

## Seed Potato Marketing

A Presentation to the Soils and Crops Workshop  
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by Harvey Clark  
Saskatchewan Irrigation Development Centre  
Outlook, Saskatchewan

### Introduction

The demand for seed potatoes is a derived demand. It stems indirectly from the demand for table and processing potatoes. Because most vegetables are bulky and perishable, the relevant market is the North American market. However, as the Western Canadian seed potato industry develops it is becoming more conceivable that seed potatoes from the prairies may also begin to move offshore.

### Comparative Advantage and Risins Usage

Canada has a comparative advantage in potato production over the United States and other countries. This is borne out by the fact that our per capita potato production is about 50% higher than the U.S. (Figure 1). Our per capita consumption of potatoes is also about 20% higher than the U.S. (Figure 2). While per capita consumption of potatoes in North America has been rising, the demand for fresh or table potatoes has been relatively steady. The rapid expansion of the potato industry in the 1990's has been mostly due to an increased demand for processing potatoes, both for export and for domestic use (Figure 3).

Manitoba, for instance, supplies a large part of the frozen French fries for the Chicago area. Eastern Canada ships table and processed potatoes to New England. Manitoba's potato planted area expanded to about 60,000 acres in 1995. Processors want to add an additional 20,000 acres in the next few years.'

### Northern Vigour

Potatoes are a cool weather vegetable. They thrive in the cooler summer climates of countries such as Canada and Ireland. Cold winters make potato storage costly. However, for seed potatoes, Canada enjoys the benefits of northern vigour due to our hardier climate. Research conducted by the University of Saskatchewan demonstrates that seed potatoes grown in a northern climate will outyield seed potatoes grown in a more southerly

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'The Western Producer, January 18, 1996, p.52

climate by about 15%.<sup>2</sup>

In dollars and cents this means that a U.S. grower could pay nothing for seed potatoes grown in his local area, and still be further ahead by buying Canadian seed potatoes at a 15% premium price (Table 1). As American potato producers become convinced of these findings, this has been the major reason for rising imports of Canadian seed potatoes in the past two years (Figure 4).

### Seed Potato Area

While the area sown to table potatoes in Saskatchewan has declined, the seed potato area has almost doubled in the past year (from 1,238 acres in 1994 to 2,400 acres in 1995, Figure 5). This is almost five times the seed potato area just two years ago. Despite this growth, seed potato area in both Alberta and Manitoba represents almost three times the area of Saskatchewan.

All of Western Canada together has less than the seed potato area of New Brunswick, while New Brunswick has about half the seed potato area of Prince Edward Island. Many of the seed potatoes grown in Eastern Canada receive a better price by being sold to the table market (Figures 6 and 7). With the unfortunate problems of the PVYn virus scare, the seed potato area in Prince Edward Island dropped by almost half in 1993. Despite recovering over the past two years, the eastern provinces find the demand for seed potatoes is stagnant. Potato production is expanding in the western United States where irrigation reduces the costs of production and provides a greater security of supply.

### Advantages of Saskatchewan for Seed Potato Production

Undoubtedly the greater incentive for Eastern Canadian potato producers to sell into the processing and table potato markets has helped Western Canada and Saskatchewan expand into seed potatoes. One of the reasons that American seed potato producers were interested in Saskatchewan was to minimize the possibility of disease by growing potatoes in a more isolated area. Similarly it will be easier for Saskatchewan seed potato growers to expand, than for growers in Manitoba due to the expansion of processing potatoes in that province.

Besides the isolation that seed potato areas in Saskatchewan enjoy, they are benefited by the existing infrastructure for irrigation. Manitoba potato growers must pay for the development of their own irrigation. Irrigation is easier to justify in many parts

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Research results range from a 10 to 60% yield improvement with seed potatoes grown in Saskatchewan compared to U.S. varieties in various locations of the U.S. (personal communication, Jazeem Wahab, SIDC)

of Saskatchewan, because of the lesser amount of rainfall compared to Southern Manitoba. This means other irrigated crops can help pay for the additional cost of irrigation. In Manitoba it is mostly potatoes that must justify irrigation alone.

The cost of seed potato production in the Edmonton area may be the lowest on the prairies. They are benefited by natural rainfall, northern vigour, and relative isolation. Saskatchewan's land costs are lower, and the room for expansion is greater. (The relative costs of seed potato production in Southern Alberta and south central Saskatchewan would be about the same.)

### U.S. Demand

As the expansion of processing potatoes continues in Manitoba and Prince Edward Island this will increase the advantage of Saskatchewan over these other areas for the production of seed potatoes.

