

What's in your grocery cart?

by Elizabeth Abraham, Statistics Canada

Take a peek inside your cart as you walk down the fresh produce aisle in your grocery store. Do you notice any changes in the type of produce you have been purchasing recently? Do you see bean sprouts, bok choy, parsley, mint, basil, other herbs, new varieties of onions, different sizes of squash and other vegetables that didn't make their way into your cart a few years ago? There's more to fresh produce these days than potatoes, tomatoes, sweet corn, beans and peas.

Not everything we see in the produce section is grown in Canada, but what is grown here has changed in the last decade. Farmers' decisions about what to produce often reflect consumer choices or demands. Are Canadian farmers responding to the changes in the attitudes and demands of the public? Let's look at the changing production patterns in the vegetable industry in Canada and the reasons for these changes.

Canadian farmers planted 133,900 ha of farmland (excluding greenhouses) with vegetables in 2001. That was up 9.1% from 122,600 ha in 1991. A closer look at the individual commodities within the vegetable group tells an interesting story — a shift away from traditional vegetables to other types, reflecting underlying changes in the vegetable industry.

Heavyweights under pressure from new contenders

The traditional Canadian heavyweights have been solanaceous fruits (such as tomatoes and peppers), gramineae vegetables (sweet corn) and legumineuse vegetables (green or wax beans and peas). These three groups made up 65% of the total vegetable area in 1991. By 2001 the share of these vegetables dropped seven percentage points to 58% of total area (Table 1).

The new contenders have been in three groups: oriental vegetables, cucurbits, and herbs and other vegetables, reflecting the diversification in the vegetable industry. From 1991 to 2001, the share of oriental vegetables grew from 0.7% to 1.1%, cucurbits from 4.9% to 8.6%, and herbs and other vegetables from 1.1% to 1.7%. These changes in share may look like small potatoes, but they indicate a very real shift from traditional to non-traditional crops.

It's a battle for turf

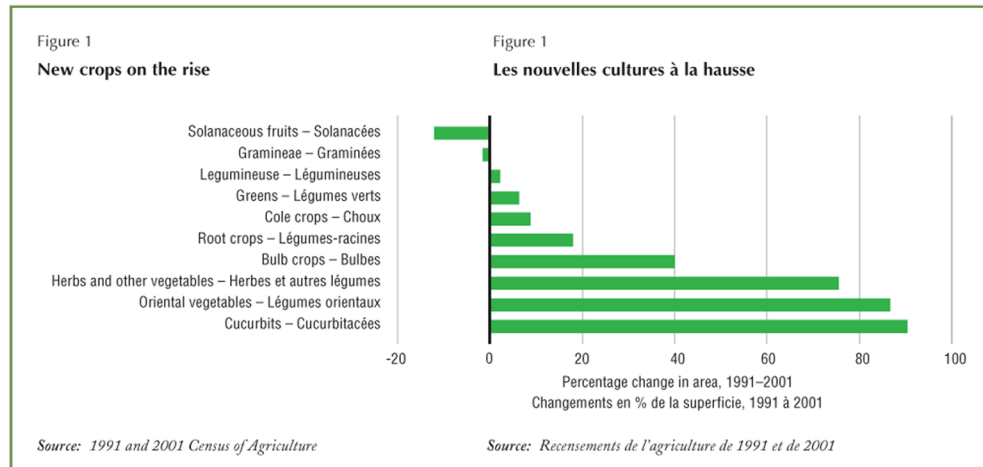
The area of oriental vegetables, cucurbits, and herbs and other vegetables all rose more than 75% from 1991 (Table 1). Solanaceous fruits and gramineae vegetables lost 12.0% and 1.5%, respectively, while legumineuse vegetables gained just 2.2%. Despite the decline in solanaceous fruit area, more tomatoes are being grown in greenhouses — the area of greenhouse vegetables is not counted in the data shown in Table 1. In the last half of the nineties, greenhouse tomato production rose sharply, from 51.8 million kg in 1996 to 210.7 million kg in 2001.

