# Greenhouse, <br> Sod and Nursery <br> Industries 



2009

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## Statistics Canada

Agriculture Division
Crops Section

## Greenhouse, Sod and Nursery Industries

2009

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May 2010
Catalogue no. 22-202-X
ISSN 1481-9872
Frequency: Annual
Ottawa
Cette publication est également disponible en français.

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. not available for any reference period
.. not available for a specific reference period
... not applicable
0 true zero or a value rounded to zero
0 s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p preliminary
r revised
x suppressed to meet the confidentiality requirements of the Statistics Act
E use with caution
F too unreliable to be published

## Acknowledgements

The following staff members have contributed to this publication:
Suzanne Danis, Serge DesRoches, Lyn Miljour, Sheba Mirza, Willa Peters-Langlois, Rosaria Spataro and Leah St.Michael.

This publication was prepared under the direction of:

- Marco Morin, Chief, Crops Section
- Lorie Shinder, Head, Horticulture Unit

Special thanks are extended to Dawn Patterson and Annick Turcotte from the Collection Planning and Management Division, the staff from the Collection Systems and Infrastructure Division, Wayne Armstrong and Wendell Pitt from the Survey Processing Unit in Agriculture Division, Kimberley Coleman and Jean-Sébastien Provençal from the Business Survey Methods Division as well as the CANSIM and Smart publishing teams from Dissemination Division for their support and contribution to this publication.

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## Highlights

## Overall trends

In Canada, the total greenhouse area increased in 2009. This situation was accompanied by an increase in production and sales of greenhouse products. The nursery sector also experienced an increase in sales from 2008.

In 2009, the total greenhouse area was 22.9 million square metres, compared with 21.8 million square metres in 2008. Sales of greenhouse products increased by $10.4 \%$ amounting to approximately $\$ 2.4$ billion in 2009. After a decrease in 2008, flower and plant production and sales have returned to historical levels in 2009.

As for total operating expenses, the cost increased by $9.0 \%$ reaching $\$ 2.1$ billion in 2009. Labour costs totalled $\$ 578$ million and represented $27.2 \%$ of total operating expenses for greenhouses. The total number of seasonal and permanent greenhouse workers increased to 38,565 in 2009, a $2.2 \%$ increase over 2008.

In 2009, sales of nursery products totalled $\$ 658$ million, compared with $\$ 635$ million in 2008, an increase of $3.7 \%$. Regarding sod farms, sales of cultivated sod rose by 8.7\%, reaching $\$ 142$ million in 2009.

## Chart 1

Sales progression of greenhouse and nursery products, Canada, 2004-2009


## Flowers and plants

The survey revealed that production of flowers and plants was responsible for $48.9 \%$ of total greenhouse area and represented $60.5 \%$ of total sales of greenhouse products in 2009. Total sales of flowers and plants amounted to $\$ 1.4$ billion, compared with $\$ 1.3$ billion in 2008, which is an increase of $12.9 \%$. Resale of flowers and plants hold $18.6 \%$ of total flower and plant sale shares.

Production of potted flowers and plants ranked first, with sales of $\$ 674$ million. Sales of ornamental bedding plants and cut flowers reached $\$ 176$ and $\$ 138$ million respectively. Ornamental bedding plant sales decreased by $20.9 \%$ while vegetable bedding plant sales increased by 31.7\% between 2008 and 2009.

In 2009, Canadian greenhouses produced more than 218 million potted flowers and plants, 261 million cut flowers, 498 million ornamental bedding plants, 564 million vegetable bedding plants and 96.0 million cuttings.

Costs for specialized producers of greenhouse flowers and plants were more than $\$ 1.0$ billion. Labour costs represented $30.1 \%$ of total costs for greenhouses specializing in the production of flowers and plants. Labour costs were comparable between 2008 and 2009, however the total number employees decreased by $3.9 \%$, representing 23,405 employees.

## Greenhouse Vegetables

Between 2008 and 2009, sales of greenhouse fruits and vegetables increased by $6.8 \%$ which amounted to $\$ 929$ million. Ontario production represented $60.0 \%$ of sales of greenhouse fruits and vegetables in Canada. Sales of tomatoes increased by $13.1 \%$ to almost $\$ 434$ million. This growth was observed mainly in British Columbia and Ontario. Sales of peppers, cucumbers and lettuce reached $\$ 230$ million, $\$ 227$ million and $\$ 21.9$ million respectively. Despite an increase of $7.6 \%$ in the production of peppers, sales went down by $2.4 \%$ in 2009. Imports of Holland peppers at low prices had a negative impact for Canadian producers.

Total operating costs for specialized fruit and vegetable producers reached $\$ 853$ million in 2009. Other operating expenses which included interest, property taxes, insurance, packaging, repairs and labour contracts was estimated at $\$ 285$ million which represented one third of the total costs. Labour costs, the principal expenditure item, totalled $\$ 204$ million, accounting for one quarter of total operating expenditures.

## Nurseries and sod farms

From 2008 to 2009, nursery sales have increased by $3.7 \%$ to reach $\$ 658$ million. The total sales of nursery products were represented by Ontario (46.8\%), British Columbia (29.9\%) and Quebec (11.8\%). Resale activities of nursery products, for example, the sale of products not grown on site, represented $24.2 \%$ of total sales. Nursery products were principally sold to landscape contractors (24.5\%), garden centres (22.4\%), mass market chain stores (14.4\%) as well as direct sales ( $9.9 \%$ ).

The survey provides information on nursery plants produced in the field and in containers. The different categories of cultivated plants appear here in decreasing order of importance in terms of volume: tree seedlings, fruit-bearing plants and shrubs, conifers, perennials and deciduous shrubs (including rose bushes). Tree seedlings produced in both greenhouses and nurseries reached 387 million trees.

In 2009, total costs for producers of nursery operators increased by $13.3 \%$ reaching $\$ 579$ million. Labour costs were estimated at $\$ 218$ million and represented $37.6 \%$ of total operating costs. In 2009, nurseries employed 14,260 seasonal and permanent workers, of this total $71.5 \%$ were seasonal workers.

In Canada, nearly 200 farms were involved in sod cultivation. The total sod area increased by $6.0 \%$ to 23,933 hectares. A total of 9,834 hectares of sod were sold in 2009. Alberta, Ontario and Quebec are among the main sod-producing provinces. In 2009, total sales of sod, including resale activities, rose to $\$ 151$ million which is an increase of $13.9 \%$ compared to 2008.

In 2009, costs for sod producers increased by 8.0\% reaching $\$ 114$ million. The principal expenditure was other operating costs which amounted to $\$ 66.0$ million. This estimate included expenditures for fertilizer, pesticides, property taxes, interest, insurance, repairs, fuel, and electricity. Labour costs totalled $\$ 43.3$ million. The sod sector employed 1,835 workers, of whom three quarters were seasonal workers.

## Related products

## Selected publications from Statistics Canada

| $21-010-X$ | Net Farm Income - Agriculture Economic Statistics |
| :--- | :--- |
| $21-011-X$ | Farm Cash Receipts - Agriculture Economic Statistics |
| $21-206-X$ | Statistics on Income of Farm Operators |
| $22-003-X$ | Fruit and Vegetable Production |
| $22-008-U$ | Canadian Potato Production - Updates |
| $23-221-X$ | Production and Value of Honey and Maple Products |

## Selected CANSIM tables from Statistics Canada

| $001-0006$ | Production and value of greenhouse vegetables, annual |
| :--- | :--- |
| $001-0046$ | Estimates of greenhouse total area and months of operation, annual |
| $001-0047$ | Estimates of specialized greenhouse operations, greenhouse area, and months of operation, <br> annual |
| $001-0048$ | Production and sale of greenhouse flowers and plants by category, annual |
| $001-0049$ | Production of potted plants, cut flowers, cuttings, by variety and tree seedlings, annual |
| $001-0050$ | Channels of distribution for horticulture product sales and resales, annual |
| $001-0051$ | Total value of greenhouse products, annual |
| $001-0052$ | Greenhouse producers' operating expenses, annual |
| $001-0053$ | Specialized greenhouse producers' operating expenses, annual |
| $001-0054$ | Total greenhouse, sod and nursery employees, annual |
| $001-0055$ | Total specialized greenhouse employees, annual |
| $001-0056$ | Estimates of nursery area, annual |
| $001-0057$ | Nursery tree and plant production, annual |
| $001-0058$ | Nursery stock sales and resales, annual |
| $001-0059$ | Channels of distribution for nursery product sales and resales, annual |


| $001-0060$ | Estimates of sod area, sales and resales, annual |
| :--- | :--- |
| $001-0061$ | Nursery and sod producers' operating expenses, annual |

## Selected surveys from Statistics Canada

## Statistical tables

Table 1
Greenhouse total area and months of operation

|  | Total |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

1. Includes all other types of enclosed protection used for growing plants, such as rigid insulation, mine shafts, barns and shelters.

Note(s): Includes greenhouse vegetables and greenhouse flowers.