There has been some concern that the expansion of seed potato exports to the U.S. will lead to trade barriers. The U.S. seed potato growers are not pleased to see their markets erode to northern competition. About 10% of the U.S. seed potato demand could be filled by Canadian potatoes. This has not been reached yet (Table 2). Although Canada's share of the U.S. seed potato supply has risen over the past few years it has not exceeded 6.6% of the total supply. In 1994/95 Canada's total seed potato exports to the U.S. actually declined from 104,000 tonnes (in 1993/94) to 97,200 tonnes. This was due to the decline in seed potato exports from Eastern Canada.

In the same year Saskatchewan's seed potato exports expanded by nine times from 635 tonnes to 5,379 tonnes, almost as much as the exports of seed potatoes from Prince Edward Island in the same year.<sup>3</sup> The leading Canadian provinces for seed potato exports in 1994/95 were Alberta with 43,723 tonnes; New Brunswick with 27,418 tonnes; and British Columbia with 12,409 tonnes. The seed potato area in Eastern Canada is higher, while seed potato exports are greater in Western Canada. Much of the Eastern Canadian area is passed for seed, but sold to the table market.

While Western Canadian exports of seed potatoes to the U.S. expanded by 17% in 1994/95 from the year before, Eastern Canadian seed potato exports declined by 32% to 33,895 tonnes. Twice in the previous four years, Eastern Canadian seed potato exports exceeded those of Western Canada. Despite a ninefold increase in seed potato

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<sup>3</sup>**There** are some seed potatoes travelling from Saskatchewan to Alberta and forming part of the export movement from that province. This was only about 1,000 tonnes in 1994/95, but this type of movement has been gaining in popularity and convenience for the two provinces.

production, Saskatchewan is still not exporting half as many seed potatoes to the U.S. as British Columbia. Seed potato production in Saskatchewan could probably be doubled again before concerns arose that the industry was in a state of **overproduction**.<sup>4</sup>

#### Advantase over Processins Potatoes/Rising Prices

For several years now potato growers in Alberta have been noting the advantages of seed potatoes over processing or table potatoes. The past year illustrates this well.

While many farmers have been elated that wheat prices have finally broken out of their doldrums in 1995, potato prices have risen too. In September of 1995 potato prices in the U.S. and Europe reached some of the highest levels of the past fifteen years (Figures 8 and 9).

The same was not true for processing potatoes. In a rising market, seed potato growers are benefited because prices are not set until the fall after harvest prices for table potatoes have been determined. In most years the seed potato price will be higher than the table potato price (at least in Western Canada).

Processing prices are set when contracts are agreed upon in the spring. If yields are good growers **sell their** extra production, but at a lower price. If prices rise, the processor benefits while growers will lobby for a higher price in future years at the risk of losing their contracts. Some growers of processed potatoes in Manitoba were concerned that they were not able to cover their costs of production due to the additional costs of irrigation and water **sourcing**.<sup>5</sup> There has been more than enough margin for seed potato growers in Alberta and **Saskatchewan**.<sup>6</sup>

#### Marketing

While not being a marketer of seed potatoes, new growers may be concerned as to how this is done. Many free enterprising seed growers like to establish their own markets. When marketing margins are high enough it is feasible to hire brokers. The earlier growers of seed potatoes in Saskatchewan travelled to the U.S. establishing

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<sup>4</sup>**Industry** sources feel that any seed potato acres grown in Saskatchewan will find a ready market at attractive prices.

<sup>5</sup>**The** Western Producer, "Expenses Wear Hole in Pockets of Manitoba Potato Producers", January 18, 1996, p. 52. See also Table 3.

<sup>6</sup>**The** costs of production for seed potato production in Saskatchewan presented in Table 4 are for larger producers. Smaller producers of more varieties will have higher costs.

clients there. University research plots have helped to convince the U.S. growers of the advantages of northern vigour. This was not new to many of them. The Edmonton Seed Potato growers were successful in establishing many markets in the U.S. Their retiring manager will be offering brokering services to seed potato growers who may need help in finding markets.

Alberta seems amenable to selling seed potatoes in conjunction with Saskatchewan. Some of the seed potatoes being exported from Alberta originate in Saskatchewan. Each year Saskatchewan seed potato growers gain more experience and have established many contacts in the U.S. More recently the Canadian government has successfully negotiated access to the Mexican market under the terms of the North American Free Trade **Agreement.**<sup>7</sup>

### Overseas Markets

Only recently it was considered too expensive to ship prairie potatoes to the coast and then to markets overseas. This had been previously done from Eastern Canada. Potatoes Canada was a semi-private group formed for this purpose. Mostly they were involved in shipments from Eastern Canada. As the production of seed potatoes shifted from Eastern to Western Canada, the inroads made by the eastern companies may have been threatened by the western competition.<sup>8</sup> Needless to say it was difficult to establish an industry consensus with these internal divisions.

