Guide To Growing Strawberries In Containers

One of our medal winning exhibits using 'Self Watering Towerpots' at the Chelsea Flower Show displaying how effective and productive container growing can be.

Of all the popular summer fruits, strawberries are one of the easiest to grow in containers on the patio. Container growing is particularly advisable where ground space is limited, or where the soil or situation would otherwise prove to be unsatisfactory for the growing of strawberries. However, heavier yields per plant can be obtained at far less cost and effort by growing the crop in the traditional way outdoors.

There are many different types of container available which vary considerably in shape, size, price and design. Basically any container will suffice so long as there is sufficient room for the roots and it has adequate drainage holes. Traditional terracotta pots are not to be recommended as they dry out very quickly and usually have very small planting holes.

The best position for strawberry plants growing in containers is in full sunlight, but sheltered from the prevailing winds. Large containers should be stood upon bricks for drainage purposes and turned occasionally so that all the plants receive a share of sunlight.

Planting

Choosing the correct compost is fundamental to success. Disappointing results will follow from the use of unsatisfactory mixtures. The ideal compost is one that retains water and nutrients for a long period but does not become waterlogged through over-watering. For small to medium sized containers such as Self-Watering Towerpots or hanging baskets best results will be obtained by using a John Innes No.2 compost or a good quality multi-purpose compost. However, with large containers better drainage will be

required. This is achieved by mixing the compost with vermiculite or perlite in the appropriate ratio. It is important that the compost mixture is moistened with a moderate amount of water before planting.

When planting the base of the crown of the runner should be positioned at soil level with the roots hanging to their fullest extent without curling upwards. If the roots are too long for ease of planting, they may be shortened back to not less than 10cm (4in) in length, using a knife or pair of scissors. It is important that the strawberry runners are planted at the correct depth; if the crown is buried or the roots left exposed, the plants will not thrive and may eventually die. A test for correct firmness is to attempt to gently pull a plant out of the soil by one of its leaves (or the crown of the plant in the case of coldstored runners). If the plant moves before the leaf tears, the planting has not been firm enough. The plants should be lightly sprinkled with water immediately after watering.

Watering Plants in Containers

Overwatering is the most common cause of failure of strawberry plants grown in containers. No hard and fast instructions can be given for watering because plants require very limited amounts of water when they are small, temperatures are low and under dull light conditions. Frequent watering is required when temperatures are high, the sun is shining, the plants are large and the fruits are swelling.

Strawberry plants have a fine fibrous root system and for this reason will not survive for very long if they are allowed to grow in compost which is too wet. More mature plants are better able to cope with this situation because they have a large root system and plenty of leaves to remove excess moisture but even they will die in time if this is allowed to carry on. Very young plants will be affected much more quickly because they are unable to remove excess water quickly enough. They should therefore be grown in a compost that is damp to begin with. The moisture content can be increased as the plants expand and the temperature rises but not to the extent of allowing the compost to become saturated. Too frequent over- watering will also remove nutrients from the compost.

A test to ascertain whether the compost is too wet is to take some in the hand and squeeze it. If the compost is saturated, any excess water will drain out between your fingers. If this happens then you will know that the compost is saturated and if allowed to continue the plants will die. The first sign of distress in the plants will be wilting of the foliage. The roots will be black in colour and such plants will not revive.

Do not allow the compost to dry out completely. If this should happen then it should be remoistened quickly, taking care not to saturate the compost. If the plants have already started flagging as a result of drying out, the containers should be temporarily shaded, to allow the plants to recover.

Feeding Plants in Containers

The nutrients in fresh compost should be sufficient to provide satisfactory growth until the plants come into flower. At this stage, a liquid feed high in potash and low in nitrates (e.g. The Ken Muir Strawberry Feed or tomato fertilizer) should be given once a week until the fruits start turning colour.

Like over-watering, the regular application of a fertilizer high in nitrates can adversely affect the cropping. Strawberries will crop best if they have the appearance of suffering from a slight deficiency of nitrogen resulting in the leaves having a pale green colour. A rather too yellow-green leaf colour is an indication that the plants need feeding.

A compound fertilizer should be applied after the plants have finished fruiting, when the old foliage has been cut back. This will encourage new growth and flower initiation for the following year. After the end of September, plain water only should be used. Reduce watering to a bare minimum after about four weeks when growth shows signs of slowing down; this is usually when the leaves begin to show autumn tints. The compost should be kept slightly damp throughout the winter. The plants should not be fed again until the following spring unless the leaves appear pale green.

Annual Culture & Maintenance of Container Grown Strawberries

De-blossoming & Runner Control

Containers that have been planted in late summer or early spring and have strongly growing plants in them should be allowed to flower and fruit in their first year. If for any reason, the plants are growing weakly, the flowers should be cut off to enable the strength of the crowns to be built up for the following year's crop. From June onwards the plants will start producing stolons on which runners will form. These stolons should be cut off as soon as they appear.

