Table of Contents

EXECUTIVE SUMMARY.....i

Introduction.....1

A. PROCESSING GRAPE PRODUCTION OVERVIEW.....1
- Processed Grape Acreage.....1
- Production of Processed Grapes by Variety.....2
- Processing Grape Crop Demand.....3
- Processed Grape Farm Sales Value.....5
- Summary of Grape Production Overview.....7

B. INDUSTRY STRUCTURE AND ECONOMIC IMPACT.....8
- Ontario Grape Grower Expenditures in Ontario.....8
- Industry Flowchart.....9
- Employment Impacts.....10
- Taxes and Government Revenues.....13
- Summary of Industry Structure and Economic Impact.....14

C. IMPACTS/CHANGES IN THE WINE CONTENT ACT.....15
- Wine Production Overview.....15
- Potential Future Production Impacts.....16
  - -Scenario 1.....16
  - -Scenario 2.....17
  - -Scenario 3.....17
- Conclusions Regarding Economic Impact &Future Scenarios.....19
- Summary of Impacts/Changes in the Wine Content Act.....20

Ontario Grape Production Economic Impact

by Kevin Grier
Larry Martin and Kate Stiefelmeyer
George Morris Centre
December, 2000

Executive Summary

This report was undertaken in order to measure the economic impacts of the grape industry on the Ontario economy and the impacts of maintaining the Wine Content Act at the 30% level. It will also provide an estimate of the benefits, to grape growers and Ontario, of increasing the requirements of the Wine Content Act to 75%. Specifically, the objectives are:

1. To determine the current contribution of the processing grape industry to the economy of Ontario.
2. To estimate the economic effects of alternative requirements of the Wine Content Act on grape growers.
3. To estimate the future contributions of the wine grape industry to the economy of Ontario under alternative requirements for the Wine Content Act.

The following are some of the key points derived from this research:

- The processing grape production sector is the central component of an industry that includes input suppliers, input retailers, production specialists, wineries, processors and retailers.
- Ontario grape growers have been investing tens of millions of dollars each year in order to meet the needs of Ontario's changing industry. Producers have invested in the future of their industry and have focused their efforts upon meeting the demands of the market.
- Processing grape acreage has been increasing in Ontario over the last ten years. All growth is due to table wine grape plantings. The vinifera varieties, which are in greatest demand by the wineries and consumers, have seen tonnage increase by more than two times between 1995 and 1999. The number of labrusca vines, (juice) have consistently declined in the decade.
- The Regional Municipality of Niagara contains over 86% of the cultivated fresh and processed grape acres in Ontario.
- Within Niagara, grapes comprise 53% of the cultivated acres dedicated to the major fruit crops.
- The farm gate value of grapes has had a near steady increase over the course of the 1990's. The wine varieties have seen farm values more than double between 1991 and 1999 as a result of increasing acreage of the higher valued viniferas.
- Ontario grape processors have been increasing their demand for Ontario grown grapes. The growth in demand has been particularly pronounced in the vinifera-types.
- Over the last seven years, as a result of the move towards viniferas, grape's share

of Ontario's farm cash receipts have been increasing.

- The processing grape production sector generates the following for the economy of Ontario:
  - nearly $13 million in direct wages and salaries.
  - nearly $30 million in value added to raw materials. This added value takes the form of labor income, profits and government revenue.
  - total direct and indirect employment of 3,500 jobs
  - tax revenue of $7 million
- Currently the Ontario grape content share of Ontario wine production is around two thirds
- If the industry were to modestly increase sales over the next five years and if production moved toward VQA and Product of Canada which requires 75% domestic content, there would be a material increase in jobs and tax revenue.
- The changes in market share envisioned by the Wine Council of Ontario's strategic plan would result in little change in overall tonnage purchased. As a result of increased plantings in recent years, however, this would mean a material surplus in grape production in Ontario.
- If the Wine Council of Ontario aggressively moves in the direction afforded by the Wine Content Act, there would be a material reduction in jobs, grower numbers and tax revenue.

In our view, the industry and governments should understand the full ramifications if the WCO does follow an aggressive effort to market "cellared in Ontario" wines. The negative impacts outlined in this report are probably very understated.

We view this as a very risky strategy for an industry that has, to date, built its reputation on the increasing quality to Ontario grapes. To now switch to an emphasis on products that have a high content of water and imported grapes may well back fire and impugn the reputation of the entire industry. Many wine consumers are relatively unsophisticated and don't understand the difference between stretched wines made from predominantly imported grapes and those made 100% from Ontario juice. Many do know that the popular press and advertising continuously focuses on how much better Ontario wines have become **because of the strong emphasis on quality and local grapes**.

Sales patterns indicate that markets for VQA wines have increased consistently. Wines relying on a high content of foreign materials and using "stretch" have failed to secure consumer support. We can only imagine the potential disaster that will occur when the press starts to focus on the lurch in strategy toward stretched and blended wines. If the effect of quality and product image in the VQA program has had a positive impact on the "product of Canada" wines to date, it stands to reason that a negative image of "cellared in Canada" wines could have a negative impact on VQA wines in the future.

In addition to reductions in taxes and jobs, it also follows logically that there will be a particularly strong negative impact on the sixty or so smaller wineries in the province. These smaller wineries have played a central role in turning the industry's quality image around. Mass marketing cheaper stretch wines that are blended or cellared in Ontario will take place under the quality and integrity umbrella that was earned by the smaller wineries. The smaller wineries will be hurt by the mass marketing of low quality wines by other Ontario wineries.

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INTRODUCTION

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A. PROCESSING GRAPE PRODUCTION OVERVIEW

PROCESSED GRAPE ACREAGE

Ontario's processed grape acreage[1] has increased steadily over the past 10 years. The following graph shows the processed acreage for the census years 1991 and 1996, and estimates for 1997 to 1999 (Figure 1).

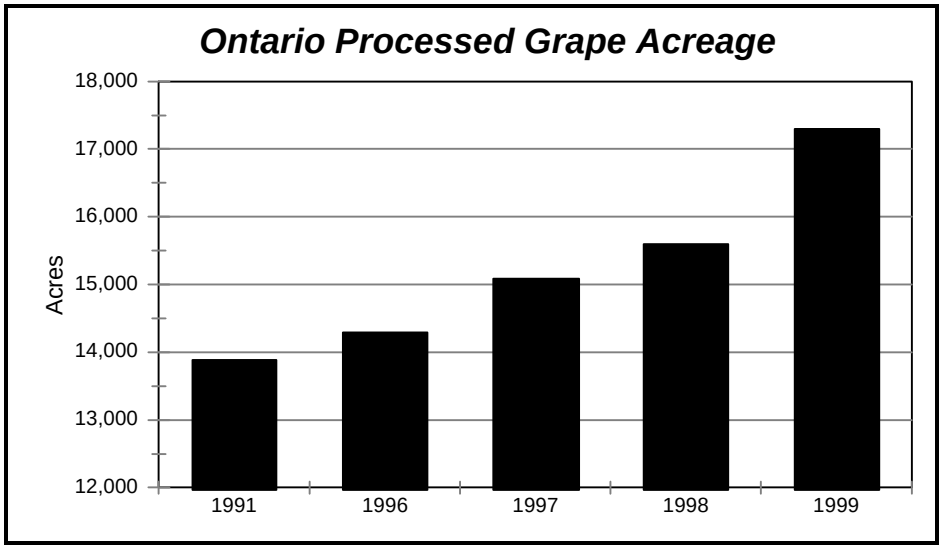

Figure 1 Source OGGMB

[1] There is a material disagreement between the acreage estimated by OMAFRA and those estimated by the Ontario Grape Growers' Marketing Board. OMAFRA data tends to be about 2,000 acres per year smaller than board estimates.