Table 2
Specialized greenhouse vegetable and fruit producers' area

|  | Total greenhouses | Area |  |  |  |  |  |  |  | Total months of operation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total greenhouse area |  | Glass |  | Rigid plastic ${ }^{1}$ |  | Poly-film |  |  |
|  | number | square feet | square metres | square feet | square metres | square feet | square metres | square feet | square metres | number |
| 2008 |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | 45 | F | F | X | X | 31,000 | 2,880 | F | F | 310 |
| Quebec | 170 | 6,533,500 | 606,982 | F | F | F | F | 4,346,660 | 403,818 | 1,320 |
| Ontario | 215 | 79,476,204 r | 7,383,578 r | 18,710,317 r | 1,738,245 r | 10,869,200 | 1,009,781 | 49,896,687 r | 4,635,552 r | 2,225 r |
| Prairie provinces | 95 | 3,773,700 | 350,588 | 74,500E | 6,921E | F | F | 3,228,300 | 299,919 | 825 |
| British Columbia | 105 | 27,825,300 r | 2,585,054 r | 25,499,500 r | 2,368,980 r | 543,400 r | 50,483 r | F | F | 900 |
| Canada | 630 | 118,121,104 r | 10,973,805 r | 46,222,387 r | 4,294,198 ${ }^{\text {r }}$ | 12,284,770 r | 1,141,292 r | 59,613,947 r | 5,538,315 ${ }^{\text {r }}$ | 5,580 r |
| 2009 |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | 30 | 472,130 E | E 43,862E | F | F | X | X | 333,460E | 30,979E | 199 |
| Quebec | 190 | 8,014,680 | 744,588 | F | F | F | F | 4,578,950 | 425,398 | 1,487 |
| Ontario | 240 | 81,411,390 | 7,563,362 | 23,067,610 | 2,143,050 | 6,938,130 | 644,573 | 51,405,650 | 4,775,739 | 2,840 |
| Prairie provinces | 80 | 4,521,950 | 420,103 | x | x | F | F | 4,345,160 | 403,678 | 730 |
| British Columbia | 105 | 28,256,455 | 2,625,109 | 26,198,920 | 2,433,958 | F | F | 1,894,495E | 176,004E | 920 |
| Canada | 645 | 122,676,605 | 11,397,025 | 51,689,370 | 4,802,098 | 8,429,520 | 783,128 | 62,557,715 | 5,811,799 | 6,176 |

1. Includes all other types of enclosed protection used for growing plants, such as rigid insulation, mine shafts, barns and shelters.

Table 3-1
Area, production and value - Greenhouse tomatoes

|  | Area |  | Production |  | Farm gate value |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | square feet | square metres | pounds | kilograms | dollars |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 18,550E | 1,723E | F | F | F |
| Prince Edward Island | x | x | x | X | X |
| Nova Scotia | F | F | F | F | F |
| New Brunswick | F | F | F | F | F |
| Quebec | 5,787,900 | 537,713 | 43,412,800E | 19,691,715E | 51,854,090E |
| Ontario | 32,501,000 r | 3,019,440 r | 300,903,000 r | 136,487,305 r | 216,579,000 r |
| Manitoba | 59,500 | 5,528 | F | F | F |
| Saskatchewan | 45,000 | 4,181 | 200,000 | 90,718 | 390,000 |
| Alberta | 920,000 r | 85,471 r | 8,870,500 r | 4,023,591 r | 8,188,700 r |
| British Columbia | 11,849,700 | 1,100,873 | 118,481,250 | 53,742,191 | 100,442,300 r |
| Canada | 51,865,500 r | 4,818,461 r | 477,412,350 ${ }^{\text {r }}$ | 216,550,599 r | 383,670,290 r |
| 2009 |  |  |  |  |  |
| Newfoundland and Labrador | 16,920 | 1,572 | 13,300E | 6,033E | 16,590E |
| Prince Edward Island | F | F | F | F | F |
| Nova Scotia | F | F | F | F | F |
| New Brunswick | 32,800 | 3,047 | 124,000E | 56,245E | 145,000 E |
| Quebec | 5,540,120 | 514,694 | 45,141,380 E | 20,475,786 E | 55,669,850E |
| Ontario | 34,072,190 | 3,165,409 | 313,943,770 | 142,402,499 | 241,304,510 |
| Manitoba | 45,190 | 4,198 | 185,120 | 83,969 | 330,350 |
| Saskatchewan | F | F | F | F | F |
| Alberta | 1,000,000 | 92,903 | 10,809,225 | 4,902,982 | 10,232,050 |
| British Columbia | 12,150,690E | 1,128,836E | 132,268,190E | 59,995,842 E | 120,644,150 E |
| Canada | 53,510,860 | 4,971,319 | 507,497,465 | 230,196,978 | 434,018,490 |

Table 3-2
Area, production and value - Greenhouse cucumbers

|  | Area |  | Production | Farm gate value |
| :---: | :---: | :---: | :---: | :---: |
|  | square feet | square metres | dozens | dollars |
| 2008 |  |  |  |  |
| Newfoundland and Labrador | x | x | x | x |
| Prince Edward Island | X | X | x | x |
| Nova Scotia | F | F | F | F |
| New Brunswick | F | F | F | F |
| Quebec | 737,900 | 68,553 | 226,000 | 1,902,000 |
| Ontario | 23,387,000 r | 2,172,722 r | 22,736,000 r | 150,658,000 r |
| Manitoba | F | F | F | F |
| Saskatchewan | 35,500 | 3,298 | 20,000 | 204,000 E |
| Alberta | 1,985,150 | 184,426 | 2,024,700 r | 17,922,550 r |
| British Columbia | 4,795,000 | 445,470 | 4,975,500 | 40,446,240 r |
| Canada | 31,075,610 r | 2,887,017 r | 30,101,530 r | 212,215,580 r |
| 2009 |  |  |  |  |
| Newfoundland and Labrador | 1,430 E | 133 E | 170 E | 2,240 E |
| Prince Edward Island | $\times$ | $\times$ | $\times$ | x |
| Nova Scotia | F | F | F | F |
| New Brunswick | F | F | F | F |
| Quebec | 746,030 | 69,308 | 205,010 E | 1,853,400 |
| Ontario | 24,420,340 | 2,268,723 | 23,651,280 | 163,240,743 |
| Manitoba | 7,220 | 671 | 3,660 | 36,140 E |
| Saskatchewan | F | F | F | F |
| Alberta | 1,700,000 | 157,935 | 1,800,000 | 15,500,000 |
| British Columbia | 4,339,890 | 403,189 | F | 44,045,090 |
| Canada | 31,487,320 | 2,925,266 | 31,058,405 | 226,627,223 |

Table 3-3
Area, production and value - Greenhouse lettuce

|  | Area |  | Production | Farm gate value |
| :---: | :---: | :---: | :---: | :---: |
|  | square feet | square metres | heads | dollars |
| 2008 |  |  |  |  |
| Newfoundland and Labrador | X | X | x | X |
| Prince Edward Island | x | x | x | x |
| Nova Scotia | 13,300 | 1,236 | 3,400 | 13,400 |
| New Brunswick | F | F | F | F |
| Quebec | 1,229,400 E | 114,215 E | F | F |
| Ontario | 263,000 Er | 24,433 Er | x | x |
| Manitoba | 0 | 0 | 0 | 0 |
| Saskatchewan | 1,850 | 172 | 9,000 E | 16,000 E |
| Alberta | F | F | F | F |
| British Columbia | F | F | F | F |
| Canada | 1,666,180 Er | 154,793 Er | F | 20,052,775 Er |
| 2009 |  |  |  |  |
| Newfoundland and Labrador | X | X | x | x |
| Prince Edward Island | F | F | F | F |
| Nova Scotia | 19,360 E | 1,799 E | F | F |
| New Brunswick | x | $\times$ | x | $\times$ |
| Quebec | F | F | F | F |
| Ontario | 308,940 E | 28,701 E | F | 4,021,740 E |
| Manitoba | 4,500 E | 418 E | F | F |
| Saskatchewan | F | F | F | x |
| Alberta | F | F | F | F |
| British Columbia | F | F | F | F |
| Canada | 1,975,730 | 183,551 | 20,051,570 E | 21,993,260 |

Table 3-4
Area, production and value - Greenhouse peppers

|  | Area |  | Production |  | Farm gate value |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | square feet | square metres | pounds | kilograms | dollars |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 0 | 0 | 0 | 0 | 0 |
| Prince Edward Island | X | X | X | X | X |
| Nova Scotia | 20,000 E | 1,858 E | F | F | 19,900 E |
| New Brunswick | F | F | F | F | F |
| Quebec | F | F | F | F | F |
| Ontario | 22,328,000 r | 2,074,338 r | 116,872,000 r | 53,012,247 r | 149,563,000 r |
| Manitoba | F | F | F | F | F |
| Saskatchewan | $12,000 \mathrm{E}$ | 1,115 E | $34,000 \mathrm{E}$ | 15,422 E | F |
| Alberta | 682,200 | 63,378 | 3,391,800 | 1,538,495 | 5,744,450 |
| British Columbia | 13,200,000 r | 1,226,320 r | 62,747,500 r | 28,461,787 r | 80,128,250 r |
| Canada | 36,309,090 r | 3,373,223 r | 183,230,490 r | 83,111,952 r | 235,807,000 r |
| 2009 |  |  |  |  |  |
| Newfoundland and Labrador | 2,740 E | 255 E | 6,720 E | 3,048 E | F |
| Prince Edward Island | X | X | X | X | X |
| Nova Scotia | 8,050 E | 748 E | 4,520 E | 2,050 E | F |
| New Brunswick | 3,000 E | 279 E | F | F | F |
| Quebec | F | F | F | F | F |
| Ontario | 22,885,600 | 2,126,141 | 122,348,220 | 55,496,219 | 139,025,390 |
| Manitoba | 4,120 E | 383 E | 5,290 | 2,400 | 7,960 E |
| Saskatchewan | F | F | F | F | F |
| Alberta | 900,000 | 83,613 | 4,850,000 | 2,199,923 | 6,500,000 |
| British Columbia | 13,400,000 | 1,244,900 | 69,700,000 | 31,615,388 | 84,200,000 |
| Canada | 37,278,160 | 3,463,253 | 197,150,380 | 89,425,908 | 230,191,380 |

