# Greenhouse, <br> Sod and Nursery Industries 



2008

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## Greenhouse, Sod and Nursery Industries

2008

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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
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Data quality, concepts and methodology
Data quality, concepts and methodology

## Highlights

## Overall trends

In Canada, the total greenhouse area decreased for the second year in a row. This situation was accompanied by lower production and sales of greenhouse products, notably plants and flowers, and by lost jobs in the sector. The nursery sector also experienced a slight decrease in sales.

In 2008, the total greenhouse area was 20.8 million square metres, compared with 20.9 million square metres in 2007. Sales of greenhouse products decreased by $7.6 \%$ to $\$ 2.1$ billion in 2008.

As for total operating expenses, they came in at $\$ 2.0$ billion ( $-5.0 \%$ ). Labour costs totalled $\$ 544$ million and represented $27.7 \%$ of total operating expenses for greenhouses. Compared with 2007, the total number of seasonal and permanent greenhouse workers decreased by $8.6 \%$ to 38,375 in 2008.

In 2008, sales of nursery products came to $\$ 610$ million, compared with $\$ 630$ million in 2007 (-3.2\%). For sod farms, sales of cultivated sod increased slightly by $0.5 \%$, reaching nearly $\$ 128$ million in 2008.

## Flowers and plants

The survey reveals that production of flowers and plants was responsible for $47.9 \%$ of total greenhouse area and represented $61.7 \%$ of total sales of greenhouse products in 2008. Total sales of flowers and plants, however, came to $\$ 1.3$ billion, compared with $\$ 1.5$ billion in 2007, which is a decrease of $13.6 \%$. Ontario, the largest producing province, experienced a decrease of $\$ 160$ million in sales of greenhouse flowers and plants.

Production of potted flowers and plants ranked first, with sales of $\$ 647$ million. Sales of ornamental plants for transplanting and cut flowers reached $\$ 226$ and $\$ 126$ million respectively. However, the value of sales in all categories of flowers and plants decreased between 2007 and 2008.

In 2008, Canadian greenhouses produced more than 208 million potted flowers and plants, 235 million cut flowers, 262 million tree seedlings, 639 million ornamental plants for transplanting, 357 million edible plants for transplanting and 65.7 million cuttings.

Chart 1
Sales distribution of cultivated greenhouse flowers and plants in Canada, by category, 2008


Note(s): Exclude resale activities of flowers and plants, as well as tree seedling sales.
Costs for specialized producers of greenhouse flowers and plants were more than $\$ 1.1$ billion. Labour costs represented $30.2 \%$ of total costs for greenhouses specializing in the production of flowers and plants. The purchase of plant materials and other growing costs (fertilizer, pesticides, etc.) were also among the main expenditure items.

## Vegetables

Unlike ornamental production, sales of fruits and vegetables increased by $3.7 \%$ between 2007 and 2008. In 2008, fruit sales reached more than $\$ 813$ million. Ontario production represented $58.5 \%$ of sales of greenhouse fruits and vegetables in Canada. The discovery of a phytosanitary problem in the tomato production in Mexico in the summer of 2008 gave a boost to Canadian producers. Sales of tomatoes increased by $4.5 \%$ to almost $\$ 372$ million. This growth was observed mainly in Quebec and British Columbia. Sales of peppers, cucumbers and lettuce reached $\$ 212$ million, $\$ 187$ million and $\$ 24.1$ million respectively. This represents an increase compared with 2007. Miniature cucumbers and greenhouse peppers were in demand in domestic and American markets.

Costs for fruit and vegetable producers reached $\$ 669$ million in 2008. Labour costs, the principal individual expenditure item, came in at $\$ 163$ million, which was one quarter of total operating expenditures. Other operating expenses (interest, property taxes, insurance, packaging, repairs and labour contracts) represented $30.7 \%$ of total costs for producers specializing in greenhouse fruits and vegetables.

## Nurseries and sod farms

In 2008, more than one thousand nurseries in Canada sold trees, shrubs, seedlings and plants valued at $\$ 610$ million. Ontario, British Columbia and Quebec represented respectively $45.6 \%, 29.9 \%$ and $11.5 \%$ of total sales of nursery products. Resale activities of nursery products, i.e., the sale of products not grown on site, represented $25.2 \%$ of total sales. Nursery products were principally sold to landscape contractors (27.7\%), garden centres (22.5\%), chain stores (14.2\%) as well as direct sales (10.5\%).

The survey collects information on nursery plants produced in fields 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, shade or flowering trees, and deciduous shrubs (including rosebushes).

Costs for producers of nursery products reached $\$ 501$ million in 2008. Labour costs were at $\$ 200$ million and represented $39.9 \%$ of total costs for nurseries. Nurseries employed 12,140 seasonal and permanent workers in 2008.

In Canada, nearly 200 farms were involved in sod cultivation. The total sod area decreased by $5.4 \%$ to 22,569 hectares. A total of 8,950 hectares of sod were sold in 2008. Ontario, Quebec and Alberta were among the main sod-producing provinces. In 2008, total sales of sod, including resale activities, came in at $\$ 130$ million.

In 2008, costs for sod producers reached $\$ 106$ million. The main expenditure item is for other operating costs, i.e., expenditures on fertilizer, pesticides, property taxes, interest, insurance, repairs, fuel and electricity. These costs came to $\$ 66.9$ million, compared with $\$ 36.9$ for labour costs. The sector employed nearly 1,800 workers, of whom three fourths 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 |
| $22-003-X$ | 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

## Selected surveys from Statistics Canada

## Statistical tables

Table 1
Greenhouse total area and months of operation, 2007

|  | Total greenhouses | Area |  |  |  |  |  |  |  | Total months of operation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total gre ar |  | Glass |  | Rigid p |  | Poly |  |  |
|  | number | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | number |
| Newfoundland and Labrador | 60 | 614 | 57 | 8 E | 790 E | 606 | 56 | .. |  | 365 |
| Prince Edward Island | 20 | 382 | 35 | x | x | x | x |  |  | 120 |
| Nova Scotia | 116 | 2,115 | 196 | 645 E | 59 E | 1,470 | 137 | . | .. | 720 |
| New Brunswick | 82 | 1,795 | 167 | x | x | x | x |  |  | 480 |
| Quebec | 800 | 26,762 | 2,486 | 2,500 | 232 | 24,262 | 2,254 | .. | .. | 5,485 |
| Ontario | 1,200 | 124,000 r | 11,519r | 34,000 r | 3,158 r | 90,000 | 8,361 | .. | . | 10,200 |
| Manitoba | 135 | 2,938 | 273 | x | x | x | x | .. | .. | 855 |
| Saskatchewan | 168 | 2,532 | 235 | 92 | 9 | 2,440 | 227 | . | . | 945 |
| Alberta | 350 | 11,615 | 1,079 | 815 E | 76E | 10,800 | 1,003 | . | . | 2,500 |
| British Columbia | 545 | 53,200 r | 4,942 r | 31,200 | 2,899 | 22,000 r | 2,043 r |  |  | 4,600 |
| Canada | 3,476 | 226,953 r | 20,992 ${ }^{\text {r }}$ | 69,373 r | 6,445 r | 156,581 r | 14,547 r | .. | . | 26,270 |

