

# Lawn Care

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## TREE FEEDING—AN AID TO LAWN

HOW can I keep my beautiful trees and still have a nice lawn?" The frequency of this question would indicate a doubt that attractive trees and a velvety lawn are compatible. Actually both can add to the beauty of the home grounds.

Granted that there are good lawns under trees, why is it that the more common sight is scraggly grass, ugly weeds, or just bare ground? Several factors are involved. They are all somewhat inter-related, and fortunately the principal one, starvation, can be remedied.

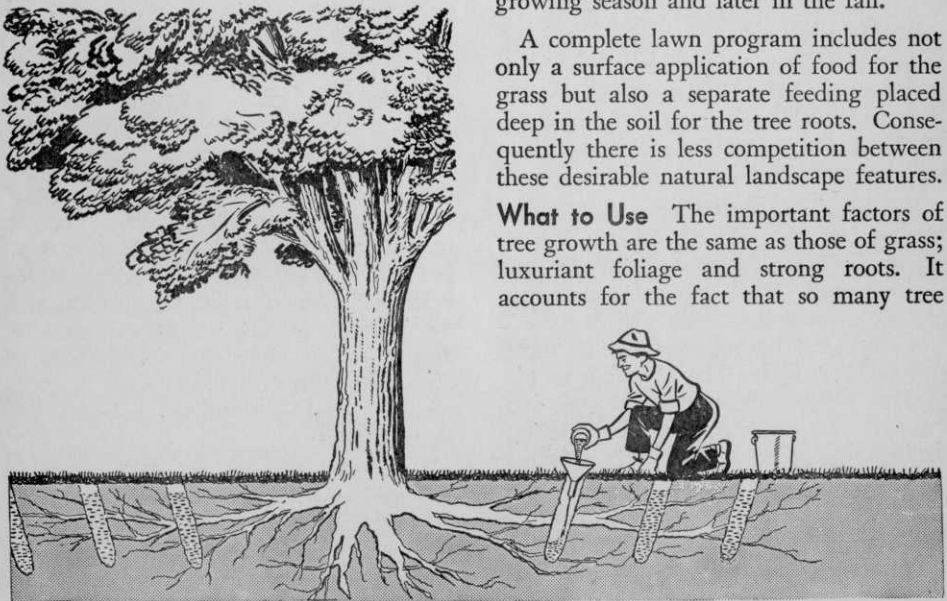
A tree is a living organism that must have food, air and water if it is to survive. In the woods there is constant replenishment of food by decaying leaves and other vegetation that form a humus mulch. In contrast, a tree in the average lawn can

only draw on whatever feeding elements are already in the soil and can be reached by its roots. These roots need to take up tremendous quantities of nourishment just to keep the tree alive. Vast supplies of food energy are required to produce the bountiful crop of leaves year after year. In addition new roots and new wood must be formed. If there is not a sufficient food supply in the deeper reaches of the soil, its roots remain at the surface where they strongly compete with grass for the limited food available.

**Dual Benefit** By giving a tree the food it needs a two-way benefit is derived—a better, fuller shaped tree and a better lawn. Well fed trees resist attacks of pests and diseases. They grow faster, hold their twigs and leaves better throughout the growing season and later in the fall.

A complete lawn program includes not only a surface application of food for the grass but also a separate feeding placed deep in the soil for the tree roots. Consequently there is less competition between these desirable natural landscape features.

**What to Use** The important factors of tree growth are the same as those of grass; luxuriant foliage and strong roots. It accounts for the fact that so many tree



experts and home gardeners report excellent results in feeding trees with Turf Builder. This special food meets the need of both grass and trees for a correct balance of nitrogen, phosphorus and potash derived from ingredients that assure immediate stimulation plus long lasting feeding.

The size of the tree and the kind of fertilizer determine the amount to be used. If Turf Builder is selected, the quantity is figured on the basis of 2 or 3 pounds per inch of diameter of the trunk, measured about four feet above the ground. Thus a tree measuring six inches through would need 12 to 15 pounds. The chart on page 3 provides a quick way to estimate the needs of different size trees.

To get the greatest benefit from a feeding, the fertilizer must be placed with consideration to the lateral distribution of the tree roots and the fact that it is desirable to encourage depth of rooting. As shown by the cross-section illustration on page 1, the feeding zone starts about half-way out from the trunk and extends a little beyond the outer edge of the branches.

