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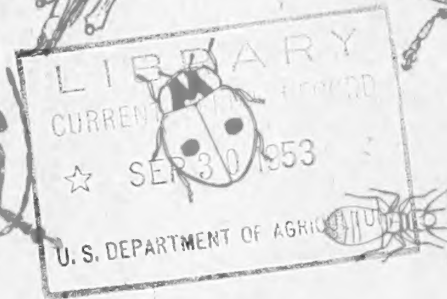


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*Cooperative*  
**ECONOMIC INSECT  
REPORT**



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**BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE  
AGRICULTURAL RESEARCH ADMINISTRATION  
UNITED STATES DEPARTMENT OF AGRICULTURE**

# **BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE**

## **DIVISION OF INSECT DETECTION AND IDENTIFICATION**

### **SECTION OF ECONOMIC INSECT DETECTION AND REPORTING**

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 Bureau serves as a clearing house and does not assume responsibility for accuracy of the material.

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Washington 25, D. C.

## COOPERATIVE ECONOMIC INSECT REPORT

## Highlights of Insect Conditions

FALL ARMYWORM and CORN EARWORM damaging cereal and forage crops in many states. (pages 696-697 ).

GREENBUG found in volunteer wheat in north central Kansas. (page 707).

APPLE MAGGOT heavier than usual in western Pennsylvania. (page 699 ).

LESSER CORNSTALK BORER widespread on blackeyed peas in lower Rio Grande Valley, Texas. Severe damage to beans on Eastern Shore, Virginia. (page 702 ).

BOLLWORMS increasing in several areas of San Joaquin Valley, California. (page 704 ).

SCREW-WORM activity in areas of Texas and Mississippi. (page 706 ).

Notes received too late for inclusion in the body of this issue (page 707 ).

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## WEATHER FOR THE WEEK ENDING SEPTEMBER 22, 1953

The main feature of the weather for the past week was the continued lack of rainfall over most of the western half of the Country. Rainfall over the eastern half of the Country was spotty, with moderate to heavy amounts in Florida, and generous showers in much of the New England States and some of the Appalachian Region. (Weather continued on page 708 ).

## CEREAL AND FORAGE INSECTS

GRASSHOPPERS - CALIFORNIA - Heavy infestations of various species in grain and alfalfa fields in Siskiyou County. Medium to light in alfalfa in Imperial County. Up to heavy infestations in alfalfa and range in Lassen County. (Coop. Ins. Pest Rept., August). WYOMING - Build-up in populations apparent over entire State, although Crook, Campbell, Weston, Niobrara, Goshen, Hot Springs and Fremont Counties are still relatively free of economic populations. Surveys to August 29 show approximately 300,000 acres of rangeland carrying threatening to very severe populations. An additional 150,000 to 200,000 acres show light population. (Cavin, Bohmont). WISCONSIN - Continue to attract major attention. (Chambers). MICHIGAN - Small area in Shelby vicinity shows population of 10-12 adult Melanoplus femur-rubrum per square yard. (Hutson).

MORMON CRICKET (Anabrus simplex) - NEW MEXICO - Appearing in epidemic numbers in Indian lands of Rio Arriba County. Most of the damage confined to forest parks in relatively small area. (Dobson, Sept. 2).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NORTH CAROLINA Has spread into two more western counties: Transylvania and Henderson. (Wray). MARYLAND - Second-generation infestation from 2 to 28 percent in Talbot County. A few third-generation eggs being deposited. Infestation from 10 to 84 percent in Caroline County. Third-generation larvae about third and fourth instars. Infestation by third generation ranged from 52 to 100 percent in Dorchester County, 20 to 100 percent in Wicomico County, 28 to 96 percent in Worcester County. (Cory, Langford, Sept. 11). DELAWARE - Most abundant and causing greatest damage in western Sussex County. (Late News).

FALL ARMYWORM (Laphygma frugiperda) - DELAWARE - Damaging ears of corn throughout southern half of State. (Late News). NORTH CAROLINA - Damage to pastures in eastern counties. (Harris, Scott). GEORGIA - Heavy infestation in ears of sweet corn in Union County. Practically destroying untreated corn; five to six larvae per ear. (Beckham, Taylor). Damaging whorls of late grain sorghum in 10-acre planting in Spalding County. (Beckham).

