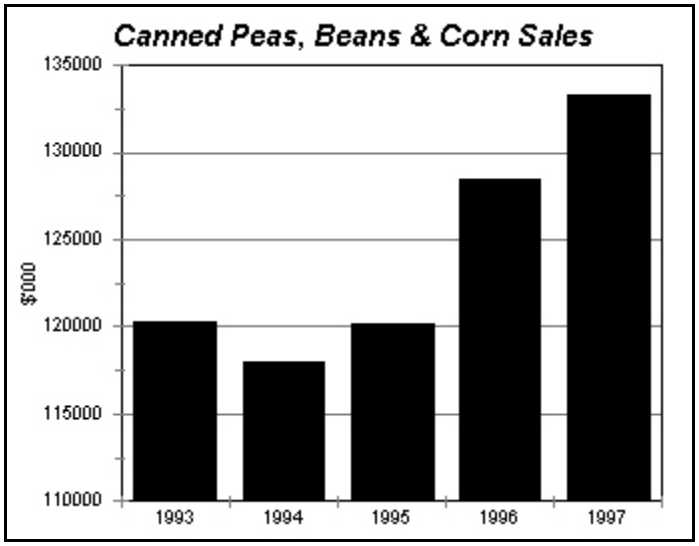



**Figure 4**: Source A.C. Nielsen




The economic concept of demand provides a schedule of the quantity purchased at any given price. Generally, the higher the price, the less consumed and vice versa. Demand for a product is increasing if, over time, for any given price, more is consumed than in the past. Demand is decreasing if, over time, for any given price, less is consumed than at some point in the past. Demand can increase or decrease with changes in incomes, consumer tastes and changes in the prices of competing products.

Over the past five years, the Nielsen data shows that the per case price of canned peas, beans and corn has risen modestly at the retail level. That, combined with a steady increase in warehouse tonnage, is evidence that domestic demand at the Canadian retail level for these canned products has increased. That is, for any given price, over the past five years, the Canadian retail market has consumed or absorbed more canned peas, beans and corn. (Figure 4).

With regard to frozen vegetables, the increase in both price and volume at the retail level has been exceptional over the past five years (see figure 5). As such, it is clear that retail demand for frozen vegetables has been very strong. This should be regarded as a positive sign for the domestic industry.

It also needs to be recalled, as stated above, that the historical data for this category does not isolate frozen peas, beans and corn. Peas, beans and corn are the foundation of the category, though, and the trend-lines for frozen peas, beans and corn mirror that of the total category with regard to tonnage.

**Figure 5** Source: A.C. Nielsen and GMC

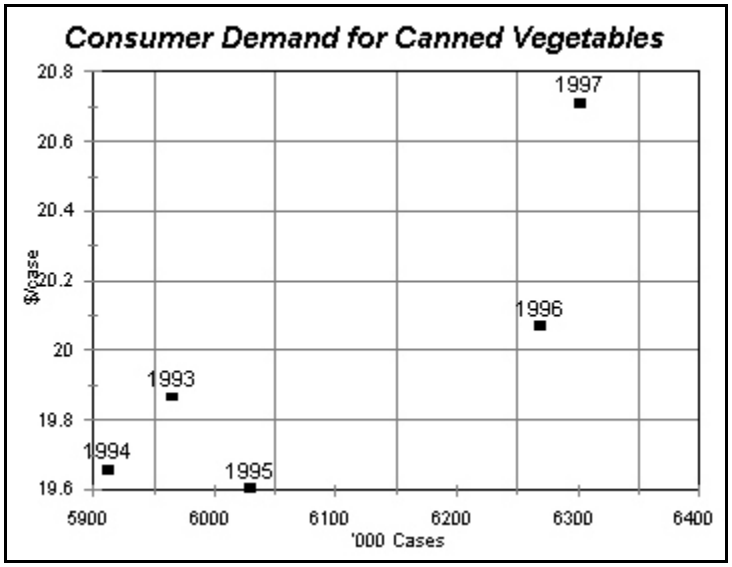
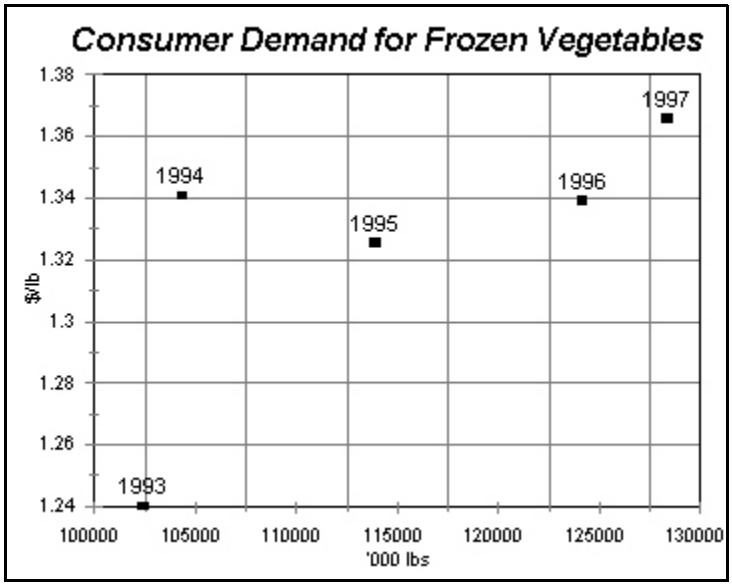



**Figure 6**: Source A.C. Nielsen and GMC



## 2.2 Acreage, Tonnage and Yields Trends

### 2.2.1 Beans

The following table and graphs outline some of the relevant data and trends with regard to production of beans in Ontario and competing jurisdictions in the United States.

**Figure 6**

| Green & Wax Beans | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|
| U.S. | | | | | | |
| Acres Harvested | 192,390 | 193,530 | 218,900 | 213,040 | 204,050 | 195,480 |
| Production (tons) | 645,900 | 652,030 | 805,790 | 695,450 | 773,560 | 733,000 |
| Yield per acre | 3.36 | 3.37 | 3.68 | 3.26 | 3.79 | 3.75 |
| | | | | | | |
| Ontario | | | | | | |
| Contract Acreage | 4,473 | 3,666 | 4,705 | 4,647 | 5,469 | 5,632 |
| Production (tons) | 10,491 | 8,232 | 10,469 | 12,069 | 13,344 | 12,352 |
| Yield per acre | 2.35 | 2.25 | 2.23 | 2.60 | 2.44 | 2.19 |

**Figure 7**

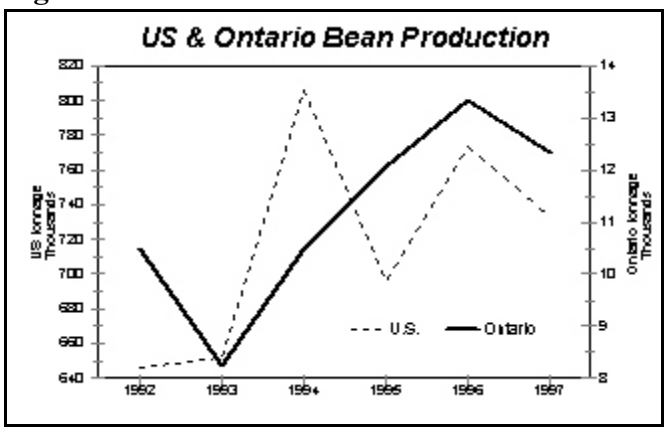



**Figure 8**

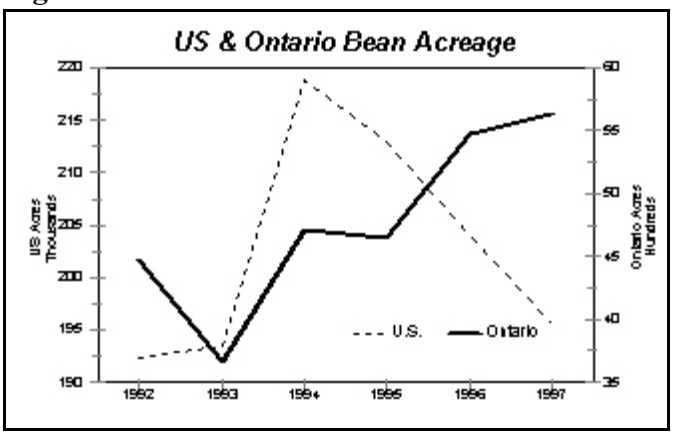
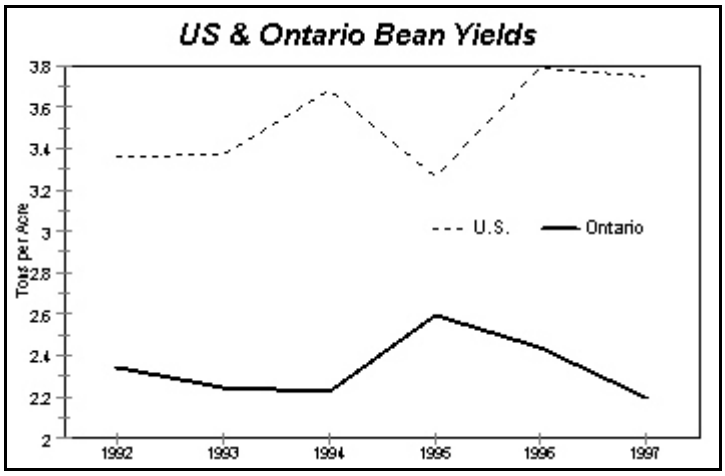



**Figure 9**



The six year trend from 1992 to 1997 for bean production and acreage shows an increase in both indicators in Ontario. US production and acreage trends are far less clear or not easily discernable. In 1998, Ontario's contracted acreage increased nearly 15% over 1997, US contracted acreage was unchanged. Total tonnage for 1998 was not available at time of writing.

Over the six years from1992 to 1997, Ontario's bean yields have been consistently and significantly less than those in the United States. While the data do not differentiate irrigated and non irrigated data, US sources state that US yields averages are materially aided by the fact that irrigation is utilized on a significant percentage of acreage in the major producing regions.

