1-1-1961

Citrus growing in the home garden

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Available at: https://researchlibrary.agric.wa.gov.au/journal_agriculture4/vol2/iss2/12
ALTHOUGH well suited to our climate, citrus trees do not always thrive in the metropolitan area because of the unsuitable soil conditions in some suburbs. Lemons can usually be grown successfully and grapefruit are worth persevering with, but oranges and mandarins are better suited to the loamy soils of the Gosnells, Guildford and Hills districts.

Lemon varieties which are commonly grown are the Eureka, a thornless, heavy bearing type, and the Lisbon, which has the disadvantage of being very thorny. In more recent times, the Meyer lemon has come on to the market, and is likely to be very useful in the home garden. Under our conditions, however, it does not bear summer crops.

There is not a great deal of choice of orange varieties but I would suggest planting Washington Navels or Valencias.

BUYING YOUNG TREES

There is a common fallacy that old trees and big trees will give better results and quicker fruiting. In practice, it is found that large trees receive a much bigger setback at transplanting, and often result from stunted trees which have been kept in the nursery until they have made reasonable growth. It is far better to obtain vigorous young trees, that is trees that are one year old from the bud, and are in no way stunted. Nursery trees can be obtained either with balled roots or with bare roots, in which case they are usually packed in sawdust.

Provided the trees are planted soon after lifting, it is immaterial which method is used, but balled trees would be better able to withstand adverse handling conditions.

If the roots are packed in sawdust, this should be completely removed before planting. On no account should the root system of a young citrus tree be allowed to dry out.

PLANTING SITE

Consider such factors as competition from established trees, lawns, etc., protection from strong winds, particularly near the coast, and also choose a sunny aspect.

Orange trees are difficult subjects in the metropolitan sands owing to heavy fruit shedding. In loamy soils they are well worth while cultivating.

PREPARATION OF PLANTING HOLE

Much of the success with citrus trees depends on the initial start the young
trees receive. Time spent in preparing the soil before planting will amply repay the effort.

A hole 2 ft. 6 in. deep and 4 ft. in diameter is suggested, although often trees are planted with far less preparation. Apply a dressing of about 3 lb. of mixed fertiliser, for example potato manure, in the bottom of the hole, and add copious quantities of organic matter such as farmyard manure, poultry manure, compost, blood and bone, etc. Intersperse this with layers of soil. Loam may be added if desired, but should be well mixed with the rest of the soil.

PLANTING

Trees are usually available from the nursery by the beginning of July, and should be planted as early as possible. Soak the trees in water as soon as received, and before planting trim off any damaged roots. In the case of a balled tree, do not disturb the ball, but after planting carefully cut the string to release the hessian binding, and fill in the top soil. Make sure the tree is planted in clean soil, free from added organic matter or artificial fertilisers. Keep the bud union well above the ground level to allow for subsidence as the organic matter in the hole rots away. If the bud union is covered, there is a strong possibility of collar rot developing at a later stage.

Firm the soil around the roots, and water immediately. Prune the top to balance the loss of roots. Cut back hard to three well-placed branches of say 6 to 8 in. long. Do not be afraid to remove the major part of the foliage, as failure to do so is a common cause of heavy leaf drop, and poor development.

CARE OF THE YOUNG TREES

The trunk of the young tree should be protected from the sun by wrapping with newspaper, corrugated cardboard, etc., tied loosely top and bottom. Alternatively, a light shelter of hessian, etc., can be used with good effect for the first few months.

Apply a soil mulch of grass around the tree to reduce soil temperatures and moisture loss, and ensure that the tree is never short of water. Apply sufficient water to wet the soil to a depth of 15 to 18 in. to induce the roots to penetrate into the deeper layers. The roots will not grow into dry soil, and frequent surface watering can induce very shallow root systems.

During the first summer, dressings of sulphate of ammonia at the rate of 2 or 3 oz. every six or eight weeks should be given at the time of watering. This will induce satisfactory growth in the young tree, which is essential if it is to come into bearing at an early age. Size of the tree rather than age will determine its bearing capacity.

CARE OF THE ESTABLISHED TREE

Manuring.