MISSISSIPPI - Infesting lawns and pastures in coastal counties. (Gladney). OKLAHOMA - Small numbers on sorghums and pastures. Control measures not yet necessary. (Howell). KANSAS - Moths still prevalent. (Marvin, Sept. 12). CALIFORNIA - Severe infestations in milo maize in Colusa County and in Sudan grass and milo in Butte County. (Coop. Ins. Pest Rept., Aug.).

CORN EARWORM (Heliothis armigera) - DELAWARE - Early instars very common in corn. (Late News). VIRGINIA - Very heavy on soybeans in Norfolk area, September 4. Twelve or more per linear foot of row in some fields. (Brubaker). NORTH CAROLINA - Causing considerable damage to corn in Northampton, Halifax, Pitt and Edgecombe Counties. Many peanut fields defoliated in Nash, Bertie and Edgecombe Counties. Attacking sorghum, millet, milo and soybeans in many areas. (Scott, Chesnutt, Honeycutt). GEORGIA - In combination with fall armyworm rendering untreated sweet corn worthless in Union County. Ninety-nine percent of ears infested; 5 to 6 larvae in some ears. (Beckham, Taylor). Damaging seed heads in 50 acres of grain sorghum in Spalding County. Average of 3 to 4 larvae per head. (Beckham). WISCONSIN - Continues to attract major attention. (Chambers). KANSAS - Moths still prevalent. (Marvin, Sept. 12). UTAH - Infestation on canning corn averages about 5 percent in Utah County to 1 percent in Cache County. This is one of lowest infestations on record compared with one of the highest in 1952. (Dorst). ARIZONA - Medium to large larvae fairly abundant in most cornfields observed. (Harries).

SOUTHERN CORNSTALK BORER (Diatraea crambidoides) - NORTH CAROLINA - Caused serious damage to corn and millet in Wayne County. (Kinsey).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - OKLAHOMA - Over 75 percent at Stillwater in overwintering stage. (Arbutanot).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - NORTH CAROLINA - Up to 30 percent damage in many peanut fields. Damage light until August. (Smith, Dogger).

SORGHUM WEBWORM (Celama sorghiella) - GEORGIA - Destroying heads of star millet on 11 acres in Cook County. (Morgan). Average of 3 to 4 larvae per head in 50 acres of grain sorghum in Spalding County. (Beckham). MISSISSIPPI - Destroying heads of sorghum grown for seed. (Hutchins).

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) and RICE WEVIL (Sitophilus oryza) - NORTH CAROLINA - Damage noted in ears of corn in the field in Halifax, Pitt, Edgecombe, Bertie and Wilson Counties. (Scott, Jones).

ELONGATE FLEA BEETLE (Systema elongata) - NORTH CAROLINA - Larvae have apparently caused more damage to peanuts than for any year on record. (Dogger, Scott).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - FLORIDA - Light to medium damage to peas and velvetbeans in Leon and Jefferson Counties. Also heavy feeding on kudzu in these counties. (Frederic).

HESSIAN FLY (Phytophaga destructor) - CALIFORNIA - Summer harvest of barley and wheat reduced 10-20 percent in parts of San Diego County. (Coop. Ins. Pest Rept., Aug.). OREGON - Localized damage to spring wheat in northern Willamette Valley. (Every).

A CLOVER CASEBEARER (Coleophora spissicornis) - CALIFORNIA - Outbreak conditions in clover fields have occurred in Sacramento Valley during year. One field 100 percent damaged in August. (Coop. Ins. Pest Rept.).

LYGUS BUGS - CALIFORNIA - Lygus hesperus heavy in alfalfa fields in parts of Siskiyou County; light in clover and alfalfa in Glenn County. (Coop. Ins. Pest Rept., Aug.).

ALFALFA WEBWORM (Loxostege commixtalis) - KANSAS - Appearing over most of State. New alfalfa seedings show general infestation. (Marvin, Sept. 12).



THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - MISSISSIPPI - Damage to lespedeza rather widespread in some sections. (Bennett).

TWO-SPOTTED SPIDER MITE (Tetranychus bimaculatus) - CALIFORNIA - Severe damage to alfalfaseed crop in Colusa County. (Coop. Insect Pest Rept., Aug.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - CALIFORNIA - Moderate damage in parts of San Diego County. Severe infestations in Kern County. (Coop. Ins. Pest Rept., Aug.).

SOD WEBWORMS - OREGON - Adults more prevalent than for past two years. (Every).

