Fertilizing

Your plants should be fed only when the soil is moist. This is one of the reasons you should never allow potted plants to dry out completely. Moisture is needed to help the plants absorb the fertilizer and to help keep it at a level where it is not harmful to the tiny tender roots through which the plants feed. If used completely dry, the fertilizer can bum and destroy the hair roots of the plant.

With this in mind, we recommend what is known as continuous fertilizing. This means you fertilize every time you water, only with a lesser proportion of fertilizer. Instructions with most fertilizers suggest you feed plants once a month with 15 mL (1 tablespoon) to 4.5 L (a gallon) of water. Instead we would recommend you use 1.2 mL (1/4 teaspoon) per 4.5 L (gallon) of water every time you water. Some well-known companies are now recommending this continuous fertilizing formula.

Plants require a variety of chemical nutrients to provide good growth. These are carbon, oxygen, nitrogen, phosphorus, potassium, sulfur, calcium, magnesium, copper, zinc, iron, chlorine, manganese, boron, and molybdenum. The first three are found in sufficient quantities in the water and the air which we provide for the plants, but the other elements are taken up by the root system. Some are major requirements while others play a minor part in plant development. The three most important elements in plant food are nitrogen (N), phosphorus (P), and potassium (K). You will find these listed on the container of your fertilizer as an N-P-K formula. For example, 15-30-15 means 15% nitrogen, 30% phosphorus, and 15% potassium.

Nitrogen will activate the development of the plant and result in a lush color of green in the leaves. A nitrogen deficiency results in pale leaf color and a slowing of the process of photosynthesis. Phosphorus encourages the development of a good root system as well as flower production. Phosphorus deficiency results in poor root development and lack of bloom. Potassium helps the plant utilize other nutrients, and also seems to help in building up a resistance to disease. A potassium deficiency causes puny de-

velopment of the plant, yellowing and downward curling of the leaves, and abnormal flower formation.

One should start a fertilization program with two types of fertilizer—a 20-20-20 and one with a higher middle number, e.g., 15-30-15. The first should be used at a ratio of 1.2 mL (1/4 teaspoon) to 4.5 L (a gallon) of water every time you water and the latter at the same ratio, whenever flowering is required. Never use one in conjunction with the other. As you become more proficient in your growing skills, you may want to invest in a variety of fertilizers with different proportions of nutrients. A change in levels is found to be quite beneficial at times. Plants also require trace elements in minute quantities, and these are sometimes listed in the contents shown on the container. While a deficiency of fertilizer may cause only minor problems, an overindulgence can ruin a plant.

Continuous fertilizing sometimes will cause a build-up of fertilizer salts on top of the soil as well as on the rims of the pots. To control this, simply drench your plants with clear water every six weeks or so. This will wash away the surplus from the soil. Five mL (one teaspoon) of dolomite lime may be added to each 4.5 L (gallon) of water used for the drench.

Foliar feeding is not recommended for a beginner. If the water is too cold it can cause leaf spotting. Additionally, a residue of the fertilizer may remain on the leaves, creating another chore and oftentimes damage. Finally, there has been some debate lately as to the efficacy of this mode of feeding plants.