Table 2
Greenhouse total area and months of operation, 2008

|  | Total greenhouses | Area |  |  |  |  |  |  |  | Total months of operation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total gre ar | use | Glas |  | Rigid |  | Poly |  |  |
|  | number | " 000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | number |
| Newfoundland and Labrador | 50 | 714 | 66 | X | X | x | x | 628 | 58 | 320 |
| Prince Edward Island | 15 | 271 | 25 | x | x | x | X | 252 | 23 | 84 |
| Nova Scotia | 105 | 2,079 | 193 | F | F | 41,700 | 4 | 1,412 | 131 | 675 |
| New Brunswick | 75 | 1,744 | 162 | x | x | x | X | 1,698 | 158 | 465 |
| Quebec | 740 | 26,936 | 2,502 | 3,168 | 294 | 1,886 | 175 | 21,882 | 2,033 | 5,240 |
| Ontario | 1,190 | 123,676 | 11,490 | 32,275 | 2,998 | 16,882 | 1,568 | 74,519 | 6,923 | 10,522 |
| Manitoba | 125 | 3,275 | 304 | 2 E | 0 E | F | F | 2,972 | 276 | 750 |
| Saskatchewan | 145 | 2,237 | 208 | 78 | 7 | 222 | 21 | 1,937 | 180 | 825 |
| Alberta | 335 | 10,409 | 967 | 540 | 50 | 1,341 | 125 | 8,527 | 792 | 2,400 |
| British Columbia | 515 | 52,037 | 4,834 | 34,437 | 3,199 | 2,300 | 214 | 15,300 | 1,421 | 4,500 |
| Canada | 3,295 | 223,378 | 20,752 | 71,161 | 6,611 | 23,089 | 2,145 | 129,128 | 11,996 | 25,781 |

Table 3
Specialized greenhouse vegetables and fruits producers' area, 2008

|  | Total greenhouses | Area |  |  |  |  |  |  |  | Total months of operation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total greenhouse area |  | Glass |  | Rigid plastic |  | Poly-film |  |  |
|  | number | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | number |
| Atlantic provinces | 45 | F | F | x | X | 31 | 3 | F | F | 310 |
| Quebec | 170 | 6,534 | 607 | F | F | F | F | 4,347 | 404 | 1,320 |
| Ontario | 215 | 74,961 | 6,964 | 17,244 | 1,602 | 10,869 | 1,010 | 46,848 | 4,352 | 2,025 |
| Prairie provinces | 95 | 3,774 | 351 | 75 | 7 | F | F | 3,228 | 300 | 825 |
| British Columbia | 105 | 25,525 | 2,371 | 21,500 | 1,997 | 2,243 | 208 | F | F | 900 |
| Canada | 630 | 111,306 | 10,341 | 40,756 | 3,786 | 13,985 | 1,299 | 56,566 | 5,255 | 5,380 |

Table 4-1
Area, production and value - Greenhouse tomatoes

|  | Area |  | Production |  | Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | '000 of square feet | '000 of square metres | '000 of pounds | '000 of kilograms | '000 of dollars |
| 2007 |  |  |  |  |  |
| Newfoundland and Labrador | 11 | 1 | 13E | 6 E | 22E |
| Prince Edward Island | 79 | 7 | x | x | x |
| Nova Scotia | 514 | 48 | 3,500 E | 1,588E | F |
| New Brunswick | 58 | 5 | 150 E | 68 E | F |
| Quebec | 5,022 | 467 | 41,335 | 18,749 | 46,820 |
| Ontario | 32,420 r | 3,012 r | 295,000 r | 133,810 r | 210,500 r |
| Manitoba | 57 E | 5 E | x | x | F |
| Saskatchewan | 53 | 5 | 163 | 74 | 311 |
| Alberta | 1,500 | 139 | 15,000 | 6,804 | 12,000 |
| British Columbia | 10,250 r | 952 r | 94,500 r | 42,864 r | 81,000 r |
| Canada | 49,977 r | 4,643 r | 450,105 r | 204,164 r | 355,613 r |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 19E | 2E | F | F | F |
| Prince Edward Island | 51 | 5 | 214 | 97 | 224 |
| Nova Scotia | F | F | F | F | F |
| New Brunswick | F | F | F | F | F |
| Quebec | 5,788 | 538 | 43,413E | 19,692 E | 51,854E |
| Ontario | 31,002 | 2,880 | 280,904 | 127,416 | 204,579 |
| Manitoba | 60 | 6 | F | F | F |
| Saskatchewan | 45 | 4 | 200 | 91 | 390 |
| Alberta | 738 | 69 | 7,871 | 3,570 | 7,189 |
| British Columbia | 11,850 | 1,101 | 118,481 | 53,742 | 101,442 |
| Canada | 50,184 | 4,662 | 456,193 | 206,926 | 371,670 |

Table 4-2
Area, production and value - Greenhouse cucumbers

|  | Area |  | Production | Value |
| :---: | :---: | :---: | :---: | :---: |
|  | '000 of square feet | '000 of square metres | '000 of dozens | '000 of dollars |
| 2007 |  |  |  |  |
| Newfoundland and Labrador | F | F | F | F |
| Prince Edward Island | x | x | x | x |
| Nova Scotia | 140 E | 13 E | 57 | 637 |
| New Brunswick | 71 | 7 | 23 | 259 E |
| Quebec | 1,553 | 144 | x | x |
| Ontario | 21,600 | 2,007 | 20,000 r | 126,500 |
| Manitoba | F | F | F | F |
| Saskatchewan | 52 | 5 | 21 E | 239 E |
| Alberta | 2,100 | 195 | 1,800 | 18,800 |
| British Columbia | 4,430 r | 412 r | 4,500 r | 29,063 r |
| Canada | 29,956 r | 2,783 r | 27,041 r | 179,421 r |
| 2008 |  |  |  |  |
| Newfoundland and Labrador | x | x | X | x |
| Prince Edward Island | $\times$ | x | X | $\times$ |
| Nova Scotia | F | F | F | F |
| New Brunswick | F | F | F | F |
| Quebec | 738 | 69 | 226 | 1,902 |
| Ontario | 22,081 | 2,051 | 20,736 | 130,659 |
| Manitoba | F | F | F | F |
| Saskatchewan | 36 | 3 | 20 | 204 E |
| Alberta | 1,985 | 184 | 3,125 | 20,923 |
| British Columbia | 4,795 | 445 | 4,976 | 33,063 |
| Canada | 29,770 | 2,766 | 29,202 | 187,422 |

