

Cutworm Damage And How to Stop It, Agent's Topic

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County Agent

Each year cutworms cause considerable loss in field crops as well as in vegetable and flower gardens. During some seasons this pest is abundant in certain areas but in other years it is somewhat scattered throughout the entire county. Wherever any number are present, damage is usually quite heavy as these worms are particularly heavy feeders. In 1940 cutworms were found in all sections of the county and damage done amounted to quite a sizeable figure.

In some districts the alfalfa clover seed crop was damaged to the extent of 50 to 60 per cent. In other areas the damage was not particularly noticeable although worms were generally present to some extent. Total damage to the county's alfalfa clover crop was estimated to average 10 to 15 per cent, which amounted to more than \$50,000. Considerable loss on other seed crops was also reported, as well as some damage to alfalfa and grain crops. Considerable damage also occurred in vegetable and flower gardens and in lawns.

While there is a considerable number of species of cutworms in Oregon, only a few of these are important in the Klamath district. Perhaps the most serious is the variegated cutworm. This species occurs every year to some extent but seldom assumes epidemic form except in a few localities. The olive green cutworm was responsible for most of the damage in 1940 and frequently becomes extremely numerous, similar to the army worm. The greasy cutworm, commonly found throughout the United States, does some damage occasionally and occurs to some extent each season. The yellow striped army worm occurs only periodically and then in limited districts. Damage, however, in these areas is extremely heavy as this worm usually takes everything before it. A major epidemic of this species occurred in Klamath county five or six years ago.

Life History

The life history of these various species varies to some extent but generally is about as follows: Winter is spent as half-grown larvae or cutworms in the soil. Some species pass the winter in the pupal stage in the soil. The half-grown cutworm or larvae in the soil become active in the spring, reaching maturity during April and May, after which they enter the soil and change to the pupae or dormant stage. From this stage the adult moths emerge during April, May and June. These adults are the common millers which are seen at night during summer evenings. Incidentally, the cutworm millers emerging this year were extremely early in the season, coming out during March. During a 10-day period in early March when the weather was warm, these moths emerged by the thousands and were noticeable at night around window panes or other lights. This is a good indicator that many cutworms will be present this year scattered throughout the entire season. Fairly heavy losses also might occur earlier than usual. Cutworm miller moths differ somewhat in color, but in general tend to a dusty grayish or brownish. The moths mate and soon after begin to deposit eggs. Each female lays from 200 to 500 or more either singly or in masses. The eggs are usually deposited in fields where there is considerable dry weeds or high stubble in or near food plants but may occasionally be deposited on buildings, trees or even on fences. The eggs hatch in a few days into another generation of worms. This generation works into the soil, comes up at night to feed and generally reaches maturity during July and August. The adults of this second generation are present in the field from July until October.

The eggs from these adults hatch into the overwintering larvae, thus completing two generations in a single year. The larvae of all of these species of cutworms generally is from 1 1/2 to 2 inches in length and feed almost entirely at night. During the day larvae can be found covered up in the top soil or burrowed into the crowns of the plants being attacked. Fields or gardens covered with leaves and debris are generally ideal places for the worms to spend the day. This larval period is the one in which all damage is done and lasts from hatching of the eggs until the pupal or dormant stage is reached. It usually requires, during the warm summer season, 60 to 70 days from the egg to the pupae stage, giving a long feeding period for cutworms.

In small gardens, cutworms

can be dug out of the soil and killed. Taking over all clods, leaves and other debris as well as digging around the crowns of plants will nearly always dislodge the worms. However, in large gardens and where field crops are attacked, this method of course cannot be followed. In cases of general infestations of this nature, two or three methods of control are followed. In general, the recommended control is that of poisoned bran mash spread over the infested areas. This mash is usually spread out late in the evening just before the worms start feeding. It is broadcast at the rate of 25 to 40 pounds per acre on heavy infested fields. In gardens it can be sprinkled between the rows or in infested spots.