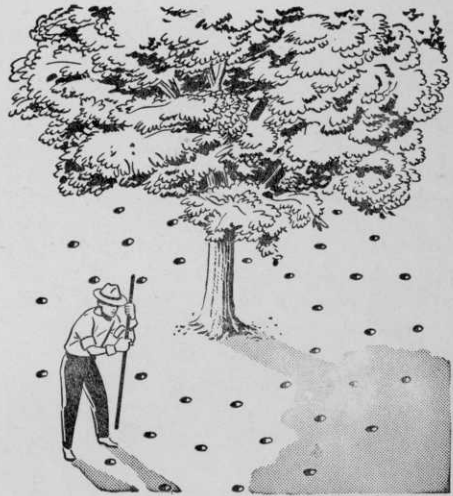
**Perforation** The method used to get food into this zone depends on the value of any turf above it. In most instances there is already a lawn under the tree and it is not desired to disturb this grass. In such cases tree food is placed deep into the soil by making a series of holes about 18 inches deep into which the fertilizer can be poured. These holes are placed in a staggered arrangement through the feeding zone as shown by the drawings.

Various tools are utilized to make these holes. First a trowel is used to cut a cone of sod which can be replaced after feeding is completed. Then the most common practice is to punch holes with a 4 or 5 foot crowbar. The holes are kept as small around as possible. The objection to the crowbar is that it forces the soil apart and compacts the earth around the sides of the holes so there is not an easy lateral spread of the fertilizer.

If a crowbar is not readily available, it is easy to get one made. Go to a junk yard or automobile wrecking lot and get a discarded automobile drive shaft. Take

this to a blacksmith or machine shop and have one end tapered. Result: a good strong bar of the right weight and length.

A soil auger does not compact the soil around the hole but it may be slower due to the tendency of the screw to fill up with dirt which has to be knocked out. Augers that make holes about two inches in diameter are satisfactory and probably the least damaging to sod of anything that can be used. In normal times soil augers made especially for the tree feeding job are procurable. Some folks now own such augers and are probably willing to lend them around the neighborhood for a good cause.



To feed a large lawn with a good many trees, the use of an Iwan pattern post-hole auger is faster. These can be obtained in sizes down to 4 inches in diameter. Holes of this size won't damage the lawn if the sod plug is carefully replaced. On the contrary, the larger holes can even be turned to an advantage by backfilling them with humus, soil and sand. Such a mixture provides improved entrance for air and water.

Some concerns that specialize in tree care have pneumatic power equipment to bore holes and insert food under pressure. This is an excellent method of feeding because it fractures the subsoil and allows the fertilizer to spread laterally.

The number of holes to make is determined by the total plant food requirements of the particular tree and the type of fertilizer being used. It is safe to use as much as one-half pound (2 cupfuls) of Turf Builder per hole. To figure the feeding requirements, measure the diameter of the tree trunk, multiply this by 2 or 3 pounds for the total needs of Turf Builder. Divide this by one-half pound per hole to get the number of holes.

A funnel will be needed to direct the fertilizer into the bottom of the hole and keep it from spilling on the grass. Otherwise the grass may be unduly stimulated and a spotted lawn result. A tin cup or coffee can makes a good measure and pouring device.

After placing the fertilizer, fill up the holes with soil or compost which should be well firmed by tamping or watering. Do not water until the holes have been filled as otherwise the fertilizer may be floated out of the hole. Replace the sod and press it into contact with the soil.

**Trenching** Another feeding method is to scoop out a shallow trench under the tree, starting at a distance from the trunk described in the chart and extending out to the edge of the tree. Then spade Turf Builder into the bottom of the trench at the rate of 3 to 5 pounds per 100 square feet. Care must be exercised to avoid excessive damage to tree roots and this will determine the safe depth of trenching and spading. Good topsoil should be kept separate and not mixed with subsoil.

When replacing the topsoil, liberal quantities of rotted manure, sludge or other organic matter worked into it will improve its moisture holding capacity and permit good circulation of air.

**Frequency** In a tree's normal growth processes and the production of foliage, food is continually being consumed. This should be replaced at intervals of every few years. Frequent feeding is even more essential on sandy ground because plant food leaches more rapidly from such porous soils.

