BOXWOOD *in* Virginia

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Circular 503

Reprinted, June 1959

Agricultural Extension Service, V.P.I.

BOXWOOD IN VIRGINIA

VALUABLE and TOUGH

Boxwood in its various forms is a valuable ornamental plant in Virginia. Many specimens known to be more than 100 years old are growing in the state.

Contrary to general belief, boxwood is a vigorous plant. In good soil it requires but little care. Its development varies with the species or variety and with the conditions under which it is growing.

DISEASES NOT IMPORTANT

No diseases of importance affect boxwood in Virginia; however, numerous fungi may be found on leaves and stems after these parts have been weakened or killed by other causes. In a Blacksburg yard there is a hedge of tree boxwood, and a number of good dwarf plants, all of which were grown from twigs thought to be diseased. These twigs, from various sections of Virginia, were sent to V. P. I. for help in identifying and controlling the diseases.

TROUBLES

A study of many thousands of boxwood plants in Virginia shows that, with rare exception, all the boxwood troubles in the state are caused by one or more of the following:

ROOTS

I. Damage to the roots by:

1. Digging in the root area by man or animals.
2. Planting too deeply or settling later.
3. Applying excessive amounts of fertilizer or manure.
4. Making a cone of soil or mulch around the plant.
5. Setting plants in holes in tight soil with no drainage provided from bottom or side.
6. Soil washing away from roots, thus exposing them to the elements.
7. Mulching too heavily.
8. Too much peat or manure in fill-in soil.
9. Moles and other rodents making burrows among the roots.
10. Heavy soil which does not allow water to move away from roots. Poor preparation.
11. Excessive watering.
12. Matting of ivy in and under plant.

LEAVES

II. Damage to leaves and branches by:

1. Leaf miners.
2. Accumulation of soot and dust on foliage; effect of smoke and gases.
3. Crowding by other plants or buildings.
4. Chemical sprays.
5. Dead leaves accumulating in dwarf plants.
6. Clipping alone to maintain formal effects instead of cutting out weak top branches to admit light and air.
7. Winter-killing.
8. Sunscald and browning on weak plants.
9. Injury from sleet or snow, bending or breaking the branches.

(Frost killing tender tips does more good than harm.)

WHOLE PLANT

III. Damage to entire plant by:

1. Total lack of water.
2. Too much shade.
3. Wet feet.
4. Salt from coastal storms or from well water.

MAN-MADE

Most boxwood troubles are man-made. In a fairly good environment this grand old plant can take care of itself, so long as it is not attacked by leaf miners.

BAD FOR ROOTS

Many yards have been filled with soil from basements. The grading is often done when the soil is muddy. The soil bakes in dry weather and stays wet and soggy in wet seasons. Boxwood is not apt to thrive under these conditions or in a pipe-clay soil, unless care is taken to prepare ample space for the plant and provide drainage from the side or bottom of the hole.

WET FEET

Boxwood cannot stand wet feet.

SUN and SHADE

Boxwood will tolerate shade but will make a stronger growth where it has sunlight, for at least a part of the day. Morning sun in winter may cause damage by rapid thawing of the leaves and branches. Winter sun may also turn exposed leaves reddish brown or yellow on plants which have been checked in growth. This condition is not caused by a disease.

FEEDING

It is not necessary to fertilize boxwood every year. Its requirements vary widely depending on the type of boxwood used, the soil, and growing conditions. Over-feeding may injure the plants or lead to excessive pruning to keep the plants within bounds. It may also keep the boxwood tender until winter when a sudden drop in temperature could cause serious winter killing (See Wilt page 5). Then, too, fertilizers can kill the plants when too much is used.

A very light application of poultry manure and bonemeal may be scattered over the root area in February or March, if the condition of the plant indicates that plant food is really needed. Where the above materials are not available, a fertilizer such as 6-8-2 or 10-6-4 might be used at the rate of ¼ cupful on a square yard of root area.

Applications of fertilizer cannot correct a bad physical condition in the soil.

SKIP IT

Often it is best not to fertilize the boxwood at all.

pH and LIME

Boxwood grows well in many different soils with varying pH levels. When sufficient humus is present and the soil is in good mechanical condition, boxwood will thrive at a pH range of 5.5 to 7.4. Small applications of ground limestone may be used on the more acid soils, once in 3 or 4 years.