Mix Given

This poisoning material is prepared as follows: Mix together 25 pounds coarse wheat bran, one pound white arsenic or paris green, one pint syrup or brown sugar, with sufficient water to make a crumbly mash. The mash should be just wet enough that moisture can be squeezed out by hand. If it can be squeezed out in large drops, it is too wet. In mixing, the dry ingredients should be mixed first and then the wet solution mixed together and added.

Chickens or other livestock should not be allowed in treated fields. Also, it should be borne in mind that this bait contains arsenic and is therefore deadly poison. In some cases, a light spread of this material is used in a garden before planting if worms are known to be present. Another method frequently used is that of dusting with calcium arsenite. This was used in the Klamath basin last year on alfalfa clover crops and apparently gave good results when applied early.

After cutworms have reached large size and are approaching maturity, results are not so good. This was put on by airplane, large fields being covered in a very few minutes. Planes applying this dust flew only a few feet above the surface of the infested fields.

Like all other insects, cutworms do the most damage if unobserved until they are nearly mature. Gardeners and growers should watch for this pest and take immediate steps for control as soon as they appear and any damage is observed.

Slip-Cover, Tie, Mattress Making Extension Project

Some of the projects which have been popular this year in the home extension program have been the making of slip covers for chairs, the making of men's ties, nutrition, and the making of mattresses from surplus cotton.

A training meeting for leaders interested in learning how to make slip covers for chairs was held in January. As a result of this meeting, five other slip cover schools have been held. Mrs. Perry Haley and Mrs. C. W. Hundley of Malin held a school in Malin. Mrs. Ralph Benoit of Altamont held one at her home. Mrs. E. V. Ayres and Mrs. Arlie Sessions of Bonanza presented a demonstration. Mrs. C. C. Chase and Mrs. Ross Putnam held a school at Mrs. Ralph Johnston's home in Keno and Mrs. Chase demonstrated the method of slip covering a chair at Mrs. H. G. Bunch's home in Klamath Falls. There is to be another school held sometime after the middle of May at Algoma, directed by two other project leaders, Mrs. Nels Hanson and Mrs. Floyd Underhill. A new government bulletin entitled "Slip Covers for Furniture," is available without charge at the office of Mrs. Winifred K. Gillen, home demonstration agent.

The making of men's ties was a project carried on during December so the homemakers could make Christmas presents for the men folks of their family. This is one project however, that has a year around appeal. Women are always interested in doing handwork and this is something that brings praise from hubby. A mimeograph giving directions for making the ties is available at Mrs. Gillen's office. The number of it is HE 1523. The pattern for the ties may be copied at the office of Mrs. Gillen.

The nutrition project for this year has included menu planning and weight control, both of which include a very thorough study of food needs. Realizing that 45 million people in the United States are mal-nourished, it is important that every individual think about the foods he eats and see to it that he gets his foods necessary to good health. Scientists tell us that these foods included daily are the following: One pint of milk for adults and

U. S. Wheat Markets Shrink



A problem facing U. S. farmers in 1941 is the great reduction in wheat export outlets, as shown by the chart above. U. S. Department of Agriculture officials point out that continued acreage adjustment under the AAA Program is necessary to balance wheat supply with decreased demand.

PRODUCTION OF CROPS TO GO UP AGAIN

Above-average crop prospects and increased production of meat, milk and eggs this season are indicated by the OSC cooperative extension service in a report just issued on the agricultural situation and outlook. Winter wheat production is expected to be larger than last year. Milk and egg production are on a high level with further increase in prospect partly owing to government support for prices.

In the country as a whole, the report states, crop prospects are better than average at this season of the year, with the season well advanced in the west but somewhat late in the southeast. Rainfall has been unusually heavy in the south from Kansas to California, and the condition of ranges and range stock is above average generally. The condition of the early lamb crop is above average and marketings are expected to be earlier and larger than usual.