According to the Ontario Ministry of Agriculture, Food and Rural Affairs, from 1991 to 1999, processed grape acreage increased by 9%. Over that same time frame, from 1991 to 1999, according to Ontario Grape Growers' Marketing Board acreage estimates, labrusca-type grape acres declined by around 27% and the hybrid acres increased by 17%. The board estimates that between 1991 and 1999, vinifera acres increased by approximately 270%. Processed acres account for 92-94% of total grape acreage in Ontario.

The Regional Municipality of Niagara contains over 86% of the cultivated fresh and processed grape acres in Ontario. According to OMAFRA data, the Niagara region contains nearly 13,600 grape acres. For perspective, the next highest region is Hamilton-Wentworth with just 893 cultivated acres in 1999. Essex county's 791 acres is about 1/17th the size of Niagara. Within Niagara, grapes comprise 53% of the cultivated acres dedicated to the major fruit crops. It is estimated that processed grape acreage totals nearly 50% of the Regional Municipality of Niagara acres dedicated to the major fruit crops (Figure 2).

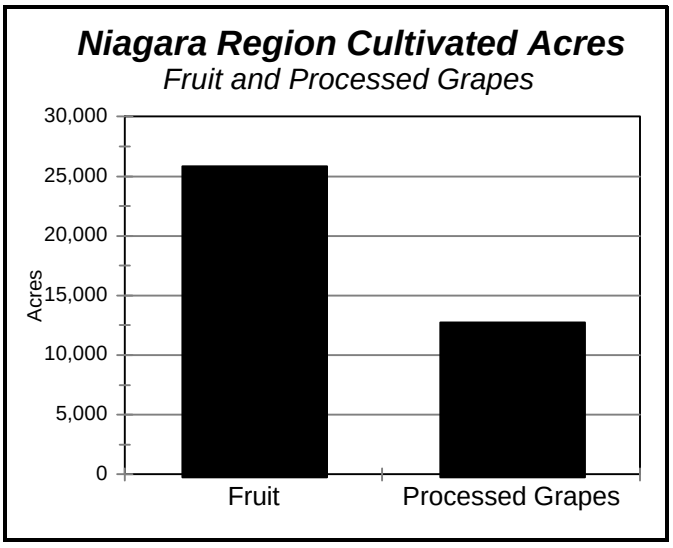

Figure 2 (Source: OMAFRA)

PRODUCTION OF PROCESSED GRAPES BY VARIETY

Within the processed grape industry, the labrusca type grapes are used primarily for juice or jams. The hybrids and vinifera grapes are utilized by the wine industry in Ontario. The primary source of growth in the industry has been in the grapes for wine sector (see figure 3).

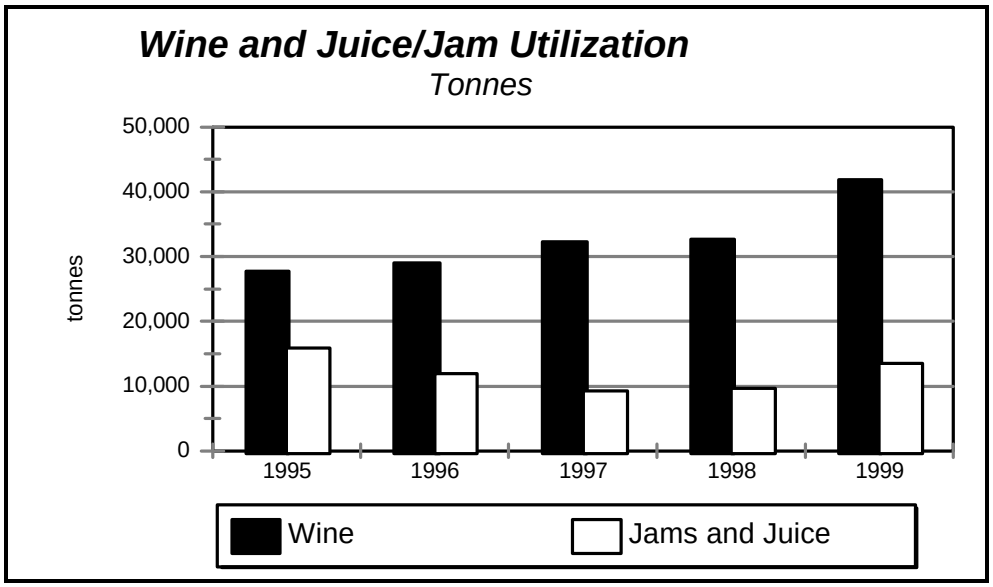

Figure 3 Source: OGGMB 1999 Annual Report

In the five years from 1995 to 1999, the wine sector increased its purchases of grapes from 28,000 tonnes to 42,000 tonnes, an increase of nearly 51%. Over the same time frame, grape production going to jams and juices declined by 15% from 16,000 tonnes to 13,500 tonnes.

Within the wine grape segment of the processing grape industry, we can see further evolution towards the more highly valued vinifera types as opposed to the hybrids. In fact 2000 was an historic year, in that it was the first year in which vinifera tonnage outpaced that of hybrids. Between 1995 and 2000, vinifera production has increased by nearly 240% from 8,600 tonnes to 20,400 tonnes. Hybrids have increased by about 8% over that same time frame to settle under 19,000 tonnes in 2000.

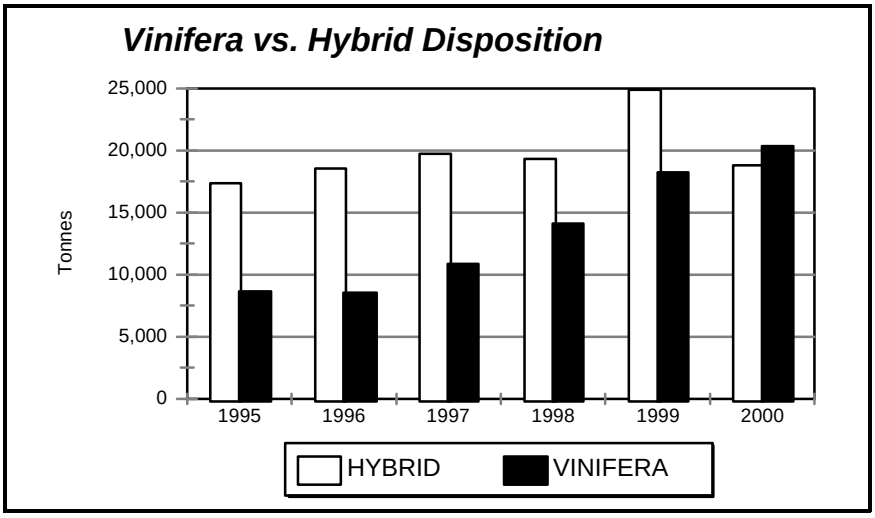

Figure 4 Source: OGGMB

PROCESSING GRAPE CROP DEMAND

The growth in production of vinifera, red vinifera in particular, is a result of increased demand for those types of wine. More particularly, however, it is a result of the growers' increased effort to supply the wineries with the raw product to meet the demand.

Demand is a function of price and quantity. A combination of price and quantity at one point in time gives an indication of product demand. A "normal" demand function typically results in decreased purchases at high prices and increased purchases at lower prices. An increase in demand occurs when prices increase and yet consumption or purchases also increase (or stay the same). Decreasing demand occurs when prices are lower and yet consumption or purchases decrease. Increases or decreases in demand are caused by external factors such as a change in taste preferences or a change in income.