Table 4
Vegetable and fruit sales distribution, 20091

|  | Domestic wholesalers | Mass market chain stores | Other greenhouses | Exported | Direct ${ }^{2}$ sales to the public | Other channels | Total sales |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | dollars |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | X | 0 | 0 | 35,720 | x | 209,180 E |
| Prince Edward Island | x | X | 0 | 0 | F | x | F |
| Nova Scotia | F | F | 0 | 0 | F | x | F |
| New Brunswick | 0 | 0 | 0 | 0 | x | x | 231,520 E |
| Quebec | 23,209,160 | 38,548,400 E | x | 9,959,195 E | 3,762,345 | x | 76,645,340 |
| Ontario | 401,041,330 | 29,109,332 | F | 21,221,072 E | F | 88,652,530 | 557,604,840 |
| Manitoba | x | x | x | x | 239,100 E | x | 557,810 |
| Saskatchewan | 0 | x | x | 0 | F | x | F |
| Alberta | 21,382,050 | F | X | 0 | F | 5,327,000 E | 33,777,050 |
| British Columbia | 83,622,450 | 55,742,060 | F | F | 1,994,540 E | 40,109,290 E | 251,338,760 |
| Canada | 534,876,330 | 127,845,172 | 19,878,286 E | 94,665,337 E | 15,551,605 | 136,076,690 | 928,981,000 |

1. Before sales tax.
2. Includes roadside stands and owner-operated retail outlets.

Table 5
Specialized greenhouse flower and plant producers' area

|  | Total greenhouses | Area |  |  |  |  |  |  |  | Total months of operation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total greenhouse area |  | Glass |  | Rigid plastic ${ }^{1}$ |  | Poly-film |  |  |
|  | number | square feet | square metres | square feet | square metres | square feet | square metres | square feet | square metres | number |
| 2008 |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | 170 | 3,527,600 | 327,725 | F | F | 125,600 | 11,669 | 3,113,000 | 289,207 | 1,050 |
| Quebec | 440 | 15,022,680 | 1,395,652 | F | F | F | F | 12,524,100 | 1,163,526 | 3,005 |
| Ontario | 885 | 45,795,540 | 4,254,543 | 14,158,390 | 1,315,357 | 5,282,800 | 490,788 | 26,354,350 | 2,448,398 | 7,710 |
| Prairie provinces | 445 | 10,813,850 | 1,004,639 | 440,500 E | E 40,924E | F | F | 9,364,800 | 870,018 | 2,850 |
| British Columbia | 350 | 18,024,160 r | 1,674,499 r | 7,732,980 r | 718,417 r | 2,191,700 | 203,616 | F | F | 3,190 r |
| Canada | 2,290 | 93,183,830 r | 8,657,057 r | 23,694,700 r | 2,201,309 r | 10,033,400 | 932,133 | 59,455,730 r | 5,523,616 ${ }^{\text {r }}$ | 17,805 r |
| 2009 |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | 170 | 3,905,640 | 362,846 | F | F | F | F | 3,391,610 | 315,091 | 1,068 |
| Quebec | 410 | 15,400,380 | 1,430,742 | 1,271,630 | 118,138E | 1,225,550 | 113,857 | 12,903,200 | 1,198,746 | 2,640 |
| Ontario | 830 | 46,384,820 | 4,309,289 | 13,281,990 | 1,233,937 | 3,387,250 | 314,686 | 29,715,580 | 2,760,667 | 6,560 |
| Prairie provinces | 420 | 11,675,230 | 1,084,664 | 377,360 | 35,058 | 625,720 | 58,131 | 10,672,150 | 991,475 | 2,828 |
| British Columbia | 300 | 17,696,675 | 1,644,074 | 6,819,540 | 633,556 | F | F | 8,995,265 | 835,687 | 2,540 |
| Canada | 2,130 | 95,062,745 | 8,831,614 | 22,047,590 | 2,048,287 | 7,337,350 | 681,662 | 65,677,805 | 6,101,665 | 15,636 |

1. Includes all other types of enclosed protection used for growing plants, such as rigid insulation, mine shafts, barns and shelters.

Table 6
Greenhouse flower and plant production and sales by category

|  | Total potted plants |  | Total cuttings 1 |  | Total cut flowers |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Production | Sales | Production | Sales | Production | Sales |
|  | pots | dollars | number | dollars | number | dollars |
| 2008 |  |  |  |  |  |  |
| Newfoundland and Labrador | 479,310 | 2,346,670 | x | x | x | x |
| Prince Edward Island | 78,050 r | 325,000 r | 0 | 0 | x | x |
| Nova Scotia | F | F | 0 | 0 r | F | F |
| New Brunswick | 2,607,545 | 10,680,600 E | $\times$ | x | x | x |
| Quebec | 43,453,240 r | 107,121,000 | F | 5,019,020 | F | F |
| Ontario | 111,159,564 r | 326,819,900 r | 23,818,730 r | 16,305,990 r | 154,923,520 r | 75,792,100 r |
| Manitoba | F | 14,478,950 E | F | F | x | x |
| Saskatchewan | 1,430,200 | 5,427,800 | 63,800 E | 7,000 | x | x |
| Alberta | 7,564,950 | 33,899,300 | 3,848,800 Er | 2,645,800 | F | F |
| British Columbia | 35,379,660 r | 141,536,800 r | F | 26,373,200 | 76,680,171 | 44,183,885 |
| Canada | 208,209,585 r | 650,711,420 r | 78,419,870 r | 55,515,310 r | 241,260,311 r | 127,343,695 ${ }^{\text {r }}$ |
| 2009 |  |  |  |  |  |  |
| Newfoundland and Labrador | 725,340 | 3,800,500 | 0 | 0 | X | x |
| Prince Edward Island | F | F | 0 | 0 | X | x |
| Nova Scotia | F | 6,668,070 E | 0 | 0 | x | x |
| New Brunswick | F | 8,512,550 E | F | F | F | F |
| Quebec | 40,885,850 | 102,526,400 | F | 5,294,970 | F | F |
| Ontario | 121,383,710 | 351,820,870 | 28,459,370 | x | 174,969,607 | 90,942,860 |
| Manitoba | F | F | F | F | F | F |
| Saskatchewan | 1,770,720 E | 6,780,000 | F | x | 0 | 0 |
| Alberta | 10,633,270 | 40,647,000 | F | 4,074,200 E | x | x |
| British Columbia | 32,515,820 | 130,400,850 | 33,268,190 E | 29,993,910 | 77,396,855 | 40,813,540 |
| Canada | 218,237,005 | 673,848,890 | 96,039,840 | 63,484,590 | 260,787,956 | 138,050,000 |
|  | Bedding plants, ornamental |  |  | Bedding plants, vegetables |  |  |
|  | Production |  | Sales |  | ction | Sales |
|  | number |  | dollars |  | mber | dollars |
| 2008 |  |  |  |  |  |  |
| Newfoundland and Labrador |  | 00 r | 2,531,325 |  | ,650 | 236,500 E |
| Prince Edward Island |  | E E | 1,040,200 |  | ,600 E | 68,800 E |
| Nova Scotia |  | F | 3,071,100 |  | F | 519,700 |
| New Brunswick |  | x | 12,441,900 |  | $\times$ | 1,641,500 |
| Quebec | 91,4 | r | 38,184,900 |  | F | 14,500,000 r |
| Ontario | 222,5 |  | 78,948,600 r |  | ,286 r | 26,032,550 |
| Manitoba |  | F | F |  | ,000 r | 1,809,100 r |
| Saskatchewan | 14,7 |  | 6,548,000 |  | ,000 | 903,000 |
| Alberta | 37,4 |  | 24,642,200 |  | ,200 | 2,892,850 |
| British Columbia | 78,8 |  | 40,432,250 |  | ,100 | 11,278,400 |
| Canada | 618,8 |  | 223,121,675 r |  | ,036 r | 59,882,400 r |
| 2009 |  |  |  |  |  |  |
| Newfoundland and Labrador | 4,122,520 |  | 2,556,550 | 224,560 |  | 201,290 |
| Prince Edward Island |  | F | F |  | F | 50,670 E |
| Nova Scotia | 6,786,880 |  | 2,643,410 |  | F | 489,000 |
| New Brunswick |  | F | F |  | F | F |
| Quebec | 80,274,670 |  | 33,503,960 |  | ,000 | 13,173,410 |
| Ontario | 153,531,240 |  | 56,253,780 |  | ,260 | 44,833,320 |
| Manitoba | - F |  | F |  | ,710 E | 2,360,000 |
| Saskatchewan | 28,141,300 |  | 7,200,000 |  | ,800 E | 1,100,000 |
| Alberta |  |  | 18,939,800 |  | ,500 | F |
| British Columbia | 28,596,260 |  | 17,257,550 |  | F | F |
| Canada | 497,878,230 |  | 176,279,110 |  | ,715 | 78,847,310 |

[^0]Table 7
Indoor potted plant production by variety


Note(s): Includes flowers grown, or given some cultural treatment, and sold.

Table 8
Outdoor potted plant production by variety

|  | Begonias | Chrysanthemums | Geraniums | Impatiens | Petunias |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |
|  |  |  |  | Hosta |  |
|  |  |  |  |  |  |

1. Includes both indoor and outdoor plants (Tables 7 and 8 ).

Table 9
Cuttings, tree seedlings and other propagating material

|  | Cuttings |  |  |  |  |  | Tree seedlings greenhouse production |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Chysanthemums | Poinsettias | Geraniums | Impatiens | Other cuttings | Total cuttings |  |
|  | number |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | 0 | x | x | 0 | x | 0 |
| Prince Edward Island | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nova Scotia | 0 | 0 | 0 | 0 | 0 | 0 | x |
| New Brunswick | x | x | x | x | X | x | x |
| Quebec | x | 0 | F | x | F | F | x |
| Ontario | x | x | 4,142,260 | 4,044,030 | 13,753,850 r | 23,818,730 r | 49,905,520 |
| Manitoba | 0 | 0 | 3,500 E | x | F | F | x |
| Saskatchewan | 0 | 0 | 3,300 E | F | F | 63,800 E | x |
| Alberta | x | 0 | 83,800 E | F | 3,749,000 Er | 3,848,800 Er | 39,393,900 |
| British Columbia | X | x | F | 310,250 Er | 18,710,000 r | F | 70,249,700 r |
| Canada | F | 4,199,270 r | 10,023,850 r | 5,884,930 r | 49,928,800 r | 78,419,870 r | 206,100,620 r |
| 2009 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Prince Edward Island | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nova Scotia | 0 | 0 | 0 | 0 | 0 | 0 | F |
| New Brunswick | x | x | x | $\times$ | F | F | X |
| Quebec | x | X | 3,577,580 E | F | F | F | F |
| Ontario | $x$ | F | F | F | 16,890,320 E | 28,459,370 | 33,180,630 |
| Manitoba | 0 | 0 | F | F | F | F | 0 |
| Saskatchewan | x | 0 | x | 0 | x | F | x |
| Alberta | 0 | 0 | F | F | F | F | 27,980,540E |
| British Columbia | x | x | F | F | F | 33,268,190E | F |
| Canada | F | 6,368,370 E | 14,625,320 | 5,928,630 | 60,154,980 | 96,039,840 | 177,349,420 |

Table 10
Greenhouse cut flower production by variety


Note(s): Includes flowers grown, or given some cultural treatment, and sold.