The total acreage in crops is expected to be maintained and the numbers of milk cows, beef cattle, sheep and chickens will be increased, even though the surplus of farm labor is being reduced around industrial areas and some of the part-time and subsistence farms may not be

worked as much as usual. The production of hogs, dairy products, chickens and eggs will be encouraged by the government through a plan to support prices. This support is to continue at least until June 30, 1943.

Prospects are good for winter wheat with production estimated at 616 million bushels compared with 589 million in 1940 and 569 million as the 1930-1939 average. Winter wheat production in Oregon, Washington and Idaho is expected to be around 70 million bushels against 55 million last year. Stocks of wheat on farms are considerably larger than a year ago and far above average.

On April 1, milk production per capita was about 4 per cent greater than the previous record at the same season and egg production continues on a high level. Chick production in hatcheries was 14 per cent greater in March 1941 than in March 1940. The report, available from county agents, also contains information on several of Oregon's specialty crop enterprises and a discussion of the fur-farming industry.

WATER NEEDS OF ALFALFA TALKED

While alfalfa requires more water than most crops, yields and length of life might be increased considerably if more care were used in finding out when to apply irrigation water, according to conclusions reached in a new U. S. department of agriculture bulletin addressed particularly to Oregon and other western states which grow alfalfa under irrigation.

"Irrigation Practices in Growing Alfalfa" is the name of the new Farmers Bulletin 1630, which is a revision of an earlier bulletin. M. R. Lewis, Soil Conservation service engineer at the Oregon experiment station, was one of those who assisted in the revision.

The authors believe that in the future irrigation development of arid lands much labor and expense might be saved, and greater profits obtained, by following a skillfully prepared plan of irrigation on each farm. The new bulletin discusses the many different methods of applying water, some of which are suitable to certain types of soil and some to others. The strip-border method is shown to be popular in Oregon, although the Columbia basin states make little use of straight flooding such as is practiced in some regions.

Livestock Grazing In Cemetery Irks Merrill Group

MERRILL — Livestock, grazing among tombstones of the old Merrill cemetery will be fenced off if plans of the Merrill Service club, advanced at this week's luncheon meeting are carried out.

President Alonzo Hodges with A. E. Davis and Rev. Lawrence Mitchellmore will contact the cemetery board in an effort to get immediate action on fencing the plot where it is reported stock is ruining shrubs, upsetting tombstones and otherwise defacing the property.

held this month in the extension units. The program for next year will be planned by women of the extension units, study clubs, grange and PTA on May 28 in the science room of the Altamont junior high school.

This year's program closes with the meetings on weight control and care of the feet being

held this month in the extension units. The program for next year will be planned by women of the extension units, study clubs, grange and PTA on May 28 in the science room of the Altamont junior high school.

INTERIOR BILL SLIGHTLY LESS THAN ESTIMATE

WASHINGTON, May 1 (AP)—The house appropriations committee recommended a \$177,019,078 appropriation for the interior department today—\$21,469,245 more than it had in the current year but \$6,325,270 below the amount approved by the budget bureau.

The increase over this year's appropriation, the committee said, was due primarily to the need for acceleration of the construction of power facilities "which are of great importance to national defense."

Specifically, the committee referred to an increase of \$11,358,500 for Bonneville dam transmission and substations which officials testified were urgently needed to supply expanding defense industries in the Pacific northwest.

The committee recommended \$78,934,000 for the reclamation bureau which it said was "fully justified by the tremendous importance of reclamation to the national defense program." The reclamation item was \$4,200,000 below the figure approved by the budget bureau.

During recent testimony on the \$3,600,000,000 tax program, Secretary Morgenthau urged that congress "re-examine" all non-defense expenditures with a view to effecting economies. He said he thought \$1,000,000,000 could be saved in that manner.