Processor demand for Ontario grapes can be illustrated by the combination of tonnage purchased and average prices per tonne. The graphs below show the tonnage/price combinations and the years in which the combinations occurred over the past decade for the main wine varieties.

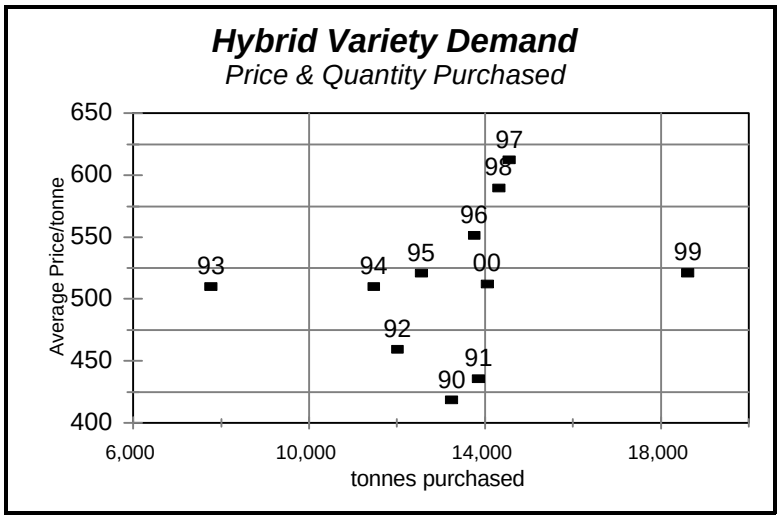

Figure 5

The graph on figure 5 above shows Ontario winery demand for four of the most heavily purchased hybrid grapes, Baco Noir, Marechal Foch, Seyval Blanc, Vidal. The price points are the weighted average of the two white and two red/blue hybrids. The scattering of price and quantity points in the given years indicates that demand has been relatively stable. That is, demand has been neither increasing or decreasing. Hybrid prices have tended to cluster around $500/tonne, while tonnage for the top four has clustered around 14,000 tonnes.

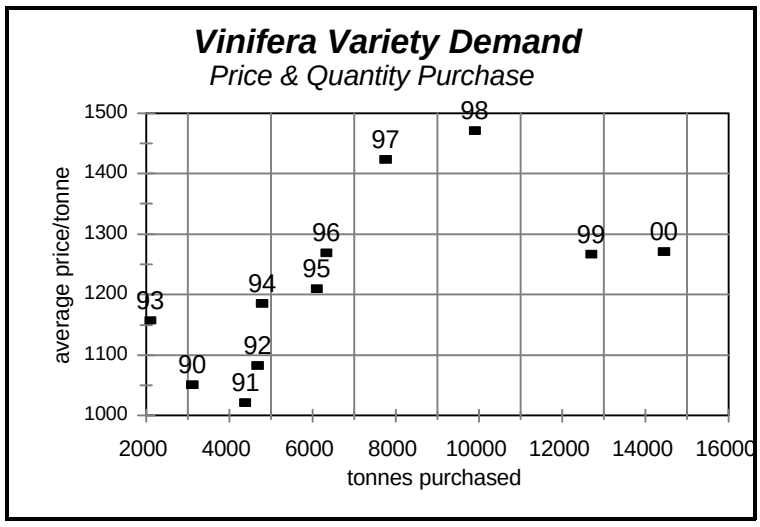

Figure 6

The graph on figure 6 , above shows Ontario winery demand for four of the most heavily purchased vinifera grapes, Chardonnay, J. Reisling, Cabernet Franc and Gamay. The price points are the weighted average between white and red viniferas. The scattering of price and quantity points in the given years indicates that demand increased between 1990 and 1998. The combination of higher prices and higher purchases is a classic example of increasing demand in those years. Between 1998 and 2000, the increased purchases coupled with lower prices indicates that demand for vinifera may have stabilized in those years, but it is too early to say that conclusively.

PROCESSED GRAPE FARM SALES VALUE

The farm gate value of Ontario's processed grape industry totaled $46.4 million in 1999 (OMAFRA). That is, the sales of grapes for wine, jams, jellies and other uses generated revenues of $46.4 million at the farm gate. Preliminary OGGMB data indicates that the 2000 total will decline to $41.6 million. The farm value has had a near steady increase over the course of the 1990's. The following graph shows the Ontario farm value of processed grape production from 1991 to 2000.

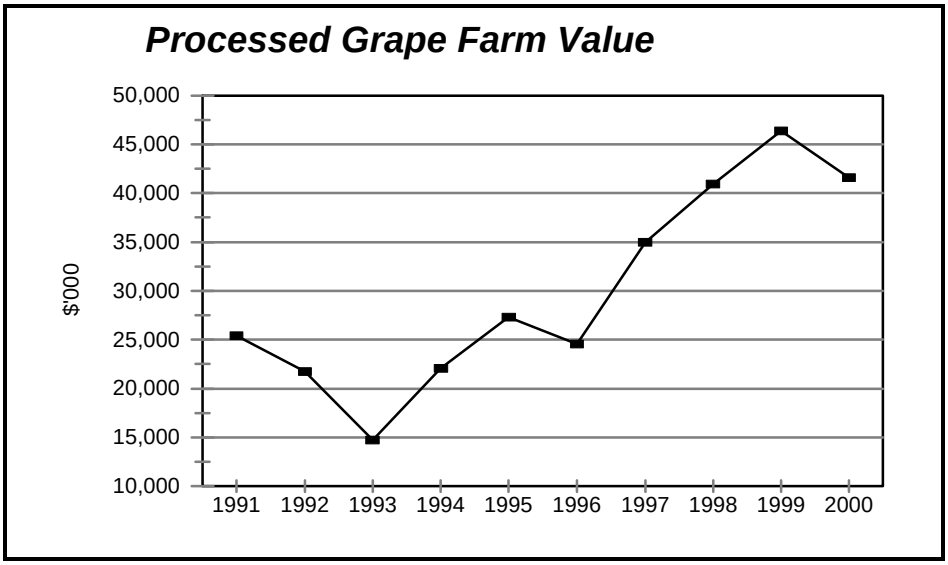

Figure 7 Source: OMAFRA & OGGMB

The labrusca varieties have seen the farm value fluctuate erratically over the last ten years. In 1991 the farm value of processed labrusca varieties was $6.7 million. In 1999 the farm value was $6.6 million. Over that period of time, however, the labrusca farm value hit a low of $4.2 million in 1993. The 1999 value was a strong recovery of nearly 31% from the 1998 total of $5 million. The hybrids and vinifera varieties have seen farm values more than double between 1991 and 1999.

Further to that last point, the increase in farm revenues in the wine varieties has been due to the switch in acreage toward the higher valued, higher cost vinifera varieties. As noted above, these higher valued viniferas are in strong demand by Ontario wineries and consumers.

In relation to the farm value of other fruits, grapes (processing and fresh) comprise 22% of the total. This makes grapes the second most valuable fruit in Ontario in terms of farm gate value. Only apples, with a 45% share of the farm value of commercial fruit crops, is larger (see graphic on figure 9).