It is also notable that there has been a move in Ontario to capitalize on increased demand for whole beans. Processors noted that a significant portion of Ontario's production is whole beans. We have not uncovered evidence that other regions are exploiting this market to the same extent or success as Ontario processors. Whole beans tend towards lower yields than the larger cut bean varieties. In contrast, the US mid-west is primarily a canned manufacturing area for beans. The canned bean market is primarily for a larger bean, either cut or french style. As a result, yields tend to be higher.

Furthermore, bean processing is a very good example of the widely differing approach taken by processors within Ontario. The differing approaches have an impact on yields. The divergence in yields within Ontario is as great as the difference between the Ontario average and the US average. It is also important to note that a significant percentage of the low yield Ontario bean acreage is grown on land that is very low cost (rent or value). As such, while the yields are low, the cost of production is also very low. The cost versus yield trade-off appears to have favoured production in that region.

To elaborate on these differing approaches for example, one processor has emphasised obtaining a smaller bean with relatively less emphasis on yield increases. This is in order to capitalize on specific market demand. Other firms have emphasized yields and as such, their overall costs have been lower. Yet another processor has chosen to bring product in from Michigan due to a number of factors, not the least of which is convenience and logistics. As such, what appears to be a regional production issue, is more accurately the result of a particular approach to the business.

Within the United States, Wisconsin is the largest bean producing state with a 30+% share of planted acreage. Other important states include New York and Minnesota with shares of about 10% each.

Figure 10 shows the percentage change in contract acreage between this year and last year as well as between this year and 1994 for the major producing states.

Trends within the producing regions indicate that Wisconsin is growing slowly but is also losing share slowly. Other mid-west states are gaining some ground (see figure 10). Within that context, however, the data indicate that beans remain a crop that is largely produced in the US mid-west.

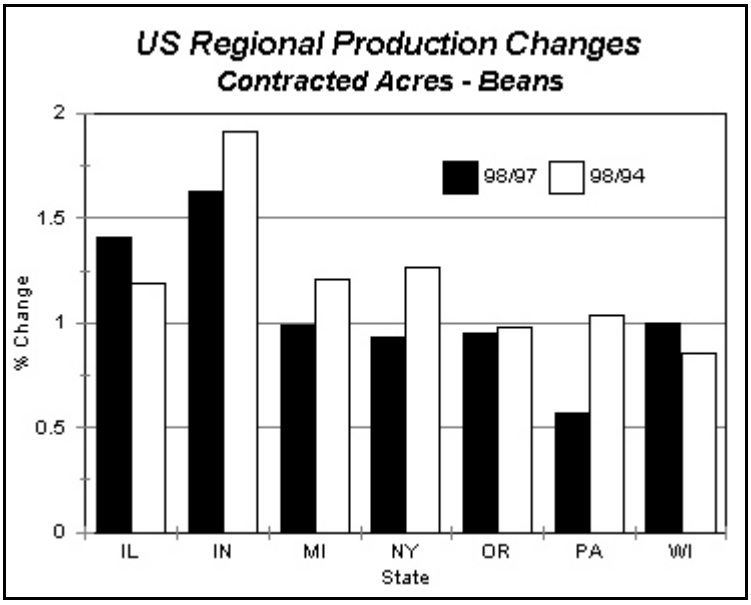



**Figure 11**

**Quebec Acreage, Production and Yields**

Due to the consolidation in the Quebec industry, Statistics Canada stopped differentiating processed and fresh acreage and tonnage in 1996. From 1996 onward, the only published data is a consolidation of fresh and processed tonnage and acreage. Due to confidentiality issues associated with the consolidation, we are unable to obtain verifiable, published data from 1996 onward for processing acres and tonnage. We have, however, developed estimates of acreage and production based on recent history. Moreover, the federation quebecoise des producteurs de fruits et legumes de transformation, did provide data on yields that are used for negotiations in the province. Based on that input as well as our own estimations, it appears that Quebec has average about 3.10-3.25 tons per acre over the past five years.

The following Quebec graphs (figures 11 and 12) are based on data that are actual Statistics Canada figures for 1995 and earlier while 1996 and forward are GMC estimates. The estimates are primarily based on the pre-1996 relationship between total production & acres in comparison to processed production & acres. Due to the fact that the post-1995 data are only estimates, we have chosen not to graph the Quebec numbers alongside the Ontario and US data. It is also for that reason that we are only graphing the data as opposed to putting a nominal number on a table. We are confident in the graphic trends but believe it would be misleading to compare absolute numbers.

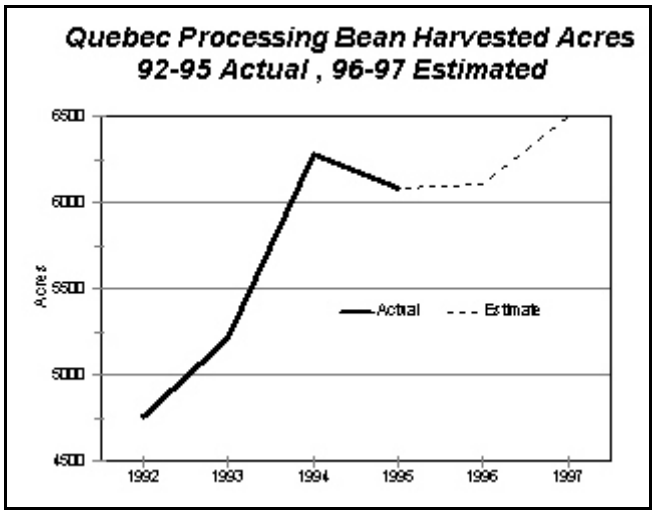



**Figure 12**

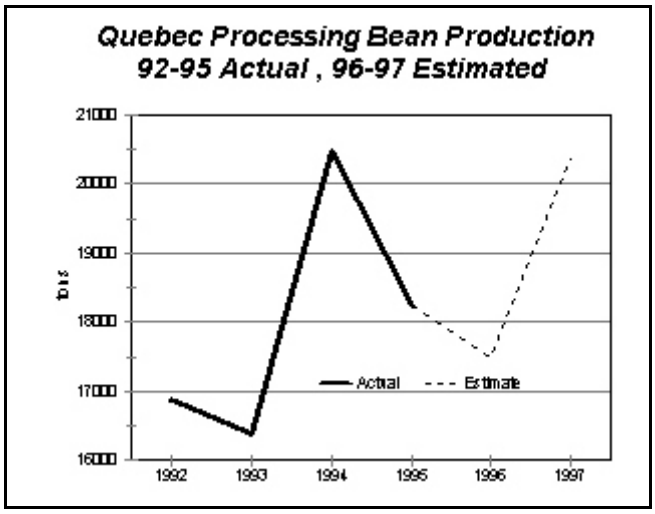



**Figure 13**

### 2.2.2 Peas

The following table and graphs outline some of the relevant data and trends with regard to peas in Ontario and the United States.

| Peas | | | | | | |
|---|---|---|---|---|---|---|
| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
| U.S. | | | | | | |
| Acres Harvested | 332,820 | 228,600 | 289,410 | 304,000 | 247,300 | 268,900 |
| Production | 569,400 | 351,780 | 489,880 | 492,590 | 413,960 | 475,940 |
| Yield per acre | 1.71 | 1.54 | 1.69 | 1.62 | 1.67 | 1.77 |
| | | | | | | |
| Ontario | | | | | | |
| Contract Acreage | 21,217 | 14,470 | 18,159 | 20,767 | 20,741 | 22,745 |
| Production | 36,845 | 25,300 | 27,741 | 33,251 | 35,961 | 42,362 |
| Yield per acre | 1.74 | 1.75 | 1.53 | 1.60 | 1.73 | 1.86 |

**Figure 13**

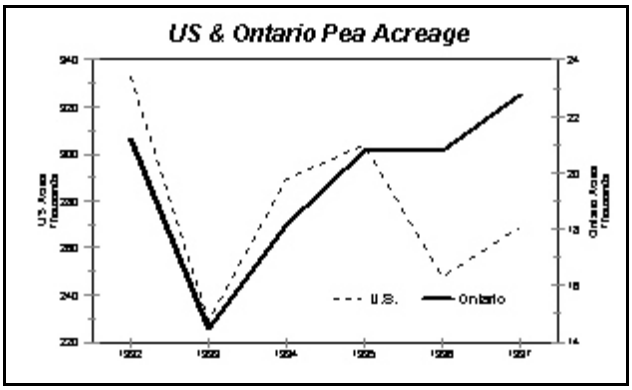



**Figure 14**

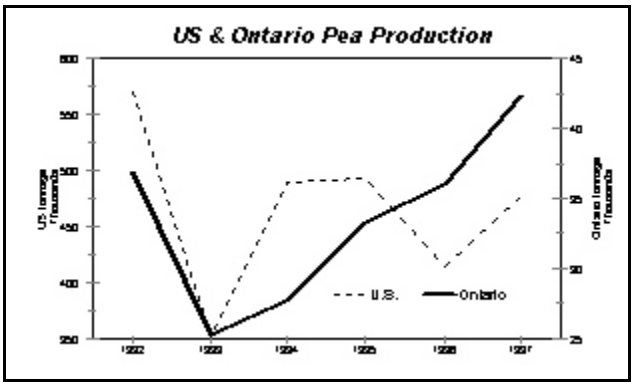



**Figure 15**

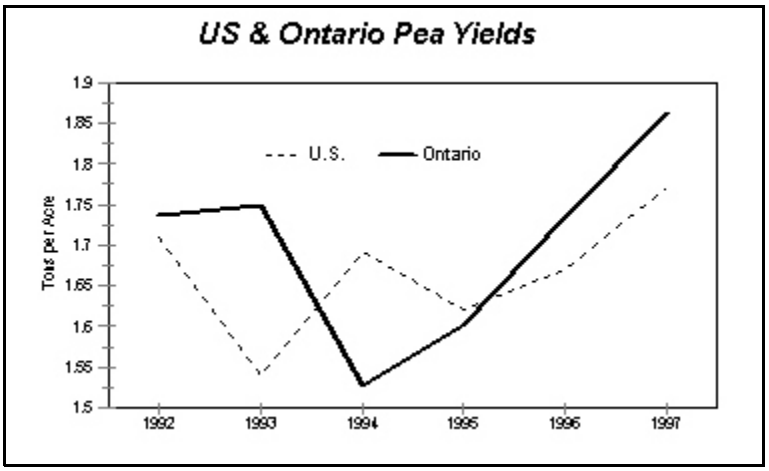



**Figure 16**

Green pea yields have increased over the six year period from 1992 to 1997 for both Ontario and the US, with Ontario showing a sharp decrease in 1994 before increasing again. In this case, however, it is the US that lags behind Ontario in terms of yield. Over the six year period, Ontario has shown a 3% higher yield per acre on average. Over the six years, Ontario's yields increased 7% compared to 3% in the US.