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

|  |  | Area |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |

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

|  | Area |  | Production |  | Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | '000 of square feet | '000 of square metres | '000 of pounds | '000 of kilograms | '000 of dollars |
| 2007 |  |  |  |  |  |
| Newfoundland and Labrador | x | x | $x$ | $x$ | x |
| Prince Edward Island | x | x | 0 | 0 | 2 |
| Nova Scotia | F | F | F | F | F |
| New Brunswick | F | F | x | x | F |
| Quebec | 62 | 6 | 78 | 35 | 129 E |
| Ontario | 20,000 r | 1,858 r | 93,600 | 42,456 | 130,000 r |
| Manitoba | x | x | F | F | x |
| Saskatchewan | 15E | 1 E | F | F | F |
| Alberta | 700 | 65 | 3,500 | 1,588 | 6,000 |
| British Columbia | 12,100 | 1,124 | 60,000 | 27,216 | 65,000 r |
| Canada | 32,909 r | 3,057 r | 157,224 | 71,315 | 201,240 r |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 0 | 0 | 0 | 0 | 0 |
| Prince Edward Island | x | X | X | X | X |
| Nova Scotia | 20E | 2 E | F | F | 20E |
| New Brunswick | F | F | F | F | F |
| Quebec | F | F | F | F | F |
| Ontario | 19,329 | 1,796 | 89,873 | 40,766 | 127,563 |
| Manitoba | F | F | F | F | F |
| Saskatchewan | 12 E | 1 E | 34 E | 15,422E | F |
| Alberta | 682 | 63 | 3,392 | 1,538 | 5,744 |
| British Columbia | 12,800 | 1,189 | 60,748 | 27,555 | 78,128 |
| Canada | 32,910 | 3,057 | 154,231 | 69,958 | 211,691 |

Table 5
Specialized greenhouse flowers and plants producers' area in 2008

|  | Total greenhouses | Area |  |  |  |  |  |  |  | Total months of operation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total |  | Glass |  | Rigid plastic |  | Poly-film |  |  |
|  | number | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | '000 of square feet | '000 of square metres | number |
| Atlantic provinces | 170 | 3,528 | 328 | F | F | 126 | 12 | 3,113 | 289 | 1,050 |
| Quebec | 440 | 15,023 | 1,396 | 1,074 | 100 | 1,425 | 132 | 12,524 | 1,164 | 3,005 |
| Ontario | 885 | 45,796 | 4,255 | 14,158 | 1,315 | 5,283 | 491 | 26,354 | 2,448 | 7,710 |
| Prairie provinces | 445 | 10,814 | 1,005 | 441 | 41 | 1,009 | 94 | 9,365 | 870 | 2,850 |
| British Columbia | 350 | 21,069 | 1,957 | 8,115 | 754 | 2,192 | 204 | 10,762 | 1,000 | 3,200 |
| Canada | 2,290 | 96,228 | 8,940 | 24,076 | 2,237 | 10,033 | 932 | 62,119 | 5,771 | 17,815 |

Table 6
Greenhouse flowers and plants production and sales by category, 2008

|  | Total potted plants |  | Total cuttings 1 |  | Total cut flowers |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Production | Sales | Production | Sales | Production | Sales |
|  | thousands | '000 of dollars | thousands | '000 of dollars | thousands | '000 of dollars |
| Newfoundland and Labrador | 479 | 2,347 | X | x | X | x |
| Prince Edward Island | 105 | 375 | 0 | 0 | x | x |
| Nova Scotia | F | F | 0 | 200 | F | F |
| New Brunswick | 2,608 | 10,681 E | x | 5,065 | 170 | 380 |
| Quebec | 43,553 | 107,121 | F | F | F | F |
| Ontario | 105,275 | 316,931 | 23,319 | 14,354 | 149,424 | 74,541 |
| Manitoba | F | 14,477E | F | F | x | x |
| Saskatchewan | 1,430 | 5,428 | 64E | 7 | x | x |
| Alberta | 7,565 | 33,899 | 1,365E | 2,646 | F | F |
| British Columbia | $37,624$ | 147,537 | F | 26,373 | 76,680 | 44,184 |
| Canada | 207,708 | 646,872 | $65,761$ | 53,763 | 234,876 | 126,192 |
|  |  | g plant ornamen |  |  | lant vegetab |  |
|  |  | uction | Sales |  |  | Sales |
|  |  | sands | '000 of dollars |  |  | '000 of dollars |
| Newfoundland and Labrador |  | 6,112 | 2,531 |  | 32 | 237 E |
| Prince Edward Island |  | 1,060 E | 1,040 |  | 95 E | 69 E |
| Nova Scotia |  | F | 3,071 |  | F | 520 |
| New Brunswick |  | 6,796 | 12,442 |  |  | 1,642 |
| Quebec |  | 1,498 | 38,185 |  | F | 7,458 |
| Ontario |  | 2,541 | 80,949 |  |  | 26,033 |
| Manitoba |  | F | F |  |  | 2,009 |
| Saskatchewan |  | 4,739 | 6,548 |  |  | 903 |
| Alberta |  | 7,456 | 24,642 |  |  | 2,893 |
| British Columbia |  | 8,837 | 40,432 |  |  | 11,278 |
| Canada |  | 9,097 | 225,522 |  |  | 53,040 |

1. Exclude trees seedling plants sales.

Table 7
Indoor potted plant production by variety

|  | Indoor potted plants |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Azaleas | Lilies | Poinsettias | African violets | Tropical foliage and green plants | Gerberas | Miniature roses |
|  | thousands |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | x | 15 | 42 | F | x | 12 E | x |
| Prince Edward Island | 0 | x | x | 0 | 0 | x | 0 |
| Nova Scotia | x | x | x | 0 | F | 11 | x |
| New Brunswick | $\times$ | 7 | 223 | 12 | x | 96 | x |
| Quebec | F | F | 929 | F | 762 E | F | F |
| Ontario | 1,700 | 4,150 | 4,360 | 10,350 E | F | 3,100 | 10,325 |
| Manitoba | x | x | x | x | F | 9 | F |
| Saskatchewan | x | 10 | 98 E | 0 | 15 | 12 | F |
| Alberta | 9 E | 65 | 350 | x | 65 | 30 E | x |
| British Columbia | F | F | 1,851 | 830 E | 1,747 E | 884 | x |
| Canada | 1,898 | 4,918 | 8,196 | 11,908 r | F | 4,340 | 10,659 |
| 2008 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | x | F | 32 | x | x | 6 E | 0 |
| Prince Edward Island | 0 | x | x | 0 | 0 | 0 | 0 |
| Nova Scotia | x | F | F | 0 | F | F | F |
| New Brunswick | x | F | 211 | x | 56 | 9 E | 2 |
| Quebec | x | F | 687 | x | 1,142 E | 183E | F |
| Ontario | 1,260 | 3,268 | 3,977 | F | F | 2,693 | 6,448 |
| Manitoba | x | F | F | x | F | 5 | 1 E |
| Saskatchewan | F | F | F | x | F | 4 | F |
| Alberta | F | 64 E | 378 | F | 21 E | F | F |
| British Columbia | F | F | 1,589 | 673 E | 3,159E | 671 | F |
| Canada | 1,306 | 4,038 | 7,246 | F | F | 3,613 | 7,031 |

