

# Lawn Care

REG. U. S. PAT. OFF.

PUBLISHED FIVE TIMES YEARLY BY O. M. SCOTT & SONS CO., MARYSVILLE, OHIO  
DISTRIBUTED FREE TO LOVERS OF BEAUTIFUL TURF

Number 50

ELEVENTH YEAR

April 1938

## CHINCH BUGS

THE chinch bug is not a newcomer. Damage to lawns was caused by this pest as long as 40 years ago. In recent years Ohio and states east have had rather serious infestations. In lower New York, Long Island, and suburban New Jersey there have been chinch bug infestations of epidemic proportions. It is likely that many instances of damage by chinch bugs have been erroneously attributed to other causes.

Heavy infestations have afforded opportunity for close study, and much is now known of the habits and life cycle of the bug. While experiments have failed to discover any adequate method of eradication, some means of control have been used with justifiable success.

There are at least three distinct species. The one attacking grass in Eastern United States differs from the species found in Florida. Neither of them is the same as the common field chinch bug that attacks grain crops.

As shown by the illustration, the full grown adult chinch bug seldom exceeds

$\frac{1}{8}$  inch in length, so it is difficult to find in grass. Two forms are found in each brood, one having long wings which extend the length of the body, the other having short wings. This is another of those peculiarities of nature that remain unexplained. Generally the color of the adult is black, except for the wings which are white with black markings. These are folded flat on the back. The young bugs have no wings and are at first a deep pink to coral in color, darkening as they grow.

There are two distinct generations each year. The insects of the first generation hatch during

May and June and become adults in July. Upon reaching maturity the females of this brood lay eggs which hatch in late July and August. The first brood adults die during the summer but those of the second brood winter in the grass and produce eggs the following May.

Some migration occurs during the growing season of each brood. This may be confined to other sections of the same lawn or to other lawns in the neighborhood.

Showing the long winged and short winged forms of Chinch Bugs. Under the glass they are magnified about 7 times while those at the bottom are natural size. It is obvious why their presence in turf may not be suspected.



Because of their small size and ability to hide in the matted turf it is very difficult to find chinch bugs in a lawn.

They are more easily found on a warm, dry day, as they are not active in temperatures under 70 degrees or while the grass is wet. If they are not seen among the grass stems around the edges of the damaged area, a close examination may reveal their presence on the ground under the grass plants.

### Damage is Severe

The chinch bug injures the grass not only by puncturing the stems and sucking the juices, but also by injecting an injurious substance into the stems during the process. The damage appears in irregular brown patches of dead grass with the edges where the bugs are feeding turning yellow. As they spread to feed on living grass these dead areas enlarge. Unless checked, severe infestation may result in the destruction of the entire lawn, except for the clover and weeds which are not attacked.

The heaviest damage occurs during the growing periods of the two broods, that is, in June and early July and again in August and early September.

It is commonly believed that some varieties of the bent grasses are more susceptible to attack by these bugs than are other lawn grasses. This belief is based principally on the fact that population counts of the bugs are usually higher per square foot in the bents than in other grasses. However, many lawns containing no bent grasses have been severely damaged or even completely destroyed. A possible explanation is that the denser turf permits a greater concentration of the insects.

### CONTROL METHODS

But few natural enemies of the bugs have been found. One egg parasite is known, and a fungus disease which grows upon the bodies of the insects

sometimes kills large numbers in early spring during cool, damp weather.

The use of a stomach poison is ineffective as the chinch bug is a true sucking insect and so does not chew the vegetation.

Proper maintenance of the lawn through fertilizing and watering is essential to success in fighting this pest. A healthy, sturdy growth will not only better enable the plants to withstand the attack, but will also help in recovery.

On putting greens and on creeping bent lawns, close mowing and frequent top dressings, in addition to adequate feeding and watering, are of advantage.

The method of directly checking the invasion is by contact poisons that suffocate the chinch bugs. The materials are inexpensive and their application is relatively simple, but the labor and material may be wasted unless used at the right time. It is the young bugs with undeveloped wings that are most easily destroyed.

Of the many contact poisons tested during the past few years, three appear to be most nearly satisfactory. None of them will burn the grass severely if used at the rates and in the manner suggested. These materials may be obtained through local stores catering to the gardener's needs.

### Tobacco Dust

Finely ground tobacco dust with a nicotine content of  $\frac{3}{4}\%$  to 1% is recommended for control. The cost varies from 5 cents to 10 cents per pound, depending on the quantity. Except for light infestations, two applications each of 25 pounds per 1,000 square feet, are recommended for each brood, at intervals of 7 to 10 days. These treatments should be made after most of the eggs are hatched but before the insects have developed wings. The period may vary somewhat with the season, but if appli-

cations are made between June 1 and 15 for the first brood, and between August 5 and 20 for the second brood, satisfactory results may be expected.

The lawn should be cut closely before treatment so the dust will settle close to the grass crowns.

Tobacco dust is usually spread with a mechanical distributor, preferably one which permits regulation of the flow, as a fertilizer spreader. If such a distributor is not available and if care is taken to distribute it evenly, tobacco dust may be broadcast by hand. Only those sections of the lawn which are infested need to be treated, but a wide margin around the damaged area should be included.

