

AGRICULTURAL NEWS LETTER

THE FEDERAL RESERVE BANK OF DALLAS

Vol. IV

Dallas, Texas, April 15, 1949

Number 4

INSECTICIDES AND METHODS FOR CONTROLLING GRASSHOPPERS

For the past 20 years American farmers have lost through destruction by grasshoppers an average of about \$32,000,000 annually, according to estimates made by entomologists of the United States Department of Agriculture. These pests destroy many millions of dollars worth of food and feed crops each year and also do considerable damage to ranges and pastures, causing loss of feed and possibly forced sales of breeding stock and unfinished meat animals. Their severe damage to crops, pastures, and ranges sometimes results in complete destruction of vegetation, which opens the way to soil erosion.

At the present time it appears that 1949 may be another year of heavy grasshopper infestation. On the basis of egg counts made by grasshopper control workers, H. G. Johnston, head of the Department of Entomology at Texas A. & M. College, predicts that 1949 may be a critical year from the standpoint of possible grasshopper damage. He points out in a press release that the worst centers of infestation of the differential grasshopper—the big yellow one with chevrons on his legs—will be along the Brazos River between Waco and Richmond and along the Trinity River as far south as Polk and San Jacinto Counties. Scattered infestations are expected along creek bottoms in north Texas as far east as Titus County and west to the West Cross Timbers area. A lesser—but still above normal—outbreak of the migratory grasshopper is expected in west Texas, the South Plains, and the Panhandle. The probability of heavy infestations of these destructive pests demands that plans be made to exert maximum efforts to combat them.

Although crops and pastures are threatened by an imminent grasshopper attack, there are

several things the individual farmer can do to destroy the pests as they appear. One of the most simple, inexpensive, and reliable methods is the use of poison bait. According to recommendations of the Bureau of Entomology and Plant Quarantine, this preparation should contain 25 pounds of mill-run bran or mixed feed, 3½ bushels of sawdust, 6 pounds of sodium fluosilicate and 10 to 12 gallons of water, or enough water to cause the bait to drip slightly when pressed firmly in hand. The best time to spread this bait, says the Bureau, is when hoppers are on the ground during their first feeding of the day. To determine the proper time, a farmer may scatter a few handfuls of bait where hoppers are numerous and watch for them to show evidence of hunger.

Instead of the bran-sawdust-fluosilicate bait, farmers may dust or spray one of the several new insecticides available, such as chlordane, toxaphene, chlorinated camphene, or benzene hexachloride. When used on weeds and brush along fence rows, field edges, roadsides, canals, and railroads, or on crops like alfalfa, young cotton, flax, and corn, these new insecticides produce a quicker control and kill over a longer period than the bran-sawdust-fluosilicate bait. However, their effectiveness, ranging from one to three weeks, is governed by conditions of weather and vegetation, season, age of hoppers, and the type and concentration of the dust or spray. In sprays and dusts used on range lands or idle lands, in fields of small grains, or in field edges with sparse vegetation, these new chemicals are no more effective than the bran-sawdust-fluosilicate bait.

For spraying, farmers should apply one pound of technical (actual concentrate)

chlordanone or one-half pound of technical chlorinated camphene per acre; in dusting they should use one and one-half pounds of chlordanone or two pounds of chlorinated camphene per acre, according to recommendations of the Bureau of Entomology and Plant Quarantine. Chlordanone and chlorinated camphene are available as emulsion concentrates, wettable powders, and dusts of varying strengths. Benzene hexachloride, which is best used as a dust, may be applied at the rate of 10 pounds per acre and should contain 5 percent gamma isomer. Toxaphene should be applied at the rate of 15 pounds of 10 percent concentrate per acre. The most satisfactory results may be obtained from these insecticides when spray or dust is applied to colonies of young hoppers before they leave hatching grounds.

To prevent hopper damage to most field crops, the field edges and adjacent infested grain fields or intervening weed patches should be treated. But when a whole field of alfalfa is infested, it is usually most economical to cut the crop and then try to protect the next growth by spraying or dusting field edges, ditch banks, patches of weeds, and uncut strips of alfalfa, where the hoppers congregate after the crop has been removed.

Farmers should remember that chlordanone, chlorinated camphene, toxaphene, and benzene hexachloride, like most other insecticides, are poisonous. Proper precautions should be taken in handling them and in feeding livestock on forage or pasture where they have been used. The sprayer's hands should be washed thoroughly with soap and water after mixing and applying spray or dust. All vessels and clothing used should be cleaned thoroughly before storing or re-using them.

