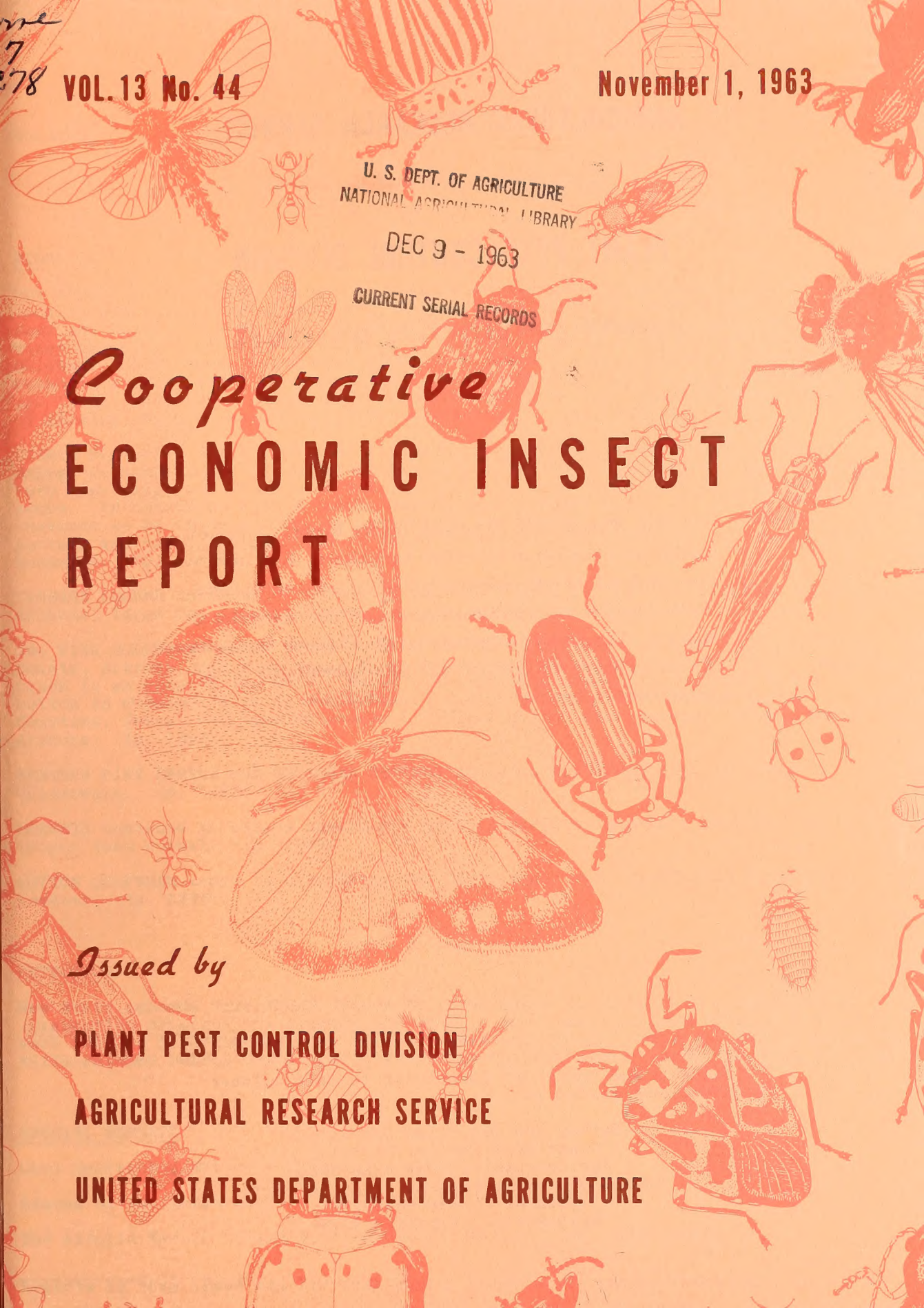


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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

**PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE**

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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Federal Center Building
Hyattsville, Maryland 20781

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

PEA APHID causing severe injury to alfalfa in many southeast Ohio fields; locally heavy in areas of Maryland, Delaware and Wisconsin, and building up in Dona Ana County, New Mexico. Large SPOTTED ALFALFA APHID populations depositing heavy amounts of honeydew on alfalfa in Wagoner, Muskogee and Sequoyah Counties, Oklahoma. Occasional specimens of GREENBUG found on wheat in Bixby area of Oklahoma (first record of season), but none found on wheat in Texas Panhandle. (p. 1289). Adults of CLOVER ROOT CURCULIO ranged 3-6 per sweep in many fields of alfalfa and mixed clover-alfalfa in Wisconsin. (p. 1291).

CITRUS FLAT MITE present on most citrus in Yuma County, Arizona, and causing damage in some areas. On Florida citrus, CITRUS RUST MITE populations increased into high range and TEXAS CITRUS MITE continues to be more abundant than in prior years. In addition, PURPLE SCALE, GLOVER SCALE, CHAFF SCALE and YELLOW SCALE continue to be above average in abundance; and WHITEFLIES (larvae) increased further and are the highest in 12 years of record, but a decrease is expected in November. (p. 1293).

CABBAGE LOOPER increasing rapidly in lettuce fields in Yuma and Maricopa Counties, Arizona; large egg deposits found in most areas. (p. 1293).

Two PINK BOLLWORM larvae found in stub cotton field near Coolidge Airport, Pinal County, Arizona; sex lure traps at this location have captured 10 moths. These finds in an eradication area. Heavy pink bollworm infestations being noted on cotton in Coyanosa area of Pecos County and in portions of Ward and Reeves Counties, Texas; and remains severe in cotton fields near Solomon, Graham County, Arizona. (p. 1294).

WESTERN PINE BEETLE and ENGRAVER BEETLES damaging ponderosa pine in areas of California. (p. 1295).

HORNETS continue to harass humans and pets in parts of Alabama; populations larger than normal. (p. 1299).

COTTON LEAFWORM taken in California for first time; not expected to overwinter, however. (p. 1294).

DETECTION

New State records were WHEAT CURL MITE in Arkansas (p. 1292) and a LEAF BEETLE (*Diabrotica cristata*) in Alabama (p. 1301). New county records of significance were SMALLER EUROPEAN ELM BARK BEETLE in Midland County, Texas (p. 1297), and a WHITE-FRINGED BEETLE (*Graphognathus* sp.) in Chattahoochee County, Georgia (p. 1301).

SPECIAL REPORTS

Ohio Spittlebug Survey - 1963. (p. 1290).

Status of the Screw-worm in the Southwest. (p. 1299).

The Alfalfa Weevil in the Eastern United States. (pp. 1304-1306).

Reports in this issue are for week ending October 25, unless otherwise indicated.

WEATHER OF THE WEEK ENDING OCTOBER 28

Dry weather continued over most of the Nation from the Rocky Mountains eastward to the Atlantic coast. The important exceptions included the lower Rio Grande Valley, a few small scattered areas in the northern and central Great Plains, and a narrow strip along the coast of the Carolinas. Parts of Kansas remained "extremely dry" as was much of Oklahoma. Most of Illinois received no rain of consequence. The drought continued in Indiana and was in the sixth week in Ohio. Columbus, Ohio, received no more than very light sprinkles in 45 days. In Pennsylvania, the drought was in the 4th week. Wells and streams were low. Some stations in New Jersey received from light sprinkles to 0.40 inch of rain on the 28th. It was the first rain since October 4. The situation was equally severe in the South. Louisiana had received almost no rain since September 29. The drought persisted in Mississippi, Alabama and Georgia, and was in the 4th week in Tennessee. The drought was in the third week in Kentucky and continued in the Carolinas (except along the coast), in Virginia, and northern Maryland. In much of the drought area, the danger of forest and brush fires was extremely high. More than 100 woodland fires occurred in New England during the week.

Hurricane Ginny, centered at the beginning of the week about 115 miles southeast of Cape Hatteras, North Carolina, drifted southward to a position off the coast of north central Florida. By midweek, she began moving northwestward producing rains along the Carolina coast. Hurricane warnings were displayed Friday from Charleston, South Carolina, to Cape Fear, North Carolina, and residents were warned to prepare for hurricane winds and high tides. The damage, however, was confined mostly to beach erosion in North Carolina. By the end of the week, Ginny had brought heavy rains and strong winds to the Carolina coast and had moved eastward toward Bermuda.

