



Strawberries

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The strawberry is a very popular fruit for home gardens and can be grown anywhere in Ontario. It is the first fruit to ripen and by a selection of “June-bearing” varieties, ripe fruit can be obtained from mid-June to late July, the year after planting. Nothing beats eating a fresh strawberry picked either off your own plants or at a local pick-your-own farm. With some planning and preparation now, you can be ready to plant early next spring.

Strawberries do not like wet feet and require full sun. If soils tend to be poorly drained, planting on a raised ridge (4-6 inches) is helpful to keep the root systems from becoming water logged and to prevent plants from smothering from ice in the winter. Strawberries should not follow crops of peppers, raspberries, potatoes, tomatoes, or eggplants. This precaution avoids serious root diseases such as verticillium wilt and black root rot. All perennial weeds and grasses should be destroyed by cultivation the previous year to planting.

Manure or compost can be incorporated the fall previous to planting to add organic matter and fertility at a rate of 2-3 bushels per 100 square feet. A soil test is recommended to determine fertility and pH. Strawberries prefer a slightly acidic soil with a pH of 6.3-6.5 for best growth.

Buy only healthy certified plants with well-developed crowns and creamy white roots. Never use plants given to you or from an old planting to help control the spread of viruses or other serious pests. These plants will come dormant without soil. Store plants in refrigerator in closed plastic bag until they can be planted. Plants should be planted as early as possible in spring. Space plants 24-28 inches apart in rows with a minimum distance of 48 between rows. Dig a hole deep enough so that roots can be placed straight downward and spread out. Plants should be set at a depth so that the midpoint of crown is level with soil surface. Press soil firmly around roots and water with $\frac{1}{2}$ (one half) cup of transplanter solution (10-52-10) per plant.

During the first summer after planting, hoe shallowly to destroy weeds. Remember the best time to hoe weeds is before they can be seen. Remove the blossoms from mother plants with scissors to encourage good root and runner growth. Space daughter plants (those produced on the runners) 4-6 inches apart within the row. Watering during dry periods is desirable. Late formed and surplus runners should be removed to keep rows at a convenient width for picking. Fertilize according to soil test with last application no later than the first week of September.

In November after plants have gone dormant and the ground is frozen, mulch with clean straw to protect plants from freeze thaw cycles during winter months. In the spring, remove straw to the walkways when yellow plant growth is noticed under the straw on berry plants to keep the fruit clean.

Frosts often occur when strawberries are in bud or bloom and can cause much damage. Plants can be protected with 2-3 inches of straw or paper or cloth. Plastic sheets give little protection. Keeping plants wet will also give protection since the change of water to ice on the plants releases heat. If using irrigation for frost protection start sprinklers when air temperature around plants has dropped to 1 degree C and keep sprinkling until ice on the plants begins to melt – usually well after sunrise.

Adequate soil moisture is essential during the period berries are developing. Strawberries are shallow rooted and as a rough guide they require one inch of rain or water per week; that means 20 inches throughout the growing season.

In July after berry picking is completed the plants must be renovated for the second and third fruiting season. Fertilize with 2 pounds 8-16-16 or 15-15-15 per 100 square foot area over plants and walkways. Mow off leaves of plants with lawnmower blade set at a high setting. Then water plants to carry fertilizer down to the roots. Narrow the rows to convenient picking width (12-18 inches) tilling in straw in walkways. It is important to keep your plants watered during August and September because next years flower buds are forming then.

The most damaging insect is the Tarnished Plant Bug (TPB), *Lygus lineolaris*. They pierce flower clusters and developing fruit sucking the sap and injecting a toxin resulting in small deformed berries with hard seedy ends – this is not frost damage as commonly thought. Adult TPBs are oval in shape 4-6 mm long and green to brown in colour with triangular markings in the middle of the back. They fly quickly when disturbed. Overwintering TPB adults move into strawberry plantings in early spring (April). There are several generations per year and all stages of growth cause damage. Since there are no registered pesticides now available to the home gardener to control the TPB only cultural methods remain. Thoroughly clean the strawberry planting of weeds in fall and spring. Preferred weed hosts for TPB include dandelion, chickweed, wild mint, creeping charlie and goldenrod. Also weedy ditches, fence-lines with scrub vegetation, woodlot areas and alfalfa fields are ideal feeding and overwintering sites for TPB. There is some evidence from California that insecticidal soap may have some control of TPB. However more research is needed to test its effectiveness and to ensure that it is non-phytotoxic to the strawberry crop under Ontario conditions. In addition, federal registration and Ontario classification will be required before insecticidal soaps can be used as a pest control product for TPB on strawberries.

A 25 foot row should yield about 20-25 quarts of berries over the season. Some recommended June-bearing strawberry varieties are: Early season - Veestar and Annapolis; early mid-season – Kent, Settler, Glooscap and Cavendish; mid-season – Jewel, Sparkle and Gov. Simcoe; and late-season – Bounty and Micmac.

Besides the June-bearing varieties there are Day-neutral strawberries. These are unique as they do not pay any attention to day length to control flower initiation. Once these strawberries become mature enough to bear fruit, usually late July to early August, they will flower and continue to produce fruit until the fall frosts finally stop the fruiting process. Good cultivars are Tribute, Tristar and Seascape. Many people grow day neutrals as an annual crop resulting in less weed and pest problems but it is quite expensive since new plants have to be purchased yearly.

If you want a large number of fruits produced in a relatively short time. Select June-bearing types. If

you want fruit in July, August and September, choose a day-neutral type. So next year enjoy the strawberry whether it be from your garden, a pick-your-own or a farmers' market. Low in calories, high in nutrition, but best of all the taste – what more could you ask.

Previously published in the Peterborough Examiner.