The committee disallowed \$987,500 sought by the geological survey for topographic mapping of "strategic areas" and while expressing "serious doubt" whether the work was essential for military purposes, said that in any event the money should be provided in a war department bill.

A total of \$60,000, an increase of \$15,000, was recommended to enable the geological survey to expedite a search for tin ore in Alaska because of "the serious shortage" of that metal in this country.

The committee also approved a budget estimate of \$6,000,000 for continuation of construction of the Blue Ridge and Natchez Trace parkways, an increase of \$4,000,000 over this year's figure.

To defray the cost of demobilizing the U. S. Antarctic expedition now on its way home, the committee recommended an additional appropriation of \$19,610 and authority to use an unexpended balance of \$21,000.

Torpedo Boats Due Britain, But No Warships Available

WASHINGTON, May 1 (AP)—Secretary Knox said Wednesday the navy expected to build substantial numbers of high speed "mosquito boats" for Great Britain, but stressed that there were no larger warships available for transfer.

Rear Admiral Samuel M. Robinson said a request for 24 more motor torpedo boats was expected momentarily from the British.

Twenty of the mile-a-minute craft already have been transferred and Robinson, chief of the bureau of ships, said they were in daily service in the English channel.

Roosevelt's demand that bituminous mines be reopened sounds like talking cold turkey.

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FIRE PROTECTION EYED FOR PARKS

WASHINGTON, May 1 (AP)—National park officials plan to increase fire protection to national parks this year through employment of 23 additional fire guards.

A. E. Demaray, associate director of the service, testified before a house appropriations subcommittee considering the interior department's 1942 appropriation bill that forest fire and protection would cost \$140,420 next year.

He said that the service expected more work in fighting blisters rust in the forests of Mount Rainier, in Washington where it had done a great deal of such work. The cost of operating Olympia National park was expected to increase about \$15,000 to nearly \$70,000 because of the necessity of taking over duties formerly performed by the state of Washington.

Demaray said the service expected to spend about \$102,000 in improving and maintaining Crater Lake National park in Oregon or about \$12,500 more than allotted this year.

Under questioning by Representative Lavy (D-Wash.), he conceded operation of the concessions in Mount Rainier National park were not profitable. Representative Fitzpatrick (D-N.Y.) said he understood the concessionaires had made investments that were not necessary upon the insistence of someone in the park service and "developed what you might call a white elephant." Demaray replied that the service had tried to keep the company from making investments it thought was unwise.

Four New Members Join Grange Group

LANGELL VALLEY — The Langell Valley grange met on Wednesday evening at the parish



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OREGON LIVESTOCK TO GET PROTECTION

An order to prevent shipment of cattle, sheep, horses and mules into Oregon from screw worm infested areas has been signed by state department of agriculture officials. It will become effective May 1.

As a result, such animals may not be shipped into this state from California, Arizona, New Mexico, Texas, Oklahoma and the republic of Mexico if they are infected with the screw worm maggot or flies. This pest is a greenish fly which lays eggs on any break in the skin. From this simple start the screw worm works millions of dollars worth of destruction each year to the livestock in the southern states.

The fly has been found as far north as Redding, Calif. Studies so far indicate that the only way it will enter Oregon is through livestock from other states, hence the quarantine.

Potato Control Area Set Up

Effective May 5, the central Oregon potato growing counties of Deschutes, Crook and Jefferson will become a control area for protection of the industry against bacterial ring rot. The order came from the state department of agriculture, following hearings held in each county involved. No remonstrances were voiced at the hearings. Growers believe this will help the area become the top ranking seed production area in the country.

Movement of potatoes into the district will be possible only under certification by the department inspectors; and bags and containers not known to be free of ring rot must be disinfected before entering or being used in the control area. Similar steps will be necessary in use of machinery employed in potato operations.

Also, no seed potatoes may enter the district from outside areas except under special permit. This area is said to be one of two in the west that is entirely free from the ring rot disease.

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