The Pacific Northwest received substantial rains from three storms during the week. The first front produced heavy rains, 2 to 3 inches or more, and gales along the Washington coast. By midweek, the front had crossed the Rocky Mountains and trailed from Lake Winnipeg across the Dakotas, the Nebraska Panhandle, Colorado, and southwestward to San Diego, California, and a new giant of a storm brought more rains to the Northwest. This second front moved quickly across the Great Plains and by Monday morning, October 28, stretched from near Boston, Massachusetts, to Midland, Texas. It produced some light sprinkles over the northern and central interior but was followed by the first freezing temperatures of the season over the northern and central Great Plains. In many areas, this was the latest that the first freezing temperatures of the fall season had occurred. The third storm was approaching the Pacific Northwest at the end of the week. Widespread rains fell over the northern Great Plains on Monday, September 21. Scattered rains, not heavy (except locally) but significant, dampened Texas and Oklahoma during the first half of the week. More scattered rains occurred over the north central areas, but the totals failed to relieve the dry situation which has resulted from the scanty rains over the past several weeks.

Temperatures for the week averaged below normal over Oregon, northern California, and southwestern Washington; also in the vicinity of Bakersfield, California. They averaged above normal over most of the rest of the Nation. Most of the Country from Oklahoma City, Oklahoma, northward to the Canadian Border, eastward to Tennessee, and northeastward to New England averaged more than 10° above normal. Numerous stations over the northern Great Plains and Lake region averaged 15° above normal. Some of the areas where no rain fell during the week include southern California, most of Arizona, New Mexico (except the north central), the Texas High Plains, western Kansas, eastern Colorado, southwestern Nebraska, Louisiana, the eastern half of Arkansas, southeastern Missouri, east central Indiana, most of Ohio, Tennessee, western North Carolina, western South Carolina, Mississippi, Alabama, Georgia (except the coast), western Florida Peninsula, and much of the area from Richmond, Virginia, northeastward to New England. (Summary supplied by U.S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

PEA APHID (Acyrtosiphon pisum) - NEW MEXICO - Appears to be building up in alfalfa fields in Dona Ana County as temperatures become cooler. (N. M. Coop. Rpt.). OKLAHOMA - Light in alfalfa in Choctaw County, southeast; ranged 2-4 per 10 sweeps. Noted in fields checked in east central area. (Okla. Coop. Sur.). WISCONSIN - Populations appear to have decreased somewhat in southern part of State; however, counts continue to range 300-500 per sweep in few fields in western Dane County. Averaged about 30 per sweep in most fields in southeast and southern areas. (Wis. Ins. Sur.). OHIO - Severe injury observed in many southeast area alfalfa fields. Populations remain extremely high in spite of rapid buildup of lady beetle adults and larvae. Aphids ranged 900-1,000 per 50 sweeps in numerous Athens County alfalfa fields. (Lyon). MARYLAND - Damaging alfalfa in Harford County. (U. Md., Ent. Dept.). DELAWARE - Causing rather extensive injury to field of alfalfa in Kent County. (MacCreary).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Large populations depositing heavy amounts of honeydew on alfalfa in Wagoner, Muskogee and Sequoyah Counties, east central; ranged 1,500-3,000 per 10 sweeps. Ranged 30-150 per 10 sweeps in Choctaw County, southeast. (Okla. Coop. Sur.). NEBRASKA - Averaged 500 per 10 sweeps in some areas of Boyd County; ranged 30-150 per 10 sweeps in fields surveyed in Keya Paha and Knox Counties. No sexual forms found in these 3 counties. (Bergman). WISCONSIN - Little change noted since last report. Noticeable numbers present in new seeding alfalfa in more heavily infested areas of State. (Wis. Ins. Sur.).

GREENBUG (Schizaphis graminum) - OKLAHOMA - Occasional specimens found in wheat in Bixby area, Tulsa County (east central). This is first record of season and corresponds to average first occurrence of October 25, based on survey records of past 8 years. (Okla. Coop. Sur.). TEXAS - Found in low numbers on western wheatgrass (Agropyron smithii) during past summer; still present on this grass but in very low numbers. As yet, has not been found on wheat in panhandle area. (Daniels).

CORN LEAF APHID (Rhopalosiphum maidis) - MICHIGAN - Populations generally low to moderate in east central and southwest counties in Lower Peninsula. Cast skins and other evidence indicate general moderate to heavy infestations earlier. (Newman, Janes).

ENGLISH GRAIN APHID (Macrosiphum avenae) - OKLAHOMA - Populations of 3 per foot of row noted in wheat in Pawnee County area, north central. (Okla. Coop. Sur.).

YELLOW SUGARCANE APHID (Sipha flava) - WISCONSIN - Populations common in most grassy alfalfa fields. (Wis. Ins. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - OHIO - Averaged 1 adult per 2 sweeps in several widely distributed alfalfa fields in southeast area. (Lyon).

CHINCH BUG (Blissus leucopterus) - ALABAMA - Light to heavy in all late corn fields recently surveyed in southwest and western counties; extremely heavy in late planted corn for roasting ears. At least 50 percent nymphs. (McQueen).

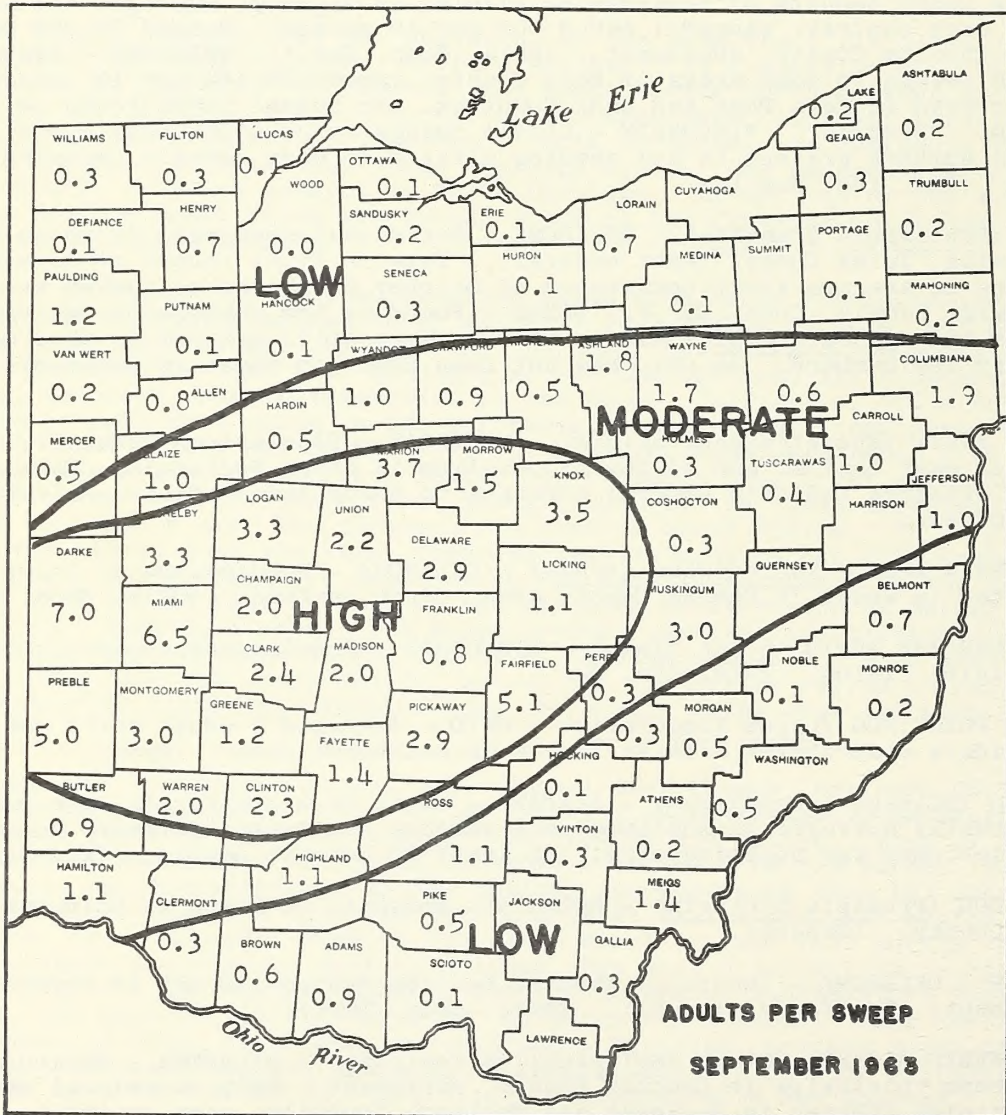
A SPITTLEBUG (Prosapia bicincta) - GEORGIA - Moderate in lawns in Columbus area, Muscogee County. (Greene).

STINK BUGS - OKLAHOMA - Counts of several species ranged 1-5 per 10 sweeps in Choctaw County alfalfa (southeast). (Okla. Coop. Sur.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Ranged 4-6 per 10 sweeps in alfalfa in Choctaw County, southeast. Only occasional specimens noted in fields checked in Sequoyah and Muskogee Counties, east central. (Okla. Coop. Sur.).