Within Ontario agriculture, grapes comprise a relatively small share of the total farm cash receipts. In 1999, grapes amounted to less than one percent of the total farm cash receipts of $6.88 billion in Ontario (the farm total does not include government payments). As a reference, grain corn amounted to 6.6%, dairy products 18.5%, and hogs 8.6%. An important point to note with regard to grapes, however, is that over the

last seven years, grapes' share of the farm cash receipts has been increasing. By contrast, hogs' and dairy's share has been declining while corn's share has increased modestly. In other words, grapes have been one of the few areas of growth and rising farm values in Ontario agriculture during the last four years.

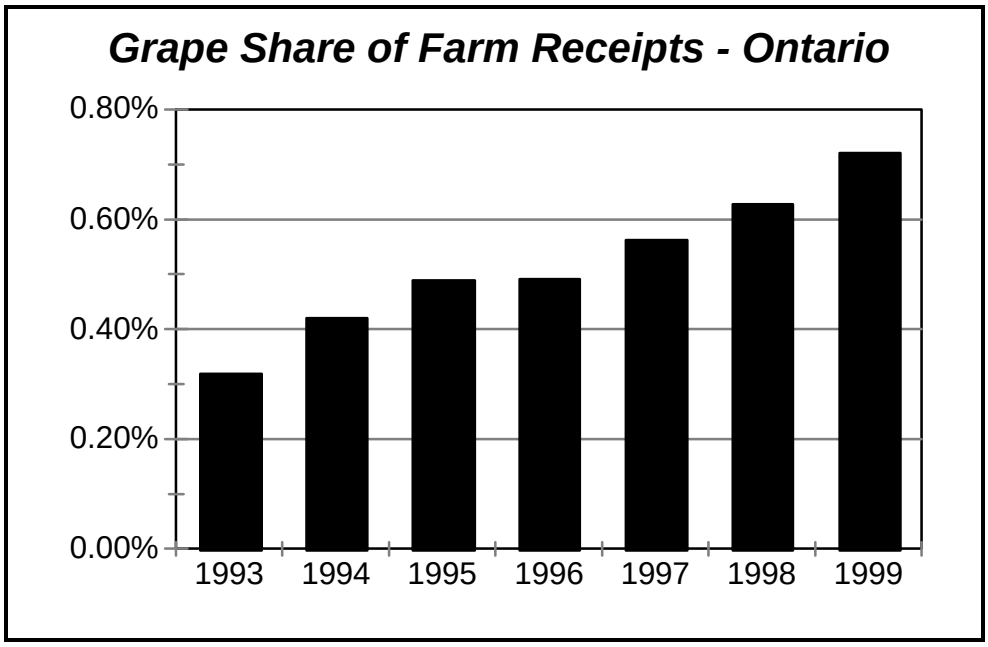

Figure 8

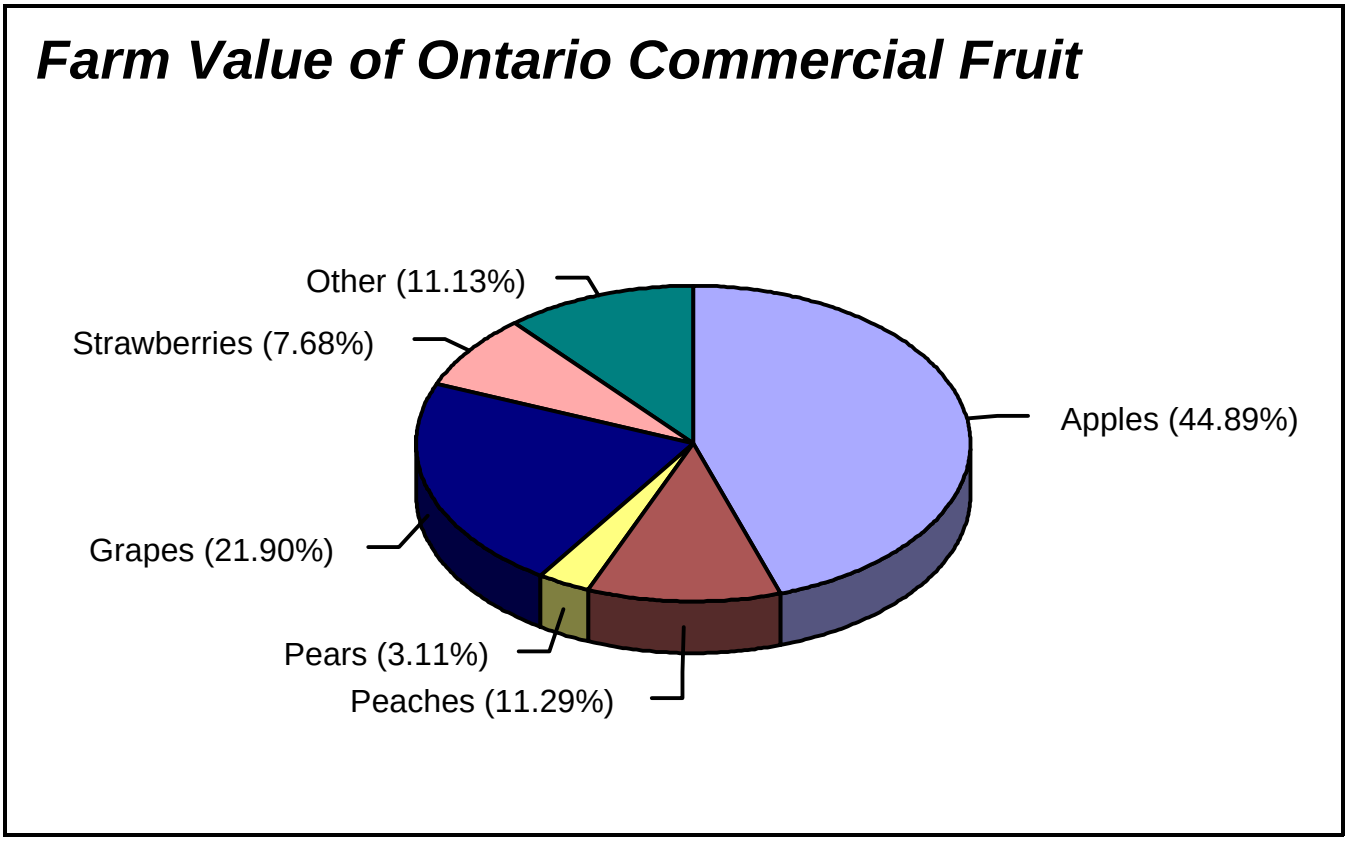

Figure 9 Source: OMAFRA

SUMMARY OF GRAPE PRODUCTION OVERVIEW

- Processing grape acreage has been increasing in Ontario over the last ten years. All growth is due to table wine grape plantings. The vinifera varieties, which are in greatest demand by the wineries and consumers, have seen tonnage increase by more than two times between 1995 and 1999. The number of labrusca vines, (juice) have consistently declined in the decade.
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- Over the last seven years, as a result of the move towards viniferas, grape's share of Ontario's farm cash receipts has been increasing.

B. INDUSTRY STRUCTURE AND ECONOMIC IMPACT

The diagram on the following page is a flow chart of the structure of the industry. As can be seen, the grape growing sector is the central component of an industry that is comprised of input manufacturers, service providers, input retailers/distributors, wineries and wine retail outlets.

ONTARIO GRAPE GROWER EXPENDITURES IN ONTARIO

The processing grape growing sector (grapes for wine as well as grapes for other processing end uses) spent approximately $35 million in 1999 in the production and marketing of grapes. Table 1 outlines the expenditures involved in the production of 17,000 acres of grapes for processing[2].

