

INTRODUCTION

World Strawberry production is focused in the Northern hemisphere and in the U.K. they remain the major soft fruit crop in production.

At the peak of harvesting in June/July, U.K. grown strawberries meets 80 – 85% of total demand, any shortfall being made up from imported fruit. Through improved varieties and production techniques the strawberry harvest in the U.K. can be extended up to 26 weeks.

Fruit yield and quality are affected by several interacting factors. Important environmental factors include: temperature; day length; winter hardiness; disease resistance; tolerance of soil conditions and high temperature resistance.



Fig 1: Strawberries

VARIETIES

Strawberry varieties are grouped according to their harvesting periods. Certified plants should be selected which provide a guarantee of trueness to type and free from specific pest and diseases.

TYPE	HARVEST PERIOD	FRUIT SIZE	CROP
Early mid Summer Varieties			
Elvira	June/early July	Medium	Heavy
Honeyoye		Medium	Heavy
Pantagruella		Medium/Large	Low
Mid Summer Varieties			
Pagasmus	July	Large	Heavy
Elsanta		Large	Heavy
Hapil		Very Large	Heavy
Cambridge Favourite		Medium	Medium - Heavy
Cambridge Vigour		Large	Heavy
Domanil		Large	Heavy
Tamella		Very Large	Very Heavy
Late Summer Varieties			
Rhapsody	July/August	Medium	Medium
Perpetual Varieties			
Aromel	July - October	Medium/Large	Medium
Ostara		Small/medium	Medium

SITE SELECTION

Strawberries thrive on well drained nutrient rich, slightly acidic (pH 6.0 - 6.5) soil with adequate protection from the wind. Frost free, south facing land provides the best site for field grown crops. As the crops will remain on the site for three or more years it is essential all perennial weeds are eliminated prior to any cultivations on the site.

PLANTING

Strawberries can be planted on the flat or in raised beds often through coloured plastic mulch. Raised beds increases the rooting zone available to the developing plants. When planted on the flat, mother plants are allowed to runner freely with



Fig 2: Plastic mulched beds

periodic training of the new young runners to establish a matted row. In this system fruit is cropped from the mother plants and runners. For crops established through coloured plastic mulch, runners produced by mother plants are removed and the resulting crowns are the primary source of fruit.

PLANTING AND SPACING

Certified runners should be planted into moist well prepared soil in July, August and September. If planting is delayed into October, plants might establish well enough to provide a satisfactory first season harvest. However, this is dependent on the autumn and winter weather conditions. In late established plantations, runners are deflowered to encourage further crown development and increase yield for the next season. Runners should be planted with the crown of the plant just level with the soil surface. Runners should be planted approximately 45cm apart down the row with metre between rows. On lighter soils runners are planted at 40cm centres within the row with 75cm between rows.

WATERING/IRRIGATION

Strawberry plants should be watered regularly in the first few weeks after planting to encourage root developments. Watering may need to be continued under dry conditions.

Once fruit set has occurred excess use of water may encourage the development of grey mould (*Botrytis cineria*) which results in fruit rotting. This is a particular problem where crops are irrigated over head.

MULCHING

Unless plants are established through polythene, crops should be strawed down to ensure the developing fruits are prevented from coming into contact with the soil. It is advisable to apply slug pellets along the rows and then apply straw ensuring it is pushed into the plant canopy to provide a barrier between the soil and fruit. Keeping the inter row areas mulched with straw will further suffocate weeds and retain moisture for up to six weeks.

HARVESTING

The optimum time to harvest strawberries is the early morning when the fruits are cool. If picked later in the day, the berries will need to be cooled to remove the field heat and maintain their quality. Fruit should be uniformly coloured and be harvested complete with a stalk conjoined with the berry.



Fig 3: Harvesting Strawberries

POST HARVEST MANAGEMENT

- Peg down runners to retain matted rows.
- Remove unwanted runners
- Reduce foliage volume by topping the leaf canopy
- Controlled burn of straw mulch will assist in reducing the likely build up of pest and diseases.

DISEASES

Varieties differ in their susceptibility to fungal disease attack. Root and crown rot caused by *Phytophthora* species is most common in heavier soils. Infected plants collapse due to the fungus attacking the roots and vascular tissues in the crowns. Mildew primarily attacks the leaves of susceptible varieties, however in these crops infection can spread to the fruit.

The most common fungal disease attacking the developing fruit is *Botrytis cineria* – grey mould. Routine fungicide spray during the flowering period will reduce the incidence of this disease.

PESTS

Roots can be attacked by a range of insect pests, for example. vine weevil, resulting in plant collapse particularly in the spring when rapid growth occurs. The leaves and crowns can be infested with aphids which cause leaf curling and distortion. The fruit can be damaged by several insect pests, resulting in misshapen fruit. Slugs can attack fruit producing holes in the fruit rendering the fruit un-saleable.

For both pests and diseases on strawberries cultural controls can significantly reduce the severity of attack.