Table 7 - continued
Indoor potted plant production by variety

|  | Indoor potted plants |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Orchids | Kalanhoe | Primula | Cyclamen | Tulips | Indoor hanging pots | Other indoor pots |
|  | thousands |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | x | 15 | $x$ | 0 | .. | .. |
| Prince Edward Island | 0 | x | x | 0 | x | . | .. |
| Nova Scotia | 0 | x | 23 | x | x | .. | .. |
| New Brunswick | 0 | 7 | x | x | x | .. | .. |
| Quebec | x | 35 | 72 | 168 | 17 | .. | .. |
| Ontario | 1,000 | 7,640 | 933 | 2,900 | 2,516 | .. | .. |
| Manitoba | x | x | 5 | x | x | .. | .. |
| Saskatchewan | 0 | 2 | x | x | 0 | .. | .. |
| Alberta | x | x | 40 | x | x | .. | .. |
| British Columbia | 486 | 706 | 2,041 | 109 | 46 | .. | .. |
| Canada | 1,613 | 8,416 r | 3,238 | 3,237 | 2,596 r | .. | .. |
| 2008 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | x | 2 | $x$ | x | F | $x$ |
| Prince Edward Island | 0 | 0 | x | 0 | 0 | 0 | 0 |
| Nova Scotia | 0 | F | F | F | F | F | F |
| New Brunswick | x | F | F | x | F | 18 | 111 |
| Quebec | x | F | F | F | F | 206 | F |
| Ontario | 3,386 | 3,090 | 663 | 1,248 | 2,127 | 945 E | 23,236 |
| Manitoba | x | x | F | F | x | F | F |
| Saskatchewan | 0 | F | F | x | $\times$ | 4 | F |
| Alberta | 0 | F | 31 | X | F | 7 | F |
| British Columbia | F | 828 E | 998 | F | 19,450 E | F | F |
| Canada | 5,069 | 3,968 | 1,756 | 1,561 | 2,191 E | 1,325 | 25,842 |

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

Table 8
Outdoor potted plant production by variety

|  | Outdoor potted plants |  |  |  |  |  |  |  | Total potted plants |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Begonias | Chrysanthemums | Geraniums | Impatiens | Petunias | Hosta | Outdoor hanging pots | Other outdoor pots |  |
|  | thousands |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 63 | 18 | 62 | 35 | x | .. | . | .. | .. |
| Prince Edward Island | 6 | x | 34 | 1 | x | . | .. | . | . |
| Nova Scotia | 72 | x | 229 | 65 | x | .. | .. | . | . |
| New Brunswick | 85 | 372 | 430 | x | 141 | . | .. | . | .. |
| Quebec | 900 | 590 | 5,312 | 903 | 639 | .. | .. | .. | . |
| Ontario | 3,600 | 12,000 | 11,000 | 2,470 | 1,600 | .. | .. | .. | .. |
| Manitoba | 121 | x | 86 E | F | 186 E | .. | .. | . | .. |
| Saskatchewan | 43 | 11E | 381 | 81 | 112 | .. | .. | .. | .. |
| Alberta | 215 | F | 1,000 | 85 | 700 | .. | .. | .. | .. |
| British Columbia | 1,428 | 1,472E | 6,370 | 1,278 | 1,376 | .. | .. | .. | .. |
| Canada | 6,534 | 14,632 r | 24,904 | 5,072 ${ }^{\text {r }}$ | 4,893 | . | . | . | . |
| 2008 |  |  |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 91 | F | 43 | 44 E | 47 | 14 E | 111 | 42E | 479 |
| Prince Edward Island | 2 | 4 E | 25 | 4 | 3 | 4 | 19 | 14 | 105 |
| Nova Scotia | F | F | F | F | F | 6 E | F | F | F |
| New Brunswick | 96 | 327 | F | 144 | 143 | F | 187 | 822 | 2,608 |
| Quebec | 811 | 696 | 5,163 | 6,417E | F | 98 | 1,753 | 21,991 | 43,553 |
| Ontario | 2,812 | 6,288 | 9,279 | 2,052 | 1,360 | 129 | 5,359 | 13,704 | 105,275 |
| Manitoba | 127 E | F | F | F | F | 38 E | F | F | F |
| Saskatchewan | 62 | F | 239 | 53 | 100 | 13 | 137 | F | 1,430 |
| Alberta | 292 | F | 921 | 77 | 948 | 14 | 543 | 3,329 | 7,565 |
| British Columbia | 1,288 | 1,314E | 5,417 | 667 | 1,305 | F | 1,285 | 14,201 | 37,624 |
| Canada | 5,672 | 9,516 | 22,791 | 9,547 | 6,753 | 394 | 10,080 | 60,606 | 207,708 |

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

Table 9
Cuttings and tree seedlings

|  | Cuttings |  |  |  |  |  | Tree seedlings greenhouse production |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Chrysanthemums | Poinsettias | Geraniums | Impatiens | $\begin{array}{r} \text { Other } \\ \text { cuttings } \end{array}$ | Total cuttings |  |
|  | thousands |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | x | x | X | x | x | .. | 0 |
| Prince Edward Island | 0 | 0 | 0 | 0 | 0 | .. | 0 |
| Nova Scotia | x | 0 | x | 0 | x | .. | x |
| New Brunswick | X | x | x | x | x | .. | 0 |
| Quebec | x | x | F | F | 13,999 | .. | x |
| Ontario | 2,500 | 2,900 | 12,400 | 4,300 | 66,000 | .. | 93,500 |
| Manitoba | 0 | 0 | x | x | x | .. | x |
| Saskatchewan | x | 0 | 16,000 E | x | x | .. | x |
| Alberta | x | 0 | F | x | 4,000 | .. | 58,030 |
| British Columbia | x | $x$ | x | x | 11,805 | .. | 300,000 |
| Canada | 12,536 E | 4,872 | 15,581 r | 5,500 | 101 r | .. | 476,010 |
| 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 | F | F | F | x |
| Ontario | x | 1,866 | 4,142 | 4,044 | 13,254 | 23,319 | 49,906 |
| Manitoba | 0 | 0 | 4 E | x | F | F | x |
| Saskatchewan | 0 | 0 | 3 E | F | F | 64 E | 9,515 |
| Alberta | x | 0 | 84 E | F | 1,265E | 1,365E | 39,394 |
| British Columbia | x | 2,011 | F | 295 E | 11,511 | F | 126,250 |
| Canada | F | 4,008 | 8,817 | 5,870 | 39,683 | 65,761 | 262,101 |

