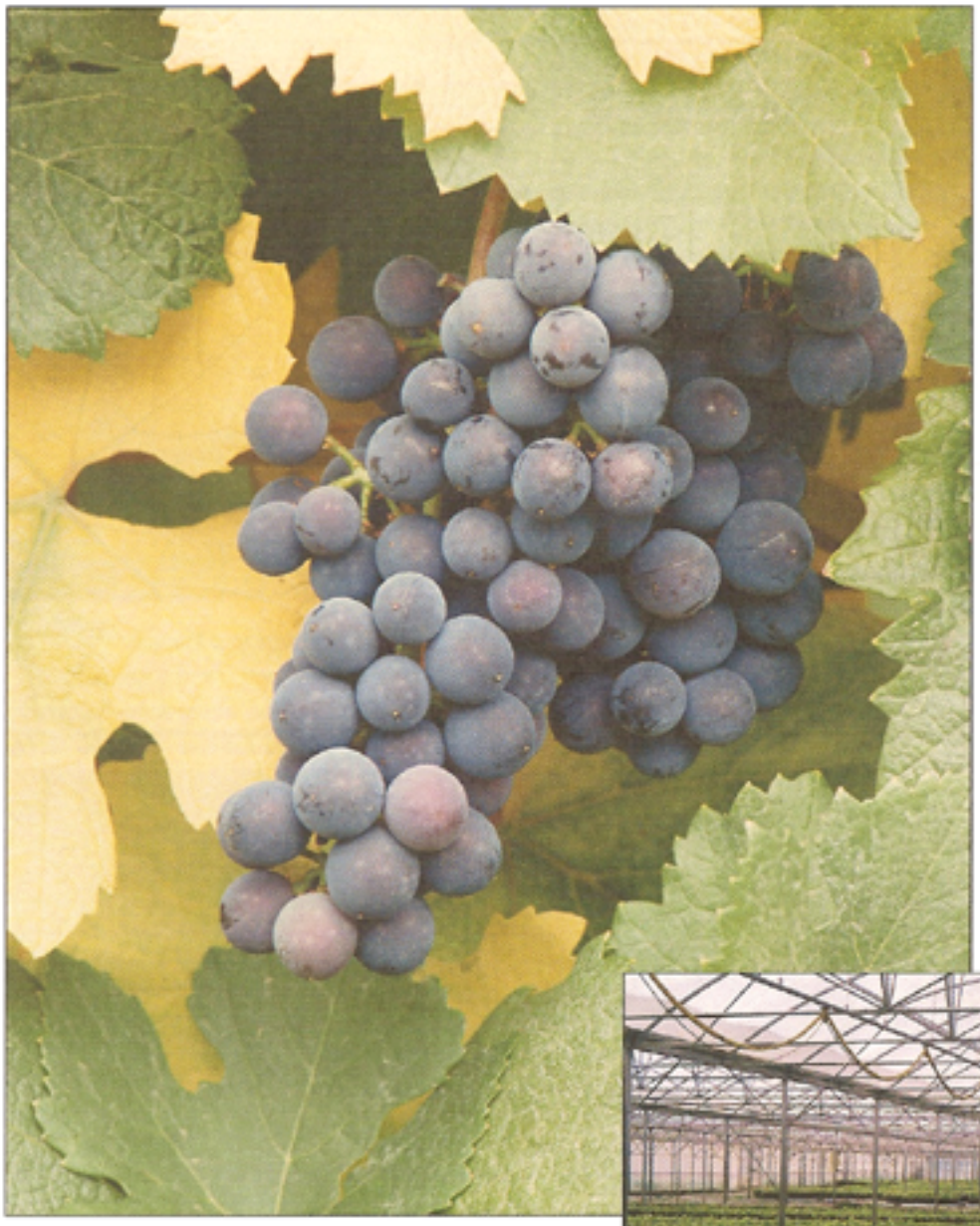
Vine Plant Production



Globally, we are seeing a significant increase in the use of container grown vine plants. Both in Europe, North America and Australia, Jiffy products are being used by an increasing number of growers.

Fig. no. 1 shows a greenhouse with vine plants ready for planting into the field. This brochure gives a short presentation on different ways Jiffy products are being used in the production of vine plants.

