The way Cherries root with such speed and ease under mist in August as quite hardwood points to another avenue to explore. This technique was discovered when bud wood was healed in under mist and forgotten; when found, rooting was well advanced.

Another development in recent years to help us in hard water areas has been the "Water-witch"** on *Cupressocyparis leylandii.* It has made all the difference from failure to real success. I am also trying a mid-winter crop with extra light. I am hoping it will help in rooting deciduous Azaleas, this is a plant I have not grown before, I am doing so as I hate to see the suckers on imported ones.

To end with, has anyone tried rooting subjects which are normally layered or grafted by the root-stock method developed at East Malling? We are trying *Laburnum vossii.*

* This refers to a patented machine, made of aluminium alloy, the action of which is to insert a continuous strip of polythene film into a standard seed tray so as to divide the tray into individual compartments. The plants when ready for moving take the shape of the cells and have grown into small rectangular blocks. The machine was designed by Mr. J. H. Beacon, Tewkesbury Road, Eckington, Pershore, Worcs. (Ed. note).

**"Water-witch" is a self-contained automatic water treatment unit for horticultural water supplies in hard water areas. It is manufactured by the Wansdyke Engineering Co. Ltd., Hillworth, Devizes, Wilts. (Ed. note).

COMPOSTS AND CONTAINERS

P. M. ROBINSON
Boulton Bros. (Moddershall) Ltd.,
Moddershall, Stone, Staffs

What is the ideal compost?

A compost is an attempt to simulate an ideal rooting medium for a particular plant.

One of the first recorded studies of plant growth and nutrition was by Woodward in 1699 when; on growing vetch, potatoes and mint in water obtained from various sources, he concluded that water was merely a carrier of terrestial matter.

Our aim as nurserymen is to produce a compost suiting the particular plant in question so as to provide the correct amount of water, nutrients and aeration. As a result of this coupled with a favourable climate and light intensity we should achieve maximum plant growth.

The practical qualities of this ideal compost should be:—

1. cheap to produce,
2. standardised quality,

3. good reserve of nutrients,
4. wide spectrum of usage.

How can we achieve these qualities?

In our container department we use only two different mixes of compost, a general purpose compost for the vast range of trees, shrubs and conifers and a special acid compost for ericaceous and allied subjects such as Rhododendrons, Azaleas and Pieris.

I now give a few practical observations on container growing. The ideal compost is without doubt one based on quality sterilised loam.

This has the advantages of requiring the minimum of feeding during the first growing season, also it is easy to compact when potting and so far plants needing caning, such as Clematis and Lonicera it is far more suitable than a peat/sand compost which is very difficult to firm well.

Due to the high cost of either obtaining or producing sterilised loam we have concluded that loam based composts are *uneconomical, for container production in our particular circumstances* as wholesale producers.

We use a mix of 5 parts peat to 3 of sand. The peat being medium-grade Irish Shamrock Brand and the sand a lime-free concreting sand. We add 8 oz. of Vitax Q4 and 8 oz. of ground magnesium limestone to each bushel of mix. This compost gave very good results with a wide range of subjects last year. As a matter of interest dropping the proportion of peat from 5:3 to 1:1 reduces the material cost of the compost by some 3s/6d. per cubic yard.

Our acid compost consists of 6 parts peat and 2 parts sand with 8 oz. of Q4 per bushel.

The standard soilless compost we produce costs about 2s/— per bushel to produce compared with anything up to 5s/— per bushel for bought-in J. I. compost.

Loam based composts are heavier than most soilless composts by anything up to 10%. This is an important fact as transportation is a big item with wholesale container growing.

With soilless composts frequent feeding is needed during the growing season, we feed at 10 day intervals from mid-June to mid-September using mixes of urea and potassium nitrate ending up in September with straight potassium nitrate to harden up the plants. Perhaps in the future we can reduce this feeding by using a longer lasting base fertiliser in the mix.

My last point to do with composts concerns the potting up of young rooted cuttings from the mist. Last year I experienced trouble with overwatering of soilless composts with subsequent death of several batches of plants; this is a point to watch as it would not have happened to the same degree with a loam compost. I hasten to add that this can be rectified by more careful management of the water regime.

What is the ideal container?

There are 5 points to consider.

1. Size — must be adequate for optimum plant growth.
2. Presentable appearance.
3. Durable enough to withstand weather and transportation.
4. Easy to use
5. Of reasonable price.

At present in my opinion only the black 500 gauge plastic container qualifies with all these five points.

Whalehide type pots either plastic lined or bitumen coated tend to be very much more expensive; £13. 3s. Od., and £9. 7s. Od. per 1,000 for a 6 inch x 5 inch size compared with about £5. 10s. Od. for a 500 gauge black plastic container. Apart from this they are bulky to store and not very durable when in use. The ideal container would seem to be a rigid plastic container of attractive appearance at a reasonable price.

To finish off I will say a few words about pots for growing young cuttings in. We use both rigid plastic pots and clay pots. In many ways plastics are superior, not needing plunging, being lighter in weight, but they do tend to dry out very unevenly and at the end of summer plastic pots coupled with soilless compost can lead to overwatering if care is not taken.

On the other hand it is difficult to overwater a plant in a clay pot due to its porous nature.

Could we produce a plastic pot with some of the qualities of a clay pot?

C. E. SALTER: I find that it is best to add some loam to soilless composts to act as a buffer against drying out.

DAVID CLARK: Did the costs of your composts which you gave us include labour charges?

P. M. ROBINSON: Yes.

DAVID CLARK: Then they are much less than mine. Perhaps I am paying too much for the components but it seems obvious that if one is to mix one's own composts it must be done on a large scale or not at all. This means using appropriate machinery such as concrete mixers.

R. ANDERSON: Concrete mixers are designed for mixing a slurry and not for dry components. Some alterations are required and they do not operate successfully if filled to the brim.

A. D. WEGUELIN: We use a hard surface outdoors on which to mix the components with tractors fitted with rotavators and bucket-attachments. It is possible for 2 men to mix 20 tons of compost in a few hours.