

DID YOU KNOW...



THE STRAWBERRY

The strawberry is the real traveler! Native species are initially found in Europe, Asia and North America. Collectively called the wild strawberry, it is the ancestor of the strawberry.

Everything begins when she is accidentally discovered by Louis XIV 's spy. She will afterward be imported in France in the 18th century by Amédée François Frézier.

F. Ananassa's hybrid is a crossing between *Fragaria Chiloensis* (the Chilean strawberry) and the *Fragaria Virginiana* (the Virginian strawberry).

From then on, we started to cultivate the crossing of these two varieties. A botanist named after Antoine Nicolas Duchesne will then study the species and that is why now we know the strawberry under *Fragaria Ananassa* Duch.

STRAWBERRY CROP-TYPES

All of these techniques have different attributes. With the exception of the protected culture which can be made in soilless substrate exempt from soil.



PROTECTED CROPS



MATTED-ROW SYSTEM



**ANNUAL HILL PLASTIC
SYSTEM**

STRAWBERRY'S SITE PREPARATION

First, the choice of location takes into account several factors: Choosing a sunny, weed-free location is essential. Prior to removing weed, use appropriate weeding techniques to keep planting area weed free. Also, nutrient and PH requirements must be adjusted if needed.



If there is no natural drainage, plant in raised beds that have been built the fall preceeding planting.



The soil must be rich with a PH of nearly 6.5



Apply manure as needed, and use both green and chemical fertilizers to achieve the ideal fertilization.



STRAWBERRY'S PLANT TYPES

GREEN TOP



Green Top plants are still commonly used for matted row system. Freshly extracted early in spring, Green Top plants have just emerged from the winter dormancy and must be kept refrigerated, but not frozen before planting.

During plantation, an irrigation method should be provided following planting and the following days if the conditions are drying. Irrigation will be reduced when younger rootlets emerge from winterized roots.

FRIGO PLANT

It first became popular with the development of the Plasticulture system. The Frigo plant is extracted from the soil in fall and is then refrigerated under zero for long periods of time. When you received your plants, it is necessary to open the boxes and take those to a shady location as quickly as possible until plants thaws.

A period of 24 to 48 hours is essential depending on the weather conditions. Typically for small quantities, the transport time is sufficient to thaw the plants. If you are not planting not planting right away, it is not advisable to refreeze the plants, but rather to keep them near the freezing point, until plantation.



STRAWBERRY'S PLANT TYPES

PLUGS

These are recommended for crops grown under glass or in substrate and the Hill-system. Plugs are available starting mid-august. In August, plug plants are actively growing with an autonomous root ball and will also be easy to implant in substrate.

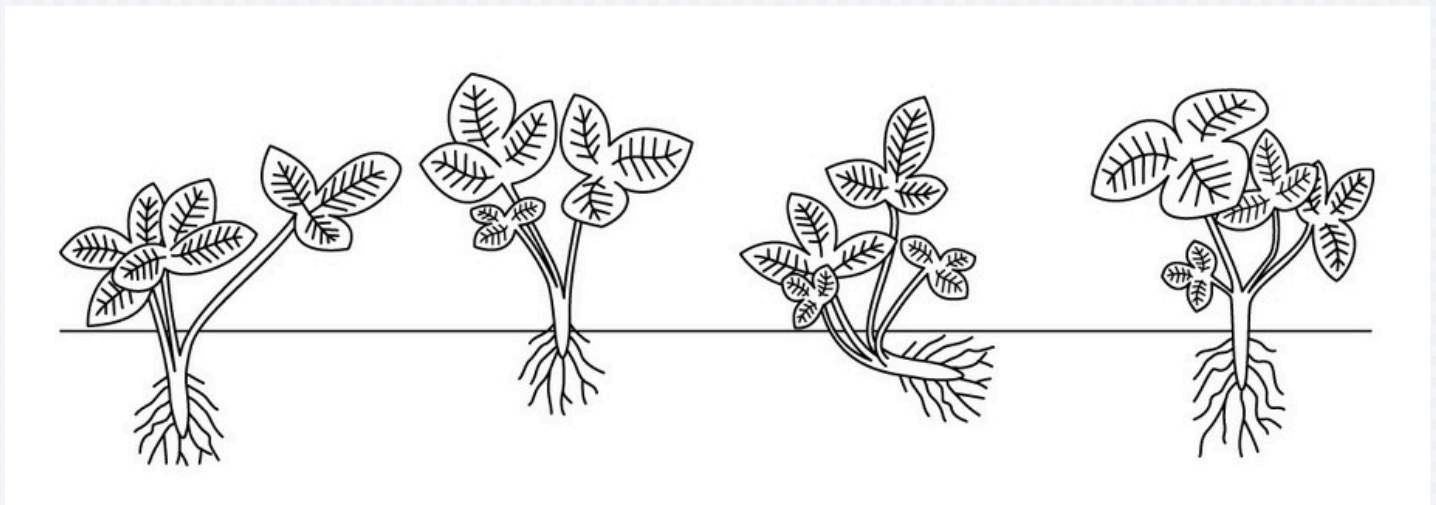
Regarding commercial plantation, it is advisable to use the overhead irrigation for three days straight following plantation. In exceptional circumstances, plugs may be kept refrigerated at 4 degrees celsius. Therefore, it should not be stored for a period less than 10 days. During that period root drying should be monitored.