Ohio Spittlebug Survey - 1963

Results of annual fall survey of meadow spittlebug (*Philaenus spumarius*) adult populations presented on map below. On the basis of the survey just completed, spittlebug populations are above those of 1962. There will undoubtedly be damage in a band across the central portion of the State next spring, whereas, populations will remain low and noneconomic in much of northern and southeastern areas. Some fields in low areas may benefit from spraying next spring. Conversely, there will undoubtedly be fields in moderate and high areas that will have relatively low numbers, as spittlebug populations are often quite variable from field to field. If nymphs can be easily found while quite small, they are likely to be abundant enough to cause damage. On the average, one adult per sweep in early September will produce one nymph per stem the following spring. Control measures will pay dividends where nymphal populations are at or above one per stem. (Treece, Lyon, Holdsworth).



CLOVER LEAFHOPPER (Aceratagallia sanguinolenta) - UTAH - Numerous in alfalfa fields in Collinston-Fielding area, Box Elder County. (Knowlton).

LEAFHOPPERS - OHIO - Specimens collected in virus-diseased cornfield near Friendship, Scioto County (south central), determined as follows: Graphocephala versuta, 1 male; Draeculacephala spp., 19 males, 19 females; Kolla bifida, 6 males, 2 females; Aceratagallia sanguinolenta, 6 males, 1 female; Deltocephalus flavicosta, 1 female; Stirellus bicolor, 1 female; Stirellus obtutus, 1 female; Chlorotettix spp., 2 females; Exitianus exitiosus, 7 males, 3 females; Endria inimica, 6 males, 3 females; Acinopterus acuminatus, 1 male. (Freytag, Sept. 26).

CLOVER LEAF WEEVIL (Hypera punctata) - WISCONSIN - Larvae becoming more noticeable in clover and alfalfa fields; first to third instars present. Adults common in few fields. (Wis. Ins. Sur.).

CLOVER ROOT CURCULIO (Sitona hispidula) - WISCONSIN - Adults range 3-6 per sweep in many fields of alfalfa and mixed clover-alfalfa. (Wis. Ins. Sur.).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - MICHIGAN - Only slight state-wide injury evidenced in 18-county autumn survey. Of 90 corn fields selected at random, only 3 (2 in Lapeer County and 1 in Lenawee County) showed evidence of attack. Yield reduction in these instances estimated at 10-15 percent. (Janes, Newman).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - OHIO - Averaged 4 adults per 50 sweeps in field of alfalfa near Marietta, Washington County. Many females with eggs. (Lyon).

Corn Pests in Alabama - RICE WEEVIL (Sitophilus oryzae), GRANARY WEEVIL (Sitophilus granarius), SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis), and other species entering corn ears in fields in Lee, Chambers and Tallapoosa Counties, especially where ears previously damaged by corn earworm (Heliothis zea). (Barwood).

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEW MEXICO - Survey negative in Quay, Curry, Roosevelt and southern counties to October 15. (N. M. Coop. Rpt.).

NORTH DAKOTA - Preliminary data from fall survey indicate heavy infestations in southeastern area. (Hintz). WISCONSIN - Few moths still being taken in light traps at Mazomanie and Platteville. (Wis. Ins. Sur.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - NEW MEXICO - Present in corn roots or stalks in most corn fields checked in southern counties. (N. M. Coop. Rpt.).

CORN EARWORM (Heliothis zea) - MICHIGAN - Larval injury to field corn in Berrien, Cass, Van Buren, Kent, Lapeer, Tuscola and Saginaw Counties extremely low in 1963. Only 1 ear, from a Berrien County field, showed injury; 875 ears sampled from 35 fields. (Newman, Janes).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Moderate counts of 9 per 10 sweeps noted in Tillman County alfalfa. (Okla. Coop. Sur.).

ALFALFA CATERPILLAR (Colias eurytheme) - WISCONSIN - Ranged 1-3 larvae per sweep in many alfalfa fields in southern area. (Wis. Ins. Sur.).

FALL ARMYWORM (Laphygma frugiperda) - TEXAS - Reports of damage to grasses and small grains continue in most sections of State. (Meisch).

GRASSHOPPERS - UTAH - Some grasshoppers, largely Melanoplus spp., still active at elevations up to 7,000 feet in Logan and Blacksmith Fork Canyons in Cache and Rich Counties. (Knowlton). NEBRASKA - Melanoplus differentialis and M. femurrubrum adults averaged approximately 4 per square yard in margins of corn fields in Cass and Otoe Counties. (Roselle). SOUTH DAKOTA - Egg survey complete,

with samples taken from areas with economic adult infestations during summer; egg pods ranged 0-9 per square yard in southeast district. (Hintz). NORTH DAKOTA - Egg surveys conducted in central, north central, northwestern and west central areas; infestations ranged light to threatening and development varied from clear to segmented; 4-8 percent of eggs infested with bee fly and carabid beetle larvae. Dominant species included M. bivittatus, M. sanguinipes, M. packardii, M. differentialis and M. femurrubrum. (Brandvik). WISCONSIN - M. femurrubrum egg development continues; deposition sites difficult to find; negative in most fields. (Wis. Ins. Sur.).

HESSIAN FLY (Phytophaga destructor) - OHIO - No specimens found in autumn planted wheat fields throughout southeast. Very light infestations observed in volunteer wheat plants growing in this season's harvested wheat fields. (Lyon).

AN ALFALFA SEED CHALCID (Bruchophagus roddi) - UTAH - Infesting 2.77 percent of alfalfa seed examined from 13 fields at Delta, Millard County; counts ranged 0-13 percent of seed infested. (Haws). Counts higher in some other seed-producing areas. (Knowlton).

WHEAT CURL MITE (Aceria tulipae) - ARKANSAS - Collected on orchardgrass at University of Arkansas Farm at Fayetteville, Washington County, during July 1963. Det. by H. H. Keifer. This is a new State record. (Ark. Ins. Sur.).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - NEW MEXICO - Losses in apple orchards much higher this season than for several years in Rio Arriba and Santa Fe Counties. Many growers were unable to obtain satisfactory control with use of insecticides. (N. M. Coop. Rpt.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - WYOMING - Small infestations found on apple trees in Cheyenne area, Laramie County, October 9. (Spackman).

SAN JOSE SCALE (Aspidiotus perniciosus) - NEW MEXICO - Light to moderate infestations found on apple trees in Velarde area, Rio Arriba County. (N. M. Coop. Rpt.).

SPIDER MITES - NEW MEXICO - Light infestations, probably Tetranychus mcdanieli, can still be found on foliage in apple orchards in Rinconada area, Rio Arriba County. (N. M. Coop. Rpt.). GEORGIA - An unspecified species heavy on 20 acres of apples in Cobb County. (Taylor).

BLACK PECAN APHID (Melanocallis caryaefoliae) - ALABAMA - This and yellow species continue very active on pecans; increased in population per tree on trees still having suitable live leaves. Majority of trees already defoliated by combination of damage by aphids, spider mites, disease and drought. (Bagby, Eden, et al.). TEXAS - This species and Monellia spp. present in large numbers on pecans in Tarrant County. (Turney).

PECAN WEEVIL (Curculio caryae) - GEORGIA - Heavy in hickory nuts in Crawford County; two-thirds of fruits examined infested with larvae. (Harvey).

HICKORY SHUCKWORM (Laspeyresia caryana) - TEXAS - Light to moderate populations damaging pecans in Tarrant County. (Turney).

A LEAF BLOTCH MINER (Cameraria caryaefoliella) - ALABAMA - Has been a widespread pest of pecans in Mobile County since June; apparently present in area for several years. (Eden).

WALNUT HUSK FLY (Rhagoletis completa) - UTAH - Infesting additional black walnut trees in Logan and Providence areas, Cache County. (Knowlton).

ORANGE-DOG (Papilio cressphontes) - ARIZONA - Larvae continue abundant on citrus and other fruits in Yuma, Maricopa and Pinal Counties. (Ariz. Coop. Sur.).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Populations abundant on citrus trees in Yuma County. (Ariz. Coop. Sur.).

CITRUS FLAT MITE (Brevipalpus citri) - ARIZONA - Present on most citrus and causing damage in some areas of Yuma County. (Ariz. Coop. Sur.).

MEXICAN FRUIT FLY (Anastrepha ludens) - ARIZONA - Eight additional adults found in McPhail traps at Nogales; this makes total of 18 found this year. Fruit inspection continues negative. (Ariz. Coop. Sur.). CALIFORNIA - Bait spray treatment scheduled to continue through December 13, due to report of male fly taken in Tijuana, Mexico, October 10. All survey and detection in State has been negative to October 25. (Cal. Coop. Rpt.).