Atlantic Canadian growers of seed potatoes can deliver directly to port. They are closer to many of the traditional seed potato markets. Many of these shipments have been assisted by government programs. They did not always represent a market driven by commercial interests. When the Canadian International Development Agency (CIDA) bought seed potatoes, Canadian suppliers would be specified. The Dutch have been active competitors, also having the advantages of northern vigour.

The export of seed potatoes by sea has many complications. First there is the added cost of transport to the coast. This can add about four to five cents a pound compared to Atlantic competition. If the shipment passes through tropical waters then refrigeration must be used. There is the threat of freezing if cold weather is encountered on the prairies. There is concern about the availability of containers. Containers must be insured to guard against theft in some countries. And there is always the financial

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risk in ensuring payment across international borders.'

While the complications are formidable, the feasibility is simply a matter of price and cost. We do not have prices of seed potatoes for many overseas markets, but an interest has been expressed. It is possible with the recent high prices of seed potatoes that overseas shipments could have occurred this past year if there was sufficient seed available of a suitable variety.

The federal government has an agricultural industry marketing strategy (AIMS) which can help with specialty crops. It requires the united efforts of growers across provincial borders. Alberta and Saskatchewan may wish to pursue such a strategy. Manitoba seed potato growers have had reservations. Not only are they further from the coast, but the expansion of processing in that province makes local sales the preferred market."

Table 3 shows the cost of a possible export movement of seed potatoes from Saskatoon for the fall of 1996. A fairly large shipment would be required to save on transportation costs. Some of the larger growers may not be interested in such an export movement at the moment, because higher prices are available in the U.S. In a few years this supplemental market may become more attractive.

#### Costs of Production

Table 4 gives an estimate of the costs of potato production for seed, table, and processing (Manitoba)." Costs are rising each year. The seed potato estimate reflects the Saskatchewan Water Corporation budget for 1996 (using Russet Norkotah, Elite II generation). Relatively minor changes have been made to compare this to the production of Red Norlands for the table market (Elite III generation). A marketing margin of \$12.00 per tonne is used for seed potatoes, and a margin of \$22.00 per tonne for table potatoes.

The returns for seed potatoes, at least this year, appear to be considerably higher than for table or processing potatoes. In fact by comparing with estimated budgets for various other irrigation crops, potatoes provide the highest return on investment in all three prairie provinces. Seed potatoes are the best of the options available.

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<sup>9</sup>The Export Development Agency can assist in payments to **some** countries. Otherwise growers must have a reputable buyer.

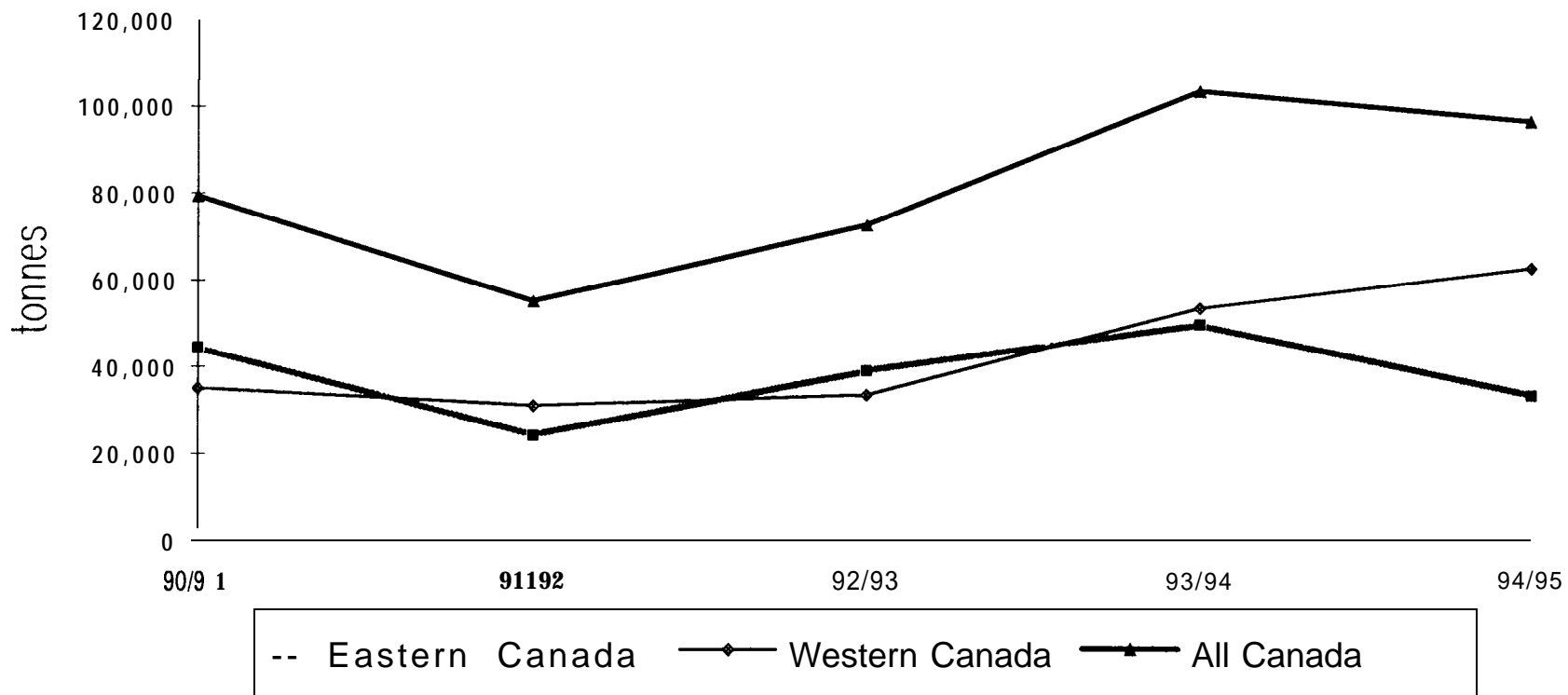
<sup>10</sup>A federal program called PEMD (Program for Export Market Development) can also help in the promotion of agricultural products.

