HISTORY OF THE STRAWBERRY BREEDING PROGRAM OF AGRICULTURE AND AGRI-FOOD CANADA IN QUEBEC

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- 1. INTRODUCTION
- 2. PAST AND PRESENT ACHIEVEMENTS
- 3. REFERENCES

1. INTRODUCTION

The second largest natural resource-based industry in Canada is the agricultural sector and horticultural production, and fruit crops play a major role (http://www.agr.gc.ca/misb/hort/home_e.php). Canada imports several fruits, including strawberry because of its short growing season. In northern areas, the season is especially short and there is a lack of adapted cultivars suitable for these climates. Importation includes more than 40,000 tons of strawberries annually at a cost of more than 9 million Canadian dollars, with fruit received from the USA, Chile and Mexico (Statistics Canada, 2003). Breeding cultivars adapted to local conditions, especially for regions like northern Quebec and Ontario where the winter climate is harsh but the summers are excellent for strawberry culture, could provide opportunity for local production. Quebec and Ontario are the leading provinces in strawberry production with over 15,000 tons produced annually (Table 1).

Table 1. Trends in Canadian strawberry production (metric tonnes) and farm gate value (FGV, \$ CAD) since 1996.

Provinces		1996	1997	1998	1999	2000	2001
Ontario	Production	8,399	9,081	8,829	8,981	7,258	7,450
	FGV	14,073	17,350	17,430	17,360	17,300	17,500
Quebec	Production	10,433	10,641	9,798	9,571	9,886	8,959
	FGV	15,180	16,375	15,050	15,950	15,350	16,000
Canada	Production	28,571	26,861	27,329	26,350	24,063	23,737
	FGV	48,417	49,196	49,705	49,885	49,325	48,410

Source: Statistics Canada

In recent years, strawberry has had the fourth highest farm gate value (FGV) for fruit, after apple, blueberry and grape (Table 2). Annual FGV has remained relatively flat since 1995 at approximately \$50 million. "Pick-your-own" operations are popular when close to urban areas. Strawberries are grown commercially in every province, however, Quebec (38%) and Ontario (31%) have the largest production followed by British Columbia (15%) (Table 1). The area of production slowly increased from 1991 to 1995, but retracted to about 5,000 hectares in 1996, and has risen slightly to 5,400 hectares in 2001. There is very little processing of Canadian strawberries.

Table 2. Major horticultural fruit products (over \$35 million farm gate value) compared to strawberry production.

Products	1998	1999	2000	2001
Apples	148	209	197	155
Blueberries	57	113	104	85
Grapes	55	70	63	72
Strawberries	50	50	49	48

Source: Statistics Canada

Canada's imports of fresh and processed strawberries have increased steadily reflecting the increased use of fruit products by consumers (Table 3). Fresh imports were valued at \$122 million in 2001, a sharp increase of 16% over 1999. Frozen strawberry imports reached a record high of \$26 million in 1999, but decreased to \$23 million in 2001. Both fresh and frozen imports originate mostly from the USA and Mexico. Canadian exports of fresh and processed strawberries are relatively small and accounts for about \$1 million in 2001 (http://www.agr.gc.ca/misb/hort/home_e.php).