Defoliation

The strawberry produces two sets of leaves each year — a spring set that supports the fruit and an autumn set which builds up new crowns for the following year's crop. Immediately after the plants have ceased fruiting, all the leaves should be cut off as close to the crown as possible so that new leaves are fully exposed to the light as soon as they appear. In late winter the set of leaves that carried the plants through the autumn should be cut off. The leaves of 'perpetual' fruiting varieties should not be cut off in midsummer, other than any diseased or dead ones.

Repotting

The original plants should crop for two or three years if they are looked after carefully. Most plants will benefit from repotting with fresh compost once a year. This is best done during the early spring when the plants first start showing signs of growth. Remove the plants from the pots, comb out as much of the old compost as possible, prune away 10% of the root system and replant with fresh compost. If the plants are growing in a large barrel it would be impractical to change the compost each year. In the second and third year, success will therefore depend upon maintaining the nutrients in the compost at a satisfactory level. To achieve this, liquid feed should be added to each watering to maintain a moderate fresh green colour and size of leaf. If the leaves turn dark green and grow too large, the addition of feed to the water should stop.

Self-Watering Towerpots

Self-Watering Towerpots are elegantly designed stackable pot systems. A set of Self-Watering Towerpots comprising of four stacking modules will accommodate twelve or twentyfour plants (depending on the size of the runners) in a vertical arrangement, occupying less than 30cm^2 (1ft^2) of ground space. Each module has three large planting pockets and its own built in reservoir to ensure even distribution of water throughout the column.

Planting

To plant the Towerpots, separate the modules and spread them out on a work surface. Best results will be obtained by using a proprietary soil-less potting compost. Ensure the compost is moist before planting. With young single crowned plants, two plants can be planted in each planting position (i.e. six plants in each module). If the plants are multi-crowned, only one plant should be planted in each planting position. The roots of each plant should be trimmed back to about 4 inches. The plants should be positioned at a slight angle, with the roots pointing towards the reservoir.

Watering

To assist the plants to become established, lightly sprinkle each level from above after planting, taking care not to overwater. Ideally, the modules should be left spread out on a greenhouse bench or on the patio for approximately 2-3 weeks or until the plants really start growing well. You can continue to water lightly from above during this period. After this initial period, the modules can be stacked together and the reservoirs can be used for watering.

Water the plants as necessary, but do not overwater them, otherwise you may drown their roots. (See page 2 — Watering Plants in Containers). You should allow the reservoirs to empty themselves between waterings so that the compost remains moist but not fully saturated. Each Towerpot is designed so that as long as there is only some water in the reservoir, the capillary wick will transfer it to the compost until saturation point is reached and the compost cannot absorb any more.

Positioning Your Towerpots

Towerpots can be kept outdoors throughout the summer but make sure that they do not get waterlogged. Continuous rain can cause the compost to become over wet causing the reservoirs to fill with water. If this should happen, tip the pots on their sides to empty them.

To avoid waterlogging during the winter months, it is advisable to keep Towerpots under cover in a garage, garden shed or unheated greenhouse between November and early March. The plants can be without light during this period because they are in a dormant state. Keep an eye on the Towerpots throughout the winter to ensure the compost doesn't dry out completely - it should remain just damp throughout the winter. In early March the pots should be moved into the light, either outdoors or into an unheated greenhouse.

Repotting

In the early spring when the first signs of growth are seen, remove all the plants and compost from each module and separate them. Select just three plants for each module and repot using a fresh soil-less compost. Make sure the compost you are using is at least damp and not too dry. Place each of the three selected plants, one to each planting pocket, in each module. Any surplus plants can be planted in the ground outdoors or in another container. (See pages 3 — Repotting).

Table-Top Production

Commercial strawberry growers are beginning to move away from the traditional practice of planting directly into the open ground over to what is termed ‘table-top’ growing. This method involves planting directly into containers or bags of compost which are supported about 90cm (3ft) off the ground (table-top height). This new approach has many advantages over conventional methods whether the plants are to be raised outdoors in the open or protected under glass or polythene. Its great advantages are that cropping is much heavier, picking is a lot easier because there is no bending down, the fruit cannot be splashed with mud, there is no need for strawing, it doesn’t depend on having a suitable patch of soil and there will be much less trouble (if any) from slugs, vine weevils, soil-borne diseases and weeds.