Immediately following the application, rake the grass thoroughly or brush it with the back of a wooden rake, in order to work the material down into the crowns of the plants. This is especially necessary as the dust must be brought into actual contact with the bugs. The tobacco dust need not be washed in with a hose. Applications must be made when the bugs are active, that is, on a warm, sunny day when the grass is dry and the temperature above 70 degrees.

Damaged areas should be raked out and reseeded with a good lawn seed in the usual manner. If this is not done the bare places will fill with weeds.

### Rotenone Dust

Rotenone dust with a strength of 1% may be substituted for tobacco dust in the treatment outlined above, although the cost will be greater. If used in the same quantities and in the same manner as the tobacco dust it will give equally good results.

### Nicotine Sulfate Spray

A spray material may be made by mixing 1 quart of nicotine sulfate such as Black Leaf 40 with 100 gallons of

water to which has been added 1 gallon of liquid potassium oleate soap. It is applied at the rate of 150 gallons to 1,000 square feet of lawn. Preferably, a power sprayer should be used. This treatment is slightly less effective than the dust treatments described above. Applications should be made at the times recommended for dust treatments.

### Timing Important

Many cases have been reported where none of the suggested treatments has seemed successful in the control of chinch bugs. In these instances it is quite possible that the failure was due to faulty timing. The different broods must be attacked before the bugs are fully developed or they will not be affected by the poisons.

As with other insect pests, the damage from chinch bugs may pass unnoticed until weed and crabgrass patches suddenly appear in the lawn. These weeds are then blamed for the damage whereas they were an effect rather than a cause as they sprouted only after chinch bugs had killed the grass and allowed the weeds to grow without competition.

### 'Lions Succumb to Gas

"Although my neighbors on either side of my property make no effort to eradicate the dandelions from their lawns, I have not one plant on my premises. I use a few drops of cheap gasoline on the crown of each plant and if a flower has developed before I find the plant, a few drops of gasoline on that and in a few hours both the flower and the plant turn black and are down and out for all time. I use an ordinary oil can with the spout pinched in at the point, so a small amount of the gasoline will pass at a time."—F. E. Woodruff, Plainfield, N. J.

### Linoleum Knife Gets Dandelions

"I have never seen the following suggestion for weeding a yard. Take a linoleum knife because it has a large handle to hold on to and a hook blade to aid cutting sidewise instead of so much pushing on a straight blade. This hook knife reaches deep after a dandelion root. A lot of the root is then pulled out easily and a little Ammonium Sulfate if put in the hole made by the knife, stops the growth. The linoleum knife serves to put the salt in the hole made by the slice of the blade before it is patted shut. As you have pointed out, weeding is the only sure way but it might just as well be made easy as possible. I have found this 50 cent investment well worth while. The smaller roots can be eliminated without much effort as the soil can be loosened with the hook blade and the entire root comes out."—H. W. Lindaman, 80 Torrence Road, Columbus, Ohio.

### Moles Suppressed

"Regarding moles: I have been very successful in keeping moles under control by the use of concentrated lye in the burrows. My method is to open the burrow at about four or five foot intervals with a very narrow trowel and deposit about a teaspoonful of the lye crystals in the opening. This is the common concentrated lye which can be purchased at almost any grocery store. The action seems to be that when the mole comes through the burrow he gets the lye on his nose and feet. This causes irritation and he licks the lye off with his tongue and soon dies from the effect. I tried out this method three years ago on my own lawn and have had al-

most no trouble with moles since and have recommended the method to others with good results."—Ross E. Hammond, Landscape Architect, Olivet, Michigan.

Here is a cure for ants that I did not see in "Lawn Care." I had a friend, a doctor, who had a brick walk with flower beds on both sides that was overrun with ants. He had a friend, a chemist, who gave him the following: Empty one-half can of Chloride of Lime in a 10 quart watering pot and give the whole area a good watering. He did it and the ants disappeared and there was no damage to the plants in the garden and the ants never came back.—CHARLES F. ROPES, Supt. Board of Cemetery Commissioners, City of Salem, Massachusetts.

I spent the summer months in Norway, Sweden, Denmark, England, Scotland and Ireland and I find that noxious weeds grow there very profusely even though farmers have more individual hand power to pull weeds. Even in progressive and agricultural Denmark, Canada Thistles towered over the beautiful wheatfields. We are not all alone in being tormented with weed or insect pests.—CAPT. JOSEPH M. JOHNSON, 1703 West 103rd St., Chicago, Ill.

### New Lawn Booklet Ready



Under the title "Good Lawns" a new bright yellow booklet of 32 pages—telling the complete but condensed story of planting and maintaining lawns—is making its debut.

It replaces "Lawns" which we called The Amateur Gardener's Guide to Better Lawns. So many people requested it by that title it must have been an appealing description. The new booklet enlarges upon the subject of lawns and, of course, contains the latest data available.

Those who have new lawns to build will especially want "Good Lawns." There is no charge.

O. M. SCOTT & SONS CO.



MARYSVILLE, OHIO

FOR YOUR PROTECTION THIS TRADE MARK APPEARS ON EVERY PACKAGE OF SCOTT'S LAWN SEED