PRUNING

The pruning of boxwood may be an important operation for the following reasons:

1. To keep the plants at the desired size.
2. To improve the appearance and condition of a plant which is thin at the top.
3. To develop a strong framework against damage from snow and wind.

THINNING Start by removing weak and crowded branches from the top center of the plant. Where necessary shorten the larger branches. Continue this thinning over the entire upper half of the plant. Very heavy cutting should be done in the spring. Ordinary pruning may be done whenever it is most convenient.

CLIPPING If clipping must be done to get a formal effect, thin as suggested above to encourage growth on the inside branches.

When boxwood is growing where its size and form do not matter, it may go indefinitely without pruning. There are many fine specimens in Virginia which have never been pruned.

TRANSPLANTING Boxwood may be moved at any time of the year, but it is best not to transplant it when it is making tender growth. It is sometimes best to shade large boxwood after it is transplanted. Strips placed well above the foliage will protect the plants from direct sun and snow.

SHADING

PREPARE Prepare the place for the new plant with care. Provide ample drainage at the roots. In very low places set the plant slightly above the level of the ground. Otherwise plant as near the original depth as possible.

SAME DEPTH

WARNING Never put manure, compost, or other organic material under the boxwood. If used, the plant will settle as the organic matter rots; finally it will be too deep for normal growth.

FILL-IN Set the plant on firm ground. Then fill in around the side and tamp gently. Fill the last six inches with good garden soil or with a mixture such as the following:

SOIL MIXTURE

¼ part old rotted manure or compost
½ part loamy top soil
¼ part coarse sand and peat
¼ cup of garden fertilizer such as 10-6-4 to each bushel.

MIX Turn these materials over until they are uniformly mixed.

WATER THE PLANT, NOT THE HOLE Water by letting the hose run very slowly at the base of the boxwood itself — not in the hole around it.
Do not over-water.

SYRINGE Tap-water syringes, two or three times a week in warm weather, will take care of later needs for water.

LEVEL Leave the ground level over the root system and beyond.

MULCH A mulch of peat, sawdust, or peanut hulls, not more than one inch deep, helps to save moisture and control soil temperature.

SYMPTOMS Some symptoms of weakness in boxwood are:

1. Reddish foliage in winter.
2. A heavy crop of flowers and/or seed.
3. Dull appearance of leaves on part or all of the plant.
4. Dead twigs.
5. Thin growth.
6. Puckered spots or blisters on the under side of leaves. If caused by leaf miners, the tiny lemon colored grubs will be found in the blisters.

LEAF MINERS

If no leaf miners are present, the cause of the trouble will be

found, in practically all cases, at the ground under and near the plants. (See page 1 for list of causes.)

WAIT

Don't worry about diseases. Locate the cause of the trouble and correct it if it is not too late. Then wait patiently until the boxwood has time to recover.

EFFECTS of INJURY

Boxwood may not show the effects of injury until six months or longer after the injury occurs. It may take much longer for large branches to die after the roots are cut. A spell of bad weather such as drought or blizzard usually shortens this period.

BOXWOOD COMPETES

Boxwood can compete successfully with wiregrass and other grasses and weeds, if these plants are mowed. Any attempt to dig these grasses out will injure the boxwood roots.

ROOTS — BRANCHES

Only a part of a boxwood plant may be weakened or killed when a part of its root system is damaged. Injury of this nature may be seen in almost any cultivated flower border which is edged with dwarf boxwood.

SERIOUS PEST

The leaf miner is the only serious pest of boxwood. This insect is found on many types of tree boxwood, while the full dwarf forms appear to be immune.

KILL THEM

Leaf miners may be killed by spraying all the leaves, inside and outside the plant, about one week before the miners emerge as tiny, adult flies. Use one ounce of 50% wettable DDT powder in 3 gallons of water. Repeat the treatment after 2 weeks, and again later if flies are seen.

Malathion might be used as directed by the manufacturer instead of DDT. However, this material would have to be applied more frequently than DDT.

DDT MAY LEAD TO MITES

DDT kills the insects which normally eat mites (red spiders) but does not harm the mites. It is best, therefore, to take special steps to control mites on boxwood, after the last application of DDT has had the desired effect on the leaf miners.