Table 1
Here come the contenders

Class	Members	Area in 2001 (ha)	Percentage change from 1991
Bulb crops	Leeks, garlic, chives, onions, shallots and green onions, other bulb crops	7,235	40.0
Cole crops	Broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, kohlrabi, kale and other edible brassicas	12,492	8.8
Root crops	Carrots, rutabagas, beets, radishes, horseradish, parsnips, salsify, other root vegetables	14,288	18.1
Cucurbits	Cucumbers, artichokes, watermelon, other melons, squash, pumpkins and zucchini	11,485	90.5
Solanaceous fruits	Tomatoes, peppers, eggplant	12,457	-12.0
Greens	Endives, chard, lettuce, spinach, celery, asparagus, fiddleheads, celeriac, other greens	6,962	6.3
Gramineae	Sweet corn	35,489	-1.5
Legumineuse	Green or wax beans, green peas, okra, other beans	29,598	2.2
Oriental vegetables	Chinese cabbage, bean sprouts, bok choy, other oriental vegetables	1,530	86.7
Herbs and other vegetables	Mint, anise, parsley, basil, rhubarb, other herbs and vegetables	2,269	75.5

Source: 1991 and 2001 Census of Agriculture

Another group of vegetables that has seen sharp growth is bulb crops, such as onions, garlic and leeks. The area devoted to bulb crops rose 40%, from 5,166 ha in 1991 to 7,235 ha in 2001.



Why the shift in production?

A host of reasons explain the changes in the production patterns: an ethnically diverse population, an aging population, rising incomes and awareness of the health benefits of some vegetables.

An international mosaic

Until late in the 20th century, most immigrants to Canada came from Europe; in recent years most have come from Asia and the Middle East.

This ethnically diverse group looks for fruits and vegetables — and other foods — that are common to their cultures. These changing consumption patterns have affected production; for example, farmers are allocating more area to oriental vegetables and herbs and other vegetables. The greater availability has helped spawn interest in new spices and flavours among the wider population. The emergence of ethnic restaurants and popularity of foreign travel have also sparked consumer interest and influenced domestic cuisines.

Not only are our consumers ethnically diverse, our farming population is also reflecting this diversity. Although farm operators with European origins still make up the bulk of our farming population, the presence of Asian farmers is steadily rising. Census data on ethnic origin of farmers show that the number of Asian farmers growing vegetables rose from 220 in 1991 to 350 in 2001. It's not always consumers' preferences that affect what farmers grow: These farmers are producing more commodities that are common to their cultures.

An aging population

Canada's population is aging: One indication is that the median age of the population has risen from 33.5 in 1991 to 37.6 in 2001. The fastest-growing age group from 1991 to 2001 was people aged 80 years and over: Their numbers soared 41.2% to 932,000.

These demographic changes can influence the demand for food products. As people age, they tend to need and eat fewer calories because their metabolism slows down. An expanding population of the middle-aged and elderly tends to change dietary patterns, consuming more vegetables and less meat. Vegetables, though low in calories, provide many needed nutrients.

A health-conscious generation

An increasing portion of the population is now obtaining a high school and college or university education. Higher education tends to be associated with greater knowledge of nutrition. According to a Statistics Canada study, people with postsecondary graduation reported higher consumption frequency of fruits and vegetables than did people with less than high school graduation. The same research found a significant association between incomes and levels of education on the one hand and fruit and vegetable consumption on the other. That is, people with higher incomes and more education are more likely to eat fruits and vegetables regularly, according to the Health Reports study.

Canada's Food Guide, published by Health Canada, promotes the importance of a variety of foods, including vegetables and fruits in our daily diet. Health information from various sources tells us that eating vegetables and fruits may mitigate health problems such as cardiovascular diseases and certain cancers.

Health benefits not only stem from directly consuming these foods; scientists are also using these foods to make new medicines. For example, scientists are looking at the antioxidant properties of the pigments responsible for the red, pink and blue colours of our foods. These reports influence our dietary patterns and daily intake of foods. Producers respond to consumer attitudes by increasing the supply of vegetables and fruits of different varieties.

More dual-income households

Food consumption depends on not only our willingness to purchase but also on whether we can afford what's available. As more and more women have entered the workforce, families' disposable incomes have increased. According to Statistics Canada family income data, after-tax family income rose each year

from 1997 to 2001. Families with rising incomes tend to have more money available to purchase higher-priced specialty and non-traditional vegetables and prepared foods or to eat out in restaurants, boosting demand for such foods.

Higher demand not just about the nutritional benefits

The 2001 Census of Agriculture found a big increase in the area devoted to cucurbits, or the gourd family. Pumpkins are the driving force behind this increase. This vegetable is not only used as pie filling, but has become a symbol of harvest during Thanksgiving and a favourite decorative object for Halloween. This non-food use of pumpkins has encouraged farmers to produce more.

Economic factors come into play, too

As Canada and other countries have become more open through trade liberalization, Canadian producers have been forced to compete on an international level. But this has opened up new export opportunities. For example, greenhouse tomato growers in Ontario, Quebec and British Columbia have found markets for their fresh products in adjacent American states; this is one reason greenhouse tomato production jumped in the last half of the 1990s.

Canada's vegetable sector is slowly moving away from traditional commodities to new varieties as farmers respond to demographic, social and economic change. This is something you might ponder as you stand at the grocery checkout counter.