

CALU HORTICULTURE WORKSHOPS – NURSERY STOCK PRODUCTION

11th December 2007

Dingles Nursery/Derwen Garden Centre, nr. Welshpool

ABOUT DINGLES NURSERY

As part of the CALU horticultural workshops, an event was held at Dingles Nursery. The workshop was split in a morning session at the nursery production site and the afternoon session at the Garden Centre. Andy Joseph, the nursery manager and CALU/ADAS consultant Chris Creed showed around the 19 attendants, looking at the different aspects of production from crop management, to varieties, seasonal care and marketing.

The Dingles nursery is one of the largest nursery stock producers in Wales. The production started in 1968 with a small retail site and has since expanded into the 65 Hectares today. With their policy of being able to supply any planting scheme in the UK, Dingles nurseries not only grow their own plants; they also buy young plants to raise, and import ready to sell plants from all over Europe.

As part of the family business Derwen Garden Centre opened in 1996. It is located about 3 miles from the Dingle nurseries site and surrounded by approx. 10 acres of tree production fields.

LOCATION

Dingles nursery is located west of Welshpool, just about 1 mile of the A490. Derwen Garden Centre is situated further south, approx. ½ mile of the A490.

SOILS AND SITE

Dingles nurseries lie about 200m above sea level on a slope. This slope has the advantage of acting as a natural drainage but extra work was needed to level out each polytunnels.



The tree production site at Derwen Garden Centre is about 100m above sea level with fertile, well drained clay soil typical for this area. Trees are susceptible to diseases originating in wet soil, but as there is no ponding this problem does not affect the production. One problem the tree production site has is soil compaction which is caused by the use of machinery.

POLYTUNNELS

At Dingles, polytunnels are used for the production and storing of plants. The polytunnels have been built facing upslope so as to promote good air circulation, and in hot weather the tunnels will act like a chimney. Polytunnels also allow control of the weather (particularly rain) and therefore reduce the time span till the product is ready to sell.



Dingle Nurseries' polytunnels

The old generation of 18ft wide tunnels is gradually replaced by 28ft. tunnels with a life span of about 10 years. The advantage of wider tunnels is their better resistance to windy weather. Each polytunnel is supported by 4 to 5 straps adding extra weight and hence stability to the tunnel.

As the picture shows Dingles do have one green and one blue tunnel which can be used to 'hold' plants at point of sale, other theories about the tunnels are reduced pest and disease levels, and they are of greater benefit to shade loving plants. There was some discussion from members of the group who have coloured tunnels as there has been mixed results.

OPEN BEDS

Besides polytunnels, open beds are used at the production site. Mypex over sand is used as a base for the storage of hundreds of plants, as can be seen in the picture. However if you are in a frost susceptible area fleece may need to be applied. A fleece cover can increase temperatures up to 2° to 3°Celsius above existing conditions. These covers are applied by hand but should be removed on hot days and should not be left for longer than 3 days in a row.



Open beds with water collecting pool in the background

IRRIGATION

Irrigation is a tricky operation in a nursery business. Overhead irrigation is used in the polytunnels but they make sure that similar pot sizes of plants with similar water use are grouped together to avoid watering small plants too much. At Dingles the sloping terrain acts as a natural drain and is used to re-collect the water in a pool at the bottom of the production site. This method has only very little risks of diseases and 50% of the water used is saved. At Dingles, water from the pond is filtered through sand before being reused. Other options would be UV light treatment.

PEST MANAGEMENT

Mammals

Rabbits are the main problem at the production site, causing yearly costs of approx. £10,000 to £20,000. Polytunnels are protected with a rabbit guard fence and plants on open beds get coated in spray. However, these methods do not give enough protection so additionally a ten day shooting campaign is held this December to reduce the numbers of rabbits.

Insects/Fungi

Spray is applied once or twice a month in summer, in winter only once. Main pests are fungal infections, aphids and red spider mite. Care is taken to use specific sprays to avoid getting resistance.

Tunnels, as somewhat closed systems do encourage the use of predators instead of chemical pest control. This was tried for red spider but unfortunately did not work.

Weeds

For the production from seeds, weeds can get a serious problem. Therefore Ronstar or similar products are used. Again, it is important to change the product regularly to avoid problems from resistance.

COMPOST AND POTTING

Dingle Nurseries use a ready mixed compost with Irish peat and a porosity of at least 60%. These days, peat is no longer necessary as there are possibilities to replace it. Nevertheless, it is the cheaper option.

Potting is a “low tech” procedure at Dingles; a trailer loaded with compost is placed next to the bed where the potting of 2 to 5 litre pots by hand takes place. To reduce the costs it is best to raise the plants directly in the saleable pot. On site, pots from 2 to 3 litres up to 50l are used.

TREE PRODUCTION SITE

The trees are planted in rows at a spacing of 70cm . Every other alley way is planted with grass and herbicide is applied on these rows. The width of the rows is according to the space needed for machinery operations.

A transformed cherry picker is used to drill in bamboo sticks next to the stem to support straight growth. This procedure is done after the planting. For maple, 4 year old grafted root stock is planted. After 3 years at the site, root pruning is applied to avoid the development of deep tap roots but encourage the growth of fibrous roots instead.



Tree production site

Only every other tree gets harvested at a time. Before the site is replanted, it is left as a grass fallow for a year. Trees are harvested either with a digging machine for bare root products or as root ball trees. The soil loss due to harvesting leads to a decline of the land. Recycled compost from the nursery site is used to counteract the soil loss.



Remaining whole after harvesting

Before we finished the afternoon, we had a look at Derwen Garden Centres' different fruit tree varieties. Chris Creed highlighted the advantages and disadvantages of the many cultivars and their requirements. He also had tips on hand for planting and management of different fruit trees species.