Yields have increased due to improved varieties, particularly freezer varieties. Many canners in the US are reportedly switching to freezer varieties. Mini peas are of course grown in the US, but other than for one processor, they are not a big percentage, perhaps only 15%. Even then, some processors just sieve out the extra small peas to make "minis." Based on information supplied by the Ontario processors, it appears that mini production is of the same significance in Ontario as in the US

In Ontario, pea yields do not exhibit the same yield variability as do beans. If there are discernable trends it is likely towards higher tenderometer categories due to weather but this varies by company and market channels for the companies. Mini production is becoming less important than five years ago, largely due to lack of returns from the market.

Ontario experienced an increase in both green pea acreage and tonnage produced over the six year period from 1992 to 1997. The US, on the other hand, decreased both area harvested and tonnage produced. Final 1998 harvested acres and tonnage was not finalized at the time of this report's completion but with regard to contact acres, in 1998 US green pea acreage was up 3% over 1997. In Ontario, contract acres were down over 7% in 1998. The reduction in acreage was due to the departure of two firms from the business. The six firms processing peas in Ontario in 1998, increased their contract acres by 7.5%.

In the US, the largest green pea producing states are Minnesota and Wisconsin with a combined total of just under 50% of total US contract acres. Over the last two to three years, it is interesting to note that three states, from very different regions saw the most growth. The graph below shows that since 1996, acreage has grown the most in Oregon, Washington, and New York state.

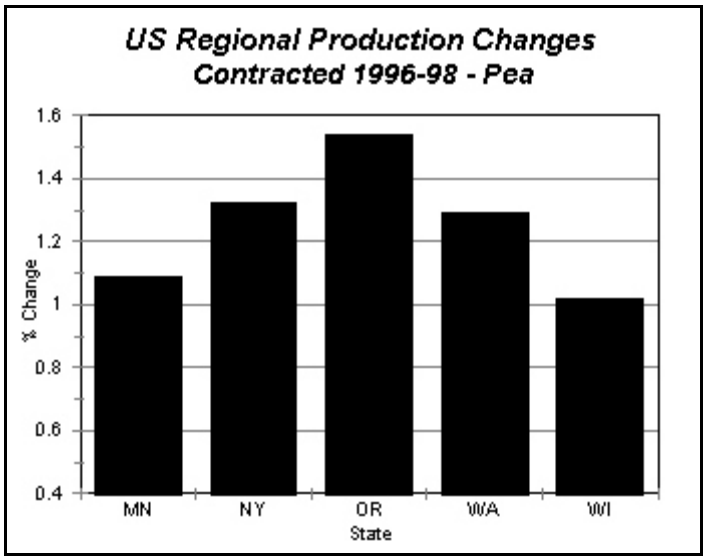


**Figure 18**

The growth in New York state acres is in part related to the Seneca Foods purchase of the Green Giant Plants in the mid-1990's. Seneca moved some of the pea acreage usually done in Wisconsin and Minnesota to their plants in NY. Seneca's headquarters are in NY and it is believed that pricing was competitive. Furthermore, another positive for New York of course was the lower shipping cost to the major

New York and east coast markets for finished goods. For perspective, however, New York still only represents about 7% of total acreage.

**Quebec Acreage, Production and Yields**

The same statistical limitations and assumptions noted for beans in Quebec apply to green peas. Within that context, the following graphs provide the actual and estimated acreage and tonnage from 1992 to 1997.

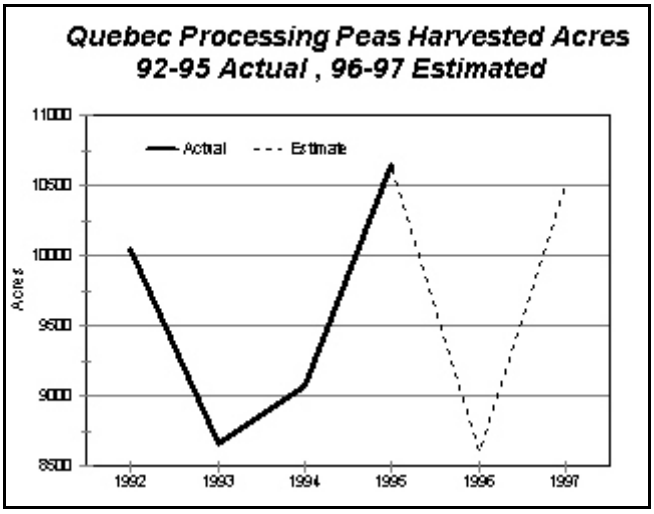



**Figure 19**

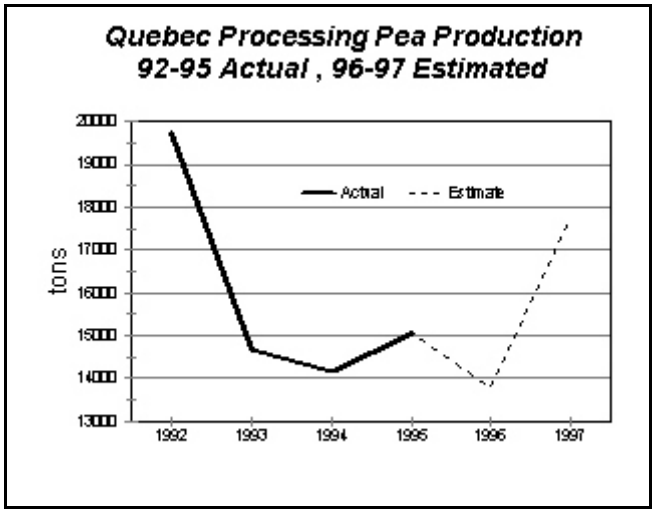



**Figure 20**

We estimate that over the past five years, Quebec pea production has yielded approximately 1.50 to 1.75 tons per acre.

### 2.2.3 Corn

The following table and graphs outline some of the relevant data and trends with regard to sweet corn in Ontario and the United States.

| Corn | | | | | | |
|---|---|---|---|---|---|---|
| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
| U.S. | | | | | | |
| Acres Harvested | 486,370 | 472,060 | 516,100 | 483,910 | 474,200 | 464,220 |
| Production | 3,251,570 | 2,721,190 | 3,731,040 | 3,324,150 | 3,296,330 | 3,323,540 |
| Yield per acre | 6.69 | 5.76 | 7.23 | 6.87 | 6.95 | 7.16 |
| | | | | | | |
| Ontario | | | | | | |
| Contract Acreage | 35,031 | 28,914 | 33,202 | 35,836 | 36,312 | 35,826 |
| Production | 165,816 | 131,842 | 181,667 | 179,734 | 188,337 | 213,202 |
| Yield per acre | 4.73 | 4.56 | 5.47 | 5.02 | 5.19 | 5.95 |

**Figure 20**

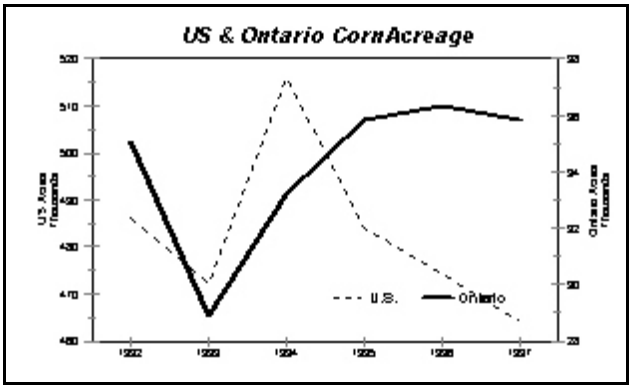



**Figure 21**

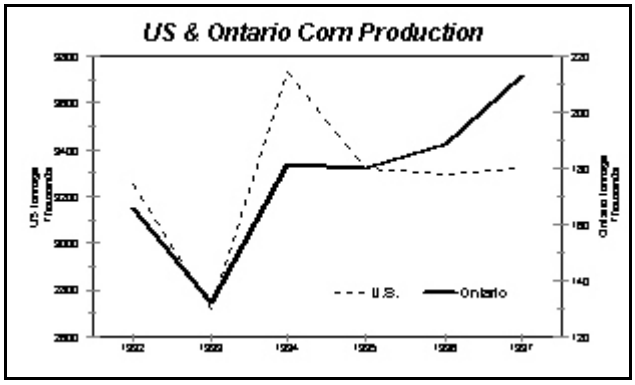



**Figure 22**

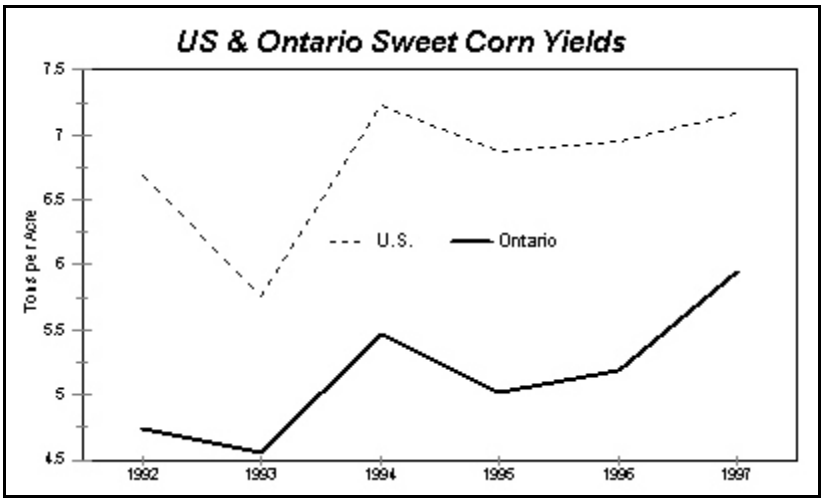



**Figure 23**

With regard to corn yields, the province lags behind the US, but there has been an improvement, or narrowing of the gap in yield per acre, over the past five years. Overall, Ontario yields have averaged about 25-30% less than those in the US. A large part of the reason that US yields are higher is that areas such as the Pacific-Northwest and some areas in the mid-west have an irrigation infrastructure in place. This is not the case in Ontario.