**Evergreens and Shrubs** It is practically impossible to grow grass under most narrow leaved evergreens because of their very low growth and the falling needles which accumulate in sufficient amount to smother the grass. Even so, the trees will be helped by feeding every few years. For larger evergreen trees, use Turf Builder at one to two pounds per inch of trunk diameter placed into the root zone by cultivation or in holes. To feed a shrub bed, either evergreen or deciduous, broadcast 2 pounds per 100 square feet once a year and work it into the upper inch or two of soil.

Broad leaved evergreens need liberal amounts of soil organic matter such as peat with only occasional light feedings.

**Time of Tree Feeding** There is a difference of opinion as to the best season to feed trees but apparently no season has a great advantage, and the home owner may plan to do the job as he has time for

## Turf Builder Feeding Chart for Various Sized Trees

	<u>3 in.</u>	<u>6 in.</u>	<u>8 in.</u>	<u>12 in.</u>	<u>18 in.</u>	<u>30 in.</u>
Turf Builder per tree .....	5 lbs.	15 lbs.	20 lbs.	30 lbs.	45 lbs.	75 lbs.
Distance from trunk to inner circle of holes.....	1½ ft.	3 ft.	4 ft.	7 ft.	10 ft.	12 ft.
Distance from trunk to outer circle....	3 ft.	8½ ft.	10 ft.	14 ft.	22 ft.	28 ft.
Spacing between holes .....	18 in.	33 in.	36 in.	42 in.	48 in.	48 in.

A sufficient number of holes should be made to accommodate the total quantity of tree food predetermined by above chart. If ordinary caustic fertilizers are used, double the number of holes and put half as much in each. When low analysis fertilizers are selected at least twice the quantity should be used per tree as is indicated above for Turf Builder.

it in spring, summer, or in the fall as late as weather permits.

### Trimming Trees

The home owner is inclined to think of almost everything about the tree as it relates to his effort to have a nice lawn under it. He may say to thin out some branches and to cut off many of the lower hanging ones. If this is done by one who knows how, the tree may actually be benefited in health and appearance.

In connection with this problem it is interesting to note the correlation between shade and grass growth. Grass needs lots of light for growth but in the open sun it uses only about 20% of the amount available. In dense shade even this small fraction does not reach the plants. The greatest benefit comes from the maximum hours of light. This should be kept in mind in trimming so wherever possible both morning and afternoon light will be let in. Grass is definitely harmed if shaded all morning and then subjected to the hot sun of noonday and afternoon.

At the time of trimming, consideration should also be given the matter of air circulation. Fungus diseases destroy grass in poorly ventilated locations. The tree expert can correct this condition by cutting some of the lower hanging tree branches, and possibly thinning surrounding shrubbery or hedges.

### Moisture Conditions

Besides competing for food, trees and grass compete for moisture. A sizeable tree may take up as much as 125 gallons of water in a single day. Nature helps the tree get replacement when summer showers come because the leaf arrangement sheds most of the water at the outer edge of the tree. Thus it falls into the area above the feeding zone where the roots

that take up moisture and plant food are located. For these reasons, lawn areas under trees are apt to be unusually dry. Proper lawn watering overcomes this condition and feeding the tree helps to extend the roots thus making a larger potential moisture reservoir available to the tree.

### Toxicity

There is another reason why trees and grass don't always get along together. Nature has fortified some plants with the power to excrete toxic substances from their roots to discourage other vegetation in the vicinity. The walnut tree is an example of this working of nature. Some think there is a harmful substance washed off oak leaves but scientific proof is lacking. It seems probable that many fanciful causes may be set up as the reason for grass failures under trees, whereas the answer may be simply starvation.

### Limitations of a Layman

It is unwise for the average home owner to assume that he can become a tree expert in ten easy lessons. The proper care of trees is a profession in itself. Here there is an analogy between human beings and trees. Proper maintenance keeps one well but the doctor is called in for serious ailments and major surgery. The care of cavities, strengthening of weak crotches, repair after injury are properly within the province of the tree expert and he should be consulted regularly. A beautiful tree is a precious possession.

It is, however, within the means of any home owner to keep his trees robust, healthy and full shaped by the relatively simple process of regular feeding. Each year scientists tell of new diseases or insect pests attacking trees but a well fed tree, like a well fed person, is best able to resist attacks.

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