USE TAP WATER

Mites may be controlled by syringing the boxwood with tap-water several times during spring and summer. Apply the water with the hose nozzle in late afternoon. Wash the leaves on the inside and outside of the plant. Let the foliage stay wet overnight. Mites cannot multiply under such conditions.

WASHING

The washing will remove soot and dust and will not only improve the appearance of the boxwood but will also let the leaves breathe more normally.

In severe cases, where tap water cannot be used, the mites could be killed with a mitecide such as aramite, if used as directed by the manufacturer.

RATHER HARMLESS

Psyllids are whitish sucking insects which feed on the tender growth and cause the leaves to curl. They disfigure the plant but cause no real injury. They may be killed by spraying or dusting the plants with nicotine or malathion about May 25 in eastern Virginia and around June 8 in western Virginia. Use the materials as directed on container.

NEMATODES

Nematodes are found on or about the roots of boxwood, especially in sandy soil and in soils low in humus. In well-drained

soil, containing a reasonable amount of humus, the nematodes will cause no serious injury to boxwood.

THEY RECOVER

The author has dug dwarf boxwood with yellowish foliage from sites reported to be infested with nematodes, and planted them, nematodes and all, in good soil. After 3 to 8 months, depending on the size of the plant and season, these plants developed normal color and have made good specimens.

WILT NOT BAD

Wilt or blue stem may follow winter injury on the tender terminal twigs The injured or girdled part of the stem usually occurs about 6 to 8 inches from the tip on tree boxwood, and about 3 to 5 inches on dwarf types.

For the sake of appearances, these twigs with reddish, yellow or dead leaves may be removed. If left on the plant no harm whatever would result.

HISTORY

Boxwood is native to East Asia, North Africa, and Southern Europe, and also occurs to a lesser extent in West India and in Central America. There is no American boxwood and none native to England which are used as ornamental plants.

Buxus sempervirens is the common tree box, while *Buxus sempervirens var. suffructicosa* is the one commonly referred to as Dwarf Boxwood or English Boxwood.

Among the thirty-odd other known species of *Buxus* are *iaponica, microphylla, balearica, fortunei, harlandii,* and *wallachiana.*

MANY VARIATIONS

Variations in boxwood are without number. In Virginia there are many thousands of different strains or varieties of boxwood. It is probable that each of these came from an individual seed at some time in the past.

SEEDLINGS

The author has grown more than 5,000 boxwood from seed at the Agricultural Experiment Station at Blacksburg. No two of them were exactly alike. Some were vigorous and upright, some were dwarf in habit, while most of them were "intermediates." Approximately 800 of these seedlings are now growing in the V. P. I. Arboretum.

RESISTANCE TO COLD

Following the severe winter of 1935, a block containing about 1,200 three-foot tree boxwood was examined in a Virginia nursery. Half of the plants had been propagated from cuttings taken from a plant purchased in one community. The rest were propagated from a different plant growing about 35 miles from the first community. The severe weather killed all the plants from one community while those from the other were green. Although the two parent plants looked alike, they varied in their resistance to cold.

PROPAGATION

Boxwood may readily be propagated from cuttings. These will root at almost any time of the year. For outdoor rooting, place the cuttings in sand or in sandy soil from July 15 to September 15. Protect from direct sunshine and from wind. Keep the bed moist. If cutting wood is abundant, make cuttings 6 inches long for dwarf box and 8 to 10 inches for tree types. Small cuttings may be put in a greenhouse or in cold frames as late as December.

SAFETY HINTS FOR HOME GARDENERS

Don't leave tools lying around. Be especially careful to keep rakes so that the teeth can't be stepped on.

Keep tools sharp. A sharp tool is safer than a dull one.

Keep insecticides out of reach of children and other pets.

Don't inhale poisonous sprays and dusts.

Don't attempt any adjustment of power equipment while it is running.

Don't use rickety ladders. Place sturdy ladders on firm footing.

Don't burn trash near buildings nor when strong breezes are stirring. And why burn leaves? They make good compost.

Use leg muscles for lifting heavy loads, not back muscles.

Take frequent rest periods during a long, hot day of gardening. Guard against over-exposure to sun.

Practice "good-housekeeping" in the garden and yard. Broken glass, nails, etc., can cause painful injuries.

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PRINTED AND DISTRIBUTED IN FURTHERANCE OF THE ACTS OF CONGRESS OF MAY 8 AND JUNE 30, 1914