

## Determine Nitrogen Use Carefully In Tree Care

Nitrogen is the most important element in a "complete fertilizer" when determining fertilizer cost and rate of application.

Of the three basic components in a "complete fertilizer," nitrogen is the most expensive and has the greatest potential for burning a plant. It is, however, used in the greatest quantities and is the element to which woody plants respond most.

Jack Wikle, Davey Tree Expert Co., Kent, O., says that application rate of a "complete fertilizer" should be established on the number of actual nitrogen per unit area. It should not be based on amount per plant or inch of trunk area. This might cause damage to smaller plants or plants in areas where the root system is confined.

Wikle suggests an annual use of 4 to 6 pounds of nitrogen (from a high nitrogen fertilizer) per 1,000 square feet. This should be divided into 1 to 2 applications for trees, 2 to 3 for shrubs, and 3 to 4 for non-woody plants. If a woody low nitrogen mulch is used, such as sawdust or wood chips, the annual rate of nitrogen should be doubled.

On the practice of fertilizing trees and shrubs at planting time, Wikle reports he has not found concrete experimental data to support doing this. He suggests, only, that 3 to 5 pounds of super phosphate per 100 square feet be mixed with planting soil or back fill. Nitrogen or potassium should not be added until 6 to 8 weeks after planting.

Wikle presents four reasons for properly fertilizing landscape plants. They are: improvement of plant growth and vigor resulting in less dieback, more roots and more and darker green foliage; reduction of drought damage because of reduction in water requirement; reduction of disease damage due to increased

resistance to disease pathogens and insects which attack unhealthy tissues; and reduction of winter injury. An excess of fertilizer can increase damage.

## Turf Care Now Ranks 2nd in Pa. Agri. Business

Turfgrass has become a \$164 million business in Pennsylvania. According to a recent survey, turfgrass is now the second largest agricultural enterprise in the state.

Money, according to the survey, was spent to establish and maintain new turf areas. It included costs for hired labor, seed, sod, lime, fertilizer, irrigation equipment, and chemicals for control of weeds, insects and diseases.

H. Burton Musser, executive secretary of the Pennsylvania Turfgrass Council, says the survey, by the State Department of Agriculture, showed the turfgrass industry second only to the dairy industry.

Musser says golf course managers are the only turf specialists who make adequate use of chemical weed control. Neither herbicides nor fertilizers are used to their fullest benefit by most homeowners, Musser said.

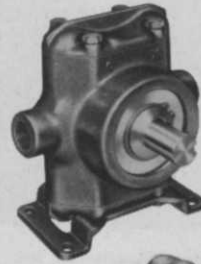
The survey showed fertilizer costs for Pennsylvania home lawns to be \$5 million. Musser claims it would cost \$26 million annually to supply the minimum amount of fertilizer needed to maintain the turfgrass in good condition.

The survey also showed golf courses spent about \$14 per acre annually on weed control. The average for other areas like parks and home lawns was only \$1.60 on a per acre basis. Expenses were low for use of both insecticides and fungicides on general turf areas, including home lawns.

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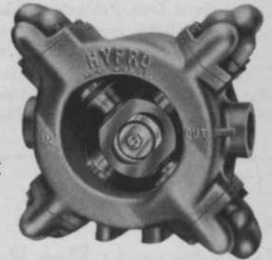
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