"The Manitoba numbers are an estimate. More official numbers have been gathered, but have not been released yet.

Table 1  
 Comparison of Processing- Costs  
 Northern Vigour (Alberta Data)

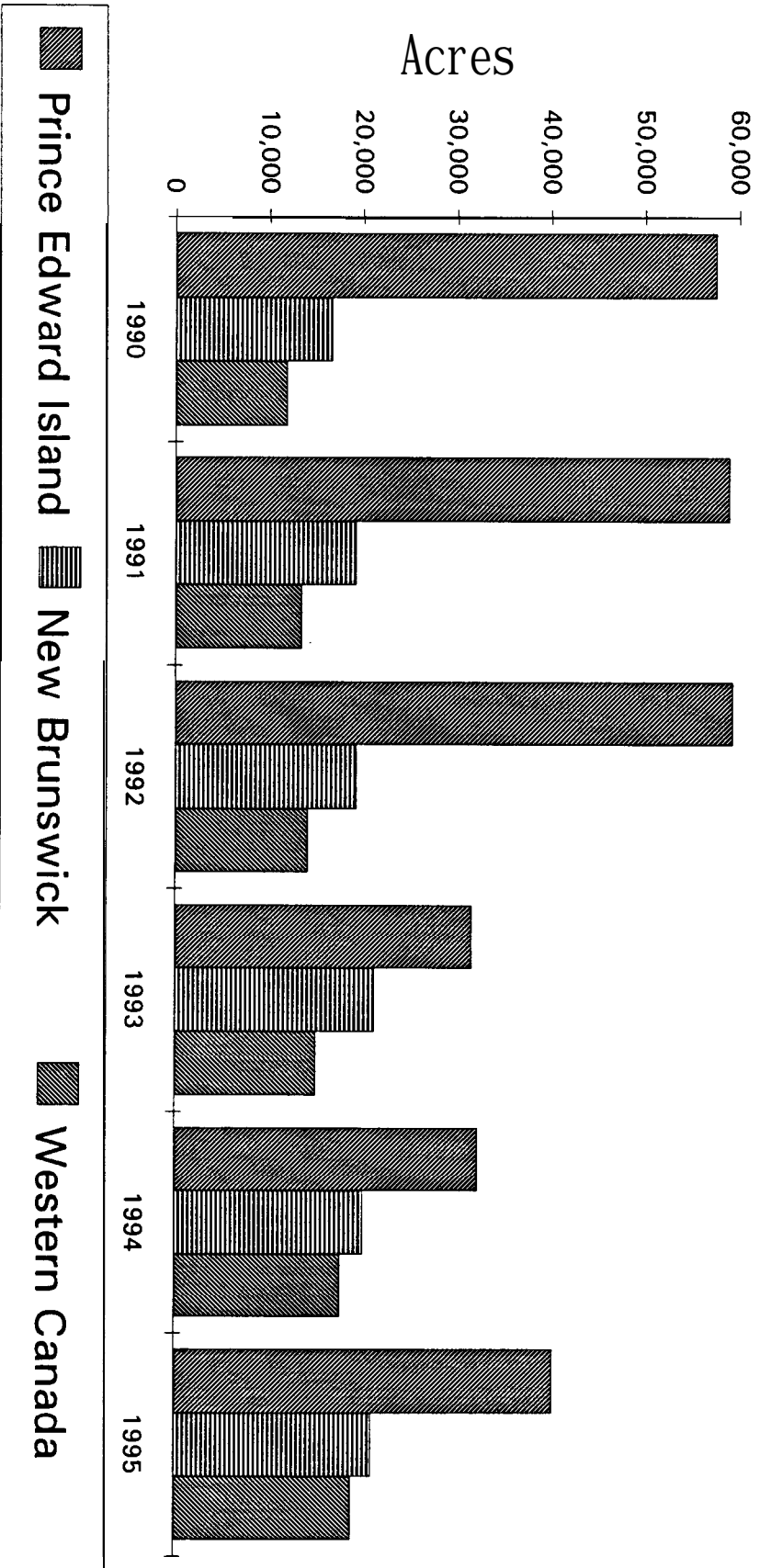
	Regular Yields	Northern Vigour
Fixed Costs	592	592
Seed	0	178
Variable Costs	732	924
Total Costs	1324	1516
Yield (t/acre)	13.5	15.5
Price (\$/t)	141	141
Returns/Acre	1898	2182
Cost per tonne	98	98
Return on Investment	13%	15%