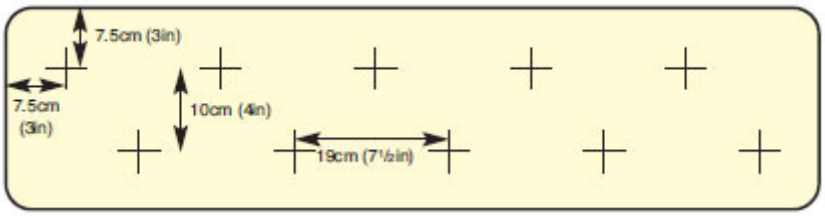
Purpose made Table-Tops are available. Alternatively, the growbags can be laid on planks supported on concrete blocks, plastic crates or wooden boxes (preferably rot-proofed). They could even be laid directly on upturned crates! Some gardeners have tried

large gutters or home-made troughs filled with compost and supported off the ground. In this case however, the disadvantage is that they cannot be easily removed onto the ground for overwintering.

Planting

Use any good quality growbag that is recommended for growing tomatoes. Growbags are best planted in the spring and summer with coldstored runners or potted plants. These plants will carry a small maiden crop of large fruit later on in the year. It is not recommended to put more than ten plants in a 1m bag.

New bags are often very firm and compressed when purchased. Fluffing up the compost by bashing the bag sideways on a hard surface will ensure the compost is loosened up but it is important to make sure the bag remains evenly filled along its length. To facilitate drainage, cut a 5cm (2in) horizontal slit just below the seam at each end of the bag and spike some small holes along the bottom where it overhangs the support.



The positions of the planting holes in a growbag

A staggered double row of ten planting holes should be cut in the top side of the growbag (See fig. 76). For bare-rooted plants an X-shaped cut 5cm x 5cm (2in x 2in) should be made with a sharp knife. The centres of the holes should be 7.5cm (3in) from the edge of the bag, about 19cm (7½) apart and there should be a 10cm (4in) gap between the rows. It is advisable to mark up the growbag prior to cutting the polythene, in case of any miscalculations! Fold the cut flaps under.

Watering

The secret to watering plants in growbags is little and often. Commercial growers use drip irrigation. If you have a similar system available, allow at least two drippers per bag.

Using a watering can to water growbags is relatively easy if there are large enough planting holes. However, once the growbag is planted, it is impossible to pour water in through the small planting holes described above. You can use a Speedfeed Irrigator. This consists of a long piece of perforated tube which is inserted into the length of the bag and a watering pot at one end where you pour the water or liquid feed. A good alternative is to make a crude funnel out of cut off bottle tops to facilitate easier watering. Cut two round holes, 7-10cm (3- 4in) in diameter in the centre of the bag between the rows of planting holes, 30cm (12in) apart. Bury the cut off tops of plastic bottles into these holes and pour the water in.

Speed Feed for growbags ensures even water distrabution.

Take great care not to allow the compost to become saturated with water, especially with very young plants having little or no leaf. If you allow this to happen, more often than not it will result in the death of the plants. Too frequent overwatering will also remove nutrients from the compost. (See page 2 — Watering Plants in Containers).

After planting or after moving bags with established plants in them (which can disrupt the roots if not done carefully), the bags should be thoroughly watered to settle the compost around the roots. After flowering, as the fruit starts to swell and ripen, the growbags will require watering twice a day, especially during sunny weather; at this stage you should bear in mind that when it rains most of the rain will run off the bags, making little or no contribution towards wetting the compost.

The water takes a while to soak in so it is advisable to go around the bags several times with the watering can until water begins to drip from the drainage hole. Bags that dry out are very difficult to re-wet; should this happen, light watering at frequent intervals would be the best way of re-wetting the compost.

Feeding

New growbags will usually have enough nutrients to last the first three to four weeks before they need to be replenished. Used bags will often have a lot of nutrients left from the previous crop. After these first weeks (or from the start of growth where plants are overwintered from the previous year) a liquid feed should be added on each occasion that the growbags are watered.

Use a liquid feed that contains a high level of potassium, e.g. Ken Muir Strawberry Feed (15:15:30), Phostrogen (14:10:27), Levington Tomorite (4:4.5:8) or Bio Tomato Food (6:5:9). Ratios shown in the brackets are the percentage of nitrogen, phosphorus and potassium contained in the compound fertilizers.

A compound fertilizer should be applied after the plants have finished fruiting, when the old foliage has been cut back. This will encourage new growth and flower initiation for the following year. After the end of September, plain water only should be used. Reduce watering to a bare minimum after about four weeks when growth shows signs of slowing down; this is usually when the leaves begin to show autumn tints. The compost should be kept slightly damp throughout the winter. The plants should not be fed again until the following spring unless the leaves appear pale green.

Frost Protection

The yield of strawberries can be seriously reduced by spring radiation frosts that can occur during the month of May when strawberries are in flower. Frost damage can be prevented by covering the plants with fleece, sheets of polythene or hessian on frosty nights. This should be removed during the day if the plants are in flower to allow pollination to take place. The television meteorologists forecast very accurately when damaging frosts are likely to occur and therefore when these precautions should be taken.