Table 10
Greenhouse cut flower production by variety

|  | Stems |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Alstroemeria | Chrysanthemums | Daffodils | Freesia | Gerberas | Iris |
|  | thousands |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | .. | x | 0 | 0 | 0 |
| Prince Edward Island | 0 | .. | 0 | 0 | 0 | 0 |
| Nova Scotia | x |  | 0 | $x$ | x | $x$ |
| New Brunswick | 0 | .. | x | 0 | 0 | 0 |
| Québec | x | .. | 0 | 0 | x | 0 |
| Ontario | 10,400 | .. | x | x | 28,000 | x |
| Manitoba | 0 | .. | x | 0 | 0 | 0 |
| Saskatchewan | 0 | .. | 0 | 0 | x | 0 |
| Alberta | 0 | .. | 0 | 0 | x | 0 |
| British Columbia | 6,800 E | .. | x | x | 17,750 | x |
| Canada | 17,623 | .. | 2,366 | F | 46,371 | 6,061 |
| 2008 |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | 0 | x | 0 | 0 | 0 |
| Prince Edward Island | x | 0 | 0 | 0 | 0 | 0 |
| Nova Scotia | x | x | 0 | x | x | 0 |
| New Brunswick | x | x | x | x | x | x |
| Québec | F | x | 0 | 0 | F | x |
| Ontario | 8,030 | 7,323 | x | x | 30,249 | 4,610 |
| Manitoba | 0 | 0 | x | 0 | 0 | 0 |
| Saskatchewan | 0 | 0 | 0 | 0 | 0 | 0 |
| Alberta | x | 0 | 0 | 0 | 0 | X |
| British Columbia | F | 7,367 E | x | x | 20,128 | F |
| Canada | 14,636 E | 14,815 | 2,688 | F | 51,353 | 5,798 |

Table 10 - continued
Greenhouse cut flower production by variety

|  | Stems |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Roses | Snapdragons | Tulips | Lilies | Lisianthus |  |  |
|  | thousands |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | .. | $x$ | x | 0 | 0 | .. | .. |
| Prince Edward Island | .. | 0 | $x$ | 0 | 0 | .. | .. |
| Nova Scotia | . | x | 0 | x | 0 |  | . |
| New Brunswick | .. | x | x | x | 0 |  | .. |
| Quebec | .. | x | x | x | x | .. | .. |
| Ontario | .. | 14,100 | 41,600 | 9,600E | x | .. | .. |
| Manitoba | .. | 0 | x | x | 0 | .. | .. |
| Saskatchewan | .. | 0 | 0 | 0 | 0 | .. | .. |
| Alberta | .. | 0 | 0 | x | 0 | .. |  |
| British Columbia | .. | 6,910 E | F | 5,350 | F | .. | .. |
| Canada | .. | 21,103 | 56,685 | 15,603 | 1,042 E | .. | .. |
| 2008 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 0 | 0 | x | 0 | 0 | 0 | X |
| Prince Edward Island | 0 | 0 | 1,813 | 0 | 0 | 0 | x |
| Nova Scotia | 0 | x | 0 | x | x | F | F |
| New Brunswick | 0 | x | x | 27 | x | x | 170 |
| Quebec | F | x | F | F | x | F | F |
| Ontario | 8,408 | 11,783 | 47,840 | F | x | 11,434 | 149,424 |
| Manitoba | 0 | x | 0 | X | 0 | x | x |
| Saskatchewan | 0 | 0 | 0 | 0 | 0 | 0 | X |
| Alberta | 0 | x | x | x | x | F | F |
| British Columbia | F | F | 19,000 E | 3,735 | x | F | 76,680 |
| Canada | 13,710 | 14,078 | 69,034 | F | F | 19,660 | 234,876 |

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

Table 11
Ornamental flower and plant sales and resales

|  | Retail florists | Domestic wholesalers | Mass market chain stores | Other nhouses | Exported | Direct sales to the public ${ }^{1}$ | Government | Other channels | Total sales |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | thousands of dollars |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |
| Newfoundland and Labrador | x | F | 2,412 | 30 E | 0 | 3,535 | x | F | x |
| Prince Edward Island | x | x | x | x | x | 1,453 | x | 0 | 2,056 |
| Nova Scotia | 3,900 | x | x | x | x | 5,388 | 152 | 486 | 18,875 |
| New Brunswick | 3,408 | 1,355 | F | 1,801 | x | 8,300 | 270 | 320E | 38,052 |
| Quebec | 38,500 | 18,200 | 50,000 | 5,500 | 6,500E | 46,000 | x | F | 174,000 |
| Ontario | 90,500 | 230,000 | 200,000 | 50,000 | 79,500 | 90,000 | 3,500 | 31,000 | 774,500 |
| Manitoba | F | F | F | 670 | x | 11,800 | 493 E | 674 E | x |
| Saskatchewan | 787 | 3,837E | 2,443E | 930 | x | 11,000 | X | 1,706 | 21,131 |
| Alberta | 9,000 | F | 13,700 | F | x | 40,000 | x | 14,500 | 83,511 |
| British Columbia | 32,000 | 80,000 | 74,200 | 24,050 | 29,000 | 33,300 | 15,500 | 39,700 | 327,750 |
| Canada | 181,731 | 338,339 | 367,469 | 85,604 r | 134,061 | 250,776 | 23,917 r | 94,022 | 1,476,589 r |
| 2008 |  |  |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 391 E | x | 1,416 | F | 0 | 3,653 | F | x | 6,010 |
| Prince Edward Island | x | 0 | x | x | 0 | 1,854 | 0 | x | 2,476 |
| Nova Scotia | F | F | F | x | x | 4,132 | 62E | F | F |
| New Brunswick | 3,888 | 1,357 | x | 1,135 | x | 6,102 | 209 | 364 | 32,261 |
| Quebec | 39,906 | 20,006 | 48,551 | 4,570 | 15,913 | 46,344 | 3,931 | 6,310 | 185,530 |
| Ontario | 56,419 | 177,416 | 162,521 | 44,109 | 71,193 | 84,549 | 2,716 | 15,400 | 614,323 |
| Manitoba | F | F | F | 1,196 | F | 10,535 | 376 E | F | 33,485 |
| Saskatchewan | 951 | F | F | 973 | x | 7,315 | 489 | F | 17,954 |
| Alberta | 6,016 | 2,557 | 10,964 | X | x | 41,932 | 1,992E | 7,826E | 74,111 |
| British Columbia | 33,681 | 55,175 | 84,175 | 20,165 | 35,073 | 22,588 | 10,245 | 30,795 | 291,896 |
| Canada | 150,580 | 258,741 | 337,473 | 73,811 | 140,031 | 229,004 | 20,048 | 64,621 | 1,275,506 |

1. Includes roadside stands and owner-owned retail outlets.

Table 12
Total value of greenhouse products

|  | 2007 |  |  | 2008 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fruit and vegetable sales | Ornamental flower and ${ }_{1}$ plant sales | Total greenhouse sales | Fruit and vegetable sales | Ornamental flower and ${ }_{1}$ plant sales | Total greenhouse sales |
|  | thousands of dollars |  |  |  |  |  |
| Newfoundland and Labrador | F | X | 7,348 | F | 6,010 | 6,200 |
| Prince Edward Island | 552 | 2,056 | 2,608 | 256 | 2,476 | 2,732 |
| Nova Scotia | 5,053E | 18,875 | 23,928 | F | F | 23,665 |
| New Brunswick | 472 | 38,052 | 38,524 | F | 32,261 | 32,637 |
| Quebec | 75,522 | 174,000 | 249,522 | 79,366 | 185,530 | 264,896 |
| Ontario | 484,970 r | 774,500 | 1,259,470 | 475,366 | 614,323 | 1,089,689 |
| Manitoba | F | x | 31,527 | 404 | 33,485E | 33,889 |
| Saskatchewan | 691 | 21,131 | 21,822 | 754 | 17,954 | 18,708 |
| Alberta | 37,345 | 83,511 | 120,856 | 35,000 | 74,111 | 109,110 |
| British Columbia | 178,857 r | 327,750 | 506,607 | 215,159 | 291,896 | 507,055 |
| Canada | 784,154 r | 1,476,589 r | 2,260,743 r | 813,075 | 1,275,506 | 2,088,680 |