On a yearly basis, within Ontario, it is difficult to state that one area consistently fairs better than another. With that said, however, the year to year differences between processors and regions, does have a material impact on total provincial yields, and of course on processor costs.

Industry participants regard it as difficult to conclusively state what the impact of varieties is upon sweet corn yields. There are also some new late season varieties that are disease resistant that help increase overall yields. Nevertheless we assert that the variability exhibited on the graphs above has far more to do with weather than production practices. For example, 1993 yields were impacted by wet conditions; while 1994 in the US mid-west was one which experts characterized as a perfect season (Good planting weather, adequate rainfall, & normal temps during the growing season followed by good September weather). US acreage started to drop in 1995 because of the big pack & carryover into 1995. This meant processors dropped early sourcing areas and the more expensive late planting.

After the huge production year in 1992 and the subsequent decline in 1993, corn acreage increased each year from 1993 to 1996 in Ontario, with 1997 showing a slight decrease. Overall, from 1992 to 1997, Ontario's acres increased by just over 2%. From 1993 to 1997, acreage increased 24%. US acreage, on the other hand, has declined by about 2% over the past five years and by 5% over the last six years. Final data for harvesting acres and tonnage was not yet in for 1998 at the time of this final report, however, contracted acres increased in the US by 4% this year. In Ontario, 1998 contracted acres decreased 9.4%. The decrease was due to the fact that one firm exited the business in 1997. Those five firms that processed sweet corn in 1998, increased their acreage by 3.5%.

As can be seen in the graph (figure 24), over the last few years from 1996 to 1998, acreage changes in the major regions has been flat to slightly lower. Washington State showed a modest gain in acres.

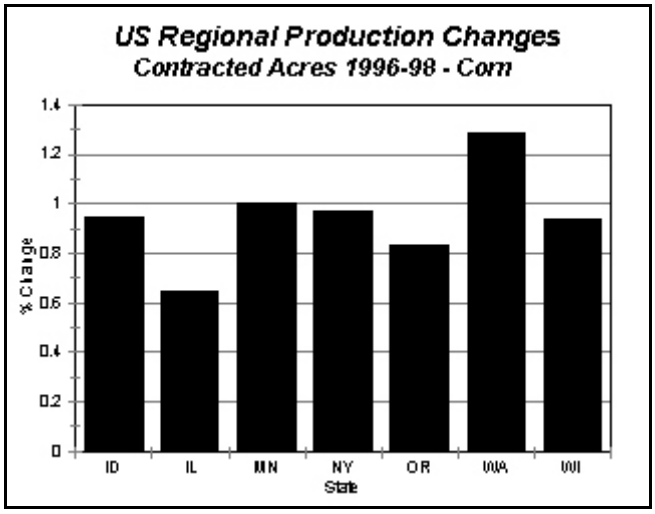



**Figure 25**

## Quebec Acreage, Production and Yields

Within the data confines noted above for peas and beans, the following graphs (figures 25 & 26) provide actual estimated acreage and production for processing sweet corn in Quebec.

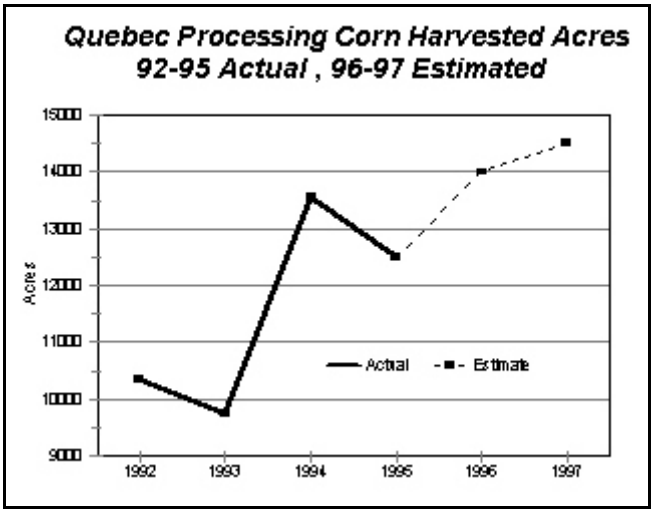



**Figure 26**

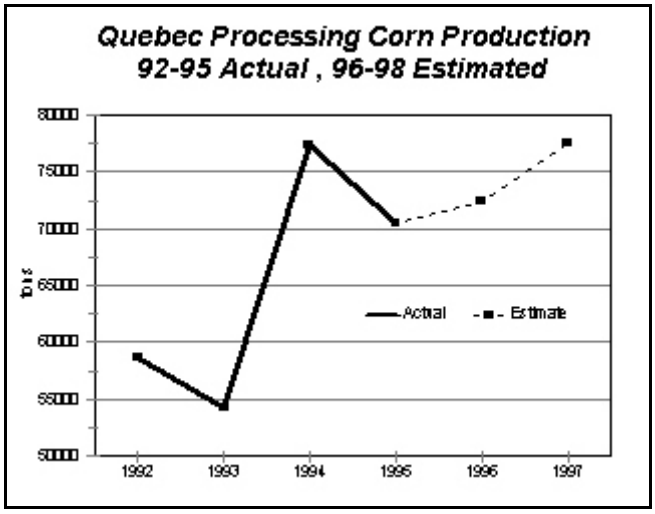



**Figure 27**

We calculated Quebec sweet corn yields to be approximately 5.5 tons per acre over the past five years.

## 2.3 Ontario Processor Demand for Peas, Beans and Corn

As noted above in the market section, the economic concept of demand provides an indication of how much quantity is desired at a given set of prices. If more product is purchased at higher prices, that is an indication that demand is increasing. If less is purchased at lower prices, that is an indication that demand is decreasing. If more is purchased at lower prices or less is purchased at higher prices, that is simply an indication of a steady or normal demand for a product.

Processor or manufacturer demand for raw product is derived from a number of factors including sales potential in export or domestic markets and ultimately from profitability. Processors also demand product in order to utilize plant capacity or to increase capacity to more efficient levels or economies of scale. Again this is in order to enhance or build profits.

Within the context of this study, we can determine processor demand for these vegetables by examining the combination of acreage contracted (or planted) along with the contract price or crop value. As with all demand relationships, we can expect that as raw product prices increase, the quantity contacted would decrease, and as raw product prices decrease, the contract acreage would increase. If, on the other hand, acreage increases at steady or increasing contract prices, we can say that processor demand is increasing and vice versa.

For the purpose of this exercise, the crop value or contract price can be graphed against the planted acreage or contract acres. These acreage measures show processor intent, given the price that they are going to pay for the raw product. Graphically, movement of the points over time to the top right indicates that, over time, acreage and price have increased, and hence demand has increased. Movements of the points over time down to the lower left indicates decreasing demand. A congregation of points over a period of time, sloping from the top left to bottom right indicates stable demand (ie., as price increase, quantity demanded decrease and vice versa).

The graphs on figures 27-29, show the combinations of crop value per ton and the acres planted in the United States. Over the five year period being examined in the United States, crop value per ton has not shown a noticeable trend either up or down. A material increase in price for these three crops was seen in 1996, but that was in response to soaring commodity prices that year.