Citrus Insect Situation in Florida - Mid-October - On leaves, CITRUS RUST MITE (Phyllocoptruta oleivora) infested 66 percent of groves (norm 64 percent); 45 percent economic (norm 37 percent). On fruit, CITRUS RUST MITE infested 67 percent of groves (norm 71 percent); 44 percent economic (norm 47 percent). Population increased into high range and will continue high. Although statewide abundance will be near normal, infestations will be above normal on leaves, especially in cold-damaged groves. Highest districts are Gainesville, Bartow, Brooksville, west coast and upper east coast. CITRUS RED MITE (Panonychus citri) infested 48 percent of groves (norm 42 percent); 16 percent economic (norm 19 percent). Population slightly below normal. Will increase into moderate range with scattered groves developing heavy infestations. Highest districts are west coast, Bartow and Gainesville. TEXAS CITRUS MITE (Eutetranychus banksi) infested 41 percent of groves (norm 20 percent); 20 percent economic (norm 5 percent). Continues to be more abundant than in prior years. Population will increase but is expected to remain in moderate range. Scattered groves will have heavy infestations. Highest districts are Bartow, west coast and ridge. PURPLE SCALE (Lepidosaphes beckii) infested 71 percent of groves (norm 62 percent); 16 percent economic (norm 3 percent). GLOVER SCALE (L. gloverii) infested 68 percent of groves (norm 25 percent); 25 percent economic (norm 1 percent). CHAFF SCALE (Parlatoria pergandii) infested 73 percent of groves (norm 39 percent); 17 percent economic (norm 1 percent). YELLOW SCALE (Aonidiella citrina) infested 39 percent of groves (norm 12 percent); 7 percent economic (norm 1 percent). These 4 species will continue to be above average abundance. Purple scale will decrease slightly. Glover scale, chaff scale and yellow scale will increase. Scattered groves will develop heavy infestations. BLACK SCALE (Saissetia oleae) infested 44 percent of groves (norm 34 percent); 21 percent economic (norm 12 percent). Population will decrease from above normal level now present. Few groves, mostly in Ridge and Indian River districts, may harbor heavy infestations until cold weather occurs. FLORIDA RED SCALE (Chrysomphalus aonidium) infested 20 percent of groves (norm 59 percent); 2 percent economic (norm 10 percent). Although this species has increased slightly, it will remain far below normal. WHITEFLY population as measured by number of larvae (the injurious stage) increased further and is highest in 12 years of record. A decrease is expected in November. (W. A. Simanton (Citrus Expt. Sta., Lake Alfred).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - Increasing rapidly in lettuce fields in Yuma and Maricopa Counties. Large egg deposits found in most areas. (Ariz. Coop. Sur.). NEW MEXICO - Few eggs and larvae still being found in lettuce fields. Most growers harvesting. (N. M. Coop. Rpt.). FLORIDA - Infesting 40 percent of 200 cabbage plants and 9 percent of 300 celery plants at Sanford, Seminole County. Damage light. (Desin).

BEEF ARMYWORM (Spodoptera exigua) - ARIZONA - Present in Yuma and Maricopa County lettuce fields. Controls have kept damage at low level. (Ariz. Coop. Sur.).

SOUTHERN POTATO WIREWORM (Conoderus falli) - NORTH CAROLINA - This only species collected from a field in Pamlico County that was in tobacco this year; 24 fairly large larvae collected by soil sifting. This is same field from which species was reported about first of June 1962. (Mount).

CABBAGE APHID (Brevicoryne brassicae) - ALABAMA - Numbers extremely high on collards in Lee County home gardens. (McQueen). RHODE ISLAND - Heavy on broccoli in Cranston, Providence County. (Mathewson, Oct. 10).

GREEN PEACH APHID (Myzus persicae) - OHIO - Nymphs and adults heavy on spinach near Lorain, Lorain County. (Sleesman).

BEEF LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Aerial treatment of Russian-thistle infestations continued; rains restricted treatment for short period, but completion scheduled for about October 26, with some 250,000 acres of brushland sprayed. Prespray counts of 15-180 beef leafhoppers per sweep reported; post-spray counts in treated areas made within 48 hours after treatment showed 99 percent kill. (Cal. Coop. Rpt.).

A LEAF MINER FLY (Liriomyza sp.) - FLORIDA - Infested 77 percent of 300 celery plants at Sanford, Seminole County; damage ranged light to heavy. Found in only one cabbage plant at same location. (Desin).

SLUGS - WISCONSIN - Causing considerable damage to tomatoes in Winnebago County. (Wis. Ins. Sur.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Remains severe in cotton fields in area near Solomon, Graham County; occasional larva and exit hole found in fields throughout county. Few larvae found at Duncan, Greenlee County. Two larvae found in stub cotton field near Coolidge Airport, Pinal County; sex lure traps at this location have captured 10 moths. These finds in an eradication area. (Ariz. Coop. Sur.). See CEIR 13(43):1267. TEXAS - Heavy infestations being noted on cotton in Cayanosa area of Pecos County and in portions of Ward and Reeves Counties. (Meisch). OKLAHOMA - Gin-trash inspections in Coal, Hughes, McClain, Okfuskee and Okmulgee Counties positive; heaviest in McClain County, with 144 specimens per 48 bushels of gin trash. (Okla. Coop. Sur.).

BOLLWORM (Heliothis zea) - NEW MEXICO - Continues to damage bolls in cotton fields throughout southern counties. (N. M. Coop. Rpt.). ARKANSAS - Moth activity continues; has been extremely heavy since mid-July. Moths continue to be taken in light traps at Kelso and Fayetteville. (Ark. Ins. Sur.).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - NEW MEXICO - Occasional larva noted in Dona Ana County cotton fields. (N. M. Coop. Rpt.).

COTTON LEAFWORM (Alabama argillacea) - CALIFORNIA - Adult male taken in argon light trap at Winterhaven, Imperial County, constitutes a new State record. Second male taken in light trap at Le Grand, Merced County, several days later, for new county record. Significance of finds problematical as species is highly migratory and is not known to overwinter in the State. (Cal. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

WESTERN PINE BEETLE (Dendroctonus brevicomis) - CALIFORNIA - Causing local kill of some 80 trees in groups of 40 or more in Aqua-Tibia wild area and Crosley Saddle area, Cleveland National Forest. (R. English, USFS). Infesting groups of ponderosa pines in Blue Gulch, Russian Creek, Sawyers Bar and George Ranch areas in Klamath National Forest. Severely damaging ponderosa pines in 3,000-acre stand in Los Padres National Forest, Monterey County. Over 500 trees already killed as single trees and groups, with infestation increasing. (A. Campbell, USFS).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - VIRGINIA - Fall coloration of hardwoods caused cessation of aerial surveys for damage, probably until mid-December. New outbreak of what is probably this species, first reported by district personnel and certified by aerial observation, appears concentrated in loblolly pine in northern Brunswick, southeast Lunenburg and central Dinwiddie Counties. Limited reconnaissance surveys into southern Mecklenburg, Brunswick and Greenville Counties showed evidence of limited activity. Spots in infested zones ranged 0.25-0.50 acre in size. Resurvey of all areas of past activity in early September showed scattered but reduced activity; about 50 percent of spots being extensions of old infestations not salvaged. Recent aerial survey of Eastern Shore showed no alarming increases in activity. In Farmville area, emergence of major adult brood reported underway in mid-September. Active throughout Waverly district, being most active in Brunswick, Dinwiddie and Greenville Counties. Continued activity evidenced by kill of loblolly and shortleaf pines in small patches in Chesterfield, Powhatan, Goochland and King William Counties; still active in Fluvanna County in shortleaf pine and continued activity evident in Amelia, Charlotte, Cumberland, Buckingham, Mecklenburg and Prince Edward Counties; 5 new infestations noted in Accomack and Northampton Counties. (Va. For. Pest Surv. Rpt., Sept. Summ.).

PINE BARK BEETLES (Dendroctonus spp.) - VIRGINIA - Active throughout Waverly district, with most in Brunswick, Dinwiddie and Greenville Counties; active in scattered single trees in several spots in Fluvanna County; activity increasing in Appomattox, Halifax, Lunenburg, Mecklenburg and Nottoway Counties in loblolly and shortleaf pines. (Va. For. Pest Surv. Rpt., Sept. Summ.).

FIR BEETLES - CALIFORNIA - Dendroctonus pseudotsugae, Scolytus unispinosus, S. ventralis and Melanophila drummondii were most important insects found in blowdown fir and pine trees in Humboldt County. Acreages ranged 20 to 160 acres for 29 reports of blowdowns in county. (R. Fheley, USFS).

ENGRAVER BEETLES (Ips spp.) - CALIFORNIA - Severely damaging small acreages of ponderosa pines in Willow District, Mendocino National Forest; damage increasing. (J. Levitan, J. Housman; USFS). OKLAHOMA - Killing pines in Pushmataha County, with prolonged drought conditions probably contributing factor. (Okla. Coop. Sur.). VIRGINIA - Large numbers now found in competition with Dendroctonus frontalis where infestations of latter species high last year. Increasing numbers in competition with D. frontalis portends a decline in population of latter species. Engraver beetles killed single Virginia pine in Roanoke County and infested 9-10 shortleaf pines in tract in Scott County; I. avulsus killing group of natural 3 to 4-year-old loblolly pines in Westmoreland County. (Va. For. Pest Surv. Rpt., Sept. Summ.).