### Figure 4 - Canadian Seed Potato Exports to the U.S.

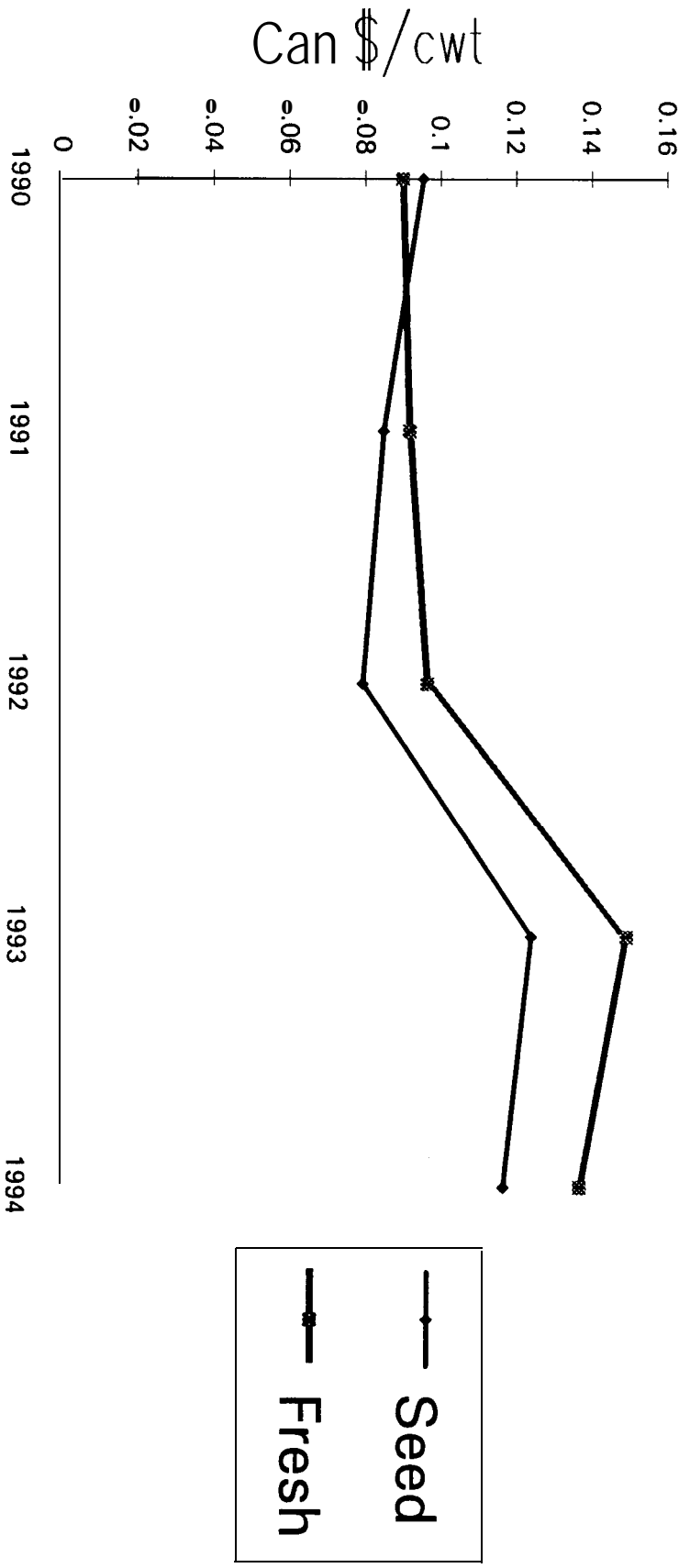




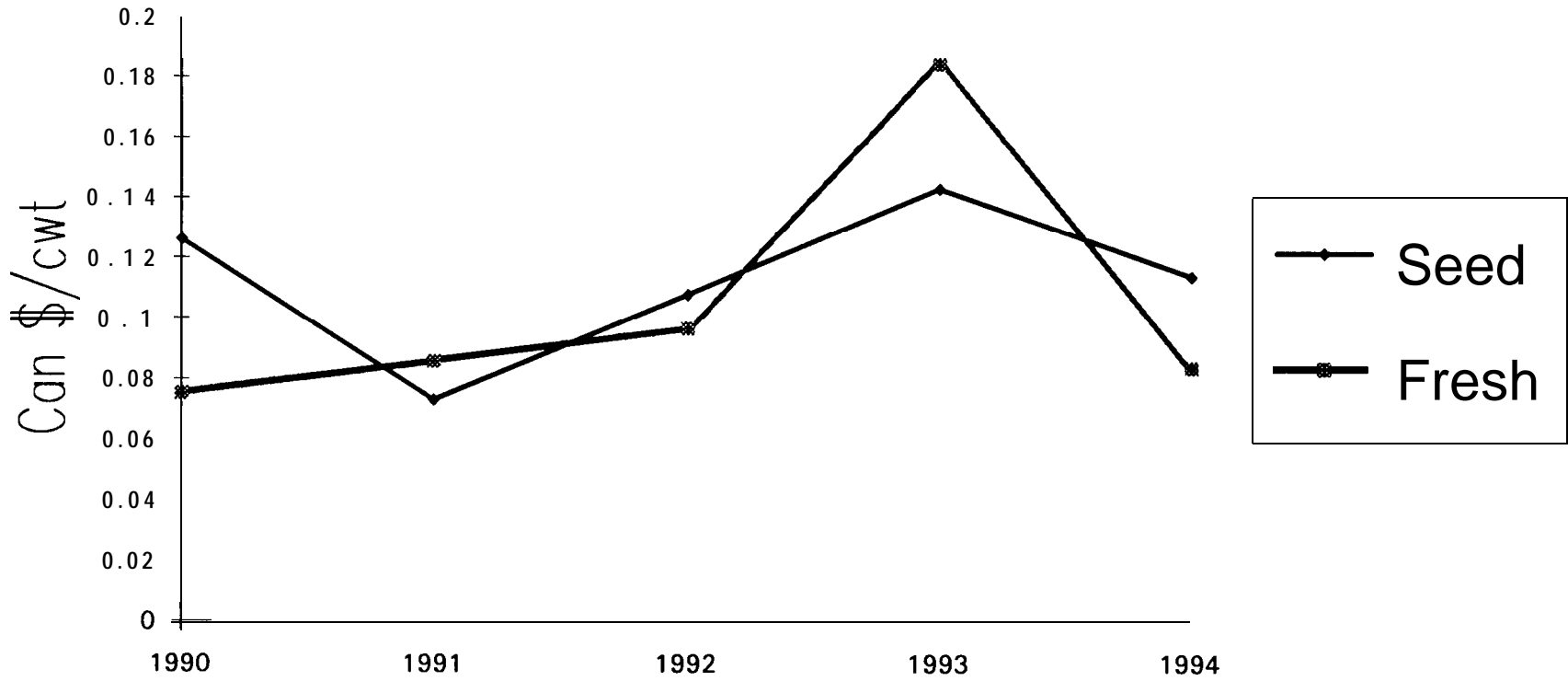
**Figure 5 - Canadian Seed Potato Area**



**Figure 6 - Export Prices for Eastern Canadian Seed and Fresh Potatoes**



**Figure 7 - Export Prices for Western Canadian Seed and Fresh Potatoes**



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**Table 2**

**U.S. Seed Potato Usage  
000 tonnes**

	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>
<b>U.S. Seed</b>	<b>1462</b>	<b>1437</b>	<b>1607</b>	<b>1481</b>	<b>1571</b>
<b>Canadian</b>	<b>79</b>	<b>55</b>	<b>73</b>	<b>104</b>	<b>97</b>
<b>Total</b>	<b>1542</b>	<b>1492</b>	<b>1680</b>	<b>1585</b>	<b>1668</b>
<b>% of U.S. Seed From Canada</b>	<b>5.1%</b>	<b>3.7%</b>	<b>4.3%</b>	<b>6.6%</b>	<b>5.8%</b>