Table 1

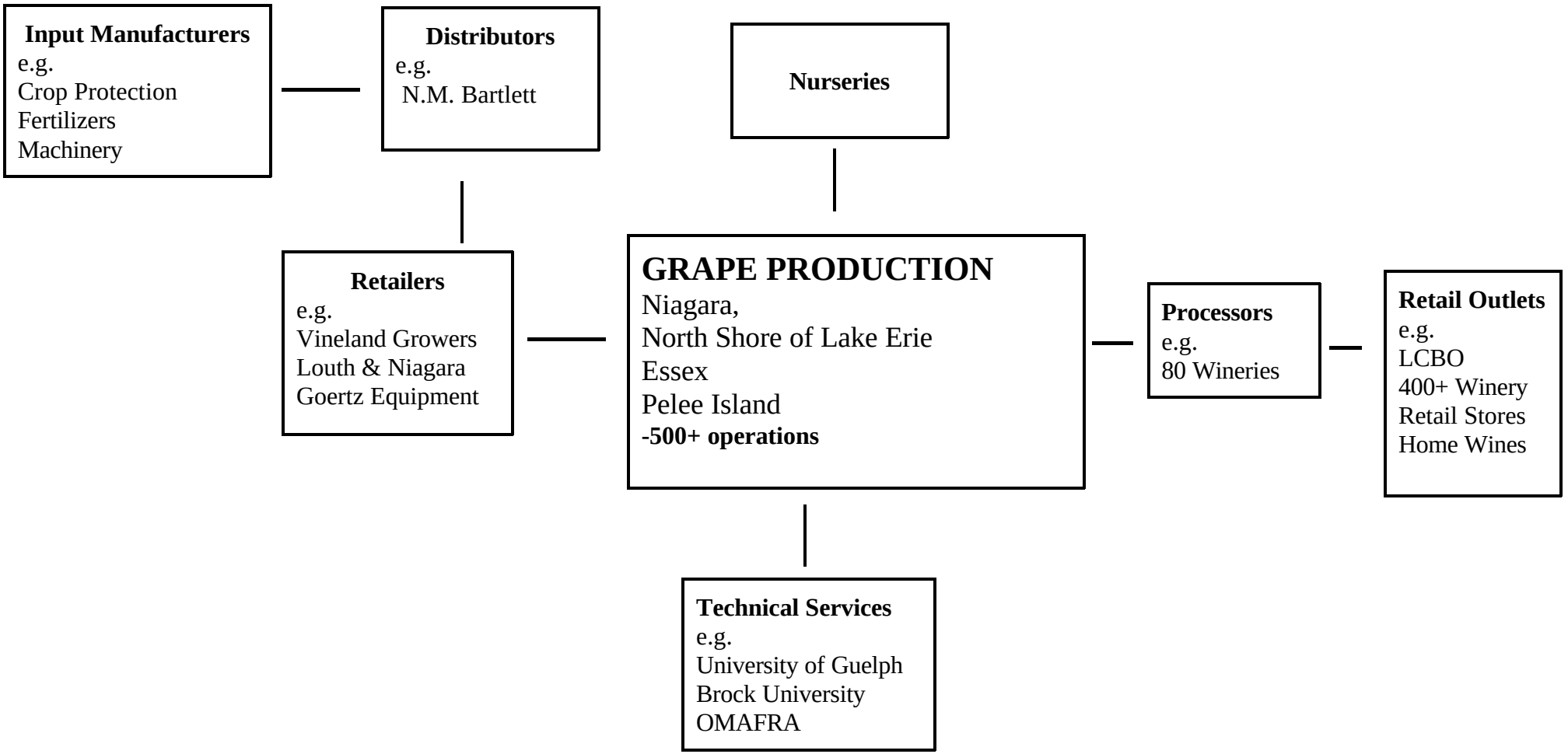
Type of Expenditure	**$Millions**
Labour	12.7
Fertilizer and Chemicals	6.1
Other agricultural inputs	0.7
Fuel	1.2
Harvest and Delivery	5.4
Other Variable	3.1
Total Variable	31.3
Measurable Fixed Costs	3.3
Total Expenditures	**34.7**

Given total revenues in the industry of approximately $46 million, the industry generates $25-$30 million dollars in added value. That is, the farm production of grapes for processing adds nearly $30 million in value to basic material and input costs. This added value takes the form of profits, taxes and labor income.

In addition to the operating expenditures associated with growing and delivering grapes, growers spend millions of dollars each year in order to establish and prepare the vineyard for production. These establishment costs are in excess of $15,000 per acre for wine type grapes and around $10,000 per acre for juice grapes. Based on relative acreage, it is estimated that the industry has spent over $210 million over the last twenty years in the establishment and preparation of vineyards.

[2] Note that the 17,000 acre figure is an OGGMB estimate and is comprised of 4,500 acres for hybrids and 6,500 acres of vinifera. These expenditure estimates are based on the 1997 Cost of Production analysis conducted by the Ontario Ministry of Agriculture, Food and Rural Affairs. That 1997 survey has been adjusted by the George Morris Centre for changes in cost indexes as reported by Statistics Canada's Industrial Products Price Index as well as for changes noted by industry suppliers.

Processing Grape Industry Structure



Furthermore, it is important to note that most of this expenditure occurred over the last ten years as the industry sought to upgrade its quality and variety offerings to the wineries of Ontario. In that regard, total investment in vineyards over the last five years can be estimated by looking at sales of vines. There is a wide divergence between nursery sales of vines and OGGMB reports. By averaging the two, however, it can be reasonably estimated that approximately 1,500 acres are planted each year. Of those new plantings, Grape Board data indicates that the overwhelming majority (over 80%) has been of the vinifera varieties. As such, that would imply that from 1995 to 1999, over $20 million per year was invested in new vineyards (either re-establishment or actual new acreages). Over the last five years, growers have invested over $100 million in establishment or upgrading their vineyards to meet the demand for higher quality wines.

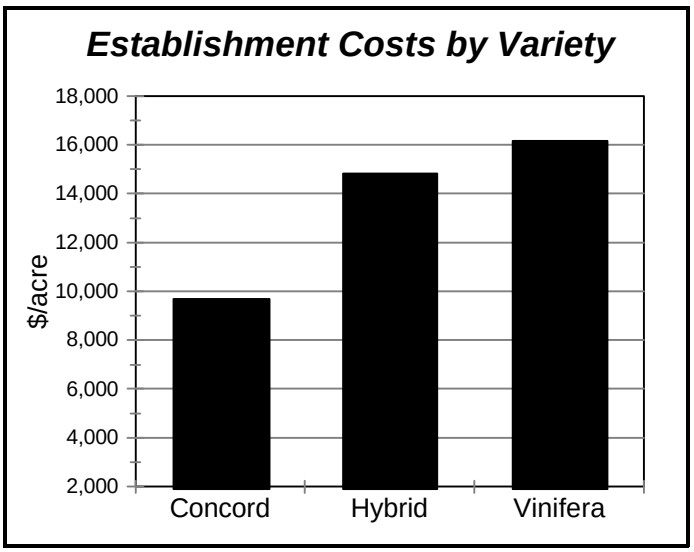


Figure 10 Source GMC and OMAFRA

It is also important to state that this investment does not include the cost of land. Land in the Niagara region is exceptionally valuable in comparison to other agricultural regions. This is primarily due to the development pressures and opportunity costs of alternative land uses. Land could typically cost $14,000/acre. It is noted that approximately 7-8% of land in the Niagara region is turned-over each year. The key point therefore is that the $100 million dollar investment noted above should be considered as being very conservative given that the high cost of land is not included.