LODGEPOLE NEEDLE MINER ("Recurvaria" milleri) - CALIFORNIA - New infestation present in Jeffrey pine in Snow Valley, San Bernardino National Forest. An estimated 5 acres presently involved with trees fading. (J. Pierce, USFS).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - OKLAHOMA - Pines in experimental plots at Stillwater, Payne County, have 73 percent of tips damaged. (Okla. Coop. Sur.). ARKANSAS - Continues active in southwest. Adults observed in Hempstead County; half-grown larvae in pine tips also noted. (Ark. Ins. Sur., Warren). VIRGINIA - Activity remains high in most loblolly pine plantations in Waverly district, with tip kill present on 90 percent of trees. Larval activity caused

extensive tip kill in 2 tracts in Hanover County and activity noted in loblolly plantations in Albemarle, Stafford and Spotsylvania Counties, with moderate to extensive damage to buds. Infesting 2 loblolly pine plantations in Amelia County where 50 percent of trees stunted and deformed, and in a Mecklenburg County plantation. Active on loblolly plantings in northern Pittsylvania County and infesting 100 percent of planted shortleaf pine on 3 acres in Page County. Damage severe in 2 loblolly pine plantations in Accomack County and 1 in Northampton County; also widespread throughout mainland portion of Portsmouth district. (Va. For. Pest Surv. Rpt., Sept. Summ.).

PINE TUBE MOTH (Argyrotaenia pinatubana) - OHIO - Moderate damage observed on white pine in Stark County. Dissection revealed larvae in pine needle tubes; pupation had not occurred. (Appleby, Oct. 19).

PINE WEBWORM (Tetralopa robustella) - VIRGINIA - Infesting 5-10 percent of loblolly pines on 2 plantations each in Amelia and Prince Edward Counties. (Va. For. Pest Surv. Rpt., Sept. Summ.). FLORIDA - Infested slash pine at Palatka, Putnam County. (Adkins, Oct. 7).

A CONE MOTH - VIRGINIA - Damage to Virginia pine widespread in Charlottesville district with occasional trees having as much as 10 percent loss of cones. (Va. For. Pest Surv. Rpt., Sept. Summ.).

PINE BUTTERFLY (Neophasia menapia) - CALIFORNIA - Heavy flights occurred during period of several weeds in Kings Beach area, Lake Tahoe, Placer County. (Wanda Wheeler).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - COLORADO - A problem on ornamental conifers in many areas of State. This season, there was a late or second generation of crawlers. (Hantsbarger). OHIO - Light on white pine in Stark County. (Appleby, Oct. 19). MARYLAND - Heavy on ornamental Scotch pine at Chevy Chase, Montgomery County. (U. Md., Ent. Dept.). ALABAMA - Heavy on several ornamental Austrian pines in retail nursery. Few less severe infestations noted on loblolly pine in Lee County. (Keeble, Blake, et al.).

GRASSHOPPERS - CALIFORNIA - Severely damaging ponderosa and Digger pines in Potato Hill Lookout Station Plantation by defoliating and debarking trees adjacent to rangeland; some 200 trees severely damaged in Mendocino National Forest. (R. Burke, USFS).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - VIRGINIA - Larvae defoliating scattered loblolly pines in 40-acre tract in King William County and infesting single loblolly pine on plantation in Amherst County; active and causing scattered, light defoliation of single shortleaf pines in Tazewell County, 5 plantations (shortleaf, Virginia and loblolly pines) in Wise County and 2 trees in loblolly plantation in Buchanan County. Larvae defoliating 2 Scotch pines in area of Augusta County. Apparently remains as low or lower in population in "observation area" as last year, except in southeastern portion of State where slight increase in damaging populations of last year may have occurred. Final totals for 1963 aerial survey show 167 positive areas, of which 11 (7 percent) were breakovers and 42 (25 percent) were old centers not treated. (Va. For. Pest. Surv. Rpt., Sept. Summ.).

CALIFORNIA TENT CATERPILLAR (Malacosoma californicum) - CALIFORNIA - Causing severe damage to madrone trees in 1,000-acre area along Klamath River from Seiad to Oak Knoll on river slopes in Siskiyou County. (J. Hippler, USFS).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Light to moderate populations defoliating poplar and fruit trees in Rio Arriba and Santa Fe Counties. (N. M. Coop. Rpt.). VIRGINIA - Widely distributed on Eastern Shore. (Va. For. Pest Surv. Rpt., Sept. Summ.).

- A FALL WEBWORM (Hyphantria sp.) - CALIFORNIA - Causing severe defoliation of madrone trees along Klamath River from Seiad to Happy Camp, Siskiyou County. (J. Hippler, USFS).
- VARIABLE OAK LEAF CATERPILLAR (Heterocampa manteo) - OKLAHOMA - Defoliation of oaks extensive this season throughout eastern third of State. (Okla. Coop. Sur.).
- FALL CANKERWORM (Alsophila pometaria) - NORTH DAKOTA - Females continue active in southeast area; extremely numerous on trees and buildings. (N. D. Ins. Sur.).
- ELM LEAF BEETLE (Galerucella zanthomelaena) - NEW MEXICO - No larvae or adults found in infested areas of Santa Fe and Rio Arriba Counties, although light to moderate damage evident on Chinese elms. (N. M. Coop. Rpt.). VIRGINIA - Damage severe on an area of eastern Augusta County. (Va. For. Pest Surv. Rpt., Sept. Summ.).
- SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - TEXAS - Several specimens collected from Chinese elm in Midland County. This is a new county record for this vector of Dutch elm disease. (Meisch).
- TWIG GIRDLER (Oncideres cingulata) - OKLAHOMA - Active on elm and pecan trees throughout State. (Okla. Coop. Sur.). SOUTH CAROLINA - Causing limbs to drop from pecan, shrubbery and other hosts in Harleyville, Dorchester County. (Nettles et al.).
- LACE BUGS (Corythucha spp.) - ALABAMA - C. arcuata heavy on oaks, especially water oak (Quercus nigra), used as ornamentals in central area. (McGholon, et al.). C. pruni continues present on leaves of wild cherry throughout State, causing light spotting and injury. (McQueen).
- WALKINGSTICK (Diapheromera femorata) - ARKANSAS - Infestations present October 15 in Boston Mountain area in northwest part of State estimated at 10 percent of numbers present September 10. On latter date, nearly all in nymphal stage, with only few adults present. Much larger numbers were expected than found October 15. Lower numbers may be due to mortality resulting from extremely dry conditions and unseasonably high temperatures. Leaves on trees also very dry. (Ark. Ins. Sur.). OKLAHOMA - Considerable activity continues throughout forested areas in eastern part of State. (Okla. Coop. Sur.).
- SPIDER MITES - ALABAMA - Unspecified species heavy on oaks, especially water oak (Quercus nigra), used as ornamentals in central area. (McGholon et al.).
- MIMOSA WEBWORM (Homadaula albizziae) - NORTH CAROLINA - Feeding heavily on mimosa in Rowan County; larvae mostly last instar. Det. by D. L. Wray. (Bowers). VIRGINIA - Infesting Moraine honeylocusts at location in Bassett, Henry County, and mimosa at several sections of Scott, Lee, Wise, Russell and Bland Counties, October 20, 23 and 24. (Tarpley).
- ROSE APHID (Macrosiphum rosae) - GEORGIA - Heavy on roses in Dalton area, Whitfield County. (Woodliff). MARYLAND - Heavy on rose buds at University Park, Prince Georges County. (U. Md., Ent. Dept.).
- APHIDS - MARYLAND - Undetermined species infesting weeping willow at College Park, Prince Georges County, and at Baltimore; 2 undetermined species moderate on oaks at Jefferson, Frederick County. (U. Md., Ent. Dept.). OKLAHOMA - Several species continue active on variety of ornamentals throughout State. (Okla. Coop. Sur.). ARKANSAS - Unspecified species very heavy on red maples in Fayetteville area, Washington County. (Ark. Ins. Sur.).
- WHITEFLIES - ALABAMA - Not so noticeable as usual; more noticeable now on shrubs around homes than at any time during year, but only in low to moderate numbers. (McQueen).