1. Includes resale value.

Table 13
Greenhouse producers' operating expenses

|  | Plant material purchase for growing on ${ }^{1}$ | Plant material purchase for resale ${ }^{1}$ | Gross yearly payroll ${ }^{2}$ | Electricity ${ }^{3}$ | Natural gas |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | thousands of dollars |  |  |  |  |
| 2007 |  |  |  |  |  |
| Newfoundland and Labrador | 1,530 | 716 | 2,300 |  | 0 |
| Prince Edward Island | x | x | 823 |  | x |
| Nova Scotia | 2,683 | 3,256 | 7,200 | .. | X |
| New Brunswick | 7,265 | 4,300 | 11,700 | .. | F |
| Québec | 24,100 | 14,000 | 71,000 | .. | 10,500 |
| Ontario | 141,400 | 110,000 | 270,000 | .. | 121,000 |
| Manitoba | 5,900 | 2,000 | 10,500 | .. | 1,700 |
| Saskatchewan | 3,600 | 1,940 | 6,385 | . | 1,176 |
| Alberta | 11,500 | 6,000 | 33,000 | . | 12,500 |
| British Columbia | 71,800 r | 35,700 r | 122,000 | .. | 41,205 r |
| Canada | 270,264 r | 177,922 r | 534,908 | . | 188,212 r |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 1,486 | 1,134 | 2,202 | 155,600E | 0 |
| Prince Edward Island | 625 | x | 763 | 132,200E | 0 |
| Nova Scotia | F | F | F | 533,560E | 0 |
| New Brunswick | 7,478 | 2,339 | 11,156 | 573 | 0 s |
| Québec | 29,326 | 15,275 | 71,748 | 9,047 | 10,909 |
| Ontario | 141,866 | 50,015 | 261,146 | 26,416 | 111,231 |
| Manitoba | 6,668 | F | 12,497E | 511 | 1,585 |
| Saskatchewan | 4,110 | 496 | 5,917 | 456 | 950 |
| Alberta | 15,428 | 4,542 | 33,618 | 3,363 | 9,649 |
| British Columbia | 77,162 | 27,501 | 135,994 | 11,254 | 35,699 |
| Canada | 286,793 | 105,525 | 543,620 | 52,441 | 170,024 |
|  | Heating Oil | Other type of fuel | Other crop expenses | Other operating expenses | Total operating expenses |
|  | thousands of dollars |  |  |  |  |
| 2007 |  |  |  |  |  |
| Newfoundland and Labrador | 719 | 47 | 600 | 996 | 6,906 |
| Prince Edward Island | x | x | 254 | 739 | 2,574 |
| Nova Scotia | 1,167 | x | 2,046 | 8,107 | 25,931 |
| New Brunswick | 1,208E | 840 | 6,108 | 10,625 | 42,149 |
| Quebec | 11,500 | 7,137 | 16,518 | 70,500 | 225,255 |
| Ontario | 26,000 | 16,000 | 103,000 | 312,000 | 1,099,400 |
| Manitoba | 104 | 300 | 1,700 | 6,113 | 28,317 |
| Saskatchewan | 172 E | 316 | 1,769 | 3,500 | 18,858 |
| Alberta | x | x | 11,000 | 24,000 | 99,101 |
| British Columbia | 585 | 11,851 r | 61,000 r | 173,900 r | 518,041 r |
| Canada | 41,652 | 39,101 r | 203,994 r | 610,479 r | 2,066,532 ${ }^{\text {r }}$ |
| 2008 |  |  |  |  |  |
| Newfoundland and Labrador | 671 | 25 | 695 | 961 | 7,330 |
| Prince Edward Island | 226 | X | 225 | 468 | 2,522 |
| Nova Scotia | 752 | F | F | F | F |
| New Brunswick | F | 603 | 6,886 | 6,628 | 36,771 |
| Quebec | 11,574 | 6,860 | 25,074 | 53,390 | 233,205 |
| Ontario | 17,359 | 17,717 | 114,647 | 248,396 | 988,794 |
| Manitoba | 89 | 369 E | 3,123 | 6,411E | 32,694E |
| Saskatchewan | F | 340 E | 1,981 | 2,410 | 16,949 |
| Alberta | 0 | 848 | 9,560 | 20,478 | 97,486 |
| British Columbia | 690 | 13,000 | 86,028 | 131,379 | 518,706 |
| Canada | 32,757 | 41,535 | 250,578 | 480,496 | 1,963,768 |

1. Includes value of flowers, plants, cuttings, seeds and bulbs purchased.
2. Includes seasonal and permanent labour.
3. Electricity expenses (lighting, airflow fan and heating).

Table 14
Specialized greenhouse vegetables producers' operating expenses, 2008

|  | Plant material purchase for growing on ${ }^{1}$ | Plant material purchase for resale ${ }^{1}$ | Gross yearly payroll ${ }^{2}$ | Electricity ${ }^{3}$ | Fuel | Other crop expenses | Other operating expenses | Total operating expenses |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | thousands of dollars |  |  |  |  |  |  |  |
| Atlantic provinces | F | x | F | F | F | F | F | F |
| Quebec | 2,815E | x | 16,019E | F | 8,438E | 7,851E | 19,685E | 59,153E |
| Ontario | 31,211 | x | 98,215 | 11,213 | 93,375 | 52,817 | 111,846 | 398,679 |
| Prairie provinces | 2,999 | x | 7,630 | 3,290 | 5,948 | 2,654 | 8,893 | 31,454 |
| British Columbia | 13,003 | x | 40,429 | 3,718 | 26,766 | 26,175 | 64,525 | 175,198 |
| Canada | 50,099 | F | 163,169 | 24,262 | 135,018 | 89,848 | 205,621 | 668,714 |

1. Includes value of flowers, plants, cuttings, seeds and bulbs purchased.
2. Includes seasonal and permanent labour.
3. Electricity expenses (lighting, airflow fan and heating).

Table 15
Specialized greenhouse flowers and plants producers' operating expenses, 2008

|  | Plant material purchase for growing on ${ }^{1}$ | Plant material purchase for resale ${ }^{1}$ | Gross yearly payroll ${ }^{2}$ | Electricity ${ }^{3}$ | Fuel | Other crop expenses | Other operating expenses | Total operating expenses |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | thousands of dollars |  |  |  |  |  |  |  |
| Atlantic provinces | 11,731 | 6,074E | 19,322 | 997 | 3,744 | 9,234 | 15,851E | 66,952 |
| Quebec | 23,364 | 12,736 | 45,576 | 3,869 | 16,024 | 13,105 | 24,567 | 139,240 |
| Ontario | 100,802 | 37,664 | 147,302 | 13,419 | 52,153 | 48,699 | 116,472 | 516,511 |
| Prairie provinces | 21,020 | 6,315 | 41,946 | 3,290 | 8,522 | 11,481 | 19,735 | 112,248 |
| British Columbia | 59,470 | 18 | 71,784 | 5,303 | 16,538 | 41,912 | 47,287 | 242,312 |
| Canada | 216,386 | 62,807 | 325,930 | 26,879 | 96,980 | 124,429 | 223,913 | 1,077,323 |

1. Includes value of flowers, plants, cuttings, seeds and bulbs purchased.
2. Includes seasonal and permanent labour.
3. Electricity expenses (lighting, airflow fan and heating).