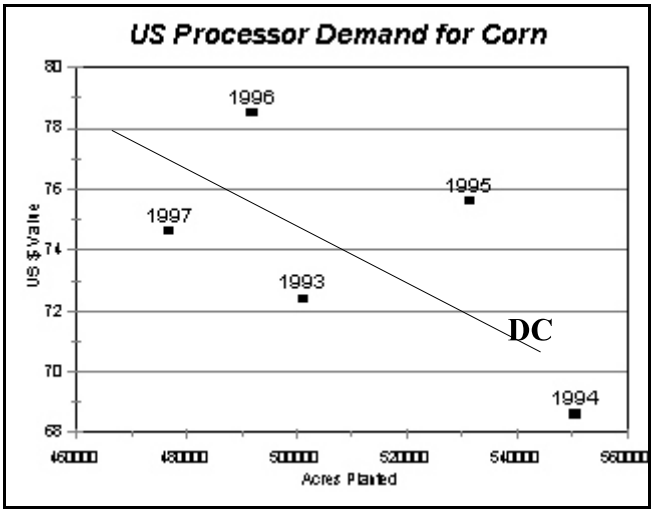



**Figure 28**

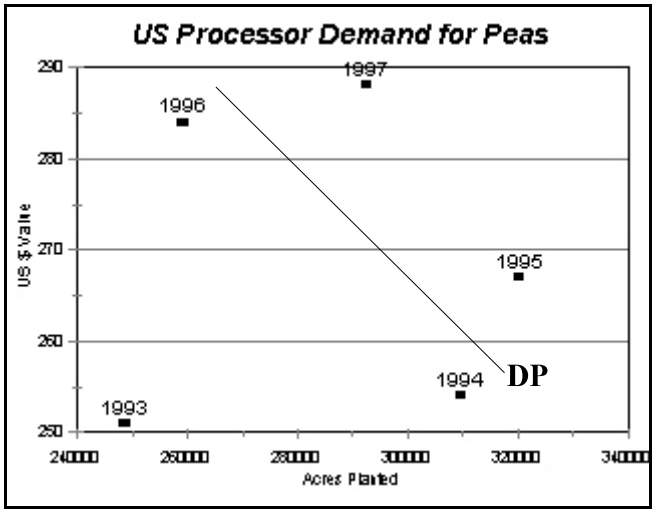



**Figure 29**

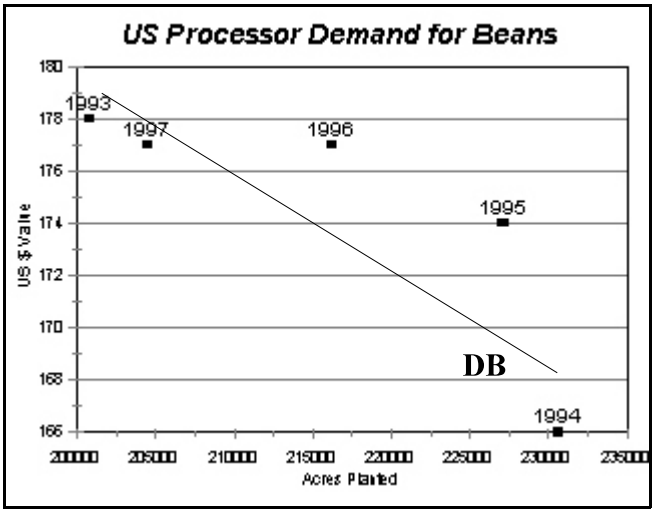



**Figure 30**

Over the five years, it is possible to visually draw a demand curve for each of the three crops (DC,DP,DB). The plotted points and the resulting demand curve show that over the years, as processors sought more acreage to be planted, the crop value increased and vice versa. In other words, the US processors are exhibiting a normal demand curve relationship in these crops.

The following graphs (figures 30-32) show the same relationships between prices of the three crops in Ontario and the contract acreage.

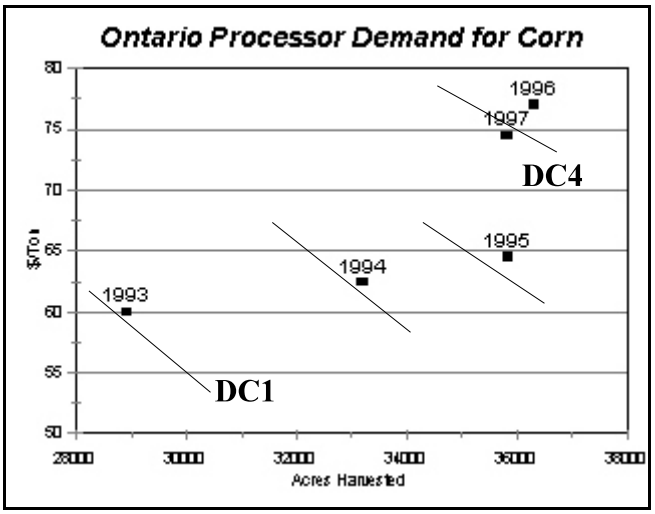



**Figure 31**

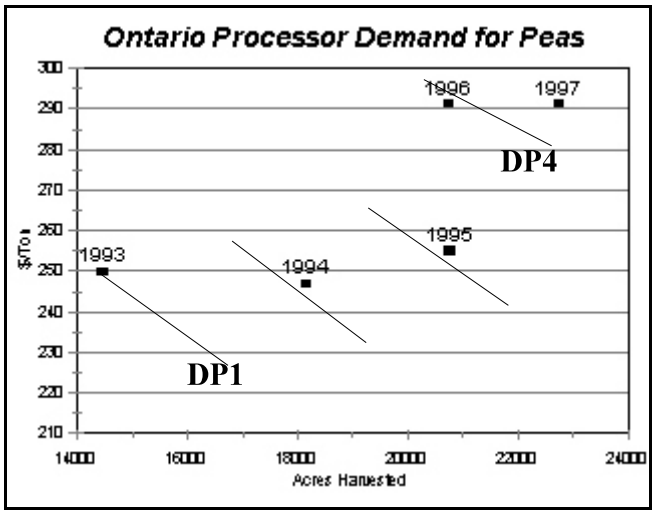



**Figure 32**

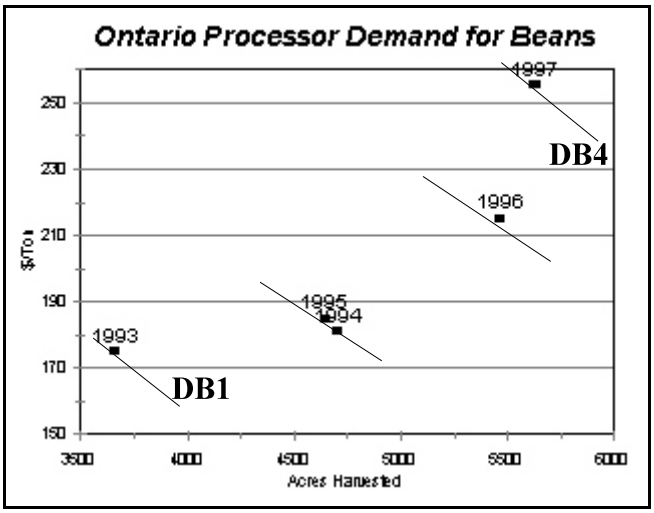



**Figure 33**

Through the years from 1993 to 1995, the prices for peas, beans and corn in Ontario were stable. During those years, Ontario's acreage increased significantly. In 1996, the prices of these three crops rose dramatically. This was due to the opportunity costs of producing these crops in comparison to grains and oilseeds which were hitting record price levels in world commodity markets.

The combination of increasing acreage and increasing prices is an indication that processor demand for peas, beans and corn have increased every year from 1993-1997. As can be seen in the figures above, this combination results in a series of demand curves moving out from left to right for each of the commodities graphed. This yearly increase in demand in Ontario is in contrast to the stable processor demand in the United States.

**Demand Summary**

Increasing demand for a raw product by a manufacturer is usually an indication of an underlying strength and an ability to compete in domestic and export markets. Ontario processors of peas, beans and corn also state that the reasons for their increased purchases of raw product have a great deal to do with the need to "size-up" the plant in order to increase contribution to overhead and increase plant efficiencies. That is, Ontario processor have needed to expand and acquire additional throughput in order to attain greater economies of scale. Furthermore, expanded demand for these raw materials is also attributed by Ontario processors to growth in export opportunities, the need to maintain domestic market share and the growth of private label. These reasons for expansion are typical to may food sectors, for example meat and poultry. All firms rationally undertake these actions in order to compete in domestic and export markets.

Fundamentally, assuming firms act rationally in their economic self interest, an expansion of demand of the magnitude demonstrated in Ontario illustrates that Ontario participants are gaining strength and seeking to grow in order to meet market opportunities and maximize profit. The growth in capacity and export markets are all part of the growth in demand for raw product by Ontario processors. The fact that Ontario processors have aggressively acted and invested in the future of the industry, can only be regarded as positive for Ontario

## 2.4 Trade

Statistics Canada collects trade data by province of entry or exit, not by province of production or consumption. As such, provincial data are not good indicators of whether exports or imports actually were originated or destined for that province. As such, the discussion of trade is restricted to Canada as opposed to Ontario.

The data graphed in figure 33 shows that Canada exports over three times more sweet corn than it imports. That ratio of exports over imports has increased steadily from 1993 when Canada only exported two times more corn than it imported.

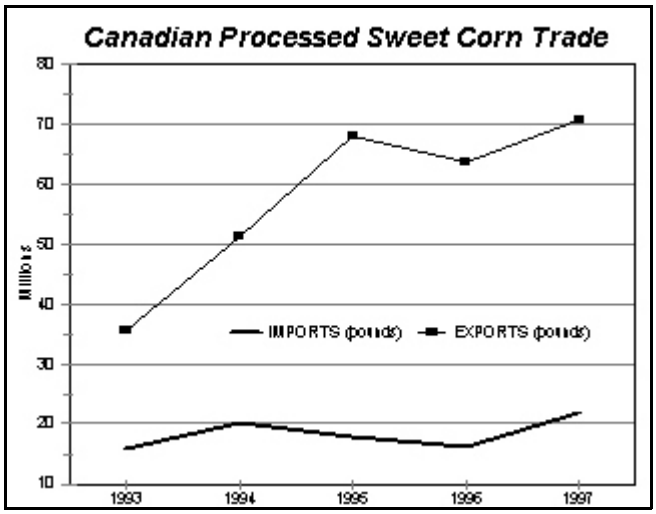


**Figure 34**

Corn exports increased steadily from 1993 to 1995, dipped slightly in 1996, and were up again in 1997. Imports fluctuated up and down during this same time period, resulting in only a relatively small increase by 1997 (see figure 33). The drop in both imports and exports in 1996 is likely due to the lowered per acre yield in 1995, during which both the US and Ontario had a decrease in tonnage produced. The US also showed a decrease in acreage during the same year.

While specific data are not available for canned green and wax beans, the frozen bean trade has, shown a significant increase in exports and a flat trend in imports (figure 34). Like corn, Canadian green pea (canned and frozen) exports and imports increased between 1993 and 1997. Imports increased steadily for the first four years, before declining slightly in 1997. Exports showed a slightly different pattern, decreasing from 1993 to 1995, before increasing again for 1996 and 1997(figure 35).