COCCIDS - FLORIDA - Pinnaspis aspidistrae severe on leaves of Polystichum adiantiforme at Raiford, Union County (Collins, Sept. 26); Pseudaonidia clavigera infested 20 percent of 30 inspected Camellia sp. plants at St. Petersburg, Pinellas County (Bingaman, Oct. 15); Phenacaspis cockerelli infested Strelitzia reginae and Michelia fuscata at Orlando, Orange County (Crews, Oct. 22). ALABAMA - Chrysomphalus obscurus and Kermes spp. heavy on oaks, especially water oak (Quercus nigra), used as ornamentals throughout central area. C. obscurus killing many small branches. (McGlohon et al.). OHIO - Asterolecanium sp. moderate to heavy on approximately 200 chestnut oak trees at a nursery at Cleveland, Cuyahoga County. (Kile, Wells). CALIFORNIA - Single batch of immature females and crawlers of Chrysomphalus obscurus found on pin oak tree under eradivative treatment in Capitol Park, Sacramento, Sacramento County. (Cal. Coop. Rpt.).

A MIDGE - DELAWARE - Unspecified species infesting and causing drop of holly berries in Newark area, New Castle County. (Connell).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - UTAH - Continue annoying at Brigham City, Box Elder County, and in some northern areas of Davis County. (Knowlton). OKLAHOMA - Probably Psorophora spp. active in north central area following recent rains; also reported active in Bryan County, south central. (Okla. Coop. Sur.). TEXAS - Aedes sollicitans, Aedes vexans, Aedes taeniorhynchus, Psorophora confinnis and Culex spp. were troublesome in Jefferson County during September. (Jeff. Co. Mosq. Control Comm.). FLORIDA - In coastal areas, light trap catches of salt-marsh mosquitoes showed Aedes taeniorhynchus far more abundant than Aedes sollicitans at all locations. Heaviest catches of A. sollicitans were 136 females per trap night (Sept. 27) at Santa Rosa, Walton County, and 142 at Innerarity Point, Escambia County (Sept. 20). Areas sporadically having A. sollicitans counts of 30 or more, but not reaching 50, were New Smyrna Beach (Volusia County), Allenhurst (Brevard County), Ft. Pierce (St. Lucie County) and Boca Grande (Lee County). A. taeniorhynchus generally most abundant in traps in Monroe County at Rock Harbor and Big Pine Key; counts approximately 1,000 females per trap on several occasions, with high of 3,392 at Big Pine on September 17 being high for entire State during September. Other high counts of approximately 500 or more sometime during September for A. taeniorhynchus made at Boca Grande, Ft. Pierce, Allenhurst, Sanibel (Lee County), Salerno (Martin County), and Biscayne Key (Dade County). Light or very light catches of both species made in such heavily populated regions as Tampa Bay area and Duval County. Cocoa Beach had very low counts of A. sollicitans and low catches of A. taeniorhynchus, highest being 66 females September 20. Traps along lower "Gold Coast" generally had low to very low catches, with scattered exceptions. (Collaborator's analysis from trap data supplied by Florida State Board of Health, Bureau of Entomology). (Tri-ology Tech. Rpt., Sept.).

HOUSE FLY (Musca domestica) - OKLAHOMA - Continues annoying around sheltered areas throughout State. (Okla. Coop. Sur.). COLORADO - Populations becoming very heavy as there have been only 2-3 very light frosts. Extremely high populations present in several feed lots in Larimer County. (Simpson).

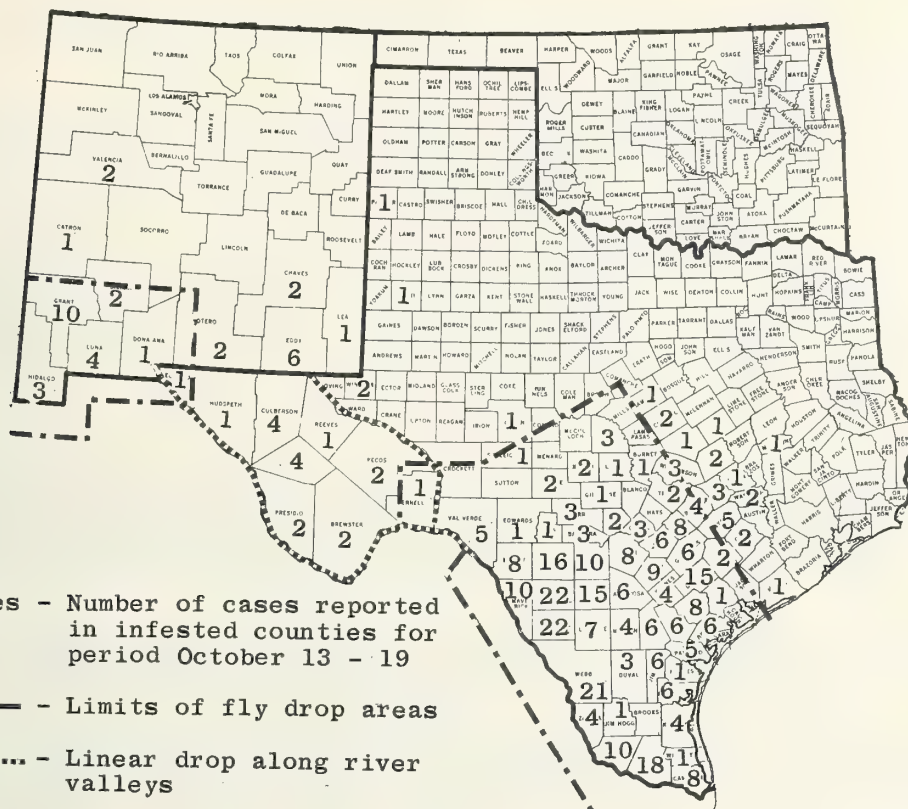
HORN FLY (Haematobia irritans) - OKLAHOMA - Generally light to moderate throughout State. Counts per head ranged 100-700 in Bryan County (south central); 600-800 in Choctaw and Pushmataha Counties (southeast); 350-400 in Tillman County (southwest). Moderate to heavy counts reported from Creek and Mayes Counties. (Okla. Coop. Sur.). GEORGIA - Averaged 30 per animal on treated herd. (Roberts).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Moderate to heavy counts of 7 per head on cattle in Choctaw County and 20 per head in Pushmataha County. (Okla. Coop. Sur.). DELAWARE - Abundant and annoying in northern Kent County. (Kelsey).

HORSE FLIES (Tabanus spp.) - OKLAHOMA - Averaged 0.5 per head on cattle in Choctaw and Pushmataha Counties, southeast. (Okla. Coop. Sur.).

STATUS OF THE SCREW-WORM (*Cochliomyia hominivorax*) IN THE SOUTHWEST

During the period October 13 - 19, a total of 377 infestations was reported in 78 counties in TEXAS and 34 infestations from 11 counties in NEW MEXICO. Most of the latter cases were in the southwest corner of the State. Screw-worm was confirmed for the first time this year in Hamilton, Lee, Madison and Matagorda Counties, Texas. A total of 124,121,450 sterile flies was released during the period. (Anim. Dis. Erad. Div.).



Figures - Number of cases reported in infested counties for period October 13 - 19

- - - - - Limits of fly drop areas
- - Linear drop along river valleys

SECONDARY SCREW-WORM (*Cochliomyia macellaria*) - WYOMING - Larvae collected June 24 from Hereford cow near Gillette, Campbell County; cow originally brought in from out of State. (Marks).

HORSE FLY BOT (*Gasterophilus intestinalis*) - RHODE ISLAND - Oviposition, apparently by this species, reported heavy on horse in Kingston, Washington County. Specimens not seen. (Kerr, Mathewson).

BLACK FLIES - UTAH - Annoying deer hunters in several areas of Logan and Blacksmith Fork Canyons in Cache and Rich Counties. (Knowlton). RHODE ISLAND - *Simulium* sp. noted attacking horse in Kingston, Washington County. (Kerr, Mathewson). NORTH CAROLINA - *Simulium* sp. a nuisance at a Martin County location. (Wray).

VESPID WASPS - ALABAMA - *Vespula* spp. continue to harass humans and pets. Extreme numbers in Lee and Jefferson Counties and other areas of State. Apparently hatch-out and population explosion of larger magnitude than usual. (Ledbetter, Spatswood, et al.). RHODE ISLAND - Scattered, seasonal reports of *Polistes* spp. in houses from all parts of State. (Mathewson, Cartier, Buonaiuto, King, Hannah, Peabody).

FLEAS (Ctenocephalides spp.) - MINNESOTA - C. felis and C. canis continue to be reported from throughout State; troublesome in homes and on lawns. (Minn. Ins. Rpt.). IOWA - Specimens of C. felis and C. canis sent in from Glenwood, Oskaloosa and Sioux Rapids during October. (Iowa Ins. Inf.).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - ALABAMA - Becoming serious pest in Macon County in areas where hand-harvesting of corn underway, particularly when loading from piles of corn on ground for several days. Populations building up where ants apparently seeking food. (Ledbetter).