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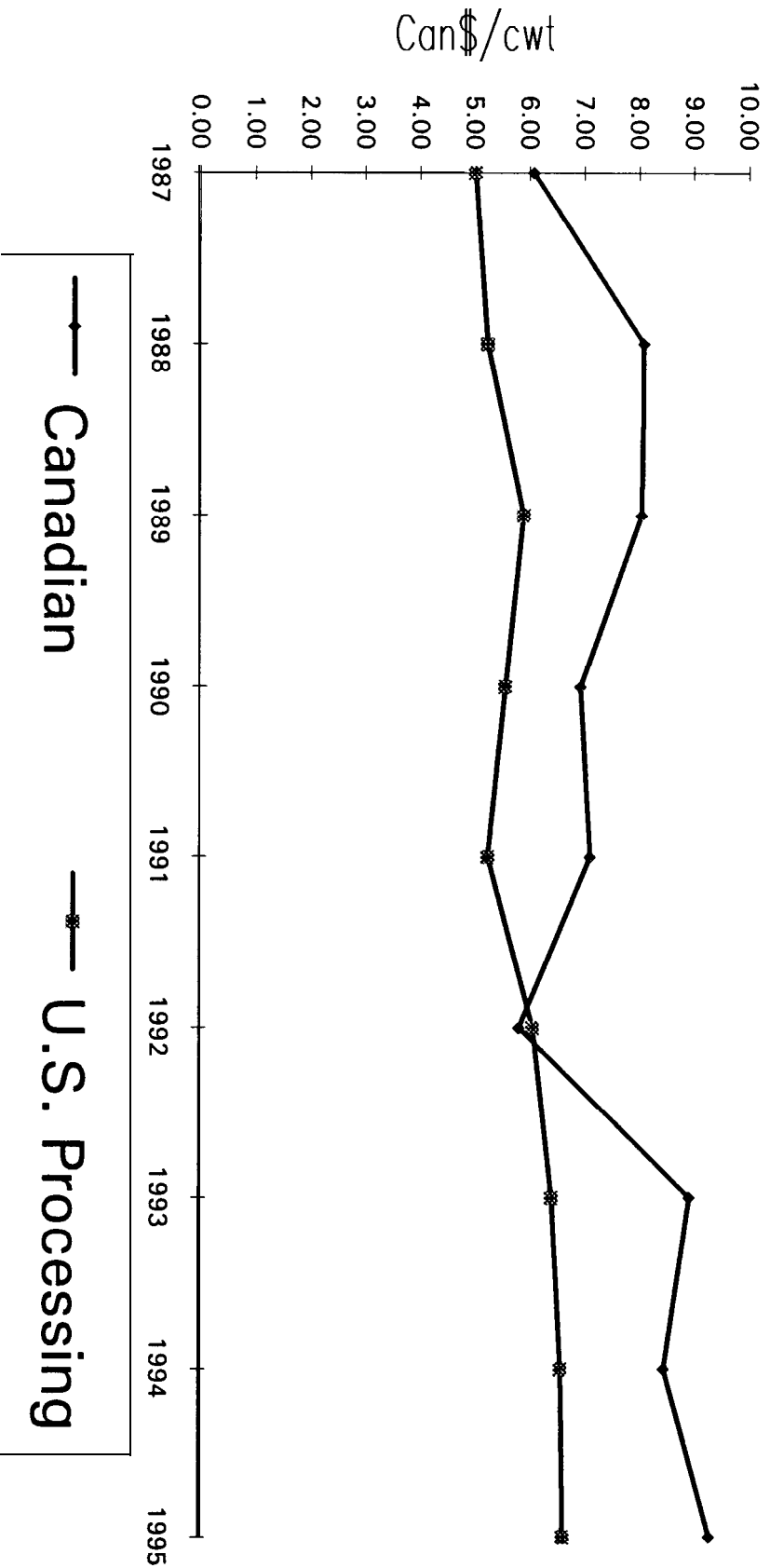
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figure 8 - Potato Prices



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**Table 3**

**Can\$/cwt**

**Cost of Shipping Potatoes to the Orient**

	<b>(1) Saskatoon to Taiwan, Keelung</b>	<b>(2) Saskatoon to China, Xingang</b>
<b>Cost of Production</b>	<b>7.5</b>	<b>7.5</b>
<b>Profit Margin</b>	<b>3.8</b>	<b>3.8</b>
<b>Freight to Tacoma, Wash</b>	<b>4.5</b>	<b>4.5</b>
<b>FOB West Coast</b>	<b>15.8</b>	<b>15.8</b>
<b>Freight to Unload Port</b>	<b>20.2</b>	<b>24.4</b>
<b>Fuel Adjustment</b>	<b>0.2</b>	<b>0.2</b>
<b>Unload Costs</b>	<b>*</b>	<b>11.8</b>
<b>CIF Destination</b>	<b>36.2</b>	<b>52.2</b>