These poisons should not be applied to fruit trees or leafy vegetables when foliage or fruit that is to be used as food is on the plant, unless the residue can and will be removed. One should avoid applying these materials to legumes in bloom or when bees are active in the fields, because of the danger of killing the bees.

Although the immediate concern of farmers is to destroy grasshoppers as they appear this year, there is need for concern also about methods for reducing or eliminating the annual threat of grasshopper damage. One method, which is most effective if used before the hoppers hatch, is to plow or harrow the fields. This method destroys the eggs or burrows them so deeply that most of the baby hoppers cannot climb to the surface. Also, by turning under all crop residues, the hoppers are denied both shelter and food. Entomologists point out that the practice of stubble mulching (breaking land so as to leave crop residues on top of the soil) may help to deter soil erosion, but it also may boost the hopper birth rate. Where soil erosion is likely to be a serious factor, farmers should seek to develop a tillage and seeding program that will provide as much grasshopper control as is consistent with approved local farming methods.

When hoppers menace crops on only one farm, individual action generally is sufficient. When there are many of them, however, and they threaten crops on other farms, united community or county-wide action is necessary. Thorough cleaning up of a community usually reduces the necessity for intensive controls the next year. A well-organized campaign, started early and pushed vigorously to completion before baby hoppers grow wings, in most cases will prevent serious crop losses.

FARM MANAGEMENT

Bees Help Increase Legume Seed Production

Until recent years few legume seeds were produced in the Southwest, and current production still does not meet the needs of farmers, who depend largely upon imports from the Pacific Northwest and Upper Mississippi areas. Soil conservation activities have stimulated interest in the use of cover crops, soil improvement crops, and hay, and in an effort to produce more of their seed requirements many farmers in the Southwest are going into seed production or expanding their operations. In the Texas Blacklands, for example, fewer than 300 acres of vetch were planted in 1942, but this acreage had increased to nearly 9,000

acres by 1947. The seed harvested from the 1946-47 crop totaled 3,500,000 pounds. The first Hubam clover was planted in the Blacklands in 1934, and by 1947 the area was yielding 11,000,000 pounds of seed.

The phenomenal increase in seed production in this area has been accomplished with the help of bees. Through the encouragement of the Soil Conservation Service, more and more seed producers are securing hives of bees for use in pollination, according to Philip F. Allen, Soil Conservation Service, Fort Worth, Texas. In the vetch areas near Rising Star, Texas, some 5,000 hives of bees are being used for pollination work. In the vicinity of Greenville, Texas, 3,500 colonies are being used. About 800 hives have been moved into Denton County in response to a call for pollination services. Elsewhere smaller numbers—up to a few hundred hives—have been moved into legume-producing localities. Many seed producers have reported large increases in yields of seed per acre as a result of bringing in hives of bees. Farmers are recognizing that pollination is essential to production of good seed crops, and the use of pollinating services of bees is growing rapidly.

Rice Growers Advised to Adjust Their Acreage; Too Much Early Rice Gluts Market

Rice growers are being advised to adjust downward their acreage of early varieties to avoid glutted rice markets early in the harvest season such as occurred last year. Agronomists of the Louisiana Rice Experiment Station explain that the 1948 crop consisted of too high a proportion of early rice for orderly marketing. More than 50 percent of the 1948 Louisiana acreage, as well as a very large part of the Texas acreage, was sown to early medium-grain varieties, which resulted in excessive marketings early in the season. Experiment station agronomists, as well as officials of the American Rice Growers Association, are advising farmers to plant less of such varieties as the Zenith and Fortuna and to offset these reductions by increases in such varieties as Magnolia, Bluebonnet, Texas Patna, Rexora,

and Nira. This would tend to defer some of the harvesting and would contribute to more orderly marketing. More detailed information on rice varieties and their recommended distribution within the crop may be obtained from local county agents.

Protect Tomatoes from Diseases and Increase Yields

Late blight is one of the most destructive of all plant diseases and may be expected to destroy a considerable part of the tomato crop if the weather is cool and rainy. Late blight first attacks the fruit, causing a spot to develop, usually starting near the stem end. The skin in the affected area is slightly wrinkled and has a speckled or brownish-green color. This spot may spread over one-third of the tomato within two days. It also attacks the stems, making light brown cankers, which often girdle the stems and cause them to split open lengthwise.