HOUSEHOLD AND STRUCTURAL INSECTS

BOXELDER BUG (Leptocoris trivittatus) - UTAH - Troublesome to homeowners in Salt Lake City area, Salt Lake County, and several school buildings in Cache County. (Knowlton). WYOMING - Adults concentrating in buildings in urban areas of Laramie County. (Marks). MICHIGAN - Adults and nymphs continue a household nuisance in southern counties. (Janes, Newman). DELAWARE - Annoying in various parts of State; particularly heavy infestation noted in Lewes, Sussex County. (MacCreary). VIRGINIA - All stages, but mostly adults, creating nuisance in and around homes at locations in Mecklenburg, Henrico, Augusta and Page Counties. (Tarpley, Agee, Amos, Gray). ARKANSAS - Numerous in lawn and entering residence in Stone County, north central. (Ark. Ins. Sur.). NORTH CAROLINA - Numerous and annoying at locations in Scotland and Catawba Counties. (Johnston, Ivey, Robertson).

FACE FLY (Musca autumnalis) - VIRGINIA - Adults creating nuisance by congregating in and around homes and buildings in Lee, Buchanan, Scott, Russell, Tazewell, Bland and Giles Counties. (Tarpley, Lyle, Abbott). WISCONSIN - Few noted causing annoyance in Green County. (Wis. Ins. Sur.). NORTH DAKOTA - Adults numerous around farm buildings in northern Dunn County. (Brandvik). NEBRASKA - Adults moving to sheltered areas to overwinter. (Bergman).

HOUSE FLY (Musca domestica) - WISCONSIN - Principally this species, very active and causing much annoyance in Dane and Green Counties. (Wis. Ins. Sur.). UTAH - Troublesome in many restaurants, homes and schools in northern and central areas. (Knowlton).

CLUSTER FLY (Pollenia rudis) - MICHIGAN - Continues a nuisance around homes in Kent and Ingham Counties. (Janes). OHIO - A nuisance in Canal Winchester, Franklin County, and South Charleston, Clark County. (Blair).

INDIAN-MEAL MOTH (Plodia interpunctella) - RHODE ISLAND - House infestations reported from Shannock and West Kingston, Washington County. (Mathewson, Oct. 1).

LARGER YELLOW ANT (Acanthomyops interjectus) - DELAWARE - Reported in several homes in Wilmington area, New Castle County. (Connell). RHODE ISLAND - Alates noted in East Greenwich, Kent County. (Cartier, Oct. 17).

CLOVER MITE (Bryobia praetiosa) - RHODE ISLAND - House infestations numerous, especially in areas of Cranston, Warwick and Middletown. (Cartier, Buonaiuto).

GRASSHOPPERS (Schistocerca spp.) - ARIZONA - S. vaga and S. albolineata becoming problem to homeowners and businesses in Tucson, Pima County. (Ariz. Coop. Sur.).

STORED-PRODUCT INSECTS

MEDITERRANEAN FLOUR MOTH (Anagasta kuhniella) - OHIO - Larvae, pupae and adults medium at flour mill in Logan, Hocking County; moths easily observed resting on feed sacks. (Davidson, Lyon).

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) - NEBRASKA - Damaging corn in crib in Thayer County. (Roselle).

SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - OHIO - Adults and larvae heavy in stored oats near Carpenter, Meigs County; 120 specimens counted in one-pint sample. Controls have been applied with partial success; old and new oats are infested. (Bishop, Lyon). Adults also noted in Fremont, Sandusky County. (Maddy, Blair).

CONFUSED FLOUR BEETLE (Tribolium confusum) - OHIO - Heavy adult populations observed at flour mill in Logan, Hocking County; primarily between sacks of stored feed in mill. Infestations have been troublesome for several months. (Lyon).

RED FLOUR BEETLE (Tribolium castaneum) - RHODE ISLAND - Infestation found in warehouse in Providence, Providence County. (Cartier).

LESSER GRAIN BORER (Rhyzopertha dominica) - NORTH CAROLINA - Heavy in grain locally in Wake County. (Wray).

Stored Grain Insects in Wyoming - Adults of SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis), RED FLOUR BEETLE (Tribolium castaneum), CONFUSED FLOUR BEETLE (T. confusum) and CADELLE (Tenebroides mauritanicus) each found in one of 5 granaries inspected in Albany County near Laramie. Infestations very light. (Marks).

BENEFICIAL INSECTS

LADY BEETLES - ARKANSAS - Eggs and larvae of unspecified species observed on red maples in Fayetteville area, Washington County, where aphids present in very heavy numbers. (Ark. Ins. Sur.). OHIO - Hippodamia convergens populations rapidly building up in alfalfa throughout southeast. (Lyon).

A STINK BUG (Euthyrhynchus floridanus) - NORTH CAROLINA - Collected in numbers from marsh reeds in Bladen County. Det. by D. L. Wray. (Lee).

HYMENOPTEROUS PARASITES - ALABAMA - Several specimens of 2 braconids, Cardiochiles nigriceps and Bracon mellitor, collected in cotton fields during August; former attacked Heliothis spp. and latter boll weevil. Also, a eurytomid (Eurytoma tylodermais) found attacking boll weevil. (Watson).

MISCELLANEOUS INSECTS

A LEAF BEETLE (Diabrotica cristata) - ALABAMA - Recently collected in Winston County for a new State record. Det. by R. F. Smith. (Balsbaugh, McQueen).

A WHITE-FRINGED BEETLE (Graphognathus sp.) - GEORGIA - Light on weeds in Chattahoochee County. This is a new county record. (Greene).

LESSER MEALWORM (Alphitobius diaperinus) - MARYLAND - Adults and larvae infesting litter in chickenhouse at Jesterville, Wicomico County. (U. Md., Ent. Dept.).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - ALABAMA - Extremely large numbers noted feeding on drying, cut dipper gourds at roadside stand near Brent, Bibb County. (McQueen).

PUMPKIN CATERPILLAR (Diaphania indica) - FLORIDA - Found in Steiner trap in calamondin at Sebring, Highlands County. (Morris, Oct. 17).

NOCTUID MOTHS - MICHIGAN - Specimens of Trichoplusia ni, Pseudaletia unipuncta, Laphygma frugiperda and Peridroma saucia continue to be taken in blacklight trap in Livingston County. Lack of generally cold night temperatures considered responsible for these abnormally late collections. (Newman).

PIERID BUTTERFLIES - MICHIGAN - Adults of Pieris rapae and Colias eurytheme continue active in Livingston County at this abnormally late date. (Newman).

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Single pupal case found on citrus leaf in new location in Sacramento, Sacramento County. Treatment in known infested area scheduled to begin in mid-November; 5 full-time inspectors continue survey outside treatment area. (Cal. Coop. Rpt.).

CRICKETS - TEXAS - Heavy infestations of unspecified species reported from Tarrant, McCulloch, Smith and Dallas Counties. (Tex. Coop. Rpt.).

LIGHT TRAP COLLECTIONS

State	Locality	Date	Temp- ature of F.	Precipi- tation	Type of trap *	Agrotis ipsilon (black cutworm)	Carpocapsa pomonella (codling moth)	Chorizagrotis auxilialis (army cutworm)	Estigmene acrea (salt-marsh caterpillar)	Farona diffusa (wheat head armyworm)	Heliothis virescens (tobacco budworm)	Heliothis zea (corn earworm)	Laphygma frugiperda (fall armyworm)	Loxostege commixtalis (alfalfa webworm)	Loxostege sticticalis (beet webworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Protoparce quinquefasciata (tomato hornworm)	Protoparce sexta (tobacco hornworm)	Pseudoteia unipuncta (armworm)	Spodoptera exigua (beet armyworm)	Triphoplusia ni (cabbage looper)	Major crop **	
ARKANSAS	Kelso	10/10-23				18																			
	Fayetteville	10/10-23																							
FLORIDA	Gainesville	10/22			BL	8			4										1		37				
GEORGIA	Tifton	10/17-23																							
MISSISSIPPI	Stoneville	10/18-24	48-88	-	MV	52		2		264	4	224	124												
	Stoneville	10/18-24	48-88	-	BL	114				518	8	270	288												
NEBRASKA	Bushnell	10/5-9				16																			
	Kearney	10/9-11				6		1																	
	North Platte	10/8-15				88																			
	North Platte	10/16-22				157																			
	Scotts Bluff Expt. Sta.	10/9-15				20																			
NORTH DAKOTA	Fargo	10/19-29				1																			
TEXAS	Brownsville	10/17-24			6BL	234		50		77	9	322	613												
	Waco	10/19-25			BL	11		2		127	18	175	485												
WISCONSIN	Platteville	10/15-19			BL	16																			
	Mazomanie	10/15-20			BL	83																			
	Madison	10/16-22			BL	11																			
	De Forest	10/15-21			BL	11																			

* BL = blacklight; I = incandescent; MV = mercury vapor; O = other

** alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; FC = field corn; grain = small grains; leg. = legumes (unspecified); lett. = lettuce; pean. = peanut; pepp. = pepper; pot. = potatoes; SC = sweet corn; sol. = solanaceous plants (unspecified); soy. = soybean; TC = truck crops (unspecified or mixed); tob. = tobacco; tom. = tomato.