**\* Unknown**

**Table 4****Costs and Returns For Irrigated Potato Production**

<b>S/acre</b>	<b>Saskatchewan</b>		<b>Manitoba</b>	
	<b>Seed</b>	<b>Table</b>	<b>Processing</b>	
<b>Fixed Costs</b>	<b>677</b>	<b>632</b>	<b>662</b>	
<b>Buildings</b>	<b>180</b>	<b>135</b>	<b>185</b>	
<b>Machinery</b>	<b>277</b>	<b>277</b>	<b>194</b>	
<b>Irrigation</b>	<b>66</b>	<b>66</b>	<b>103</b>	
<b>Variable Costs</b>	<b>1197</b>	<b>985</b>	<b>886</b>	--
<b>Seed</b>	<b>573</b>	<b>373</b>	<b>155</b>	
<b>Total Costs</b>	<b>1874</b>	<b>1617</b>	<b>1548</b>	
<b>Yield (t/acre)</b>	<b>11.7</b>	<b>11.2</b>	<b>11.9</b>	
<b>Marketing Costs</b>	<b>12</b>	<b>22</b>	<b>0 (\$/t)</b>	--
<b>Producer Price</b>	<b>230</b>	<b>176</b>	<b>1 54 (\$/t)</b>	--
<b>cents/lb</b>	<b>10.5</b>	<b>8</b>	<b>7</b>	
<b>Cost per pound</b>	<b>7.3</b>	<b>6.6</b>	<b>5.9</b>	
<b>Returns/acre</b>	<b>2696</b>	<b>1975</b>	<b>1836</b>	
<b>Return on</b>				
<b>Investment</b>	<b>14%</b>	<b>7%</b>	<b>5%</b>	

**Costs and Returns for Irrigated Potato Production - Saskatchewan/Manitoba**

	Saskatchewan - Investment cost	Seed Annual cost	Saskatchewan-Table Investment Cost	Table Annual Cost	Manitoba - Investment Cost	Processing Annual Cost
<b>Fixed Costs</b>						
Interest @ 8%						
Land (No dep'n)	1050	84	1050	84	1250	100
Buildings (25 yrs)	1504	180	1128	135	1543	185
Machinery (10 yrs)						
Tractor/tillage	150	27	150	27	222	40
Other	1387	250	1387	250	858	154
Irrigation (15 yrs)	451	66	451	66	700	103
Taxes	10	10	10	10	20	20
Management	60	60	60	60	60	60
<b>Total Fixed Costs</b>	<b>4612</b>	<b>677</b>	<b>4236</b>	<b>632</b>	<b>4653</b>	<b>662</b>
<b>Variable Costs</b>						
Seed/Land Prep		573		373		155
Fertilizer		85		85		109
Weed Control		48		48		50
Disease Control		51		51		80
Insect Control		10		10		20
Fuel		40		40		63
Repairs		17		17		130
Utilities		25		25		29
Labor		270		270		125
Custom Work		10		10		75
Operating Interest		68		56		50
<b>Total Variable Costs</b>	<b>1197</b>	<b>1197</b>	<b>985</b>	<b>985</b>	<b>886</b>	<b>886</b>
<b>Total Fixed and Variable Costs</b>	<b>5809</b>	<b>1874</b>	<b>5221</b>	<b>1617</b>	<b>5539</b>	<b>1548</b>
<b>Yield (t/acre)</b>		<b>13</b>		<b>14</b>		<b>14</b>
<b>Loss in Storage</b>		<b>10%</b>		<b>20%</b>		<b>15%</b>
<b>Market Yield</b>		<b>11.7</b>		<b>11.2</b>		<b>11.9</b>
<b>Market Price (\$/t)</b>		<b>242.44</b>		<b>198.36</b>		<b>154.28</b>
<b>Marketing Costs</b>		<b>11.97</b>		<b>22.04</b>		<b>0.00</b>
<b>Producer Price (\$/t)</b>		<b>230.47</b>		<b>176.32</b>		<b>154.28</b>
(cents/lb)		<b>10.46</b>		<b>8.00</b>		<b>7 . 0 0</b>
<b>Returns S/Acre</b>		<b>2696</b>		<b>1975</b>		<b>1836</b>
<b>Cost (\$/tonne)</b>		<b>160.17</b>		<b>144.37</b>		<b>130.11</b>
<b>Cost (cents/lb)</b>		<b>7.27</b>		<b>6.55</b>		<b>5.90</b>
<b>Return on Investment</b>		<b>14%</b>		<b>7%</b>		<b>5%</b>

Source: Saskatchewan Water Corporation, Irrigation Handi-Facts, 1996; The Western Producer, "Expenses Wear Hole in Pockets of Manitoba Potato Producers", January 18, 1996, quoting Don Kroeker; other costs estimated by using data for potato production from Alberta Agriculture and the Ontario Ministry of Agriculture and Food; Seed potato prices courtesy of The Alberta Seed Potato Growers' Association

Prepared by: Harvey Clark, Saskatchewan Irrigation Development Centre, February 1996