Table 11
Channels of distribution for flower and plant sales and resales ${ }^{1}$

|  | Retail florists | Domestic wholesalers | Mass market chain stores | Other greenhouses | Exported | Direct ${ }^{2}$ <br> sales to the public | Government and public agencies | Other channels | Total sales |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | dollars |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 390,660 E | x | 1,416,200 | F | 0 | 3,653,300 | F | x | 6,010,280 |
| Prince Edward Island | x | 0 | x | X | 0 | 1,804,000 r | 0 | X | 2,426,400 r |
| Nova Scotia | F | F | F | x | x | 4,131,820 | 62,330 E | F | F |
| New Brunswick | 3,887,500 | x | 2,824,600 | x | x | 6,102,000 | 209,270 | x | 32,160,660 r |
| Quebec | 39,906,000 | 20,005,600 | 48,550,800 | 4,570,000 | 15,913,150 | 46,343,700 | 3,930,900 | 6,310,300 | 185,530,450 |
| Ontario | 56,419,030 | 177,415,670 | 162,520,890 | 44,109,210 | 71,192,900 | 84,548,930 | 2,716,320 r | 15,400,300 | 614,323,250 |
| Manitoba | F | F | F | 1,196,300 | F | 10,534,600 | 376,050 E | F | 33,484,800 E |
| Saskatchewan | 951,000 | F | F | 973,000 | x | 7,315,000 | 489,000 | F | 17,954,000 |
| Alberta | 6,015,600 | 2,557,300 | 10,964,400 | x | x | 41,932,000 | 1,991,500E | 7,826,000E | 74,110,650 |
| British Columbia | 33,680,500 | 55,174,500 | 84,174,500 | 20,164,500 | 35,073,400 | 22,588,400 | 10,244,935 | 17,143,640 r | 278,244,375 r |
| Canada | 150,580,190 | 258,741,280 | 337,273,040 r | 75,007,420 | 139,930,850 | 228,953,750 r | 20,048,305 r | 50,969,280 r | 1,261,504,115 ${ }^{\text {r }}$ |
| 2009 |  |  |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 466,230E | x | F | 31,770 E | 0 | 4,532,905 | F | F | 8,856,720 |
| Prince Edward Island | x | X | X | 0 | 0 | F | F | X | 4,382,980 E |
| Nova Scotia | F | F | F | F | 0 | 11,886,840E | 151,070 E | F | 22,395,120E |
| New Brunswick | F | F | F | F | X | 5,819,460 | 263,610 | F | 39,522,780 E |
| Quebec | 32,845,740 | 18,610,460 | 53,032,250 | 16,146,460 E | F | 42,553,950 | 3,642,420 | 2,829,310 | 184,807,050 |
| Ontario | 75,543,580 | 178,274,900 | 222,990,820E | 65,410,470 | 101,067,387 | 71,338,133 | 3,878,350 | 23,932,520 | 742,436,160 |
| Manitoba | F | F | F | 1,328,300E | F | 18,352,980 | F | F | 49,086,090 E |
| Saskatchewan | F | x | F | 925,000 E | X | 7,530,000 | F | F | 18,730,000 |
| Alberta | 8,777,200 | 2,500,000 | 14,178,900 E | F | x | 39,241,300 | 652,200E | 10,000,000 E | 82,351,700 |
| British Columbia | 38,109,290 | 52,192,660 | 81,837,440 | 30,107,760 E | 33,022,520 E | 23,971,530 | 2,670,230 | 9,873,130 | 271,784,560 |
| Canada | 170,366,940 | 256,586,160 | 407,923,885 | 122,624,390 | 173,001,597 | 227,405,098 | 14,604,620 | 51,840,470 | 1,424,353,160 |

1. Before sales tax.
2. Includes roadside stands and owner-operated retail outlets.

Table 12
Total value of greenhouse products

|  | 2008 |  |  | 2009 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total ${ }^{1}$flower and plantsales | Total fruit and vegetable sales | Totalgreenhousesales | Total flower and plant sales |  | Total fruit and vegetable sales | Totalgreenhousesales |
|  |  |  |  | sales | resales |  |  |
|  | dollars |  |  |  |  |  |  |
| Newfoundland and Labrador | 6,010,280 | F | 6,200,280 | 6,560,930 | F | 209,180 | 9,065,900 |
| Prince Edward Island | 2,426,400 r | 256,000 | 2,682,400 r | 4,382,980 E | 0 | F | 4,838,370 |
| Nova Scotia | F | F | 23,976,250 r | 10,605,830 E | F | F | 29,551,230 |
| New Brunswick | 32,160,660 r | F | 32,524,660 r | F | 4,430,780E | 231,520E | 39,754,300 |
| Quebec | 185,530,450 | 74,779,840 r | 260,310,290 r | 161,007,450 | 23,799,600 | 76,645,340 | 261,452,390 |
| Ontario | 614,323,250 | 529,963,800 r | 1,144,287,050 r | 566,256,890 | 176,179,270E | 557,604,840 | 1,300,041,000 |
| Manitoba | 33,484,800 E | F | 33,890,550 r | F | F | 557,810 | 49,643,900 |
| Saskatchewan | 17,954,000 | 754,000 | 18,708,000 | 15,830,000 | F | F | 19,735,000 |
| Alberta | 74,110,650 | 32,999,500 r | 107,110,150 r | 75,351,700 | 7,000,000 | 33,777,050 | 116,128,750 |
| British Columbia | 278,244,375 r | 223,541,765 r | 501,786,140 r | 238,730,370 | 33,054,190 | 251,338,760 | 523,123,320 |
| Canada | 1,261,504,115 r | 869,971,655 r | 2,131,475,770 r | 1,158,656,470 | 265,696,690 | 928,981,000 | 2,353,334,160 |

1. Includes resale value.

Table 13
Total greenhouse producers' operating expenses

|  | Plant material ${ }^{1}$ purchases for growing on | Plant material ${ }^{1}$ purchases for resale | Gross ${ }^{2}$ yearly payroll | Electricity ${ }^{3}$ | Natural gas |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | dollars |  |  |  |  |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 1,486,450 | 1,133,680 | 2,202,200 | 155,600 E | 0 |
| Prince Edward Island | x | x | 762,900 | 132,200 E | 0 |
| Nova Scotia | F | F | F | 533,560 E | x |
| New Brunswick | 7,478,400 | 2,338,750 | 11,156,300 | 573,250 | x |
| Quebec | 29,325,900 | 15,275,300 | 71,748,430 | 9,046,990 | 10,909,300 |
| Ontario | 141,866,000 | 40,015,310 r | 261,146,000 | 26,416,000 | 113,231,400 r |
| Manitoba | 6,667,800 | F | 12,497,200 E | 510,700 | 1,584,500 |
| Saskatchewan | 4,110,000 | 496,000 | 5,917,150 | 456,000 | 950,000 |
| Alberta | 15,427,700 | 4,542,100 | 33,617,700 | 3,363,400 | 9,649,000 |
| British Columbia | 78,153,000 r | 27,500,700 | 132,993,900 r | 11,253,600 | 35,699,400 |
| Canada | 287,783,900 r | 95,524,840 r | 540,619,780 r | 52,441,300 | 172,083,600 r |
| 2009 |  |  |  |  |  |
| Newfoundland and Labrador | 1,282,370 | F | 2,629,860 | 220,330 | 0 |
| Prince Edward Island | F | x | 1,103,010 E | F | 0 |
| Nova Scotia | 1,364,350 | F | F | 667,370 E | X |
| New Brunswick | F | 1,500,000 | 12,317,670 E | 633,702 E | F |
| Quebec | 28,218,780 | 14,318,110 | 72,853,000 | 7,231,500 | 10,644,610 |
| Ontario | 150,262,180 | 30,054,270 | 293,508,420 | 34,677,170 | 117,841,080 |
| Manitoba | 9,202,330 E | F | F | 620,600 | 2,311,220 E |
| Saskatchewan | 4,720,000 | F | 5,385,650 | 500,000 | 900,000 |
| Alberta | 12,604,200 | 4,416,300 E | 36,779,500 | 4,397,800 | 8,418,000 |
| British Columbia | 78,584,160 | F | 128,161,970 | 12,555,350 | 40,070,070 |
| Canada | 293,923,630 | 78,998,180 | 578,332,560 | 61,636,242 | 180,267,840 |
|  | Heating oil | Other types of fuel | $\begin{array}{r} \text { Other } \\ \text { crop } \\ \text { expenses } \end{array}$ | Other operating expenses | Total operating expenses |
| dollars |  |  |  |  |  |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 670,750 | 25,100 | 695,400 | 960,550 | 7,329,730 |
| Prince Edward Island | x | x | 224,800 | 468,000 | 2,521,850 |
| Nova Scotia | 752,450 | F | F | F | F |
| New Brunswick | F | 603,000 | 6,885,825 | 6,627,990 | 36,810,915 ${ }^{\text {r }}$ |
| Quebec | 11,574,190 | 6,860,450 | 25,074,345 | 52,809,600 r | 232,624,505 r |
| Ontario | 17,358,800 | 17,717,000 | 114,647,000 | 248,396,000 | 980,793,510 r |
| Manitoba | 89,100 | 368,800 E | 3,122,750 | 6,411,000 E | 32,693,850 E |
| Saskatchewan | F | 340,000 E | 1,981,000 | 2,410,000 | 16,949,150 |
| Alberta | 0 | 848,050 | 9,559,600 | 20,478,000 | 97,485,550 |
| British Columbia | 689,700 | 13,000,000 | 85,028,200 r | 131,378,585 | 515,697,085 r |
| Canada | 32,756,890 | 41,534,500 | 249,577,520 r | 479,916,025 r | 1,952,238,355 r |
| 2009 |  |  |  |  |  |
| Newfoundland and Labrador | 600,980 | F | 988,230 | 1,117,950 | 8,453,670 |
| Prince Edward Island | F | F | F | F | F |
| Nova Scotia | 673,180 | F | 1,662,280 | 3,797,958 E | 20,973,628 |
| New Brunswick | 719,980 E | x | F | F | F |
| Quebec | 9,088,630 | 5,751,940 | 24,732,400 | 64,467,140 | 237,306,110 |
| Ontario | 25,855,970 | 17,617,490 | 145,487,380 | 318,000,000 | 1,133,303,960 |
| Manitoba | 113,900 | F | F | 9,962,670 E | 46,354,440 E |
| Saskatchewan | F | F | 2,500,000 | 3,300,000 | 19,086,150 |
| Alberta | 0 | 563,560 | 14,842,200 | 26,185,500 | 108,207,060 |
| British Columbia | 226,970 | 8,303,840 | 71,883,340 | 153,053,170 | 513,939,870 |
| Canada | 37,851,510 | 35,675,980 | 273,780,930 | 587,217,098 | 2,127,683,970 |