HILL SYSTEM PLASTIC MULCHED

PLANTATION

Prior planting, it is recommended to rotate crop for 4 years, avoiding a return of eggplants, peppers, potatoes, tomatoes, and raspberries to prevent Verticillium Wilt, Pythium, and Phytophthora. Cultivation, green manure, herbicide and fallow can be used. Following it with Fall tillage.



Trop bas

Trop haut

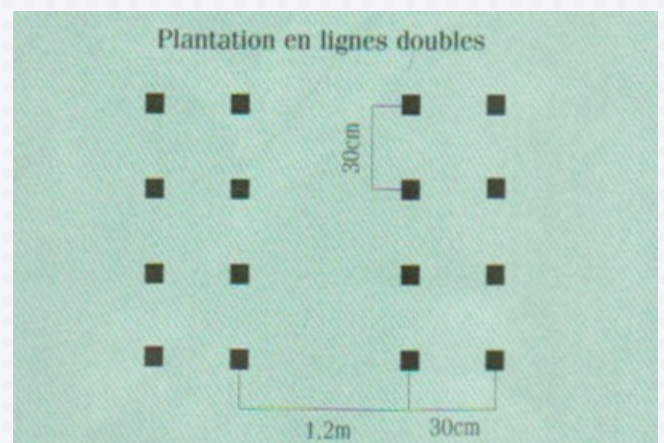
Trop bas

Idéal



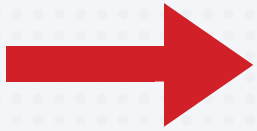
It is best to plant as soon as possible in Spring. Plant spacing will vary depending on the variety, the type of culture and the machinery being used.

High-density system supports several planting methods. The most common consist of raising beds with plastic mulch measuring up to 30 cm high and 80 to 100 cm wide on the top of the bed. The beds are spaced at 1.2 M or more depending on the size of the machinery used. Crowns are planted in double rows on the mound about 30 cm between the rows and between the plants. These dimensions may vary depending on crop varieties and soil types. A drip irrigation hose will be incorporated when laying the plastic between the two rows.



HILL SYSTEM PLASTIC MULCHED

PLANTATION MAINTENANCE



JUNE-BEARING

Weed control between rows is recommended and different herbicides are available. It is best to remove the flowers to promote the growth of the crowns. An increasingly popular practice is to keep the flowers for a small harvest in mid-July.

Trimming runners is to be expected once or twice in the season. At the end of the growing season around mid-October, winter coverage will be applied to finalize the Fall growth.

In regions where snow regularly disappears during the winter, it is recommended to double the cover or add a layer of straw late in November before snowfall. In the spring it will be necessary to remove the straw and put back the cover to favor the precocity of the flowering.

As soon as 5 to 10% of the flowers are open, the covers are removed in order not to impair with pollination.