Fig no. 1, French Vine plants nursery

Jiffy

The traditional way with dormant plants materials

The traditional way of propagating vine is to graft a dormant scion of a selected variety onto a dormant rootstock. That job is done indoors and often with an Omega grafting machine. The grafts are then placed in a warm room for callusing. After callusing, the plants are either inserted on beds outdoors for bare root production or inserted into a container (Jiffy Pots or Jiffy-7) for rooting. Starting up the plants in a container and under greenhouse conditions with better control of temperature, light and humidity gives much better results. The average take rate for bare-root cuttings is about 50% compared to 75% for greenhouse produced container plants.

Fig no. 3, Plant in Canadian Jiffy Pot

Jiffy Pots

Both the Danish (30042502) and the Canadian (30012701) pots are used in Europe. The soil volume in the pots is about 210cc. The main difference between them is that the Danish pot (Fig. no. 2) has slits whereas the Canadian (Fig. no. 3) does not. The walls of the Canadian pots are more resistant to humidity than the Danish pots, but for both pot types the root penetration is very good.

Both pots can be used in the French air-pruning tray for vine plant production.

Fig no. 2, Plant in a Danish Jiffy Pot

Jiffy-7

From Italy, France, Canada and the USA nurseries using the large, Canadian produced Jiffy-7 pellet for the rooting of callused vine cuttings (see Fig. no. 4) have reported excellent results due to the fast and uniform rooting of vines in this system specially developed by Jiffy for this purpose. The diameter of these pellets is 50mm and the expanded height is 100mm (220 cc) or 150mm (320cc). In most cases, the Jiffy-7's are delivered and used in plastic inserts (see Fig. no. 5). In North America the pellets arrive preloaded in special developed tray.
Vine plants prefer a pH within the range of 6,0 - 7,0. With a pH of 5.8 in the Jiffy-7, and the pH of irrigation water often being high, the Jiffy-7 pellets make a very suitable rooting media and will not create any pH-related problems in vine plants production.

Fig no. 4, Plant in a Jiffy-7 pellet

Fig no. 5, Supporting Trays for Jiffy-7

The new propagation method using plant material in good growth

Fig no. 6. Grafting (Top-grafts) and inseting into a Jiffy-7

Many different plant species are today propagated with the top grafting method. This is also the case with vine plants.
By using scions and rootstock in good growth and graft them together, often by machine, the graft can be inserted direct into a Jiffy-7 (see Fig. no. 6) without going through the callusing period.
As this method handle with delicate plant material, it requires a much better control with the humidity, temperature and light in the propagation then what is the case for rooting callused plants (see Fig. no. 7).

Fig no. 7. Rooted (Top-grafts) vine plants in Jiffy-7

Why use Jiffy pots and pellets in Vine production

Establishing a new vineyard is a major investment and the vines planted into a vineyard are a major part of this investment. In short, it is important that the quality of the vines planted is as good as can be. The root system of the vines to be planted will play a crucial role in how well and how fast the new vines will establish themselves after planting.
The secret of the Jiffy system is that we produce «open wall containers» allowing any root system to develop as natural as possible (see Fig. no. 8).
Roots can grow through the pot – and pellet walls at random, creating a strong and healthy natural root system as supposed to the deformed root systems often found in plastic containers (see Fig. no. 9).

Figure no. 9. Deformed root system due to plastic container

In the vineyard the use of biodegradable Jiffy pots and Jiffy-7 pellets during propagation translates into other benefits being that the vines can be planted in the ground without ripping of the container resulting in no root bindings, no transplant shock, no pot disposal and best of all labour saving.
The root system of the vines in the new vineyard will develop as natural as can be, resulting in healthy well-established vines and optimal production for many years to come.

Figure no. 8. Root development in the Jiffy system

Jiffy

Jiffy Products used for Vine propagation

Jiffy Pots

Product no.	Diameter (mm)	Hight (mm)	Volume cc*
300 42 502	70	80	210
300 12 701	70	89	210
300 13 200	75	115	330

Jiffy Strips

Product no.	Diameter (mm)	Hight (mm)	Volume cc*
300 52 300	57	150	215

Jiffy-7

Product no.	Diameter (mm)		Hight (mm)		Volume cc*
	Dry	Expanded	Dry	Expanded	Expanded
320 15 015	50	54	37	150	320

* All volumes are approximate

Jiffy – Your partner in plant propagation!