1. Includes value of flowers, plants, cuttings, seedlings, seeds and bulbs purchased (before sales tax).
2. Includes seasonal and permanent labour.
3. Electricity expenses for lighting, airflow fans and heating.

Table 14
Specialized greenhouse vegetable producers' operating expenses

|  | Plant ${ }^{1}$ material purchases for growing on | ```Plant \({ }^{1}\) material purchases for resale``` | Gross ${ }^{2}$ yearly payroll | Electricity ${ }^{3}$ | Fuel | Other crop expenses | Other operating expenses | Total operating expenses |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | dollars |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |
| Atlantic provinces | F | x | F | F | F | F | F | F |
| Quebec | x | x | 16,019,000E | F | 8,437,700E | 7,851,100E | 19,684,600E | 59,152,570E |
| Ontario | x | x | 98,214,700 | 11,212,700 | 94,634,616 r | 52,817,000 | 111,845,900 | 399,938,456 r |
| Prairie provinces | x | x | 7,629,800 | 3,289,900 | 5,948,100 | 2,654,000 | 8,893,150 | 31,454,000 r |
| British Columbia | x | x | 40,428,900 | 3,717,800 | 26,766,350 | 26,174,600 | 64,524,600 | 176,189,250 r |
| Canada | 51,090,200 r | F | 163,168,900 | 24,261,895 | 136,297,006 ${ }^{\text {r }}$ | 89,847,600 | 205,621,030 | 670,984,721 ${ }^{\text {r }}$ |
| 2009 |  |  |  |  |  |  |  |  |
| Atlantic provinces | F | 0 | F | 198,580 | F | F | F | F |
| Quebec | x | x | 21,417,550 | 2,121,340 | 9,678,740 | 6,904,770E | 25,000,010 | 67,786,000 |
| Ontario | 43,776,720 | 0 | 123,953,400 | 17,487,210 | 106,010,230 | 73,487,440 | 145,932,400 | 510,647,400 |
| Prairie provinces | 2,440,220 | x | 8,956,160 | 2,279,630E | 6,256,310 | F | 11,184,250E | 37,390,060 |
| British Columbia | x | ${ }^{\mathrm{x}}$ | 48,561,370 | 5,524,220 | 31,492,070 | 23,664,150 | 102,395,220 | 234,559,115 |
| Canada | 71,860,105 | F | 203,837,940 | 27,610,980 | 154,104,430 | 110,540,920 | 284,910,140 | 853,193,365 |

1. Includes value of plants, seedlings, seeds and bulbs purchased (before sales tax).
2. Includes seasonal and permanent labour.
3. Electricity expenses for lighting, airflow fans and heating.

Table 15
Specialized greenhouse flower and plant producers' operating expenses

|  | Plant ${ }^{1}$ material purchases for growing on | Plant ${ }^{1}$ <br> material purchases for resale | Gross ${ }^{2}$ yearly payroll | Electricity ${ }^{3}$ | Fuel | Other crop expenses | Other operating expenses | Total operating expenses |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | dollars |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |
| Atlantic provinces | 11,730,700 | 6,073,600E | 19,322,300 | 996,950 | 3,744,000 | 9,233,500 | 15,851,350 E | 66,952,400 |
| Quebec | 23,363,575 | 12,735,500 | 45,575,940 | 3,869,100 | 16,023,750 | 13,104,500 | 24,567,400 | 139,239,765 |
| Ontario | 100,802,200 | 37,663,900 | 147,302,400 | 13,419,200 | 52,152,700 | 48,699,000 | 116,471,900 | 516,511,300 |
| Prairie provinces | 21,019,750 | 6,315,250 | 41,945,500 | 3,289,950 | 8,521,700 | 11,480,650 | 19,735,100 | 112,307,900 |
| British Columbia | 59,469,800 | 25,106,570 r | 65,328,960 r | 5,303,400 | 16,537,700 | 41,911,700 | 47,287,250 | 260,945,380 r |
| Canada | 216,386,025 | 87,894,820 r | 319,475,100 r | 26,878,600 | 96,979,850 | 124,429,350 | 223,913,000 | 1,095,956,745 ${ }^{\text {r }}$ |
| 2009 |  |  |  |  |  |  |  |  |
| Atlantic provinces | 9,749,380E | F | 21,014,820 | 1,206,370 | 3,058,020 | F | 8,610,640E | 57,566,960 |
| Quebec | 22,393,940 | 13,284,500 | 39,838,040 | 3,933,140 | 13,186,920 | 12,946,860 | 28,826,140 | 134,409,540 |
| Ontario | 103,089,450 | 29,000,140 | 154,059,270 | 14,154,140 | 47,931,970 | 59,645,130 | 116,525,920 | 524,406,020 |
| Prairie provinces | 22,758,680 | 6,979,110 | 47,857,300 | 2,875,280 | 9,113,700 | 14,087,190 | 26,487,170 | 130,158,430 |
| British Columbia | 48,719,760 | F | 54,561,935 | 3,796,240 | 13,499,300 | 31,482,900 | 37,617,520 | 208,437,895 |
| Canada | 206,711,210 | 72,788,140 | 317,331,365 | 25,965,170 | 86,789,910 | 127,325,660 | 218,067,390 | 1,054,978,845 |

1. Includes value of flowers, plants, cuttings, seedlings, seeds and bulbs purchased (before sales tax).
2. Includes seasonal and permanent labour.
3. Electricity expenses for lighting, airflow fans and heating.

Note(s): Excludes vegetable bedding plant producers.

Table 16
Labour - Total greenhouse employees

|  | 2008 |  |  | 2009 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total greenhouse employees |  |  | Total greenhouse employees |  |  |
|  | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total |
|  | number |  |  |  |  |  |
| Newfoundland and Labrador | 250 | 50 | 300 | 260 | 50 | 310 |
| Prince Edward Island | 70 | 10 | 80 | 130 E | 15 | 145 |
| Nova Scotia | 540 | F | 820 | 490 | F | 700 |
| New Brunswick | 550 | 375 | 925 | 590 | F | 1,000 |
| Quebec | 4,630 | 2,120 | 6,750 | 4,450 | 2,090 | 6,540 |
| Ontario | 9,600 r | 6,500 | 16,100 r | 9,760 | 7,250 | 17,010 |
| Manitoba | 825 | 225 | 1,050 | 1,110 | 270 | 1,380 |
| Saskatchewan | 1,100 | 150 | 1,250 | 915 | 175 | 1,090 |
| Alberta | 2,400 | 800 | 3,200 | 2,500 | 1,010 | 3,510 |
| British Columbia | 3,920 r | 3,350 r | 7,270 r | 3,720 | 3,160 | 6,880 |
| Canada | 23,885 r | 13,860 r | 37,745 r | 23,925 | 14,640 | 38,565 |

1. Seasonal employees who worked less than 8 months during the year.
2. Permanent employees who worked more than 8 months during the year.

Note(s): Including mixed operations (vegetables, flowers and plants).

Table 17
Labour - Specialized greenhouse producers

|  | Specialized greenhouse vegetable producers |  |  | Specialized greenhouse flower and plant producers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total |
|  | number |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |
| Atlantic provinces | 140 | F | 190 | 1,100 | 600 | 1,700 |
| Quebec | 490 | 660 E | 1,150 | 3,040 | 1,145 | 4,185 |
| Ontario | 2,750 | 2,240 | 4,990 | 6,275 | 3,910 | 10,185 |
| Prairie provinces | 275 | 220 | 495 | 3,750 | 920 | 4,670 |
| British Columbia | 1,090 | 870 | 1,960 | 1,995 r | 1,610 r | 3,605 r |
| Canada | 4,745 | 4,040 | 8,785 | 16,160 r | 8,185 r | 24,345 r |
| 2009 |  |  |  |  |  |  |
| Atlantic provinces | 100 | 40 E | 140 | 1,180 | 590 E | 1,770 |
| Quebec | 610 | 770 | 1,380 | 2,850 | 990 | 3,840 |
| Ontario | 3,050 | 2,590 | 5,640 | 5,800 | 4,020 | 9,820 |
| Prairie provinces | 260 | 370 | 630 | 3,790 | 980 | 4,770 |
| British Columbia | 1,090 | 935 | 2,025 | 1,635 | 1,570 | 3,205 |
| Canada | 5,110 | 4,705 | 9,815 | 15,255 | 8,150 | 23,405 |

1. Seasonal employees who worked less than 8 months during the year.
2. Permanent employees who worked more than 8 months during the year.