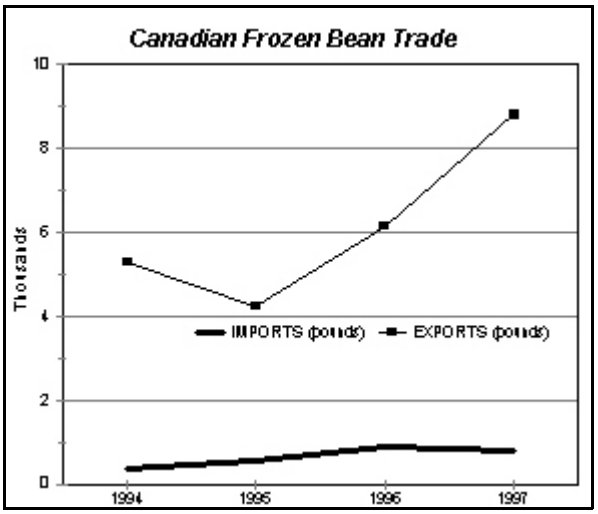


**Figure 34**

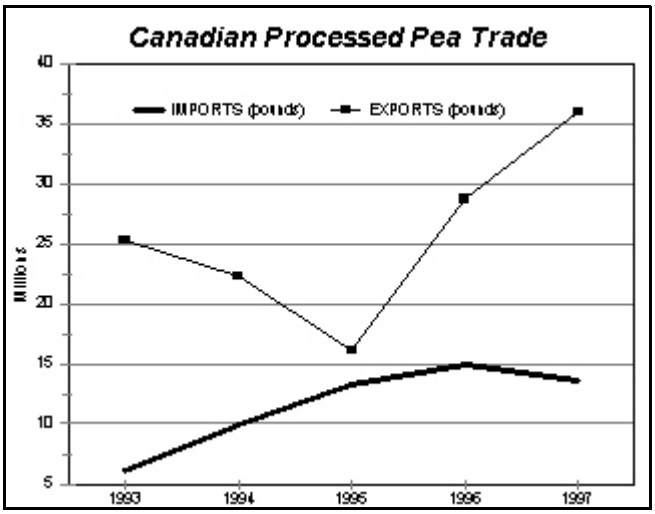


**Figure 35**

**Trade Summary**

Within Canada, Ontario and Quebec process the vast majority of these three products. Ontario comprises 70+% of the Canadian total for corn, 60% for peas and 40% for beans. As such, given that Canadian data show exports are gaining, it is probable that Ontario firms are driving the exports. Furthermore, anecdotal evidence provided by Ontario processors indicates that exports are a source of growth for their firms.

One obvious reason for this success is the decline in the value of the Canadian dollar. While major costs such as raw products are determined once per year, in three of the years between 1993 and 1997, the dollar declined throughout the course of a year. In 1995, the dollar gradually increased and in 1996, the dollar was relatively stable. A declining dollar through the year, after a significant portion of raw product costs are set, enhances the cost competitiveness of Canadian processors.

Overall, the trade data for processed product demonstrates that the Canadian industry is successfully competing in export markets. Furthermore, the data indicates that the Canadian industry has managed to maintain or defend its share of the domestic market.

## 2.5 Processing Industry Structure

### 2.5.1 US Perspectives*

In 1996, there were 127 plants in the United States which processed vegetables. Of those, approximately 46% were located in the US mid-west. The next highest percentage was in the US north-west with 24% and the north-east with 17%. These regions are also the main growing regions of the US. The remaining plants were located in other regions of the US. Between 1989 and 1996, the US processing industry closed 40 plants. The greatest percentage of closures (41%) occurred outside the three main processing/growing regions. The least (proportional) closures occurred in the north-west which lost only 6% of its plants. That compares to 26% in the mid-west and 22% in the north-east. While there has been little change in numbers in the north-west, there has been significant change in ownership. Furthermore, new plants have been built to replace older plants. Finally, the north-west has exhibited a competitive advantage in frozen production, mainly due to lower electricity rates in the region.

The following table shows the distribution of processing tonnage in the US regions between 1989 and 1996 (latest available data).

| Tonnage Distribution Percentag | | |
|---|---|---|
| | 1989 | 1996 |
| Mid-west | 55 | 50 |
| North-east | 9 | 10 |
| North-wes | 31 | 34 |
| Others | 5 | 6 |
| Total | 100 | 100 |

**Figure 37**

One of the biggest developments in the US industry is the Pillsbury sale of certain Green Giant plant assets to Seneca. Under this 20 year deal, signed in the mid-1990's, Seneca produces product under the Green Giant label while Pillsbury maintains marketing control and brand ownership.

This arrangement is similar to that employed in Canada by Family Tradition in Ontario and Aliament Carrière in Quebec and Pillsbury. The concept, in which one firm specializes in

marketing and brand equity while another concentrates on manufacturing, has been employed at various times in other food sectors as well. For example in early 1998, Sara Lee Corp., of Chicago announced its intention to outsource many manufacturing functions.

Over the last twenty years, tonnage growth in the US vegetable canning industry has been comparatively flat. US vegetable freezing production, however, has nearly doubled over the same time period. The growth in freezing tonnage has occurred steadily over the two decades. While the canning tonnage has not changed much over the prior twenty years, during the 1980's tonnage decreased significantly. During the 1990's, however, canning tonnage has recovered all the ground lost during the 1980's.

Overall, the changes in the United States can be summarized as follows:

- the # of plants is down significantly, which suggests - reduction of excess capacity
- total vegetable processing tonnage has increased over the past five years by 15% which suggests -expansion of existing facilities and the use of early sourcing.
- canning volume has been basically flat while freezing has been steadily increasing
- shift from the mid-west to the north-west reflects increase to freezing, season expansion and irrigation (consistency). The freezing move to the north-west is also reflective of materially lower utility rates in that part of the United States.

***US Processing industry information obtained from a 1997 public presentation by Bob Allen**, Del Monte USA. Mr. Allen also provided important consulting services for this project with regard to US production trends and vegetable contract provisions.

### 2.5.2 Ontario and Quebec Processing Industry

According to industry participants, over the past three to five years, the Ontario pea, bean and sweet corn vegetable processing industry has made investments of approximately $40 million dollars. Of that total, approximately $6 million went towards the purchase of new harvesting equipment. The remaining total was invested in capacity expansion and equipment upgrades within the plants.

The focus of the investment in Ontario was a combination of plant and capacity expansion and the reduction of costs. The plant or capacity expansions are evidenced by the big acreage increases seen over the years (see above). The cost reduction investment concentrated on the ability to move more product at lower overheads and the reduction of unit variable costs through more efficient machinery. Some companies also invested in order to take advantage of export sales opportunities, new product opportunities and line extensions. Another focus of investment was towards quality enhancement and regulatory compliance.

Capacity expansion and contractions are often used as an indicator of the state of well being of an industry. A definition of plant capacity can, however, be an elusive measure to compare between companies. When asked, based on their own definitions, how their processing capacities had changed over the last five years, the responses ranged from a near doubling to no change at all. Some firms have dedicated significant resources and capital to the expansion of capacity while others have not chosen to focus on that area.

For the five companies processing product in Ontario in 1998, during the period from 1995 to 1997, weighted average bean tonnage increased by 20%. Weighted average green pea production increased by 40% over the same time period for the six Ontario pea processors. All companies increased production ranging from just six percent to more than double. In sweet corn, the five 1998 processors managed a weighted average production increase of nearly 30% from 1995 to 1998. All companies increased throughput ranging from 10 to 60%.

The rationalization experienced in the US, as well as in most food manufacturing industries, also occurred in the Ontario pea, bean and corn sectors. In 1997, two firms exited the industry, one of those firms, EVOG processed sweet corn and green peas in eastern Ontario. The other firm to leave the business was a smaller firm, MCM/Nor-County, also in eastern Ontario.

In Quebec, the industry is dominated by one firm, Aliment Carriere. This firm operates four plants, including the St. Martine plant which it purchased from Pillsbury. Nabisco operates one plant which processes beans in Chambly. Another smaller firm, Produit Ronald processes corn on the cob near Montreal. Other than the Pillsbury changes noted above, there have been no changes in ownership or plant numbers in Quebec during the last five years.

## 3.0 Cost and Contract Comparisons

This section of the report examines the costs to the processor of procuring peas, beans and corn. Conversely, it examines the compensation returned to the farmer for growing peas, beans and corn. This section analyzes the costs in 1997 of the raw product and the cost of getting the raw product from the field to the "pad" at the processor's plant for Ontario and its major competing jurisdictions (Quebec and the US). The primary components of the cost comparisons are as follows:

- Cost per ton of peas, beans or corn
- Seed cost
- Pest Management
- Harvesting
- Trucking/Delivery
- By-Pass

These components were chosen because they are the primary cost variables in the Ontario agreements. These variables are the main components of the competing regions as well.

These costs, and the party that bears the costs, are stipulated in the agreements or contracts between the growers and the processor. Cost comparisons, therefore, cannot be done without equal attention paid to the elements of the agreements or contracts between the processors and growers in Ontario and the competing regions.

The following Ontario companies provided cost information for this study:

- Cobi Foods
- Family Tradition
- Nabisco

- Omstead Foods
- Strathroy Foods

As part of this project, we have examined over 50 US mid-west and east coast vegetable contracts in addition to the Ontario and Quebec agreements. Appendix 1 of this report provides a summary of the components of many contracts. Appendix 2 is a "summary of the summary." That is, Appendix 2 provides a three page summary of the major components of the contacts in Ontario and the competing jurisdictions.

**A Note on Contract Premiums and Discounts Stipulations**

The reader should examine Appendix 2 if not both 1&2 before proceeding to examine the cost comparisons between regions. This is important in order to appreciate the permutations and combinations involved in comparing costs between regions. It is also important in order to gain an understanding of how costs are incurred in this industry.

As can be seen from the Appendices, these contracts have numerous and intricate stipulations or clauses. The clauses often relate to premiums or discounts on the raw product cost or payment. The clauses can have both material or immaterial impacts on the compensation returned to the grower, or conversely, the cost to the processor. The analysis below utilizes those components that we believe to be relevant to the competitive environment that faces Ontario.

We have noted a principle behind many of the contract stipulations as they related to compensation. That is, if there are premiums or discounts, they tend to be designed to offset disadvantages (geographic, climatic) or to take advantage of opportunities. For example, there are very basic, sound reasons for paying premiums for late and early plantings. One common reason is that a wider spread of harvest times provides for better processing plant utilization and lower by-passed acreage. Furthermore, the earlier or later the crop is planted, the greater the risk and often the lower the yield, hence the premium. The processor generally decides when a product should be planted and hence its harvest time. The decision is based upon their own requirements, including overhead allocation.