EVER-BEARING

Maintenance and over-wintering recommendations of June-Bearing varieties make sense for Ever-Bearing plugs varieties as well. Regarding the Frigo plant, pruning flowers are recommended by removing the first and the second floral truss. It will help to balance and triggered production peaks of August and September.

HILL SYSTEM PLASTIC MULCHED

FIRST YEAR HARVEST

Make sure there is 3-5 cm of water per week. Irrigate less at a time, but more often in light soil. If freezing occurs at the time of flowering, irrigate with low volume jets during the whole period when the temperature is below the freezing point. Nozzle against pathogen and insects according to the results of scouting or the specific needs of the strawberry.

If scouting information is not available, a repression program is to spray twice; A first time at the beginning and a second just at the end of flowering. In this way, the negative impacts on beneficial insects are minimized and the use of insecticide / fungicide treatments is optimized.

RENOVATION

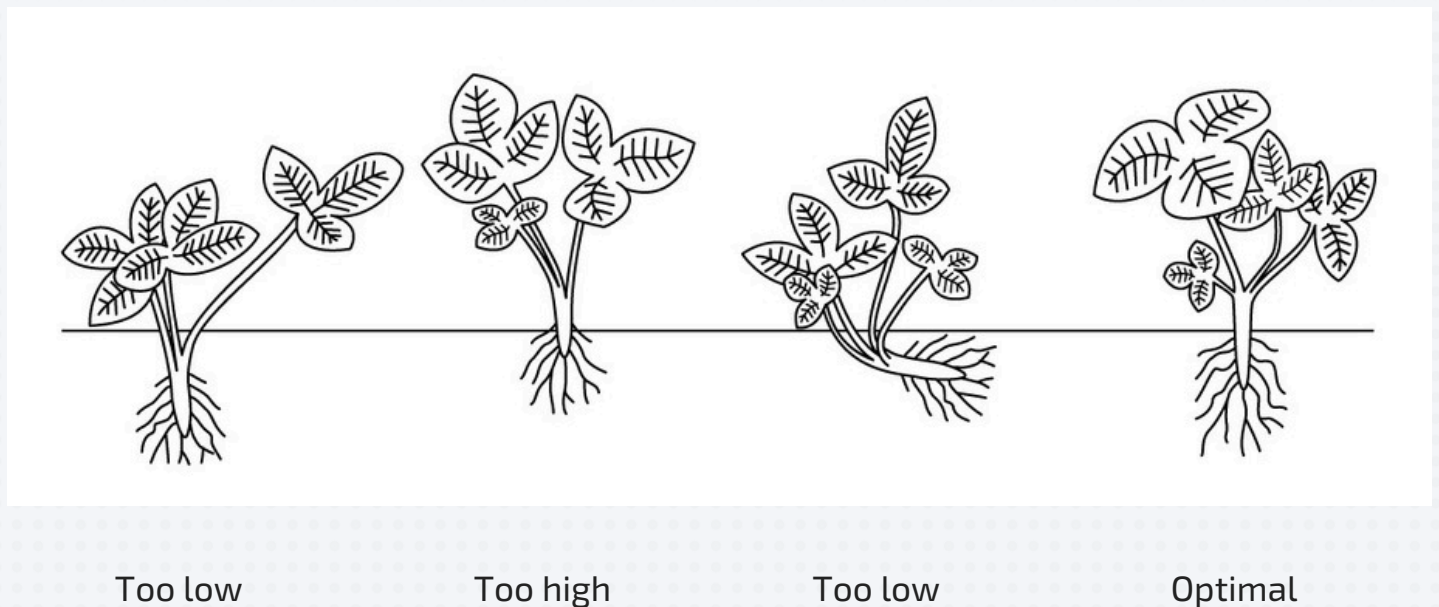
High-density crop is derived from annual strawberry production as practiced in Southern US. The renovation of these planting are practiced for the June-Bearing varieties, but less for the Ever-Bearing varieties. In the latter case, planting are protected from winter by means of winter cover, but the success and the quality of the harvests the following spring, although very early is questionable.

For June-bearing varieties, renovation is possible and more profitable. Following the end of the harvest, the foliage is mown without damaging the crown. The foliage will grow and the runnings will be cut in mid-August to balance floral initiation and crown production for the next harvest. Too many crowns will decrease the size of the fruit the following year.