EMPLOYMENT IMPACTS

As can be seen from the industry flow chart on the previous page, the grape production sector is the hub of a variety of economic activities. These activities encompass manufacturing, processing, service and education. The grape production sector creates jobs in the sectors that provide it with goods and services, and it creates jobs in the sectors that utilize and merchandise its products. These jobs are considered indirect employment while the jobs directly involved in production are considered direct employment.

Neither the Grape Growers Marketing Board nor Statistics Canada monitor the number of people directly employed or involved in the production of grapes for processing. An estimation of the number of people that are involved in the direct production of grapes can be generated however, by utilizing OMAFRA's cost of production estimates and the associated labor requirements.

As a starting point, in 1999 there were 519 growers registered with the Ontario Grape Growers Marketing Board. For the purposes of this estimation, these registered growers are considered the only full time positions resulting from grapes for processing production. Beyond that point, the calculation of the number of additional part time jobs resulting from the industry can be deduced from the following assumptions in Table 2.

Table 2

Total Labour Hybrid Grapes	95 hours/acre (4,500 acres)
Total Labour Vinifera Grapes	140 hours/acre (6,500)
Total Labour Labrusca Grapes	60 hours/acre (6,000)
Part Time Labour	20 weeks/year
Hours/Week	40
Part Time Wage	$9.00/hour

It was also assumed that Owner/Operators undertake 1/3 of all hand labour and 75% of the machine labor.

Based on the above assumptions, the number of part time employees directly associated with the processing grape production sector was likely between 1,200 and 1,500 people in recent years. As such, including the full time positions, the number of people directly employed in grape production likely amounts to around 2,000. These jobs are involved in the production of grapes for processing. That includes labrusca production which is primarily geared towards juices or jams.

There are also a large number of jobs associated with servicing and supplying the processing grape growing sector. For example, the provision of fertilizers, chemicals and machinery results in job creation in manufacturing, sales, service and administration. In that regard, we note that the manufacturers of agricultural machinery, crop protection materials and fertilizers are all industries that operate on a large scale supplying world markets. Manufacturing industry participants note that while the grape growing sector is an important component of their business, it is also relatively small compared to global sales.

For example, in the fertilizer industry, basic commodities such as nitrogen or phosphates are produced at massive scale plants in Canada and around the world. Large scale Canadian buyers in turn distribute product to smaller manufacturers such as fertilizer blenders. These blenders may in turn both distribute and retail the final product. Furthermore, in the crop protection industry, most of the manufacturing jobs are not located in Canada. For these reasons, this report will not estimate an absolute number of manufacturing jobs that result from sales to the Ontario grape processing industry.

The issue of jobs created as a result of the grape production sector is further complicated by the fact that suppliers and service firms do not typically have

employees dedicated solely to grape production. Instead grape production is part of a package or bundle of end-use customers or clients.

While the number of manufacturing-related jobs is difficult to estimate exactly, there are a number of jobs that have been created in the manufacturing industries that are involved in the sales and service to the grape processing industry. Niagara-based retailers and distributors of inputs such as fertilizers, chemicals and machinery have increased employment as a result of the grape industry.

The key point is that the industry does purchase $10 million worth of inputs and nearly $5 million in services each year as well as millions of dollars worth of farm machinery. As such, grape industry supplier participants know that without the sector or with a reduction in the sector, there would be a reduction in jobs. Based on discussions with a large number of industry suppliers from the fertilizer, crop protection, machinery and technical support levels, it is estimated that grape industry supplier employment is approximately 100 either full or part time jobs.

Moving along the industry supply chain to the processors and retailers, a September, 2000 report by the firm of KPMG entitled "Update: Economic Impact of the Wine Industry on the Economy of the Province of Ontario in 1999," noted the following direct employment supported by the Ontario wine industry:

Sector	**Total Direct Employment**
Growers	1,022
Wineries	988
Winery Retail Store	1,861
Total	**3,871**

The KPMG analysis also estimated that indirect full time employment for the grape production sector amounted to 77 jobs. These indirect jobs are the production sector suppliers. This estimate of 77 jobs is very close to the GMC supplier survey estimate (note KPMG focuses on wine grapes, only while this current focus is on all processing grapes).

The next step is to estimate the number of jobs further along the supply chain in the processing and retail sectors. The challenge is to isolate those jobs that are created as a result of the processing grape production sector. In other words, the jobs that would not be in existence without grape production. It should be noted that grape production is not responsible for all jobs in the winery or retail stores. Grape production is only responsible for the jobs involved in processing the grapes and merchandising those Ontario based products. In order to narrow the estimate, a few points or assumptions need to be noted:

- Approximately two thirds of the wine volume produced in Ontario uses Ontario grapes (see section entitled "Impacts/Changes in the Wine Content Act below)

- Of the approximately 80 wineries in Ontario, fewer than 15 can import foreign wines for blending.
- Most of the growth in the industry is a result of the higher quality Ontario content.
- More jobs are required to process domestic grapes than to blend foreign wines and water. The ratio of winery jobs involved in processing grapes, bottling and labeling the wine compared to receiving, bottling and labeling foreign wine is assumed to be three to one.
- The winery jobs associated with "winery tourism" exist largely as a result of the production base.
- Winery retail stores can only merchandise the winery's own product. As noted, up to two thirds of that product is Ontario grown content.
- Winery retail stores are in existence as a result of the Ontario vineyards. As such, arguably all of the jobs in the system are due to the production sector.

Before proceeding further into an assessment of total jobs generated as a result of processing grape production, it must be stated that determining the number of jobs generated by one sector as a result of another is not an exact science. Furthermore, in order to withstand scrutiny, it is prudent to be conservative.

As such, with those caveats in mind, the following is a breakdown of the total number of jobs either fully or partially employed as a result of the farm level processing grape production industry.

Industry Sector	**Employees**
Suppliers (including technical)	100
Processing Grape Production	1,700
Wineries	700
Winery Retail Stores	1,000
Total	**3,500**

This calculation of 3,500 jobs is very conservative as it assumes that only seventy percent of the jobs in the winery sector and fifty-five percent of the jobs in the retail sectors are as a result of the domestic production. It is also conservative as it does not take into account residual jobs at the LCBO or in tourism resulting from wineries. Finally, the calculation ignores the indirect jobs created by the wineries and retail stores.

TAXES AND GOVERNMENT REVENUES

This section provides an estimate of the tax revenue generated by the processing grape production sector in Ontario at the farm level. This calculation does not include taxes generated by industry suppliers or those sectors that purchase processing grapes. Instead, the calculation is strictly based on the taxes applicable to the grape farming industry's value added contribution (revenues less costs) plus the provincial sales taxes on products purchased by the industry.

The following are the assumptions used in determining the federal and provincial income taxes:

- Total Industry Income $46 million
- Average Tax Rate 25%
- Owner Operator Incurs 37% of all wage and salary costs
- Total Costs Net of Owner Operator wages and salary costs $29.9 million
- Industry Net Taxable Income $16.1 million
- Total Income Taxes on Earnings $4 million
- Non-Owner Wages $8 million
- Taxes Payable on Non-Owner Wages $2 million
- Sales and Fuel Taxes $1 million

As such, it is estimated that the industry generates approximately $7 million dollars in tax revenue in a given year for the federal and provincial treasuries. This tax revenue is the estimate attributable solely to the grape production sector. It does not include taxes generated by wineries or wine sales for example. In that regard, it is argued below that the grape production sector is responsible for at least two-thirds of the economic activity beyond the farm gate. Further to that, the KPMG study says that wine specific revenues accruing to the Federal and Ontario Governments through consumer purchases of Ontario wine totaled $196.5 million in the fiscal year ending March 2000. Applying the two-thirds estimate to that figure and applying it to 11,000 wine grape acres amounts to nearly $12,000 per acre in wine related taxes alone. This dwarfs the $3,500/acre in wine grape revenue which growers received in 1999.