A MEALYBUC (Phenacoccus sp. n.) - CALIFORNIA - New species taken on ryegrass in Berkeley, Alameda County, July 22, 1953. Nothing is known about its economic importance; however, other species of the genus are serious pests. (Armitage).

A CATERPILLAR (Mocis sp.) - GEORGIA - Heavy infestation destroying foliage in 30-acre grass pasture in Berrien County. Pupal cases on grass blades making pasture unfit for grazing. (Morgan).

AN ARMYWORM - FLORIDA - Heavy damage to pasture at Florida-Georgia line north of Monticello on US Highway 19. (Frederic).

#### FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - PENNSYLVANIA - Heavier in southwestern area. (Udine).

APPLE MAGGOT (Rhagoletis pomonella) - PENNSYLVANIA - Much heavier than usual in western area. (Adams, Udine). Moderate infestation in eastern counties. (Gesell).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - PENNSYLVANIA - Increasing in southwestern area. (Udine).

LESSER APPLEWORM (Grapholita prunivora) - PENNSYLVANIA - Infestation in Grimes apples in Fayette County. (Udine).

WALNUT CATERPILLAR (Datana integerrima) and FALL WEBWORM (Hyphantria cunea) - OKLAHOMA - Larvae less numerous this year than last. Defoliated approximately 5 percent of persimmons, black walnut, and pecans in eastern and central areas. (Howell).

BLACK-MARGINED APHID (Monellia costalis) - ARIZONA - Very heavy in pecan groves in Graham and Yuma Counties. Practically all commercial groves in Graham County have been treated; however very little control applied in Yuma County. Pecan trees in Phoenix area also heavily infested and infestation occurred at earlier dates than normal. (Mendennall).

SPIDER MITES - CALIFORNIA - Tetranychus pacificus severe on prunes and walnuts in Colusa County. (Coop. Ins. Pest Rept., Aug.).

SHOT-HOLE BORER (Scolytus rugulosus) - MICHIGAN - Very severe on young cherry trees at Shelby. (Hutson).

PLUM CURCULIO (Conotrachelus nenuphar) - PENNSYLVANIA - Generally heavier than usual. (Pepper).

CITRUS PESTS- CALIFORNIA - Citrus bud mite (Aceria sheldoni) increasing in coastal lemon orchards in southern areas. Citrus rust mite (Phyllocoptruta oleivora) heavy in some orchards in San Diego County. Citricola scale (Coccus pseudomagnolarium) heavy in Kern and parts of Fresno County. Some severe infestations in Tulare County. Black scale (Saissetia oleae) reported generally under good biological control. Yellow scale (Aonidiella citrina) infestations ranging up to severe in Tulare County. (Coop. Ins. Pest Rept., Aug.). FLORIDA - Purple scale (Lepidosaphes beckii) increasing and further increase expected. Florida red scale (Chrysomphalus aonidium) activity increasing as hatch continued. Further increase expected, but apparently infestations will not be generally high this fall. Citrus red mite (Metatetranychus citri) activity increasing but no major trend expected to develop during September. Citrus rust mite activity high. (Pratt, Thompson, Second Wk. Sept.).

TRUCK CROP INSECTS

**APHIDS - CONNECTICUT** - Infestations serious on crucifers, September 3. (Minnum). **PENNSYLVANIA** - Potato aphid (Macrosiphum solanifolii) and green peach aphid (Myzus persicae) increasing rapidly on potatoes. Cabbage aphid (Brevicoryne brassicae) increasing rapidly. Heavy infestations in some sections. (Pepper). **NORTH CAROLINA** - Cabbage aphids numerous in all fields inspected in mountain counties. Severe damage could occur if control measures not applied. (Scott). **UTAH** - Less numerous than normal on potatoes and celery in northern area. (Knowlton).

**CABBAGE CATERPILLARS - DELAWARE** - Cabbage looper feeding heavily on broccoli in Milton and Middletown areas. Eggs and small larvae generally numerous. Large acreage of late cabbage damaged east of Dover. (Late News). **VIRGINIA** - Increasing in untreated plantings in eastern area. (Brubaker, Greenwood, Hofmaster). **FLORIDA** - Imported cabbageworm (Pieris rapae) prevalent on fall collards in Gadsden County. (May). **WISCONSIN** - Continue to attract major attention. (Chambers). **ARIZONA** - Cabbage looper (Trichoplusia ni) eggs and small larvae becoming numerous on young lettuce in Salt River Valley. As high as 10 eggs and 1 to 2 larvae per plant. (Taylor).

