

LIQUID OR FOLIAR FEEDING

By John Woodfield



Foliar feeding has become a popular and easy method to help look after our plants. It may help to know how and why this method developed, though you may be interested to know that it's not new. Research on foliar feeding dates back to the late 1880's.

Normal plant growth occurs when simple nutrients are extracted from the soil and transported through the plant to be converted into more complex compounds required for healthy development. Much of this activity takes place in leaves, so why then could the roots not be bypassed and the nutrients applied directly to the leaf?

In early trials it was found some compounds were leached from the leaves by rainwater, and plant scientists pondered whether plant nutrients might be able to move into the plant via the foliage and in developing this method of fertilising plants, much has been learned about the actual conditions and speed at which this occurs.

Initial trials found that after about ten minutes absorption began and by 30 minutes a great deal had been taken up, but then uptake reduced, and even though plenty of suitable nutrient remained on the leaf surface, no more was taken up. Young leaves were found to be more efficient at taking up nutrients than older leaves and the undersides of leaves were more responsive than the top or outer sides of the leaves.

Further trials continued using different means of application and different nutrients. Solutions applied as a fine mist were observed to be taken up sooner than leaves dipped in the same liquid fertiliser. Different compounds were taken up at different rates, organic materials were more effective than inorganic materials and trace elements required the presence of sugars. The addition of wetting agents also helped the absorption rate.

Improvements in foliar feeding and new products continue to appear and at times may confuse the average gardener. The availability of seaweed, fish, worm and plant nutrients mixed with existing known compounds has given us an outstanding range of fertilisers to use with ease and convenience.

But do remember when using these products that some things never change, with some over-enthusiastic gardeners will still trying to improve on what is available by using a stronger solution than recommended.

Here are a few hints for successful application of foliar fertilisers:

- First read the directions on the container to determine if it is appropriate for your purpose.
- Mix only the amount you need to use at the recommended rate or weaker and apply in the cooler early part of the day when there is some humidity about. Applying foliar feeds in the heat can cause burning and result in the spray evaporating before it can be absorbed.
- A fine spray should be applied to upper and lower surfaces of leaves.
- Several diluted applications have been found to be more effective than a concentrated spray.
- Avoid applying directly to flowers in bloom as many will stain or mark.
- Do not apply when rain is expected for best results.

And remember our Canberra Times garden writer says:: weakly, weekly!■