There are yet other examples of why premiums are paid in order to keep the plant operating over a longer, more efficient period. Some processors must transport raw product from greater distances in order to attain their desired quantities or in order to spread production. In instances such as that, premiums are paid in order to cover transportation or the transportation is paid by the processor for long hauls. Illinois production is often cited as a good example of this occurrence but there are Ontario examples on a regional or processor specific basis as well. Certainly, transportation is a major source of cost difference between Ontario processors.

Depending on grower opportunity costs, a processor may pay a premium or a discount. For example, as noted above, in 1996, when commodity prices soared, processors across North America were forces to pay much more for peas, beans and corn. The flip side is that in more southern regions like Illinois, peas can be contracted very cheaply. This is due to the ability to plant a second crop after the peas are harvested.

Another good example is variety premiums. Some varieties that are valued by the market are lower yielding or riskier. For example, in corn, the supersweet varieties are more strongly

desired by some processors but historically, those yields have been lower. As such, in order to entice supersweet production, a premium is often required.

An important source of variation in raw product costs for peas is tenderometer scores. The higher the tenderometer, the lower the price per ton due to heavy, less tender peas and less desirable product. Furthermore, the more tender the pea, the smaller it is and, therefore, the more difficult to harvest. The tenderometer reading that a processor takes peas at, is impacted by the weather but for the most part, it is a management decision. It is a choice, based on their plant equipment and finished product markets.

A good example of a premium for varieties, at least in the past, was the premium for mini peas. In the early 1990's processors determined a market demand for minis, but due to factors such as higher risk, premiums had to be paid in order to get the product in the ground. Ontario processors were paying a premium for this production before it was included in the negotiated agreement.

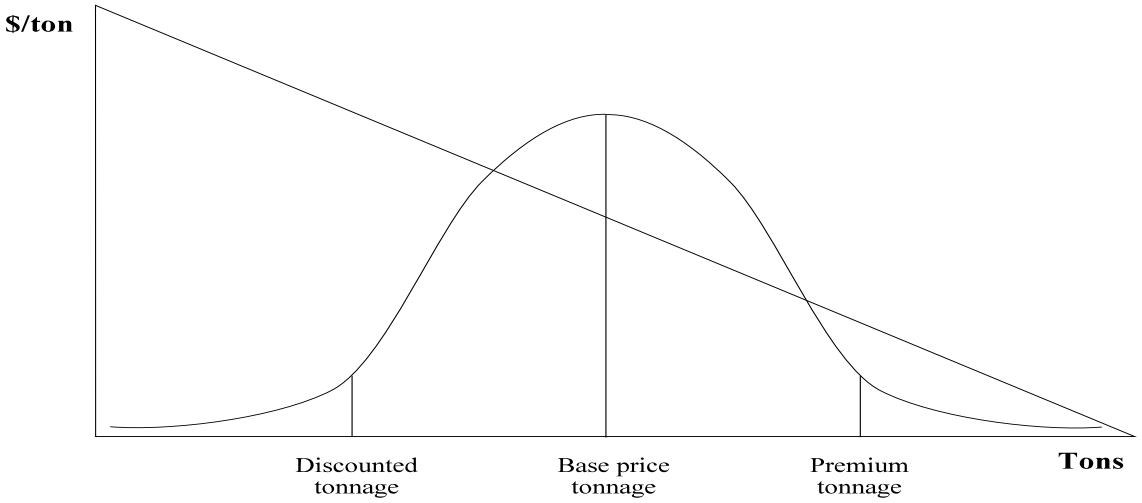
Of course non-raw product costs are also subject to great variability from region to region and processor to processor. For example, in some regions, bean and corn harvest can be spread over longer periods and, therefore, the harvest costs are spread over a longer season. For this reason, harvest rates could be lower in the US than in Ontario and in some regions of Ontario in comparison to others. Processors within Ontario do experience highly different harvest costs depending on whether they custom harvest or own their own harvester or some combination. Processors who own their own equipment could have highly variable harvest costs depending on how costs are allocated, depreciation methods and age of the equipment. Custom harvesters arguably reflect true costs (ie. capital, labor and ROI).

By-pass is another non-raw product source of variation that is often a major factor between regions and between processors. High by-pass cost variation can result from factors such as harvest weather, harvest timing and market conditions. Ontario processors have made a successful effort over the past several years towards reducing by-pass costs. This reflects not only agricultural management but also their increased ability to market a broader range of product.

Seed costs are one of the more interesting, non-raw product costs. In some regions, the processor supplies seed, while in others the grower is responsible. When the processor purchases seed for the grower, the processor bears a greater share of risk for the success of the crop. With regard to seed costs, it is noted that in Ontario, with processors now supplying seed, there is an increased emphasis on yields from a processor perspective. That is, when growers paid for seed, processors' costs for seed weren't impacted by yields because these costs were covered by the grower. Arguably, this is a type of productivity driven costing, where higher yields result in lower per ton seed costs. This requires a greater degree of management on the part of processors and rewards those companies who utilize varieties and practices that result in greater grower yields.

The relationships such as those above could be viewed as a matrix with prices and rankings on the axis. We believe the combinations of price discounts and premiums is likely to result in a final cost per ton which is very close to the base. Another way to look at the issue is to think of a *normal curve* with most of the tonnage centered at the base cost with premium and discounted

acreage falling quickly away.




## Summary

For each of those examples cited above, there are yet many others that can impact the price of raw product or the cost of getting the product from the "field to the pad." Many contracts in the US try to capture these variables and permutations (see appendices). In contrast to many of those US contracts, the Ontario agreements are still relatively simple in terms of content and scope. While most processors can cite minor agreement irritants, for the most part, Ontario processors appreciate the contract simplicity. We have noted that both growers and processors have jointly worked towards keeping these agreements comparatively simple and geared towards the needs of both segments. Processors are also unable to readily cite crucial points for improvement. For our part, we could not identify non-monetary areas of the Ontario agreements that would result in material improvements for either the processors or growers.

## 3.1 Methodology of Cost Calculations

The following three sections outline the comparative costs of raw product and field to pad costs for Ontario, Quebec and the US mid-west. The Ontario costs are based on actual 1997 data submitted by the processors noted above. The Quebec costs are estimates based on the information obtained from the Quebec agreements as well as discussions with grower industry participants in Quebec and informed industry participants in Ontario. The US costs are estimates based on the following:

- Analysis of the US contracts
- Discussions with Ontario growers and processors who are knowledgeable about US practices
- Sub-contracted data provided by US consultant.

The contract and cost components utilized for the comparison analysis of peas, beans and corn were chosen based on the following criteria:

- Significant cost impacts relative to the base cost of the raw product.
- Similar features as utilized in Ontario
- Widely practiced in the competing jurisdictions

We chose these criteria based on our acquired knowledge of the Ontario practices, our examination of the contracts in competing jurisdictions (ie. appendices 1&2) and discussions with growers, processors and the US consultant. One fundamental guiding principle was to estimate costs based on typical practices and yields in the regions. Another principle was to use estimates of costs based on the insights provided by informed industry members.

### 3.1.1 Sweet Corn

In Ontario, the raw product cost component of the agreement stipulates a minimum price to the grower as well as two types of premiums: early and late.

The following are our estimates of the costs in Ontario in comparison to those in other regions. The Ontario costs come directly from the processors in the province. The numbers shown are actual highs and lows submitted by the processors. For the other regions we utilized the methodology noted above. For example, based on our acquired knowledge of typical US practices, we assumed that 75-80% of the plantings would not receive a premium for early or late planting. Once, again, the line item numbers for the other regions are based on typical practices in those regions and if possible, the application of Ontario-type agreement provisions.

| Sweet Corn | Ontario | Quebec | Minnesota | Wisconsin | Illinois |
|---|---|---|---|---|---|
| 1997 | (C$)/Ton | (C$)/Ton | (US$)/Ton | (US$)/Ton | (US$)/Ton |
| Item | | | | | |
| Raw Product | 70.00-74.50 | 80-87.5 | 44.00-52.00 | 45.00-55.00 | 56.00-64.00 |
| Seed Cost | 7-10 | 1.00 | 6.00-8.00 | grower | 7.00-9.00 |
| Pest Management | 5-8 | 4.00 | 6.00-8.00 | 3.00-7.00 | 6.00-9.00 |
| Harvest | 6-16 | 18.00-20.00* | 5.00-7.00 | 6.00-8.00 | 5.00-7.00 |
| Trucking | 8-13 | | 4.00-6.00 | 4.00-6.00 | 4.00-6.00 |
| Silage | 2-5 | 2.00-3.00 | 2.00-4.00 | 1.00-3.00 | 1.00-3.00 |
| By-Pass | 1-2 | 1.00 | 2.00-4.00 | 2.00-4.00 | 2.00-4.00 |
| | | | | | |
| Total | $104-111 | $105-112 | $72-80 | $68-74 | $85-92 |
| *incl trucking | | | | | |

**Figure 39**

Please note that the variability in harvest costs in Ontario is solely related to whether firms custom harvest or harvest their own crop. The difference is one of accounting for depreciation. As noted above, for comparison purposes, we prefer to use custom rates, which we utilized for the other regions. A good harvest comparison value for Ontario would be $10/ ton.

When the Mid-West US costs are weighted by production volumes per state, the average total field to pad cost per ton is likely to be in the range of US$ 72-78. A range such as that, when converted to Canadian dollars (at the average1997 exchange rate of 72 cents) results in costs which are very similar to those borne by Ontario processors in 1997. With regard to Quebec, as can be seen, the Quebec field to pad costs are also very close those of Ontario.

Moving into 1998, there were no material changes in prices in either Ontario or the US mid-west. In Quebec, sweet corn prices trended upwards by about $1-2/ton. As such, considering that for the first ten months of 1998, the Canada-US exchange rate was around .68 compared to .72 in 1997, it is clear that the Ontario costs in US dollars were far lower in 1998. That is, in US dollars, the Ontario field to pad costs in 1997 were between $75-80/ton. In 1998, those costs were between $70-75/ton.