MATTED ROW SYSTEM

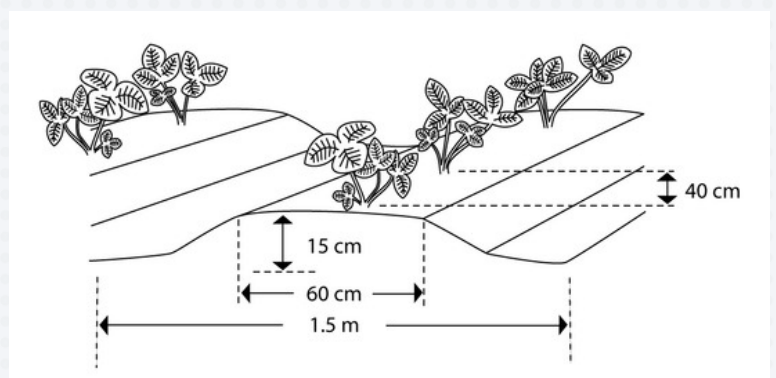
PLANTATION

Prior planting, it is recommended to rotate crops for 4 years, avoiding a return of eggplants, peppers, potatoes, tomatoes, and raspberries in order to prevent Verticillium Wilt, Pythium, and Phytophthora. Cultivation, green manure, weed-killer and fallow can be used. Following it with Fall tillage.



It is best to plant as soon as possible in Spring. Plant spacing will vary depending on the variety, the type of culture and the machinery being used.

Commonly, we plant 40-50 cm on the row and 120 cm between the rows. It is recommended to use produced and controlled plants in such a way to meet the quality standards appropriate to controlled quality standards. Which will ensure the absence of systemic pathogens such as viruses and Phytophthora as practiced at Production Lareault for more than 50 years.



MATTED ROW SYSTEM

MAINTENANCE PLANTATION

Depending on the type of plant purchased, keep the plants in the refrigerator until planting. Plant in such a way that the crown of the plant is just below the surface of the soil. (See the first figure on page 10.). Add water to the plantation and irrigate as necessary to facilitate rapid establishment.

For the urban farmer, high-phosphorus fertilizer-type fertilizers are no longer recommended for environmental reasons. The use of well-mixed soil organic amendments and additions of Mycorrhyzes and other beneficial organisms are recommended.

In addition, to promote soil aeration, the simplest solution for the urban farmer is to use frequent mechanical weed control. For professionals, weed control and application of a herbicide will help control weeds on the row. Flower removal, runners placement, irrigation and band application of fertilizers are practices that will promote the rapid development of daughter plants. The latter and the mother plants are the basis of an abundant harvest in the first year.

Mechanical weeding at the end of the season will also be used to trim the beds at the correct width (40-45 cm) and to dig the aisles for a better survival of the plants in the winter. Application of a herbicide and end-of-season straw application will complement maintenance work before winter.



MATTED ROW SYSTEM

FIRST YEAR HARVEST

Remove the straw early if as soon as possible yield is the objective. If winter has been particularly difficult, apply soluble fertilizers such as 20-20-20 as soon as the new foliage appears. Make sure there is 3-5 cm of water per week.

Irrigate less at a time, but more often in light soil. If freezing occurs at the time of flowering, irrigate with nozzle of flow rate during the whole period when the temperature is below the freezing point. Spray against pathogens and insects according to the results of screening or the specific needs of the strawberry.

If detailed information is not available, a repression program is to spray twice; A first time at the beginning and a second just at the end of flowering. In this way, the negative impacts on beneficial insects are minimized and the use of insecticide/fungicide treatments is optimized.

RENOVATION

A relatively weed-free healthy strawberry can be renovated for a second year of harvest. As soon as harvest is completed, perform mechanical weeding or apply a broadleaf herbicide and mow the foliage, taking care not to damage the crowns, and thin the bedding width.

Apply a full fertilizer such as 10-10-10 and then thin the rows to 20-30 cm in width. Maintain a constant soil moisture for the rest of the growing season.