John A. Cox, Louisiana Extension Horticulturist, advises tomato growers either to dust or to spray their crops to control this disease. Mr. Cox points out that unless late blight occurs earlier than usual it is advisable to start spraying or dusting four weeks after the first cluster bloom and to repeat at seven-day intervals until the weather warms up or the danger of infection is over. Some of the chemicals which can be used against the late blight fungus include Dithane Z-78, Dithane D-14, and such copper fungicides as COCS dust and Bordeaux. Dithane Z-78 is favored by many growers because it can be used either as a dust or as a spray.

FARM PRICE SUPPORTS

Programs for 1949 Announced

Flaxseed: The 1949 flaxseed crop will be supported by the Commodity Credit Corporation at 90 percent of the farm parity price as of April 1, 1949. The support price has been set on a Minneapolis basis to reflect 90 percent of the farm parity price; at Corpus Christi and Houston, Texas, the support price for No. 1 flaxseed will be 30 cents below Min-

neapolis, or \$3.69 per bushel, which is about \$2.00 per bushel below the support price last year. Prices will be supported by means of (1) producer loans, (2) producer purchase agreements, and (3) purchases only. Loans and purchase agreements will be available to producers from time of harvest through October 31, 1949; purchases will be made through July 31, 1949. The support price for No. 2 flaxseed will be 5 cents per bushel less than that for No. 1. No support price will be available for flaxseed which does not grade U. S. No. 1 or No. 2.

Wheat: The 1949 wheat crop in the Southwest will be supported through farm-storage and warehouse-storage loans or through purchase agreements. The actual support price will be computed on the basis of 90 percent of the wheat parity price as of the beginning of the marketing year, July 1, 1949. In general, wheat price supports in 1949 will follow the pattern of the 1947 and 1948 programs and will be available to farmers from time of harvest through January 31, 1950.

Oats, Barley, and Rye: Price support programs for 1949-crop oats, barley, and rye will be implemented through loans and purchase agreements, which will be available from time of harvest through January 31, 1950. Price support for oats will reflect to producers a weighted average rate equal to 70 percent of the parity price, and for barley and rye, a weighted average equal to 72 percent of the respective parity prices, as of April 15, 1949.

Grain Sorghums: The price of 1949-crop grain sorghums will be supported by farm-storage and warehouse-storage loans and by purchases of grain sorghums delivered under purchase agreements, all of which will be available from harvest time through January 31, 1950. The support price, on which loans and agreements will be based, will be established at a level which will reflect to producers a weighted average rate equal to 70 percent of the grain sorghums parity price as of April 15, 1949.

Hay and Grass Seeds: A price support program to encourage increased production of hay, pasture, and range grass seed, in expectation of greater need for such seed during the next few years for planting on some of the acreage now in wheat, cotton, and other cash crops, has been announced by the Production and Marketing Administration. The hay and pasture seeds include alfalfa, various kinds of clovers, lespedeza, and several grasses. Range grass seeds include buffalo grass, switch grass, bluestem, lovegrass, and Indian grass. Price supports, to be operated through purchase agreements with farmers, range from nominal sums on hay and pasture grasses to \$1.25 a pound for certified Ladino clover. A complete list of support prices for such seeds may be obtained from local representatives of PMA.

American-Egyptian Cotton: Loans on 1949-crop American-Egyptian cotton will be available at 90 percent of the August 1, 1949, parity price. Loans, which will be available to producers through April 30, 1950, may be secured on cotton classed as No. 5 or better in grade and 1 $\frac{3}{8}$ inches and longer in staple length, with appropriate differentials to reflect differences in value due to quality and location.

The Department of Agriculture has announced that no price supports will be available this year for broilers and mohair.

1948 Loan Maturity Dates Vary

Commodity Credit Corporation support price loans on 1948-crop wheat, soybeans, rye, oats, barley, dry edible beans, and grain sorghums will mature on April 30, 1949 (or earlier on demand). On 1948-crop corn the maturity date of loans is September 1, 1949; on 1948-crop cotton loans the maturity date is July 31, 1949; and on 1948 alfalfa seed loans, May 31, 1949, is the maturity date.

The latest dates for getting loans on 1948 crops are April 30, 1949, for cotton, flaxseed, and sweet potatoes and June 30, 1949, for corn loans and purchase agreements. Loans are no longer available on 1948-crop rice and grain sorghums.