The mistake is often made of going to great pains to prepare the soil prior to planting the tree, but failing to maintain adequate supplements in later years. This results in the tree developing under artificial conditions and at the time when it should be coming into bearing it is being subjected to a declining plane of nutrition. This will restrict the growth of the tree and upset its bearing habits.

A suitable fertiliser programme for the poor metropolitan sands would be as follows:

Apply a dressing of up to 5 lb. of mixed fertiliser for a large tree during the winter months. Use ample quantities of any type of organic material to build up the organic matter content of the soil. Compost, animal manure, poultry manure, etc., can be used with the object of moisture retention, encouraging earthworms, and other beneficial soil organisms, and also reducing the soil temperature.

In the spring and summer months, apply light dressings of sulphate of ammonia or alternatively fowl manure. Citrus trees have a high nitrogen requirement, and will not prove successful unless this need is met. Trace element deficiencies will probably occur, and the following spray will prove useful if deficiency symptoms are noticed.

| Copper Oxychloride | 1½ oz. |
| Zinc Oxide | 2 oz. |
| Manganese sulphate | 6 oz. |
| Water | 4 gall. |

Spring application is best, but the spray can be used whenever the tree is making new growth.

Cultivation.

Do not dig deeply around citrus trees. Hoe or pull out weeds to reduce competi-
tion, but apart from this do not disturb the soil more than can be helped.

Grapefruit grow well in the Perth climate even under sandy conditions but they are very subject to fruit fly

Watering.

The aim of successful irrigation is to wet the whole root zone of the tree. Any further water will be wasted. The lateral spread of water in sand is poor, and therefore uniform distribution over the full extent of the root perimeter is necessary. Putting a hose to run under the tree may only result in the water quickly soaking into the ground and penetrating below the root zone without affecting the main lateral roots. Overwatering can be detrimental by washing soluble nutrients from the soil.

Pruning.

Citrus trees do not need extensive or annual pruning. Lateral shoots developing on the trunk of young trees should be completely removed. Strong shoots coming from the main head of the tree should be shortened back to induce the growth of lateral shoots and so prevent the tree becoming unbalanced. Old trees which are declining can be thinned out, removing spent and dead wood, and this applies particularly to lemons, which benefit from a periodical cutting back. It must be always remembered that pruning alone will not rehabilitate a declining tree. Nutritional aspects and pests and diseases must also be taken into account.

PESTS AND DISEASES

The main pests with which citrus trees are infested are the various types of scales, i.e., red, brown, white wax and cottony cushion scale. In addition, aphids, citrus white fly and fruit fly, can cause considerable damage.

The fungus diseases attacking citrus trees are collar rot, which causes girdling of the trunk, and brown rot, which attacks leaves and fruit causing excessive defoliation.

A suitable spray programme for citrus trees would be as follows:

During late December and January, spray with 1 in 40 white oil at least twice to control scale insects. It is essential to use spraying equipment which will thoroughly drench the tree. An average size citrus tree will take up to four gallons.

In April, before the winter rains, apply a spray of Copper Oxychloride according to the maker's recommendations.

In October, use 1 in 40 white oil plus 1 in 600 nicotine sulphate for white fly and aphids, and make later applications where aphids are bad.

Folage baiting for fruit fly should be carried out while ripe fruit is on the trees, and also during odd times when other trees in the vicinity are being baited.

PHYSIOLOGICAL DISORDERS

Considerable damage is done to citrus fruits by unfavourable weather conditions. Excessive heat will cause heavy shedding of young fruits, and in the case of lemons will bring about sunburning and internal decline of the fruit. When an affected lemon is cut open, it will be found that one side of the fruit is normal, whereas on the other the pulp is brown and often dried up.

Fruit drop may be minimised by good growing conditions, adequate watering and in some instances by the use of soil dressings of bluestone. Care is necessary however, to ensure that only light applications of 3 to 4 oz. of bluestone are made at any one time because of the danger of root damage.

VEGETABLES AMONG FRUIT TREES

Provided the requirements of the trees are met, there is no reason why other garden subjects may not be grown among them. In fact, trees often get much better attention, under these conditions, than they would otherwise. However, avoid planting too close to the trees, and do not dig deeply in close proximity to them.
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Journal of Agriculture, Vol 2 No 2, 1961