Note(s): Excludes vegetable bedding plants producers.

Table 16
Specialized greenhouse vegetables bedding plants producers' operating expenses, 2008

|  | Plant material purchase for growing on ${ }^{1}$ | Plant material purchase for resale ${ }^{1}$ | Gross yearly payroll ${ }^{2}$ | Electricity ${ }^{3}$ | Fuel | Other crop expenses | Other operating expenses | Total operating expenses |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | thousands of dollars |  |  |  |  |  |  |  |
| Atlantic provinces | X | X | X | X | x | X | X | X |
| Quebec | F | x | F | F | 89 E | 85E | F | 666 E |
| Ontario | 178 E | 0 | 1,531E | F | 578 E | 2,106E | 548 | $5,305 \mathrm{E}$ |
| Prairie provinces | F | 0 | x | F | F | x | F | F |
| British Columbia | F | X | F | X | x | x | x | F |
| Canada | 309 | F | 2,039 | F | 722 | 2,275E | 791 | 6,573 |

[^0]Table 17
Labour - Total greenhouse employees

|  | 2007 |  |  | 2008 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total greenhouse employees ${ }^{1}$ |  |  |  |  |  |
|  | Seasonal ${ }^{2}$ | Permanent ${ }^{3}$ | Total | Seasonal ${ }^{2}$ | Permanent ${ }^{3}$ | Total |
|  | number |  |  |  |  |  |
| Newfoundland and Labrador | .. | .. | 335 | 250 | 50 | 300 |
| Prince Edward Island | .. | .. | 110 | 70 | 10 | 80 |
| Nova Scotia | .. | .. | 895 | 540 | F | 820 |
| New Brunswick | .. | .. | 1,035 | 550 | 375 | 925 |
| Quebec | .. | . | 6,900 | 4,630 | 2,120 | 6,750 |
| Ontario | .. | .. | 17,300 | 9,900 | 6,500 | 16,400 |
| Manitoba | .. | .. | 1,100 | 825 | 225 | 1,050 |
| Saskatchewan | .. | .. | 1,605 | 1,100 | 150 | 1,250 |
| Alberta | .. | .. | 4,400 | 2,400 | 800 | 3,200 |
| British Columbia | .. | .. | 8,300 | 4,350 | 3,250 | 7,600 |
| Canada | .. | . | 41,980 | 24,615 | 13,760 | 38,375 |

1. Including mixed operations (vegetables, flowers and plants).
2. Seasonal employees who worked less than 8 months during the year.
3. Permanent employees who worked more than 8 months during the year.

Table 18
Labour - Specialized greenhouse producers, 2008

|  | Vegetable |  |  | Flower and plant |  |  | Vegetable bedding plant |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total |
|  | number |  |  |  |  |  |  |  |  |
| Atlantic provinces | 140 | F | 190 | 1,100 | 600 | 1,700 | x | X | X |
| Quebec | 490 | 660 E | 1,150 | 3,040 | 1,145 | 4,185 | 45E | 0 | 45 E |
| Ontario | 2,750 | 2,240 | 4,990 | 6,275 | 3,910 | 10,185 | 65 | 30 E | 95 |
| Prairie provinces | 275 | 220 | 495 | 3,750 | 920 | 4,670 | F | $\times$ | 15E |
| British Columbia | 1,090 | 870 | 1,960 | 2,730 | 1,700 | 4,430 | x | F | F |
| Canada | 4,745 | 4,040 | 8,785 | 16,895 | 8,275 | 25,170 | 142 | 45 | 187 |

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 19
Nursery area, 2008

|  | Total nurseries | Total field area |  | Total container area |  | Total area |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | number | acres | hectares | acres | hectares | acres | hectares |
| 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 | 245E | 99E |
| New Brunswick | 15 | 170 | 69 | F | F | F | F |
| Quebec | 220 | 4,870 | 1,971 | 670 | 271 | 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 | 300 | 6,300 | 2,550 | F | F | 9,000 | 3,642 |
| Canada | 1,280 | 40,850 | 16,531 | F | F | F | F |

Table 20
Nursery trees and plants production (fields and containers), 2008

|  | Trees and plants |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Coniferous trees | Fruit trees | Shade/ ornamental trees | Coniferous evergreen shrubs | Evergreen broadleaf shrubs | Deciduous shrubs (including roses) |
|  | thousands |  |  |  |  |  |
| Field grown |  |  |  |  |  |  |
| Atlantic provinces | F | 5 | F | F | X | F |
| Quebec | F | 101E | F | F | F | F |
| Ontario | 319 | 712E | 215 | 228 | F | 182 |
| Prairie provinces | 72 | 23 | 197 | 8 E | F | 105 |
| British Columbia | 1,832 | 567 | 4,463 | 431 | F | 552 |
| Canada | 2,891 | 1,409 | 4,918 | 681 | 582 E | 981 |
| Containers grown |  |  |  |  |  |  |
| Atlantic provinces | x | 0 | x | 0 | X | F |
| Quebec | 32,514E | 80 | 13 | F | F | 328 |
| Ontario | 215 | 44E | 194 | 942 | 679 | 2,439 |
| Prairie provinces | 106 E | 61 | 81 E | 321 | 5 | 1,221 |
| British Columbia | F | F | F | 4,731E | 649 | 2,147 |
| Canada | 42,643 | 220 | 936 | 6,105 | 1,880 | 6,192 |

Table 20 - continued
Nursery trees and plants production (fields and containers), 2008


Table 21
Nursery stock sales and resales

|  | 2007 |  |  | 2008 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sales | Resales ${ }^{1}$ | Total sales | Sales | Resales ${ }^{1}$ | Total sales |
|  | thousands of dollars |  |  |  |  |  |
| Newfoundland and Labrador | X | x | X | F | x | F |
| Prince Edward Island | x | X | x | 0 | 0 | 0 |
| Nova Scotia | 4,246 | 2,100 | 6,346 | 2,750 E | F | F |
| New Brunswick | 4,700 | 832 | 5,532 | 5,621 | F | 6,455 E |
| Quebec | 55,989 | 22,762 r | 78,751 r | 47,456 | F | 70,252 |
| Ontario | 197,500 | 76,000 r | 273,500 r | 208,000 | 70,000 | 278,000 |
| Manitoba | 7,701 | 3,000 | 10,701 | F | 1,719 | 12,405 E |
| Saskatchewan | 3,727 | 2,522 | 6,249 | 2,400 | 914 | 3,314 |
| Alberta | 32,000 | 14,800 | 46,800 | 34,836 | 16,484 | 51,320 |
| British Columbia | 159,000 | 34,300 | 193,300 | 144,146 | 38,791 | 182,937 |
| Canada | 465,215 | 165,252 | 630,467 | 456,239 | 153,795 | 610,034 |