Table 18
Nursery area

|  | Total nurseries | Total fi |  | Total con | area | Total nurs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | number | acres | hectares | acres | hectares | acres | hectares |
| 2008 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 10 | 0 | 0 | F | F | F | F |
| Prince Edward Island | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nova Scotia | 20 | F | F | 35 | 14 | 345 Er | 140 Er |
| New Brunswick | 15 | 170 | 69 | F | F | F | F |
| Quebec | 220 | 4,830 r | 1,955 r | $710{ }^{\text {r }}$ | 287 r | 5,540 | 2,242 |
| Ontario | 460 | 21,000 | 8,498 | 1,880 | 761 | 22,880 | 9,259 |
| Manitoba | 35 | 800 | 324 | 120 | 49 | 920 | 372 |
| Saskatchewan | 30 | F | F | 50 | 20 | F | F |
| Alberta | 190 | 6,300 | 2,550 | F | F | 10,100 | 4,087 |
| British Columbia | 330 r | 6,300 | 2,550 | F | F | 9,000 | 3,642 |
| Canada | 1,310 r | 40,910 r | 16,556 r | F | F | F | F |
| 2009 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 10 | 5 E | 2 E | 10 E | 4 E | 15 | 6 |
| Prince Edward Island | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nova Scotia | 20 | F | F | 30 E | 12 E | 350 E | 142 E |
| New Brunswick | 15 | F | F | F | F | F | F |
| Quebec | 225 | 4,870 | 1,971 | 910 | 368 | 5,780 | 2,339 |
| Ontario | 460 | 21,290 | 8,616 | 2,160 | 874 | 23,450 | 9,490 |
| Manitoba | 30 | 830 | 336 | 110 | 45 | 940 | 380 |
| Saskatchewan | 40 | F | F | F | F | F | F |
| Alberta | 170 | 5,090 | 2,060 | 3,280 | 1,327 | 8,370 | 3,387 |
| British Columbia | 325 | 6,350 | 2,570 | 2,450 | 991 | 8,800 | 3,561 |
| Canada | 1,295 | 41,864 E | 16,942 E | 9,023 E | 3,651 E | 50,887 | 20,593 |

Table 19
Nursery tree and plant production (field and container)

|  | Coniferous trees | Fruit trees | Shade or ornamental trees | Coniferous evergreen shrubs | Evergreen broadleaf shrubs | Deciduous shrubs (including roses) | Vines | Perennials and annuals | Small fruit <br> bushes | Nursery tree seedlings | Other trees and plants |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | number |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| Field grown |  |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | F | x | F | F | x | F | x | X | x | x | 0 |
| Quebec | F | 101,100 E | F | F | F | F | x | F | F | F | x |
| Ontario | 768,630 r | 711,940 E | 441,400 r | 340,490 r | F | 266,000 r | X | 64,225 r | X | 1,380,400 r | F |
| Prairie provinces | 71,900 | x | 196,900 | 7,600 E | F | 105,300 | F | F | F | 631,500 | 2,500 |
| British Columbia | 1,831,500 | 567,000 | x | 431,250 | F | 551,650 | 9,100 | F | F | F | F |
| Canada | 3,432,940 r | 1,408,690 | 5,144,110 r | 828,400 r | 607,085 Er | 1,064,170 r | 1,505,655 ${ }^{\text {r }}$ | F | 71,548,600 E | F | F |
| Container grown |  |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | F | $x$ | F | F | F | F | F | F | 2,700 | F | x |
| Quebec | 24,256,000 Er | 80,300 | 68,170 Er | F | F | 327,900 | F | 842,700E | F | F | F |
| Ontario | 289,700 r | 43,780 E | 193,670 | 942,320 | 678,790 | 2,438,880 | 206,150 | F | 13,060 | x | 326,126 |
| Prairie provinces | 106,350 E | x | 81,200E | x | 5,270 | 1,220,600 | 16,700 E | 705,800 | 40,500 | 8,708,400 | 148,150 |
| British Columbia | F | F | F | 5,130,900 Er | 749,800 r | 2,247,600 r | F | 5,784,450 r | F | 53,818,250 | F |
| Canada | 34,459,720 r | 220,230 | 990,890 r | 6,641,020 r | 1,980,025 r | 6,292,030 r | 459,460 ${ }^{\text {r }}$ | 12,950,800 r | 644,410 E | 96,389,390 r | 1,686,746 E |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| Field grown |  |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | F | F | F | F | F | F | x | F | F | x | 0 |
| Quebec | 899,420E | 79,130E | 34,315E | 52,820 | F | 91,940E | F | F | 16,414,150E | F | 534,450E |
| Ontario | 972,330 E | 503,750 | 770,420 | 325,480 | 127,230 | 795,080 | 1,739,320E | 80,850 E | x | 1,973,250 | x |
| Prairie provinces | 145,200 | 85,240E | 136,310 | 7,010 E | F | 115,620 | F | 48,960 E | 100,360 E | F | 5,330 E |
| British Columbia | 2,688,030E | 719,965 E | F | 451,600E | F | 1,473,410E | F | F | F | F | F |
| Canada | 4,708,050 | 1,394,525 | F | 837,130 | 542,680 | 2,484,790 | 1,742,860 E | F | 49,878,480 E | 4,768,300 | 552,550 |
| Container grown |  |  |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | F | F | 2,860E | 2,550E | F | F | 3,200E | F | F | F | x |
| Quebec | 20,893,270 | F | 85,450E | 256,179 | 559,265 | 518,130 | 78,085 | 1,099,660 | F | 9,115,850E | F |
| Ontario | 280,230 | F | 188,660 | 976,900 | 877,630 | 3,050,340 | 242,110 | F | 23,230 | F | F |
| Prairie provinces | 30,240 | 13,880 | 111,450 | F | F | 1,170,410 E | 22,390 | 648,220 | 29,910 | F | x |
| British Columbia | F | F | 750,000 | 3,485,520 | 1,599,730 | 2,424,585 | 211,160E | F | 173,240E | F | 298,070 E |
| Canada | 28,658,740 | 205,061 | 1,138,420 | 5,114,239 | 3,051,395 | 7,198,210 | 556,945 | 13,711,140 | 342,230 | 205,304,400 E | 882,840 |

Table 20
Nursery stock sales and resales 1

|  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |

[^1]2. The process of buying trees, shrubs, plants, seedlings, cuttings, etc. and selling it within a short time period with minimal care or maintenance.

Table 21
Nursery sales distribution ${ }^{1}$

|  | Direct ${ }^{2}$ sales to the public | Fruit growers | Landscape contractors | Garden centres | Mass market chain stores |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | dollars |  |  |  |  |
| 2008 |  |  |  |  |  |
| Atlantic provinces | F | F | F | 832,350 E | $x$ |
| Quebec | F | F | 15,366,975 r | 17,583,800 r | 7,875,400 r |
| Ontario | 20,490,000 r | 10,944,930 | 80,955,070 r | 72,200,000 r | 53,000,000 r |
| Prairie provinces | 15,091,500 r | 308,850 | 34,307,600 r | 8,359,100 Er | F |
| British Columbia | 12,230,800 | 5,805,200 | 38,571,800 | 40,343,400 | 28,049,320 r |
| Canada | 67,149,190 ${ }^{\text {r }}$ | 21,405,870 r | 171,341,785 ${ }^{\text {r }}$ | 139,318,650 r | 89,648,110 ${ }^{\text {r }}$ |
| 2009 |  |  |  |  |  |
| Atlantic provinces | 5,266,270 E | F | F | F |  |
| Quebec | 12,141,130 | 1,929,100 | 16,182,860 | 22,070,820 | 7,866,380 |
| Ontario | 20,919,310 | 9,257,950 | 78,446,520 | 78,138,690 | 61,865,050 |
| Prairie provinces | 16,997,280 | 909,420 E | 27,614,570 | 7,339,380 | 458,780 E |
| British Columbia | 9,542,110 | 6,596,500 E | 37,584,825 | 39,470,380 | 24,700,160 |
| Canada | 64,866,100 | 19,701,610 | 160,997,711 | 147,665,534 | 94,890,370 |
|  | Other growers | Exported | Government and public agencies | Other channels | Total sales |
|  | dollars |  |  |  |  |
| 2008 |  |  |  |  |  |
| Atlantic provinces | x | 430,160 | 762,700 | 3,220,730 | 12,805,120 r |
| Quebec | 3,783,500 r | F | 10,998,300 r | F | 76,971,080 r |
| Ontario | 22,900,000 | 8,400,000 | 6,300,000 | 8,810,000 r | 284,000,000 r |
| Prairie provinces | x | F | 4,938,300 | 697,800 | 68,801,100 r |
| British Columbia | 24,372,600 | 10,793,700 | 14,040,510 r | 17,795,500 E | 192,002,830 r |
| Canada | 53,669,100 r | 23,983,385 r | 37,039,810 r | 31,024,230 r | 634,580,130 r |
| 2009 |  |  |  |  |  |
| Atlantic provinces | F | 0 | F | F | 11,418,140 |
| Quebec | 4,404,240 | F | 9,734,190 | 850,920 E | 77,548,110 |
| Ontario | 22,519,530 | 15,272,670 | 8,960,740 | 12,429,820 | 307,810,280 |
| Prairie provinces | 2,309,530 | 1,506,670 | 2,976,010 | F | 64,192,810 |
| British Columbia | 15,200,220 | 8,040,165 E | F | F | 196,936,270 |
| Canada | 44,439,730 | 27,187,975 | 49,922,840 | 48,233,740 | 657,905,610 |

[^2]2. Includes roadside stands and owner-operated retail outlets.