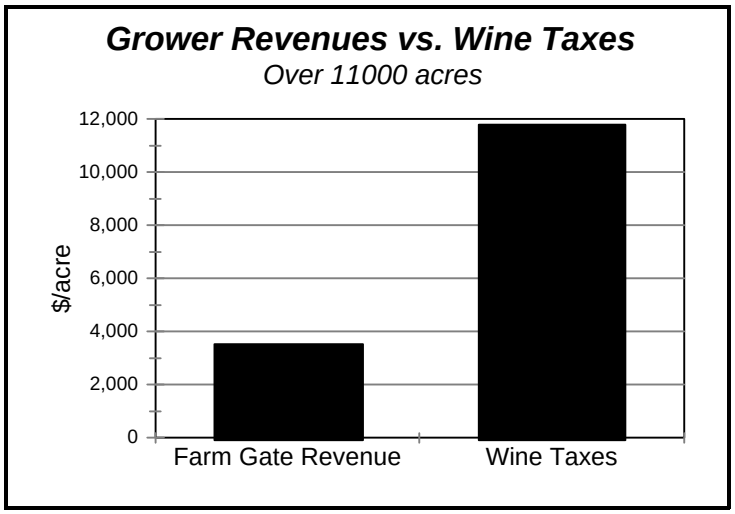


Figure 11

SUMMARY OF INDUSTRY STRUCTURE AND ECONOMIC IMPACT

The processing grape production sector generates the following for the economy of Ontario:

- Nearly $13 million in direct wages and salaries.
- Nearly $30 million in value added to raw materials. This added value takes the form of labor income, profits and government revenue.
- Total direct and indirect employment of 3,500 jobs
- Tax revenue of $7 million.
- Indirect taxes generated through wine sales exceed total farm gate revenues by more than three times.

C. IMPACTS/CHANGES IN THE WINE CONTENT ACT

The current Ontario Wine Content Act has a sunset clause of December 31, 2000. The new Act which will replace the current law has now passed the legislative process. As with many bills and acts, most of the details of the law will be contained in the regulations. While the regulations have not passed into law, the following are the key factors that are being considered:

- the minimum content of Ontario wine in blended wines is 30% with no allowance for "Stretch" on the Ontario portion.
- Labeling is to be based on National Wine Standard guidelines whereby wines labeled "Product of Canada" must contain a minimum of 75% domestic grape content; "Product of Ontario" wines must contain 100% domestic grape content; blended wines utilizing imported wine will require a minimum 30% Ontario grape content and will be labeled "Cellared in Canada from imported and domestic wines" (or domestic and imported wines if the domestic content is greater than the imported content).

Before examining the impact of the changes in the Wine Content Act, the following section provides an outline of current tonnage and wine industry production volumes.

WINE PRODUCTION OVERVIEW

Over the last few years, Ontario wineries produced approximately 38 to 40 million litres of wine. The wineries in turn purchased approximately 32-33,000 tonnes of grapes from producers in 1997 and 1998. In 1999, the wineries purchased approximately 42,000 tonnes from producers. Actual wine production and grape tonnage disposition data is not available. Based on the data available for this report, no attempt was made to calculate exact tonnages or production. Instead, the following outline provides an estimation of production and volumes based on recent purchases, sales and market share data. In other words, the following data and calculations provide a sound overview of recent supply and disposition[3].

Ontario Winery Production	40 million litres
Ontario tonnage used for wine production	38,000 tonnes
VQA Market Share	15%
Other/Blended Market Share	85%
VQA Production	6 million litres
Ontario wine juice litres per tonne	700
VQA tonnage	8,571 tonnes
Other/Blended Production	34 million litres
Stretch/Water	5.9 million litres
Foreign Wine	7.5 million litres
Other/Blended Ontario tonnage	29,400 tonnes
Ontario juice share of Other/Blended	61%
Ontario juice share of total production	66%

[3]The Ontario tonnage relative to wine production is likely overstated.

As such, based on recent production and tonnage data, it is likely that Ontario's production share of the Ontario winery volume is around two thirds. This tonnage estimate is based on total hybrid acreage of about 4,500 and total vinifera acreage of 6,500 as estimated by the Ontario Grape Growers' Marketing Board.

POTENTIAL FUTURE PRODUCTION IMPACTS

There is a wide array of production and sales outcomes that are possible in the next five years. One possible outcome could be the aggressive sales gains as outlined in the Wine Council of Ontario's Strategic Plan. That document estimates that domestic volume sales could grow by 86% over five years at a rate of 12% annually. That would move the industry from 39.7 million litres for the year ended March 2000 to 73.8 million litres in 2006. Another possible outcome could be the continuation of the sales trends experienced over the last five years. In that regard, note that the trend has proceeded from gains of 7.9% for 1995-6 to -3.2% for 1998-9 according to the January 2000 Annual Report of the OGGMB. The LCBO annual report for 1999-2000 indicates that Ontario sales for the year ending March 2000, may have increased by about 2% over 1998-9 sales.

It is beyond the mandate of this research to forecast future sales of Ontario wine. With that said, assumptions are needed in order to determine the impact of changes afforded by the new Wine Content Act. A sales increase rate of 3% per year was assumed for the Scenarios outlined below. This figure was chosen not as a result of detailed analysis, but simply as a point between the strong sales gains of the mid-1990's, the sales decline in 1999 and the modest increase in 2000. The 3% figure is a reasonable sales assumption between current performance and the forecast in the Wine Council's Strategic Plan.

Another important factor to consider with regard to sales and production relates to the share of Ontario grape production in Ontario wines. The share issue also provides a wide possibility of future outcomes. The Ontario-based share could range from the low of 30% provided for in the new Wine Content Act to around 75% based on current volumes and VQA share. Both of these shares are possible.

Scenario 1

Assumptions for 2004:

- Ontario wine sales increases of 3% per year to 45 million litres
- VQA sales attain a 20% share
- Remaining production is "Cellared" product at the minimum 30% Ontario content.

Based on those assumptions the following are the production impacts:

VQA production	9 million litres
VQA tonnage	12,900 tonnes
Cellared Production	36 million litres
Ontario Cellared Tonnage	15,400 tonnes

Total Ontario Tonnage	28,300 tonnes
Total Ontario share	44%

Scenario 2

Assumptions for 2004:

- Ontario wine sales increases of 3% per year to 45 million litres
- VQA sales attain a 20% share
- All other sales are Product of Canada with 75% Ontario content.

Based on those assumptions the following are the production impacts:

VQA production	9 million litres
VQA tonnage	12,900 tonnes
Product of Canada production	36 million
Product of Canada Ontario tonnage	38,600 tonnes
Total Ontario grape tonnage	51,500 tonnes
Total Ontario share	80%

Scenario 3

Based on WCO market share projections

- Ontario wine sales increases of 3% per year to 45 million litres
- VQA sales attain a 25% share
- Product of Ontario attains 25% share with 75% Ontario content.
- Cellared attains 50% share with 30% Ontario content

Based on those assumptions the following are the production impacts:

VQA production	11.25 million litres
VQA tonnage	16,100 tonnes
Product of Ontario production	11.25 million litres
Product of Ontario grape tonnage	12,100 tonnes
Cellared Production	22.5 million litres
Cellared grape tonnage	9,600
Total Ontario grape tonnage	37,800 tonnes
Total Ontario share	59%

As noted, there is a wide number of future possibilities. The scenarios outlined above provide a picture of the possibilities given recent history and the parameters of the new Act. While Scenario 1 may seem unlikely given current shares, it is possible under the new Act and there are economic incentives to follow that course. Further to that, it is noted that the WCO strategic plan calls for a very aggressive pursuit of Cellared share.