Bird Protection

To achieve maximum yields, ripening fruit should be protected against birds with a net which should be supported away from the fruit.

Rain Protection

Heavy rain at the time of fruiting can seriously damage the strawberry crop. To avoid this happening, the Table-Top should be covered with polythene during prolonged periods of heavy rain. Do not cover the ends as ventilation must be provided. It is important to remove the polythene as soon as the weather changes.

Runner Control

Strawberry plants start producing runners in June following flowering. These should be removed as they appear, using a sharp knife or secateurs.

Overwintering

The bags should be left on the Table-Top support after picking has finished and fed and watered as described. When the leaves begin to die off in late November the old dying leaves and the remains of fruit trusses should be cut off; this should leave a central rosette of short stemmed green leaves.

The bags should be carefully lifted down from the tables so as not to damage the root systems of the plants and placed on the ground in a sheltered spot. If left on top of the Table-Top over winter the rooting system of the plants can be damaged if the bags are frozen solid in severe weather.

In very cold districts the bags should be covered with one or two layers of horticultural fleece to keep out icy winds. In early March, the growbags should be returned to their Table-Top, at the same time trimming away any further dead leaves. If two people lift each bag or if a thin rigid board is slipped under each bag before lifting, the compost and the roots are less likely to be disturbed.

The strawberry plants in the growbags should be capable of yielding three crops before fruit size gets too small as the plants get more crowded.

Indoor Forcing Of Strawberries

For the earliest crops, strawberries must be grown indoors, either in a heated or unheated greenhouse. They may be grown in either 15cm (6in) pots, growbags or self-watering Towerpots, which will save space.

The pots are best planted in June or July with coldstored runners, using a John Innes No.2 or good quality multipurpose compost. ‘Perpetual’ varieties can be planted later, or even in the early spring with freshly lifted plants, and still bear a heavy crop of fruit within twelve months.

Following planting, the pots should be given one good watering and afterwards not overwatered. They should be placed outdoors in a sunny sheltered position, where they should remain until the late autumn. They then need to be housed under cover in an unheated greenhouse, garage or garden shed until the end of February (unless they are to be grown on in a heated greenhouse). The compost must be kept moist at all times and not be allowed to dry out; neither should it be excessively wet, especially with plants grown in Towerpots where the system relies on capillary uptake of water and there is no free drainage to take away excess water. (See page 2 — Watering Plants in Containers).

When the strawberries are to be grown in a heated greenhouse, provided the minimum temperature is not allowed to fall below 13°C (55°F), the pots may be brought into the greenhouse at any time after the beginning of January.

When the plants are brought into the greenhouse, all the dead leaves and any stolons that may have previously grown should be removed. The leaves should be kept under close observation, in particular for powdery mildew, greenfly and spider mites and if found, sprayed with the appropriate pesticide recommended for the outdoor crop, according to the manufacturer’s instructions.

Watering & Ventilation

It is important not to allow the plants to get too soft and rank in their growth. Up to the time when the flowers set their fruits, watering should be done sparingly, so that the compost is not always saturated with water. At the same time, the vents should be opened when the temperature rises above 13°C (55°F). When the fruits are swelling, the plants are large and leafy, the sun is shining and temperatures are high, the plants should be watered more frequently — often twice a day. As far as the vents and doors allow, a temperature of 18°C (65°F) should be aimed for. Shading of the glass will assist greatly in preventing the temperature inside the greenhouse from rising too high. Far larger fruit will be obtained when the temperature (during the day) is kept to a maximum of 18°C (65°F) and the fruit ripens more slowly. Grey mould can become a serious problem, even under glass, so it will be necessary to spray the plants with a suitable fungicide at least three times during the flowering period.

Pollination

One of the troubles that besets early strawberry production is poor pollination, which gives rise to flower abortion or distorted berries. To facilitate pollination, either a rabbit's tail or a camel-haired brush should be passed daily over the flowers that have not set their fruits.

Feeding

Strawberries growing in pots are more susceptible to deficiencies in plant foods, particularly potash, than plants growing in the open ground. The reason for this is simply that the roots have only a limited amount of compost from which they can take up their food requirements, and the available nutrients are likely to be depleted through being leached out of the compost by rain during the winter months or as a result of being watered copiously after flowering.

With a view to maintaining healthy foliage and avoiding any risk of potash deficiency, the leaves of the plants should be examined twice weekly from the flowering period onwards. If the general colour of the leaves becomes excessively pale, or the leaf margins lose their colour, the pots should be watered once each week with a liquid fertilizer that is high in potash, thoroughly wetting the compost. (See page 2 — Feeding Plants in Containers).