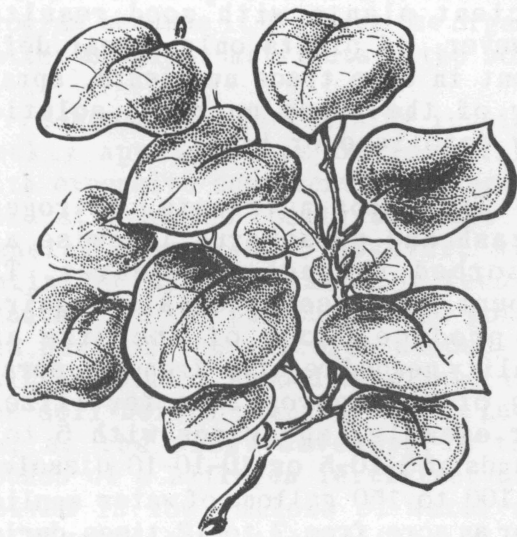


Foliar Feeding of Plants



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IN RECENT MONTHS there has been considerable interest in applying fertilizers to plants by spraying dilute solutions of fertilizers on the leaves (foliar feeding).

This form of feeding plants is not new. It has long been known that plants are able to absorb the various plant nutrients through the leaves. Those nutrients required in small quantities, such as zinc, copper, manganese and other trace nutrients, may be sprayed on leaves of nutrient deficient plants with good results. However, if plants only appear deficient in some trace nutrients, spraying of the trace nutrient solution may defoliate or kill.

The major nutrients, nitrogen, potash and phosphorus, likewise are absorbed through the leaves. The amount of these materials required to produce crops of the size and quality needed require frequent spraying of the appropriate fertilizer. For example, sprayings with 5 to 6 pounds of 5-10-5 or 10-10-10 dissolved in 100 to 150 gallons of water applied over an acre from 7 to 12 times during the year furnish all the nutrients required for most plants. Woody plants utilize the nutrients more efficiently than do many of our succulent plants and results are better.

The use of small quantities of fertilizer solutions in water as a spray over crops can best be considered a *stimulating fertilization*.

The stimulation of crops without applying sufficient amounts of nutri-

ents to actually feed the crops becomes a soil-depleting operation. Therefore, anyone using foliar feeding should arrange to supply the amount of nutrients necessary to feed the crop and perhaps leave a little extra in the ground to maintain bacterial population.

In some cases, a spray application at a critical time in the plant growth tides it over with outstanding results. However, this practice is not recommended as a general fertilizing program because it depletes the organic matter and plant nutrients in the soil.

Since spray fertilizing requires weekly applications of fertilizer with expensive equipment, the practice generally is too costly to adopt for general farm usage. However, when foliar sprays are used for feeding plants, all the phosphorus and potash and part of the nitrogen needed for full production should be placed into the soil before planting time. Later on, as the plant develops, 2 to 5 pounds of a nitrogen fertilizer dissolved in 150 gallons of water can be sprayed onto the foliage at the appropriate interval and results will be good.

In any fertilizer program, it takes pounds of nutrients to produce hundreds of pounds of crops. There is no exception to this rule.

For further information on this subject, ask for extension publications B-167, *Fertilizers and Their Use*, and B-253, *Methods of Applying Fertilizer for Efficient Use*.

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[The main body of the document contains several paragraphs of text that are extremely faint and difficult to read. The text appears to be a technical or agricultural report, possibly discussing various plans or methods. The words are mostly illegible due to the low contrast and quality of the scan.]