Under Scenario 1, if the wineries were to aggressively pursue the Cellared option, that could result in a loss of about 10,000 tonnes from current wine grape production. Even assuming a very high average yield of hybrid and vinifera wine grapes of 5 tonnes per

acre, that would result in a reduction of about 2,000 acres in Ontario. In our view, this represents a very conservative impact if the WCO does follow an aggressive effort to market "cellared in Ontario" wines.

We view this as a very risky strategy for an industry that has, to date, built its reputation on the increasing quality to Ontario grapes. To now switch to an emphasis on products that have a high content of water and imported grapes may well back fire and impugn the reputation of the entire industry. Many wine consumers are relatively unsophisticated and don't understand the difference between stretched wines made from predominantly imported grapes and those made 100% from Ontario juice. Many do know that the popular press and advertising continuously focuses on how much better Ontario wines have become **because of the strong emphasis on quality and local grapes**.

Sales patterns indicate that markets for VQA wines have increased consistently. Wines relying on a high content of foreign materials and using "stretch" have failed to secure consumer support. We can only imagine the potential disaster that will occur when the press starts to focus on the lurch in strategy toward stretched and blended wines. If the effect of quality and product image in the VQA program has had a positive impact on the "product of Canada" wines to date, it stands to reason that a negative image of "cellared in Canada" wines could have a negative impact on VQA wines in the future.

The ramifications of a reduction of 2,000 acres (or more) of wine production could result in the following outcomes:

- At least 60 growers would cease grape production
- At least 300 winery workers could lose their jobs

The impact on tax revenues would be greatly dependent on changes in prices and costs. It is likely that direct tax revenues associated with farm production would decline by at least $1 million each year.

In addition to taxes and jobs, it also follows logically that there will be a particularly strong negative impact on the sixty or so smaller wineries in the province. These smaller wineries have played a central role in turning the industry's quality image around. Mass marketing cheaper stretch wines that are blended or cellared in Ontario will take place under the quality and integrity umbrella that was earned by the smaller wineries. The smaller wineries will be hurt by the mass marketing of low quality wines by other Ontario wineries.

Under Scenario 2, Ontario wine grape tonnage would increase significantly to over 51,000 tonnes. That is an increase of at least 12,000 tonnes from the base. An increase in tonnage of that magnitude represents supplies from 2,400 acres of vineyards, above the buying level of 2000 by the wineries. This acreage capacity is already in production. As such, this tonnage increase would help to preserve or even expand the number of part time or full time grape production workers. In addition to

that on-farm job increase, the wineries would require more workers as well. Winery jobs would likely increase by at least 300 positions in order to handle the increased tonnage. Direct taxes associated with the 12,000 tonnes of farm production amounts to $1-2 million each year.

Under Scenario 3, using the market share estimates of the WCO, there would be little or no change in tonnage purchased by the wineries. That is, the total purchases in four or five years could be very similar to the purchases in 1999. As such there would be little change in employment or taxes payable as well. This understates the negative impact of the WCO market share estimates under this sales assumption scenario, however. That is because each year at least 4,000 additional tonnes of vinifera-type grapes are produced as young plantings mature. These plantings are a result of growers responding to market demands and the requests of the wineries. For example the Wine Council of Ontario has been publically quoted as saying that "We're going to need to plant every available acre of land over the next 10-15 years."

As such, if in fact, Scenario 3 materializes, that would mean that there would be a very large surplus of grapes within five years. Even without any further plantings of table wine grapes it is becoming obvious that there would be a massive surplus of vinifera grape varieties within just four years. This is a crucial issue not just to the growers but also to the longer term stability of the Ontario-based industry.

It is also significant to note the relationship between the stated acreage needs under the WCO plan and the economic realities of production returns. That is, growers will respond to the economic signals dictated by returns per acre. As noted, land in Niagara is very valuable. As such, production will gravitate towards the activity which generates the highest return. In that regard the growers have been receiving mixed signals in recent years. For example, fresh market peach returns per acre are typically in the area of $4,700 (assuming a gross margin of $23.50/tree and 200 trees). Processing peach returns are similar. Returns per acre of viniferas on the other hand have been only around $4,400 in the last year (assuming 5 tonnes per acre and an average price per tonne of $1,330). Furthermore, the trend in the last two years has been towards lower vinifera prices. A surplus of grapes as envisioned in this scenario could logically result in lower prices and lower returns.

CONCLUSIONS REGARDING ECONOMIC IMPACT AND FUTURE SCENARIOS

As noted forecasting future sales and share changes is beyond the scope of this research. With that said, however, assumptions of sales and share need to be made in order to determine future impacts of policy actions.

As noted above, the 3% sales gains figure was chosen as a reasonable alternative between the current trends and the forecasts in the Wine Council's Strategic Plan. An equally important issue relates to the share of Ontario wine in the product produced by Ontario wineries. This is the key issue with regard to the Wine Content Act and the possible future direction of the Ontario wine industry.

In that regard the Wine Council has argued strongly for a 30% Ontario share to be allowed in product called "Cellared." The Strategic Plan asserts that Cellared will

eventually attain a 50% share. If that happens, Cellared will have the largest share of wine produced by Ontario wineries. The 50% share for Cellared could, however, become much greater. In fact it could rise as high as the 80% as outlined in Scenario 1.

There are strong reasons why rational profit maximizing firms would aggressively pursue this Scenario 1 strategy. The main reason is that it is much cheaper to use foreign wine than to buy and process Ontario grapes. For example, according to Wines & Vines, July 2000, in 1999, Canada imported 16.2 million litres of bulk table wine from the United States. This is an increase of 16% compared to 1998. This imported bulk wine had a per litre value of only .71 US cents. Of all the countries that import US bulk wine, Canadian wineries have imported the cheapest by a wide margin. For example, bulk shipments to Japan were $2.09 US per litre.

That 71 cents is approximately C$1.09/litre using an exchange rate of .65. Even adding an extra 20 cents for transport and handling would make the imports very attractive. That imported cost compares to about $1.33/litre for the average Ontario vinifera ($1,200/tonne at 902 litres per tonne). Furthermore, as noted above, the imported product requires far less labour, processing and storage to produce the final, bottled product.

The conclusion is that Scenario 1, with all its negative implications for jobs, production and taxes is a very real possibility.

SUMMARY OF IMPACTS OF CHANGES IN THE WINE CONTENT ACT

- Currently the Ontario grape content share of Ontario wine production is around two thirds
- If the industry were to modestly increase sales over the next five years and if production moved toward VQA and Product of Canada which requires 75% domestic content, there would be a material increase in jobs and tax revenue.
- The changes in market share envisioned by the Wine Council of Ontario's strategic plan would result in little change in overall tonnage purchased, but would mean a material surplus in grape production.
- If the Wine Council of Ontario aggressively moves in the direction afforded by the Wine Content Act, there would be a material reduction in jobs, grower numbers and tax revenue.
- An aggressive or successful pursuit of the cellared market will have a negative impact on the smaller Ontario wineries who have played a central role in building the quality image of Ontario wines
- An aggressive pursuit of the cellared market will also result in a negative consumer perception of Ontario wines.