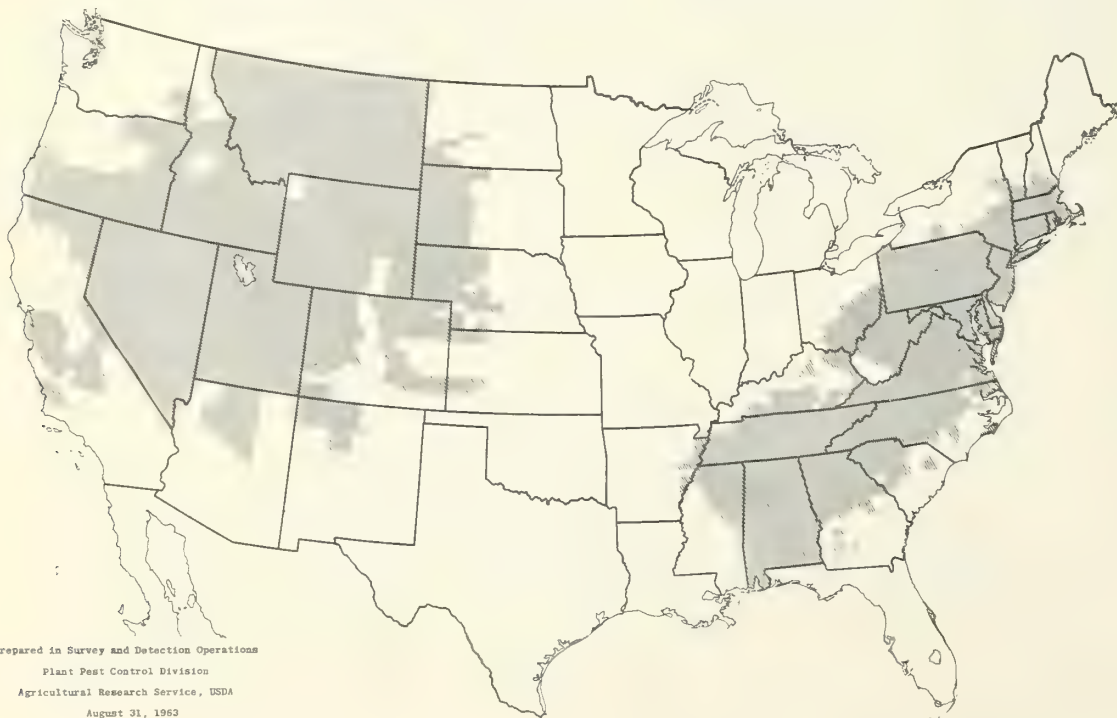
The Alfalfa Weevil in the Eastern United States

The alfalfa weevil, Hypera postica (Gyllenhal), has been known in the United States since 1904. In that year specimens were identified from Utah. It was not until 1952 that the weevil was reported in this country east of Nebraska. It had been the belief of entomologists that the weevil would not become established in the eastern part of the United States because of the difference in climatic conditions from those in its western habitat. However, in 1952, alfalfa weevil specimens were identified from Maryland. Later in the same year specimens were taken in Delaware, New Jersey, Pennsylvania and Virginia. In the succeeding years, spread of the weevil was rapid in the south and east with infestations being reported from Arkansas, Mississippi, and New Hampshire in 1963. In the Eastern United States, the weevil has now been found in 20 states east of the Mississippi River and in Arkansas west of the river. During the same period, only three new states, Kansas, North Dakota, and Washington, were reported in the West making a total of 15 states infested in that section of the Nation. The accompanying map shows the present distribution of the insect in the United States.

In order to determine the impact the weevil has had on alfalfa production in the East and South, a questionnaire was submitted to entomologists in each of the infested States in these areas. The following table is based on the information received, combined with existing U.S. Department of Agriculture records. No attempt was made to summarize the material, since it is believed the reader will obtain a much better picture of the problem and related costs if he makes a critical study of the table,

A review of the material shows a striking example of the rapid spread of an insect within a few years and how it can affect the economy of one of our important crops by reducing yield and quality as well as increasing the cost of producing the crop.

Distribution of Alfalfa Weevil (Hypera postica (Gyll.))



ALFALFA WEEVIL IN THE EASTERN UNITED STATES

State	First Rpt'd year	Alfalfa acreage year prior to weevil find	Acreage last crop reporting year	Influence of weevil on acreage reduction	Has weevil reduced hay quality	Percent hay reduction by weevil	Cuttings affected	Were insecticides applied to alfalfa prior to first report	Are insecticides used for weevil control		Percent alfalfa treated	Cost - all applications (per acre)
									Fall	Growing season		
Alabama	1958	20,000	17,000	Weevil and other production problems	Yes, first particularly	On untreated fields at least 33%	First, occasionally second	Infrequently	Yes	Yes	70%	\$2.00 to \$3.00
Arkansas	1963	35,000	--	--	--	--	--	--	--	--	--	--
Connecticut	1957	34,700	34,670	--	No	5%	First	Yes	Yes	Yes	10-15%	--
Delaware	1952	7,000	7-8,000	--	In fields where no control practiced	6% of total production 80-100% first cutting some fields	First, some times second	Infrequently (pea aphid control)	Yes	Yes	80%	\$4.50
Georgia	1958	40,000	12,000	Weevil major factor in reduction	Yes	33% (of remaining acreage)	First & second - stand killed in 1-2 years if not treated	No	Yes	Yes	90%	Fall \$3.85 to \$4.80 Spring \$7.75
Kentucky	1959	305,000	320,000	--	Some	--	First & second	Seldom	No	No	None	--
Maryland	1952	73,000	92,000 (high of 108,000 in 1959)	Possibly 5,000 fewer acres - Another factor seven percent fewer animals	Yes, heavy on first cutting	Four percent in addition to the 5,000 acres	Mainly first, some second	Limited for meadow spittlebug and potato leafhopper	Yes	Yes	90-95%	\$2.50 fall to \$5.00 spring
Massachusetts	1957	34,301	25,375 (1959)	None	Locally - not State-wide	5-20 locally	First & second	No	Yes	Yes	10-12%	\$2.00 to \$3.00
Mississippi	1963	10,000	10,000	Indication that some need control to continue to grow alfalfa	Yes	50% (in cases)	First two cuttings	Some for armyworms	--	Yes	Unknown but very little	1963 growing season - some cost \$2.50
New Hampshire	1963	35-40,000	--	--	--	--	--	--	--	--	--	--
New Jersey	1952	61,198 (1949)	86,667 (1959)	--	Yes, unless controlled	30% unless controlled	First & early second	Occasionally for aphid or spittlebug	75%	25%	90%	\$2.75
New York	1955	--	--	--	--	--	--	--	--	--	--	--
North Carolina	1955	90,000	40,000	100% responsible	Yes	50%	First, some times second	No	Yes	--	98%	\$3.20

(Continued on page 1306)

Alfalfa Weevil in the Eastern United States (continued)

State	First Rpt'd year	Alfalfa acreage year prior to last crop reporting year	Alfalfa acreage prior to last crop reporting year (1960)	Influence of weevil on acreage reduction	Has weevil reduced hay quality	Percent hay reduction by weevil	Cuttings affected	Were insecticides applied to alfalfa prior to first report	Are insecticides used for weevil control		Percent alfalfa acreage treated	Cost - all applications (per acre)
									Fall	Growing season		
Ohio	1960	189,000*	189,000 (1960)	--	Yes	30% locally	First & second 1962; first & second 1963	Yes	Little	Some in 1963	1%	--
Pennsylvania	1952	580,000	748,000	--	Yes, if weevil is not controlled	--	First & second	Yes	Yes	Yes	70%	Fall treatment \$5.00
Rhode Island	1958	--	--	--	--	--	--	--	--	--	--	--
South Carolina	1957	10,000	--	--	Slightly	50%	First cutting primarily	No, except for white grubs	Yes	Some	98%	\$5.00
Tennessee	1959	180,000	160,000	Definite influence although acreage expected to increase	Yes, destroyed first crop	20%	First mainly	No	Yes	Some	50%	\$2.50
Vermont	1962	--	116,000	None	Not as yet	Unknown	First	No	Not as yet	--	None	--
Virginia	1952	131,000	250,000	--	Yes in 1962 and 1963	10% (1963)	First mainly	No	Yes	Yes	85%	\$2.50 - \$3.00
West Virginia	1954	--	--	Considerable	Yes	30-90% in areas	First	Very few	Yes	Yes	50-75%	\$2.25

* Acreage declining since 1956

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