**GARDEN FLEAHOPPER (Halticus bracteatus) - FLORIDA** - Abundant on young turnip and snap bean plantings in Gadsden County. Feeding damage increased by extremely dry weather. (May).

**SEED-CORN MAGGOT (Hylemya cilicrura) - OKLAHOMA** - Adults appearing in small numbers in spinach-growing area of eastern counties. Twenty to 30 flies taken per bait trap daily. (Walton).

**BEE T ARMYWORM (Laphygma exigua), YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli), and CUT WORMS (Agrotis ypsilon and Feltia sp.)** infesting fields of lettuce and sugar beets in Salt River Valley, ARIZONA. Insecticides necessary. (Taylor).

**CORN EARWORM (Heliothis armigera) - DELAWARE** - Damaging foliage and pods of late limas from Milford and Milton southwestward to Bridgeville. Severe damage at some places. (Late News).

MEXICAN BEAN BEETLE (Epilachna varivestis) - DELAWARE - Injurious east of Milton. (Late News). VIRGINIA - Hatching in Norfolk area. Unless adequate control measures employed considerable damage will probably result, (Brubaker, Greenwood, Hofmaster). NORTH CAROLINA - Considerable damage to snap beans in eastern counties. (Scott). GEORGIA - All stages numerous on green beans, lima beans, and cowpeas in Union County. (Taylor, Beckham).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Light to severe widespread infestation on blackeyed peas over entire lower Rio Grande Valley. (Wene, Griffith). VIRGINIA - Reducing stands of young beans on Eastern Shore and in Norfolk area. Fields of cowpeas and snap beans on Eastern Shore show stands reduced 50 percent or more. (Brubaker, Greenwood, Hofmaster).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - Curly top averages from 3 to 5 percent on canning tomatoes. This is about one-third to one-fifth of last year's infestation. (Dorst). ARIZONA - Populations average two leafhoppers per foot of row in some sugar beet fields in Salt River Valley. Insecticides applied in some fields. (Taylor).

SUGAR-BEET NEMATODE (Heterodera schachtii) - WISCONSIN - Found for time in Kenosha County. (Chambers).

POTATO PSYLLID (Paratrioza cockerelli) - UTAH - More abundant than usual this season. (Knowlton).

EUROPEAN CORN BORER still causing extensive injury to plantings of pepper on Eastern Shore, VIRGINIA. CORN EARWORM and FALL ARMYWORM also causing severe damage to this crop. (Brubaker, Greenwood, Hofmaster).

TOMATO RUSSET MITE (Vasates destructor) - CALIFORNIA - Light to medium infestations in tomatoes in Santa Barbara County. (Coop. Ins. Pest Rept., Aug.). UTAH - Observed in small spots in five tomato fields in Davis County. Damage light as infestations controlled before spread occurred. (Dorst).

TOMATO FRUITWORM (Heliothis armigera) - UTAH - Infestation extra light on tomatoes this year. No dust applied in northern area. (Dorst).

TOMATO HORNWORM (Protoparce quinquemaculata) - TEXAS - Medium widespread infestation on tomatoes in Cameron County. (Wene, Griffith).

SUCKFLY (Dicyphus minimus) - NORTH CAROLINA - Caused severe damage to tobacco in Granville and Wake Counties. (Jones).

GRASSHOPPERS - NORTH CAROLINA - Attack on tobacco has been less severe than usual. Some damage in localized areas. (Black, Nau, Scott).

BUDWORMS (Heliothis spp.) - NORTH CAROLINA - Heavy infestations on tobacco reported from many areas; however, the attack, coming late in the season, generally has not caused heavy economic losses. (Rabb, Scott).

FLEA BEETLES - NORTH CAROLINA - Reports from western counties indicate continued severe damage to tobacco. (Nau, Scott).

A MINT FLEA BEETLE (Longitarsus waterhousei) - OREGON - Collected abundantly in Columbia County. First record for county, although insect known for many years in other western counties where mint is grown. (Every).

A PYRRHOCORID (probably Euryophthalmus cinctus) - OREGON - More abundant than usual, primarily on cane fruits but also abundant in gardens. (Every).

### COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - NORTH CAROLINA - Infestations have been higher and damage more severe than any year since 1950. Many larvae, pupae and adults noted in almost all fields. There will be a considerable difference in yield in favor of treatment in most counties in spite of dry conditions. (Scott, Jones).

PINK BOLLWORM (Pectinophora gossypiella) - TEXAS - Gin trash inspection completed in 10 central counties. On basis of pink bollworms per bushel 8 of these show some increase over last year.

County	PBW per Bu.		County	PBW per Bu.	
	1952	1953		1952	1953
Anderson	.43	.14	Limestone	.01	.06
Falls	.29	1.00	McLennan	.24	.41
Freestone	.17	.40	Navarro	.09	.02
Henderson	.11	.48	Robertson	.009	.08
Lee	.28	12.93	Travis	.98	25.96

Continued inspections in ALABAMA, GEORGIA, FLORIDA, MISSISSIPPI, LOUISIANA, and on the west coast of MEXICO have given negative results insofar as pink bollworm is concerned. Two inspection parties began work in southwest ARKANSAS early in the week. Results there have also been negative. (Jeffrey).

BOLLWORMS (Heliothis spp. et al) - CALIFORNIA - Decided increases in larval counts in Fresno, Clovis, Kerman and Stratford areas, while egg counts increasing in Tulare vicinity. (Heffernan, Fernandez, Roullard, Sept. 12). Very severe outbreak with damage as high as 80 percent reported in eastern Riverside County during August. (Coop. Ins. Pest Rept.). ARIZONA - Light infestation in Buckeye area, Maricopa County. (Stevenson et al).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - CALIFORNIA - Increasing particularly in Pond, Earlimart, Tulare Lake and Linder regions. Infestations coming from hay fields being cut as well as oviposition directly in cotton. Considerable predatism and parasitism of eggs. (Heffernan, Fernandez, Roullard, Sept. 12).

COTTON LEAFWORM (Alabama argillacea) - GEORGIA - Moderate to heavy infestations defoliating cotton in Spalding County. (Beckham). Defoliation general south of Fort Valley. (Moore). Light infestations north of Macon. (Alden).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - ARIZONA - Very serious in some fields in Yuma County and if not controlled may cause considerable injury. Salt-marsh caterpillar involved in some fields. Cotton leaf perforator also causing some injury and continuing to spread in Pinal County. (Roney, Stevenson).

SPIDER MITES - NORTH CAROLINA - Heaviest infestation for many years occurred this season. In some counties infestation assisted in speeding up harvest time by defoliating plants; in other counties it was believed that some "top crop" cotton was lost due to early defoliation. (Scott, Gast). CALIFORNIA - Connected with warmer weather, build-up occurring in Helm, San Joaquin and Tranquillity areas. (Heffernan, Roullard, Fernandez, Sept. 12).

APHIDS - CALIFORNIA - Potential for rather general infestation remains unchanged. No serious "honeydewing" reported. (Heffernan, Fernandez, Roullard, Sept. 12). ARIZONA - Continue the major insect problem in Graham County. Control measures underway in most fields. Some also showing up in Cochise County. (Roney).

A STINK BUG (Euschistus impictiventris) - ARIZONA - Light general infestation in Buckeye area, Maricopa County. (Stevenson et al).

CORRECTION: Vol 3, no. 38, page 690, line 5, should read "... only 750 lygus, but 2100 predators in 10,000 sweeps."

#### FOREST INSECTS

FALL WEBWORM (Hyphantria cunea) - PENNSYLVANIA - General over State, heavier in east part. (Pepper).

JUNIPER SCALE (Diaspis carueli) - MICHIGAN - Causing concern in Lansing, Jackson, Battle Creek and Grand Rapids vicinities. (Hutson).

TENT CATERPILLARS - OREGON - Frequency with which egg masses being found indicates possible outbreak in 1954. (Every).

MIMOSA WEBWORM (Homadaula albizziae) - PENNSYLVANIA - Honey locust defoliated in southern area. (Pepper).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Pine stands in mountain counties, especially Catawba and McDowell, severely attacked. (Speers).

AN OAK BORER (Agrilus sp.) - NORTH CAROLINA - Has damaged trees in upper Piedmont, especially in drought areas. (Ford).

### INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (Callitroga hominivorax) - TEXAS - Cases in southwest area confined primarily to sheep and goats. Infestations in general have been relatively low throughout summer, possibly lower than normal for area. A slight increase in infestations may be expected the latter part of September or early October if sufficient moisture is present. MISSISSIPPI - Has appeared in several counties. Heaviest infestation centers in Warren County and western half of Hinds County. Case incidence in Warren County was approximately 1 percent with other counties much lower. A severe outbreak is not expected to develop as adequate remedies for treatment of wounds are available to farmers and stockmen. Available information indicates infestations may be result of infested animals being shipped into State. (Smith).

HOUSE FLY (Musca domestica) - NORTH CAROLINA - Few reports of serious outbreaks or high populations in houses have been received. (Scott). FLORIDA - Heavy increase in population in Gadsden County area. (Guthrie). TEXAS - Populations have increased considerably in Kerrville area. (Smith).

HORN FLY (Siphona irritans) - NORTH CAROLINA - More serious this year than for several years, especially in mountain counties. (Scott).

### BENEFICIAL INSECTS

CALIFORNIA - Klamath weed beetles (Chrysolina spp.) very effective in areas on Salmon and Klamath Rivers in Siskiyou County, but results following introduction in Scott Valley disappointing. A blue milkweed beetle (Chrysochus cobaltinus) very prevalent on woolly-podded milkweed in Siskiyou County. An abundance of predaceous



mites of purple scale reported from Orange County. *Stethorus picipes* developing rapidly on Paratetranychus coiti infestations on avocados. Fair control of mites in cotton fields in Fresno County by predators. (Coop. Ins. Pest Rept., Aug.).

#### STORED-PRODUCTS INSECTS

STORED-GRAIN INSECTS - NORTH CAROLINA - Rapid increase in populations during late summer in many farm bins. Cadelle, saw-toothed grain beetle, confused flour beetle, Indian-meal moth and psocids observed in wheat in a warehouse in Pitt County. (Jones). PENNSYLVANIA - Moderate infestation of cadelle, saw-toothed grain beetle, and a grain beetle (Ahasverus advena) in grain storage in Lycoming County. (Gesell). KANSAS - Angoumois grain moth in stored wheat reported from Chase County. Indian-meal moth abundant around storage bins in central area. (Gates).

#### MISCELLANEOUS INSECTS

BOXELDER BUG (Leptocoris trivittatus) - MICHIGAN - Very numerous over lower peninsula. Particularly annoying at Pontiac, Flint, Lake Orion, Mt. Clemens and Ionia. (Hutson).

A CHLOROPID (Thaumatomyia annulata) - WISCONSIN - This fly infesting number of homes in Iron County. (Chambers).

#### ADDITIONAL NOTES

KANSAS - GREENBUG found in volunteer wheat in north central counties. SOUTHERN MASKED CHAFER (Cyclocephala immaculata) - as high as 35 grubs per square foot in soil ready for fall seeding of wheat in Rice County. Similar reports from Cloud and Ottawa Counties indicate grubs in wheat fields may be quite abundant in central area. SOUTHWESTERN CORN BORER found in Phillips, Osborne, Mitchell, Cloud, Ottawa, Riley, Pottawatomie, Wabaunsee, Morris, Marion, McPherson and Crawford Counties. Infestation extends several counties farther north than for past few years.

CORN EARWORM continues problem on heading sorghums in northern counties. GRASSHOPPERS - second-generation Melanoplus mexicanus mature and abundant enough to cause damage to fall-sown alfalfa and wheat. (Gates).

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Weather Continued:

It was unusually hot in the central Great Plains on the 17th, and in the Midwest on the 18th. Concordia, Kans., and St. Joseph, Mo., reported 102° on the 17th, and Evansville, Ind., and Louisville, Ky., recorded 98° and 99°, respectively, on the 18th. It was hot all week in the far Southwest and until the last 2 days in California where the temperature reached 109° at Red Bluff on the 13th and 14th.

A mass of cool Canadian air spread into the Northwest on the 17th. By the 22d it had spread to the Atlantic and Gulf Coasts. Freezing temperatures were reported on the 21st in the Dakotas, Montana, and Nebraska, and frost was reported in northern Iowa, and portions of the States bordering the Great Lakes, and in the higher elevations of the Rocky Mountain States. (Summary Supplied by U. S. Weather Bureau).

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Reports in this issue are for the week ending September 18, unless otherwise designated.