### 3.1.2 Peas

With regard to grower compensation for peas, the main determinants in Ontario and all competing jurisdictions are tenderometer readings and planting periods. In Ontario, the greatest volume of peas fell into the 109-112 tenderometer range in 1997. Of course the readings do vary by processor and plant depending on what they are packing. For example some may harvest peas at a higher reading due to the fact that they put harder peas in Pea & Carrot mix and in mixed vegetable packs. In the US the main tenderometer readings are 110 to 115 for canners and 100 to 105 for freezers. There appears to be a trend in the US to harvesting freezer peas at slightly lower tenderometer readings over the last couple of years. US canners have stayed the same.

As noted above, tenderometer readings are largely a processor management decision. If a

processor wants tender peas and takes them as such, the raw product cost is higher than for a processor who takes harder peas.

The following are our estimates of the costs in Ontario in comparison to those in other regions. Methodology and assumption-types were similar to those employed with sweet corn. That is, Ontario costs are actual, as reported, while other regions are estimates.

| Sweet Peas | Ontario | Quebec | Minnesota | Wisconsin |
|---|---|---|---|---|
| 1997 | C$/ton | C$/ton | US$/ton | US$/ton |
| Item | | | | |
| Raw Product Cost | 215-235 | 245-255 | 125-130 | 135-140 |
| Seed | 56-75 | 2.00 | 50-55 | 45-50 |
| Pest Control | 1.00 | 1.00 | 2.00 | 2.00 |
| Harvest | 68-110 | 110-130* | 60-70 | 60-70 |
| Trucking | 10-30 | | 10.00 | 10.00 |
| By-Passed Acreage | 0-8.00 | 4.00 | 10.00 | 8.00 |
| Acreage Premium | | 32.00 | | |
| Total | $390-430 | $400-425 | $265-275 | $270-280 |
| *incl trucking | | | | |

**Figure 40**

Please note that the source of variability in harvest costs in peas is the same as that noted for corn. We would use a value of $100/ton or less for comparison.

The data indicates that Quebec and Ontario have very similar costs. The US mid-west costs in Canadian dollars in 1997 were in the range of $375-390/ton.

Unlike sweet corn, where there is little variation between processors in terms of total costs, there was a wide variation between Ontario processors in peas. The source of the difference primarily rests with the wide variation in harvest & trucking costs, pea yields between processors, as well as the tenderometer.

In 1998, Quebec raw product costs were increased by $4/ton for regular peas and $5/ton for minis. In Ontario and most US regions, the contract prices were basically unchanged from 1997. As such, in relation to the United States, Ontario prices declined in US dollars from a range of $295-300/ton in 1997 to $275-285 in 1998.

### 3.1.3 Beans

The following are our estimates of the bean costs in Ontario in comparison to those in other regions. Comparisons between Ontario and the US are difficult to make because of the fundamentally different raw product contract structure in place in each area. Specifically, in the

US, beans are priced according to sieve size, while in Ontario they are priced by bean type. It is worth noting that the Ontario industry abandoned pricing based on sieve size a number of years ago as a result of continued difficulties with size grading equipment.

| Whole Beans | Ontario | Quebec | Wisconsin |
|---|---|---|---|
| 1997 | | | & Illinios |
| **Item** | **C$/ton** | **C$/ton** | **US$/ton** |
| **Raw Product Cost** | 205-220 | 190-212 | 140-160 |
| **Acreage Premium Payment** | 0 | 5-10 | |
| **Seed** | 50-95 | 5(grower) | 20-30 |
| **Pest Control** | 5-10 | 5-10 | 10-15 |
| **Harvest** | 30-50 | 50-60* | 30-40 |
| **Trucking** | 10-20 | | 10-20 |
| **Silage** | 0-5 | 0-5 | |
| **By-Passed Acreage** | 0-2 | 0-2 | 2-6 |
| **Total** | $340-360/ton | $280-310 | $230-250 |
| *incl trucking | | | |
| | | | |
| **Cut Beans** | **Ontario** | **Quebec** | **Wisconsin** |
| | | | **& Illinios** |
| **$/ton** | **C$/ton** | **C$/ton** | **US$/ton** |
| **Raw Product Cost** | 150-160 | 164-168 | 80-90 |
| **Acreage Premium Payment** | 0 | 5-10 | |
| **Seed** | 60-70 | 5(grower) | 20-35 |
| **Pest Control** | 5-10 | 5-10 | 8-15 |
| **Harvest** | 30-50 | 50-60* | 30-40 |
| **Trucking** | 10-20 | | 10-20 |
| **Silage** | 0-5 | 0-5 | |
| **By-Passed Acreage** | 0-2 | 0-2 | 2-6 |
| **Total** | $280-295 | $240-260 | $160-175 |

**Figure 41**

As can be seen, with regard to beans, the results indicate that in comparison to other competing jurisdictions, Ontario costs are materially higher. The source of the cost differentials rest mainly with the cost of raw product and seed costs. To understand this, one must recognize the varying approaches taken by Ontario processors with respect to beans. This was discussed in depth on page eight.

The root cause of Ontario's cost position is the variation in bean yields among processors. We note that in attempting to address this issue with respect to the raw product component of the equation, the industry has developed a pricing structure that allows processors to significantly lower their raw product costs if they can achieve higher yields. This pricing structure was enhanced further in 1998, thus placing continued emphasis on increasing yields.

The situation with respect to Quebec is complicated by the fact that one processor is exclusively a canner and the other is both a canner and a freezer. In contrast in Ontario, five processors are freezers, with one processor also canning. We were not able to break down Quebec data to determine costs or trends within the Quebec industry.

As was the case in peas and corn, in 1998, Ontario contract prices were stable or declining (dependent upon yields). In 1998, Quebec contract prices increased modestly by about $2/ton. In most US regions, prices were stable. The price differentials between Ontario and the US mid-west narrowed considerably in 1998 due to the depreciation of the Canadian dollar.

## 3.2 Cost Comparison Commentary

The cost comparisons noted above are an important part of the competitive calculations. Cost comparisons, particularly raw product cost comparisons, can be misleading, however, when only looked at in isolation. Furthermore, in any given year, Ontario may or may not compare well with another region. It will depend on a wide variety of factors including grower alternatives, weather, processor market opportunities and of course, the value of the Canadian dollar.

Nevertheless, within those confines, obviously cost comparisons are an important component of any competitive analysis. As such, it is clear to us that Ontario costs from the field to the pad for corn are well within the range of costs experienced by the major competing jurisdictions. In fact, in 1998, with the assistance of the depreciated dollar, Ontario sweet corn costs were notably lower than those in the US. With regard to peas, in 1997, Ontario's field to pad costs were likely higher than the US, but with the depreciation of the dollar in 1998, any difference was eliminated. With regard to beans, Ontario's field to pad costs are generally higher than in other regions. Problems in regard to the bean sector are related to the relatively lower yields in Ontario.

## 4.0 Summary and Conclusions

Competitiveness is defined as the sustained ability to profitably gain or maintain market share. Competitiveness of an industry results from a package of factors. These include market conditions, trends, raw product costs, and the ability of the industry to develop and market products and services that deliver value for consumers. It is also important to note that competitiveness is a moving target. The August 1998 announcement of the closure of the Del Monte vegetable processing plant in the US mid-west is an example of how rigorous the competition in this particular industry will become in the future. That plant was closed largely because it was regarded as too small to be efficient. Arlington packed sweet corn, peas and sauerkraut. The canned pea volume had been declining. That plant, however, was larger than any of the plants in Ontario.

The Ontario vegetable processing industry has managed to overcome two extremely difficult market events or phenomena, both of which occurred in the 1980's. The first was the erosion in demand for the products, particularly canned peas, beans and corn. The second was the Canada-US Free Trade Agreement.

It now appears that the consumer demand for canned product has stabilized or even improved. The frozen market is robust and Ontario processors have demonstrated the foresight to take advantage of this trend in their production and procurement capabilities. This reversal of market fortunes compared to the 1980's is a positive development which is now a part of the market equation in the mid-late 1990's.

As an aside, its strikes us that the nutritional benefits of processed products are continuously under-emphasized. Recent research in a leading scientific journal has noted the nutrition advantages of processed product in comparison to fresh. The industry may want to consider, as a joint exercise, some sort of initiative in this regard to build on the improvements to the canned market and growth occurring in frozen markets of the past several years.

With regard to the Free Trade Agreement, the industry's underpinnings have fundamentally changed from one of being relatively protected by steep tariffs ten years ago to one of being totally tariff free in 1998. This development had the potential to cause a severe downsizing of the industry. Instead of downsizing, however, the industry has taken the necessary steps to meet the competition from all facets of the industry from the farm to the plant. It should be noted also that the decline in the value of the Canadian dollar has no doubt, aided the industry's ability to compete.

Putting all this together, what the analysis in this study shows is that the Ontario industry:

1. Is enjoying growing demand for its products, while the US is not.

2. Is gaining market share at the expense of the US.

3. Is cost competitive with the US in sweet corn, has become so in 1998 in peas and has not quite achieved it in beans.

The foregoing means that the industry meets at least a large component of the definition of

competitiveness: it has a demonstrated a sustained ability to gain market share. We are not in a position to know how profitable it is, but firms usually do not invest in new plant and equipment unless they see their investments as potentially profitable, and acreage of product does not usually rise unless its producers are profitable. At the same time, the industry's substantial adjustments since the Free Trade Agreement, especially processors' investments in plant and equipment and in domestic and export market development have contributed to the success that has been achieved.

Obviously, the industry needs to continue to focus on all three of the products to maintain competitiveness. Just as obviously the major focus needs to be on beans because of the differences in costs and yields. The discussion about the bean segment pointed out a number of factors that affect this, and they need to be addressed in both measuring and enhancing competitiveness in the future. We also note that during 1998, the industry has begun to tackle this issue with specific productivity enhancing measures. Given the tentative success noted, it is advisable that the industry continue along this course and perhaps pursue more formal, productivity pricing measures in the agreement.