Table 22
Sod area, sales and resales

|  | Total sod operations | Total sod area |  | Sod area grown for sale |  | Gross sales |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Revenue from sod grown | Revenue from sod resale |
|  | number | acres | hectares | acres | hectares | dollars |  |
| 2008 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 15 | 460 | 186 | 230 | 93 | 2,200,800 | 0 |
| Prince Edward Island | 5 | x | x | x | x | x | 0 |
| Nova Scotia | 10 | 2,420 | 979 | 785 | 318 | 5,049,200 | 0 |
| New Brunswick | 5 | 720 | 291 | 250 | 101 | 1,123,125 | x |
| Quebec | $50{ }^{\text {r }}$ | 12,650 | 5,119 | 6,860 | 2,776 | 31,981,800 | 916,400 |
| Ontario | 60 | 25,000 | 10,117 | 8,900 r | 3,602 r | 47,072,500 r | 1,007,600 |
| Manitoba | 10 | 1,000 | 405 | 200 E | 81 E | , F | - 0 |
| Saskatchewan | 5 | x | x | x | x | x | 0 |
| Alberta | 20 | 11,500 | 4,654 | 4,050 | 1,639 | 31,103,000 | $x$ |
| British Columbia | 15 | 1,400 | 567 | 970 | 393 | 8,270,000 | 0 |
| Canada | $195{ }^{\text {r }}$ | 55,770 | 22,569 | 22,515 ${ }^{\text {r }}$ | 9,111 ${ }^{\text {r }}$ | 130,301,975 r | 2,190,000 |
| 2009 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 20 | 740 | 299 | 480 E | 194 E | x | F |
| Prince Edward Island | 5 | x | $\times$ | x | x | x | 0 |
| Nova Scotia | 15 | F | F | F | F | F | $\times$ |
| New Brunswick | 10 | F | F | F | F | F | F |
| Quebec | 50 | 11,230 | 4,545 | 6,000 | 2,428 | 28,627,010 | 837,440 |
| Ontario | 65 | 24,530 | 9,927 | 9,180 | 3,715 | 46,128,380 | 811,900 |
| Manitoba | 10 | 740 | 299 | 190 | 77 | 976,470 | 0 |
| Saskatchewan | 5 | F | F | F | F | F | 0 |
| Alberta | 20 | 16,290 E | 6,592 E | $5,980 \mathrm{E}$ | 2,420 E | 43,452,510 E | F |
| British Columbia | 15 | 1,220 | 494 | 840 | 340 | 8,710,000 | x |
| Canada | 215 | 59,140 | 23,933 | 24,300 | 9,834 | 141,604,860 | 9,306,340 |

Table 23
Nursery and sod producers' operating expenses

|  | Nursery |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Plant material ${ }^{1}$ purchases for growing on | Plant material ${ }^{1}$ purchases for resale | Gross yearly payroll | Other operating expenses | Total operating expenses |
|  | dollars |  |  |  |  |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 12,500 | 6,750 | F | F | F |
| Prince Edward Island | 0 | 0 | 0 | 0 | 0 |
| Nova Scotia | F | F | 1,855,600 Er | F | F |
| New Brunswick | 201,140 | x | 1,396,000 | x | 2,378,040 |
| Quebec | 8,403,260 r | 7,126,500 | 22,182,900 | 18,131,520 r | 55,844,180 r |
| Ontario | 29,205,300 | 41,752,100 | 92,036,500 | 81,335,800 r | 244,329,700 r |
| Manitoba | 1,225,100 E | 1,213,200 | 3,797,750 E | F | 11,038,900 E |
| Saskatchewan | 231,000 | 528,000 Er | 3,000,000 r | 2,216,000 r | 5,975,000 r |
| Alberta | 4,018,000 | 7,824,500 | 13,405,400 | 11,069,000 | 36,316,900 |
| British Columbia | 22,770,400 | 11,195,700 | 60,867,300 r | 57,004,000 r | 151,837,400 r |
| Canada | 66,155,300 r | 70,005,650 r | 198,841,450 r | 176,244,320 ${ }^{\text {r }}$ | 511,246,720 ${ }^{\text {r }}$ |
| 2009 |  |  |  |  |  |
| Newfoundland and Labrador | x | x | F | 29,970 E | F |
| Prince Edward Island | x | x | F | 0 | F |
| Nova Scotia | F | F | 2,100,130 E | F | 4,781,500 E |
| New Brunswick | F | F | F | F | F |
| Quebec | 13,274,400 | 7,035,670 | 26,093,130 | 20,712,945 | 67,116,145 |
| Ontario | 28,044,730 | 46,037,980 | 102,078,940 | 95,398,080 | 271,559,730 |
| Manitoba | 1,269,520 | 1,356,130 | 4,974,510 | 5,455,630 | 13,055,790 |
| Saskatchewan | F | F | 4,500,000 | F | 10,732,800 E |
| Alberta | 4,228,120 | 7,927,460 | 14,531,630 | 9,225,840 | 35,913,050 |
| British Columbia | 20,943,920 | 18,766,420 | 60,837,050 | 69,773,225 | 170,320,615 |
| Canada | 69,330,640 | 83,156,320 217 | 217,683,420 | 209,116,040 | 579,286,420 |
|  | Sod |  |  |  |  |
|  | Purchases for resale | $\begin{aligned} & \text { Gross }^{2} \\ & \text { yearly } \\ & \text { payroll } \\ & \hline \end{aligned}$ |  | Other operating expenses | Total operating expenses |
|  | dollars |  |  |  |  |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | X | 913,300 |  | X | 2,676,900 |
| Prince Edward Island | 0 | x |  | x | x |
| Nova Scotia | x | 2,488,000 |  | x | 5,415,800 |
| New Brunswick | x | 445,600 |  | x | 998,300 |
| Quebec | 496,500 | 7,965,800 |  | 12,351,850 | 20,814,150 |
| Ontario | 682,400 r | 15,310,780 |  | 30,246,830 | 46,240,010 r |
| Manitoba | 0 | 190,000 E |  | F | x |
| Saskatchewan | 0 | x |  | x | x |
| Alberta | x | 7,179,700 |  | x | 22,425,500 |
| British Columbia | 0 | 1,680,700 |  | 2,782,000 | 4,462,700 |
| Canada | 2,026,300 ${ }^{\text {r }}$ | 36,923,380 |  | 66,927,680 | 105,877,360 r |
| 2009 |  |  |  |  |  |
| Newfoundland and Labrador | x | 1,086,350 |  | x | 2,409,660 |
| Prince Edward Island | 0 | x |  | x | x |
| Nova Scotia | x | F |  | F | F |
| New Brunswick | F | F |  | F | F |
| Quebec | 608,450 | 8,417,930 |  | 14,008,680 | 23,035,060 |
| Ontario | 597,460 | 16,605,060 |  | 23,684,640 | 40,887,160 |
| Manitoba | 0 | 107,060 E |  | 409,410 E | 516,470 |
| Saskatchewan | 0 | F |  | F | F |
| Alberta | F | 10,748,350 E |  | F | 33,521,970 E |
| British Columbia | x | 2,276,600 |  | x | 4,973,480 |
| Canada | F | 43,265,730 |  | 65,984,410 | 114,375,190 |

1. Includes value of trees, nursery stock, bedding plants, seedlings, cuttings or bulbs purchased (before sales tax).
2. Includes seasonal and permanent labour.

Table 24
Nursery and sod labour

|  | Nursery |  |  | Sod |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total |
|  | number |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |
| Newfoundland and Labrador | 25 E | F | 30 E | 70 | 10 E | 80 |
| Prince Edward Island | 0 | 0 | 0 | 10 | 0 | 10 |
| Nova Scotia | 205 Er | 15 Er | 220 Er | 70 | 35 | 105 |
| New Brunswick | 60 | 65 r | 125 r | 30 | 5 | 35 |
| Quebec | 1,910 | 300 | 2,210 | 340 | 90 | 430 |
| Ontario | 3,500 | 1,670 | 5,170 | 524 | 141 | 665 |
| Manitoba | 160 | 60 | 220 | x | F | 30 |
| Saskatchewan | 275 r | 70 r | 345 r | x | x | 30 |
| Alberta | 750 | 200 | 950 | 200 | 100 | 300 |
| British Columbia | 2,205 r | 1,510 | 3,715 ${ }^{\text {r }}$ | 60 | 30 | 90 |
| Canada | 9,090 r | 3,895 r | 12,985 r | 1,349 | 426 | 1,775 |
| 2009 |  |  |  |  |  |  |
| Newfoundland and Labrador | 10 | 0 | 10 E | 80 | 10 | 90 |
| Prince Edward Island | F | x | F | x | 0 | x |
| Nova Scotia | 235 E | F | 265 E | F | F | 130 |
| New Brunswick | F | F | F | F | x | F |
| Quebec | 2,120 | 440 | 2,560 | 370 | 80 | 450 |
| Ontario | 3,700 | 1,690 | 5,390 | 480 | 170 | 650 |
| Manitoba | 290 | 70 | 360 | x | x | 30 |
| Saskatchewan | 370 | 125 | 495 | F | F | F |
| Alberta | 720 | 280 | 1,000 | 210 E | 70 | 280 |
| British Columbia | 2,615 | 1,350 | 3,965 | 40 | 60 | 100 |
| Canada | 10,200 | 4,060 | 14,260 | 1,360 | 475 | 1,835 |

1. Seasonal employees who worked less than 8 months during the year.
2. Permanent employees who worked more than 8 months during the year.

## Methodology

## Introduction

Statistics Canada has conducted an annual survey of the greenhouse industry since 1955, of the nursery industry since 1956 and of the sod industry since 1982. The survey is designed to provide an indication of the economic situation of the primary greenhouse, sod and nursery stock production industries. The survey is designed to provide insight into the general economic situation of the industry. To this end, data are provided on market structure and production inputs.