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

Table 22
Nursery sales distribution, 2008

|  | Direct sales to the public ${ }^{1}$ | Fruit growers | Landscape contractors | Garden centres | Mass merchandisers | Sold to other growers | Exported | Governments | Other channels | Total sales |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | thousands of dollars |  |  |  |  |  |  |  |  |  |
| Atlantic provinces | F | F | F | 832 E | X | x | 430 | 763 | 3,221 | 11,805 |
| Quebec | F | F | 14,660 | 16,784 | 6,975 | 3,484 | F | 9,498 | F | 70,252 |
| Ontario | 19,490 | 10,945 | 79,955 | 71,200 | 52,000 | 22,900 | 8,400 | 6,300 | 6,810 | 278,000 |
| Prairie provinces | 13,792 | 309 | 34,108 | 8,159E | F | $x$ | F | 4,938 | 698 | 67,039 |
| British Columbia | 12,231 | 5,805 | 38,572 | 40,343 | 26,984 | 24,373 | 10,794 | 6,041 | 17,796 E | 182,937 |
| Canada | 64,349 | 20,406 | 169,435 | 137,319 | 86,683 | 53,307 | 22,171 | 27,540 | 28,824 | 610,034 |

[^1]Table 23
Sod area sales and resales

|  | $\begin{array}{r} \text { Farm } \\ \text { sod } \\ \text { reporting } \end{array}$ | Total sod area |  | Sod area grown for sales |  | Gross sales |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Revenue from sod grown | Revenue from sod resale |
|  | number | acres | hectares | acres | hectares | thousands of dollars |  |
| 2007 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 15 | 650 | 263 | 350 | 142 | 2,121 | 0 |
| Prince Edward Island | 5 | 200 | 81 | 70 | 28 | 494 | 0 |
| Nova Scotia | 10 | 2,900 | 1,174 | 850 | 344 | 5,333 | 0 s |
| New Brunswick | 5 | 575 | 233 | 305 | 123 | x | 0 |
| Quebec | 50 | 12,000 | 4,856 | 5,300 | 2,145 | 26,970 | 1,175 |
| Ontario | 65 | 28,000 | 11,331 | 10,500 | 4,249 | 54,000 | 1,675 |
| Manitoba | 10 | x | x | x | x | 2,200 | 0 |
| Saskatchewan | 5 | x | x | x | x | x | 0 |
| Alberta | 20 | 11,000 | 4,452 | 4,000 | 1,619 | 25,000 | 0 |
| British Columbia | 15 | 1400 r | 567 r | 890 | 360 | 7,700 r | 0 |
| Canada | 195 | 58,965 | 23,862 | 22,905 | 9,269 | 127,803 | 2,850 |
| 2008 |  |  |  |  |  |  |  |
| Newfoundland and Labrador | 15 | 460 | 186 | 230 | 93 | 2,201 | 0 |
| Prince Edward Island | 5 | 220 | 89 | 70 | 28 | 475 | 0 |
| Nova Scotia | 10 | 2,420 | 979 | 785 | 318 | 5,049 | 0 |
| New Brunswick | 5 | 720 | 291 | 250 | 101 | 1,123 | x |
| Quebec | 45 | 12,650 | 5,119 | 6,860 | 2,776 | 31,982 | 916 |
| Ontario | 60 | 25,000 | 10,117 | 8,500 | 3,440 | 45,214 | 1,008 |
| Manitoba | 10 | 1,000 | 405 | 200 E | 81 E | F | 0 |
| Saskatchewan | 5 | 400 | 162 | 200 | 81 | 2,024 | 0 |
| Alberta | 20 | 11,500 | 4,654 | 4,050 | 1,639 | 31,103 | x |
| British Columbia | 15 | 1,400 | 567 | 970 | 393 | 8,270 | 0 |
| Canada | 185 | 55,770 | 22,569 | 22,115 | 8,950 | 128,443 | 1,950 |

Table 24
Nursery and sod producers' operating expenses, 2008


[^2]Table 25
Nursery and sod labour, 2008

|  | Nursery |  |  | Sod |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total | Seasonal ${ }^{1}$ | Permanent ${ }^{2}$ | Total |
|  | number |  |  |  |  |  |
| Newfoundland and Labrador | 25E | F | 30 E | 70 | 10E | 80 |
| Prince Edward Island | 0 | 0 | 0 | 10 | 0 | 10 |
| Nova Scotia | 125 E | 10 E | 135 E | 70 | 35 | 105 |
| New Brunswick | 60 | 15 | 75 | 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 | 170 | 20 | 190 | x | x | 30 |
| Alberta | 750 | 200 | 950 | 200 | 100 | 300 |
| British Columbia | 1,650 | 1,510 | 3,160 | 60 | 30 | 90 |
| Canada | 8,350 | 3,790 | 12,140 | 1,349 | 426 | 1,775 |

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

# Data quality, concepts and 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. In 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, lightning, 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). In 2008, electricity expenses for lightning, airflow fans and heating were reported inside a specific expense item.

The concept for full-time employment has been 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. In 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.

In 2008, nurseries 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 North West Territories and Nunavut were excluded from the survey. After these exclusions, the remaining farms represent the initial survey frame.

Observations from the 2008 survey frame were extracted from the 2007 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, three strata were defined. The first stratum includes all operations with a greenhouse area of less than 1 acre and greenhouse sales of less than $\$ 110,000$ and with no nursery or sod area. The second stratum includes operations with a greenhouse area of less than 1 acre and greenhouse sales of less than $\$ 110,000$, a nursery area greater than zero and less than 5 acres, and no sod area. The remaining operations were put in a third stratum. For each province, operations were sampled in the first two strata and then a census was taken of all operations in the third stratum. For each stratum, the minimum sample size was 15 and the maximum design weight was 10 .

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 4,094 .
For this survey, we used two questionnaire versions: one full version requesting all the required information and one abridged version that essentially 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. At the end, we had attributed the full version to 3,015 operations and the abridged version to 1,079 operations.

## Data collection

The reference period for this survey is calendar year 2008. Respondents received a copy of the questionnaire through the mail in early February 2009 and most of them were interviewed by telephone between February 16 and March 8, 2009.

Data collection for the 2008 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 all 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 lowest is the CV, the smallest is the sampling errors.
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 made sure 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 2008 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. Less commonly reported variables are associated with higher, but still acceptable CVs, usually under $25 \%$. 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. Includes value of flowers, plants, cuttings, seeds and bulbs purchased
    2. Includes seasonal and permanent labour.
    3. Electricity expenses (lighting, airflow fan and heating).
[^1]:    1. Includes roadside stands and owner-owned retail outlets.
[^2]:    1. Includes the value of flowers, plants, cuttings, seeds and bulbs purchased.
    2. Includes seasonal and permanent labour.