The survey is designed to collect information on area planted, labour, payroll, cost for growing-on and for resale, gross revenues, as well as the distribution of gross sales by channel of distribution.

The greenhouse target population includes all of the commercial greenhouse growers as identified by the 2006 Census of Agriculture and reconciled with the previous known population. For the sod and nursery operations, the survey focuses on operations that grow some or all the commodities they sell. As a result, firms that only distribute sod or nursery stock, or just landscape and lay sod are excluded from the survey. The survey is also designed to estimate the total value added of the agricultural side of nursery/sod but also picks up value added from the non-growing (i.e. marketing) portion of each operation. Note too that value added from landscaping and laying sod is excluded from the revenue estimates even when the responding firm grows nursery stock or sod. The survey estimates for greenhouses, sod farms and nurseries are calculated using probability sampling methods.

## Concepts and definitions

## Greenhouse industry

Prior to 1986, the target population included all commercial greenhouse growers. In 1986, the target population was redefined to include only commercial greenhouse growers with a growing area of 7,500 square feet or more.

In 1992, it was decided to include all of the commercial greenhouse growers as identified by the 1991 Census of Agriculture and reconciled with the previous known population. Due to the changed methodology, the estimates since 1992 are not comparable with the corresponding 1991 estimates.

A greenhouse can be defined as an operation where plants are grown under glass, plastic or similar type of protection. Since 2008, we also ask respondents to report area under poly-film or polyethylene.

A breakdown of sales, indicating channels of distribution and flower varieties sold, assists in the determination of the market structure. All sales figures published represent prices paid to the grower. Data collected on important inputs of production include the number of employees, gross yearly payroll, total investment and area operated under glass and plastic.

Greenhouse operating expenses include payroll, plant material purchases, heating, lighting, ventilation costs, other crop expenses (fertilizer, pesticides, and growing mediums) and other operating expenses (interest, land taxes, insurance, packaging, repairs to farm buildings, machinery, equipment and vehicles, and contract work). Since 2008, electricity expenses for lighting, airflow fans and heating are reported inside a specific expense item.

The concept for full-time employment was revised for Greenhouse, Sod and Nursery (GSN) 2003 data in accordance with the definition used at Statistics Canada and endorsed by the International Labour Organization. Full-time employment consists of persons who usually work 30 hours or more per week at their main or only job. Prior to 2003, full-time employment was defined as persons working 8 months or longer and part-time employment consisted of
persons working less than 8 months of the year. Since 2008, respondents to the survey must report the number of seasonal workers (less than 8 months contract) and permanent (more than 8 months contract).
The tables for cut flowers, potted plants, cuttings and propagating material have been updated to reflect changes in the industry.

## Nursery and sod industry

Before 1992, estimates essentially pertained to commercial operations that allocated a portion of their surface area to sod or seedlings and had annual gross sales of $\$ 75,000$ or more. Since 1992, estimates have pertained to nurseries with 5 acres or more, and sod operations of 40 acres or more in regions other than the Atlantic (10 acres or more in the Atlantic region).

The survey estimates in previous years were simply a tabulation of all responding operations fitting the above two criteria. Due to the changed methodology, the 1992 and subsequent estimates are not directly comparable with the corresponding 1991 estimates.

The survey collects dollar data on two commodities: sod and nursery stock. Sod is a standard commodity whereas nursery stock requires precise definition. The term "nursery stock" covers a diverse range of non-edible, living plant material grown in field or in containers and sold with its root system intact. Nursery stock includes annual and perennial plants ranging from woody plants (e.g. trees, shrubs and rose bushes) to bedding plants and potted outdoor flowers.

The end purpose of the plants may be ornamental or functional (e.g. fruit trees, grape vines and forestry seedlings). Plant sizes range from seedlings to fully grown trees. "Nursery stock" excludes Christmas trees and various inputs such as growing medium (e.g. peat moss and top soil), fertilizer and pesticides. Since 2008, nursery and sod operating expenses are separated.

## Methodology and data quality

## Survey frame

The survey frame has been designed to include all operations cultivating greenhouse, sod and nursery products based on the latest Census of Agriculture. Institutional farms, farms on Indian reservations, Hutterite colonies as well as operations from Yukon, the Northwest Territories and Nunavut were excluded from the survey. After these exclusions, the remaining farms represent the initial survey frame.

Observations from the 2009 survey frame were extracted from the 2008 Annual Greenhouse, Sod and Nursery Survey and the 2006 Census of Agriculture, to which were added some operations coming from external sources. The new operations are either new farms since the 2006 census or farms missed by the 2006 census.

Excluded from the survey frame were areas of glass or plastic greenhouses maintained for non-commercial plants. Also excluded were greenhouse-only operations in Quebec, Ontario and British Columbia with less than 5,000 square feet and greenhouse sales of less than $\$ 10,000$. Greenhouse-only operations in the remaining provinces with less than 1,000 square feet were excluded from the survey frame. Furthermore, sod-only operations with less than 40 acres ( 10 acres in the Atlantic) and nursery-only operations with less than 5 acres were excluded from the survey frame.

## Sample selection

For each province, four strata were defined. The first stratum includes operations with a greenhouse area of less than 1 acre, greenhouse sales of less than $\$ 110,000$, no nursery or sod area, and that reported flower production in the 2006 Census of Agriculture. The second stratum includes all operations with a greenhouse area of less than 1 acre, greenhouse sales of less than $\$ 110,000$, no nursery or sod area, and that did not report flower production in the 2006 Census of Agriculture. The third stratum includes all operations with a greenhouse area of
less than 1 acre, greenhouse sales of less than $\$ 110,000$, nursery area greater than zero and less than 5 acres, and no sod area. All remaining operations were placed in the fourth stratum. Within each province, operations were sampled in the first three strata and a census was taken of all units in the fourth stratum. For each stratum where sampling was done, the minimum sample size was 15 and the maximum design weight was 5 .

Overall, the sample size was determined in order to achieve a target CV of 0.01 (1\%) for greenhouse sales, greenhouse area and nursery area at the provincial level. The final sample size for this survey was 5,216 .

For this survey, we used two questionnaire versions: one full version requesting all the required information and one abridged version that essentially only requests totals. Following the sample selection, we allocated one of the two versions of the questionnaire to each operation sampled. We assigned one of the two versions to operations based on their province of operation and sales volume. We attributed the full version to 3,695 operations and the abridged version to 1,521 operations.

## Data collection

The reference period for this survey is calendar year 2009. Respondents received a copy of the questionnaire through the mail in early December 2009 and most of them were interviewed by telephone between January 11 and January 31, 2010.

Data collection for the 2009 Annual Greenhouse, Sod and Nursery Survey was undertaken using a "Computer Assisted Telephone Interview" (CATI) system. Some respondents, who have previously mentioned that they did not want to be interviewed over the phone, mailed back the questionnaire to the Ottawa Head Office.

During the data collection period, some respondents asked to not be interviewed over the phone. They were asked to complete the questionnaire and send it back to the Ottawa Head Office.

## Response rates

Information was received from nearly $88 \%$ of the sample. Non-responding units (i.e. no-contacts and refusals) are dealt with by adjusting the initial sample weights (raising factor adjustment).

## Edit and imputation

With the introduction of the CATI methodology, it is now possible to implement edit procedures at the time of the interview. Computer programmed edit checks in the CATI system inform interviewers during the interview of possible data errors, which can then be corrected immediately by the interviewer and respondent. The CATI system significantly reduces the need for subsequent telephone follow-up, thereby reducing respondent burden and survey processing time. Erroneous data and partially completed questionnaires are imputed using historical data.

## Sampling and non-sampling errors

The statistics contained in this publication are based on a random sample of agricultural operations and, as such, are subject to sampling and non-sampling errors. The overall quality of the estimates depends on the combined effect of these two types of errors. Sampling errors arise because estimates are derived from sample data and not from the entire population. Sampling error is quantified using the coefficient of variation (CV). The lower the CV, the smaller the sampling error.

Non-sampling errors are errors which are not related to sampling and may occur throughout the survey operation for many reasons. For example, non-response is an important source of non-sampling error. Coverage, differences in the interpretation of questions, incorrect information from respondents, mistakes in recording, coding and processing of data are other examples of non-sampling errors.

## Estimation

We weighted the information collected from the respondents to produce estimates representative of all of the operations in the greenhouse, sod and nursery industry in our survey frame. We produced estimates at the national and provincial level for different totals and sub-totals of industry variables. During the weighting, we took into consideration both versions of the questionnaires and ensured that all of the estimates produced for all variable types remained representative of all of the operations in the survey frame.

## Data quality

The estimates in this publication are based on a probability sample of farming operations. The potential error introduced by sampling can be estimated from the sample itself by using a statistical measure called the coefficient of variation (CV). Over repeated surveys, 95 times out of 100, the relative difference between a sample estimate and what should have been obtained from an enumeration of all farming operations with respect to the sample estimates would be less than twice the coefficient of variation. The sample estimate plus or minus twice the CV is referred to as the confidence interval.

For the 2009 Annual Greenhouse, Sod and Nursery Survey, CVs at the Canada level range generally from 2\% to $10 \%$ for the variables that are more frequently reported (area, investment, expenditures, sales, etc.), which makes them very reliable. We obtained CVs around 10\% for the different sales sectors. Some variables on plant, flower and tree varieties have CVs greater than $25 \%$. The coefficients of variation are available upon request.

To improve data qualification, the symbols $E$ and $F$ have been introduced into the publication. An $E$ means that the data are widely dispersed and that the estimate should be used with caution. An F replaces the estimate where the data are too unreliable for publication.


[^0]:    1. Excludes tree seedling plant sales.
[^1]:    1. Before sales tax.
[^2]:    1. Before sales tax.
