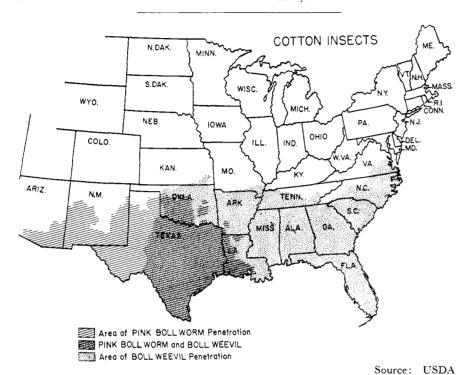
dieldrin, and some others are not given. These chemicals are produced by single manufacturers who do not release production, capacity, and sales information. Furthermore, USDA's statistics cover only the past four years. A hopeful sign pointing to improvement in this situation is that Dr. Shepard reports the industry as becoming more and more cooperative in furnishing data on operations

How much total sales and profits were down is difficult to estimate (see chart). Most producers of basic toxicants also produce other chemical materials and seldom give breakdowns of total sales in their annual reports in such a way as to indicate the dollar volume of agricultural chemical sales, although most of them have stated in letters to stockholders that business was poor in the ag chemicals field last year.



# Cotton Insects, Grasshoppers, Corn Borer, And Army Worm Still Major Threats

Generally it is still too early in the year to predict accurately the pests which will emerge as major problems this year. The weather in the various regions is perhaps the predominant factor in any insect outbreak. However, it is possible to estimate what might be major threats.

The cooperative insect report, issued by the insect plant pest control branch of the Agricultural Research Service, is a weekly survey of insect infestations by geographical regions of the U.S. This survey is the one centrally coordinated source on insect infestations for the U.S.

# Cotton Insects

The boll weevil is still unchallenged as the principal insect enemy of the cotton crop. Better moisture conditions in the cotton region could be an indication that there will be a resurgence of the boll weevil.

For Georgia, hibernation counts made last fall indicated that the level of infestation was about 40% higher than the previous year. The general level of

infestation for the state was about 5000 weevils per acre. The situation this year will depend upon the effects of the winter weather on the larvae and the weather in the early part of the cotton growing season.

Infestations in Tennessee are expected

Infestations in Tennessee are expected to be lower than in the previous two years. South Carolina also reports a low level of boll weevil infestation.

#### Pink Bollworm

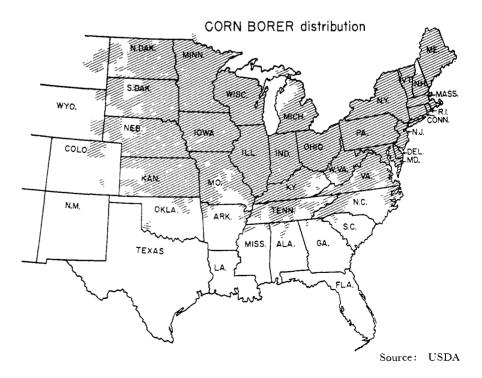
The pink bollworm infestation in southern Texas will probably be down again this year. Inspection of surface debris and bolls in the fields at the beginning of the year indicated a lighter infestation than the previous two or three years. In the north and central regions of Texas the frosts of January may have appreciably reduced the numbers of bollworms overwintering. The USDA does not have its survey completed but it seems possible that the pink bollworm will be down for the first part of the growing season.

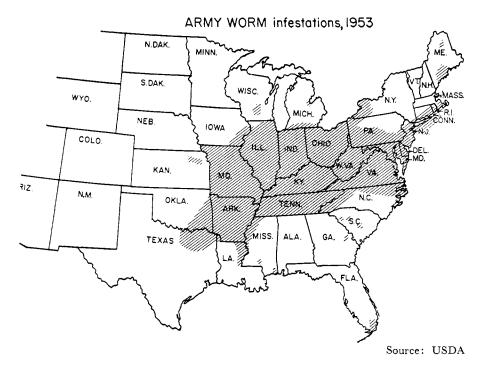
#### Corn Borer

The European corn borer is now present as a crop menace in most of the northeastern quarter of the country. Last year 11 states reported new infestations in 55 counties which had previously been free of the corn borer. The most heavily infested areas are the junction of eastern South Dakota, northeastern Nebraska, and northwestern Iowa and a band across the state of Illinois.

## Army Worm

Army worm outbreaks are almost completely dependent upon weather





conditions. The cool wet weather last spring combined with the relatively mild winter were the major factors contributing to the outbreak of army worms throughout the Ohio-Mississippi Valley and the Mid-Atlantic Coast. The army worms generally move up from the midsouth in the spring. Both the army worm and the fall army worm are effectively controlled by DDT and toxaphene sprays and dusts.

### Grasshopper

According to the USDA there are critical build-ups of grasshoppers in several areas of the West, including central New Mexico, south central Colorado, central Idaho, and the panhandle area of Oklahoma and Texas. Infestations serious enough to warrant a large scale control program on the range lands are reported for 13 western states.

The greatest increase in grasshopper populations appears to be in Missouri and Wisconsin. On the crop lands of the West the infestations are generally local and scattered.

The crucial factor in the grasshopper outlook for 1954 will be the effectiveness of the range land control programs. This campaign, aimed at killing off the first generations which hatch and breed in the waste lands in the early spring, generally holds the hoppers in check. However, there is always the possibility that under proper conditions they can break out into the crop lands in the late summer.

# Mormon Crickets

Mormon crickets may also pose control problems in the western states.

According to the insect report about 122,000 acres of land in Montana, Utah, Nevada, California, and Washington are infested. Most of these buildups are on the public lands, with the most serious infestation in parts of Utah. The USDA has scheduled a control program for the Utah area this spring.

In addition to the USDA insect report the following local reports were obtained by the AG AND FOOD staff in its industry survey.

The development of resistant insects may have an effect on this year's market for insecticides. Potato beetles and cabbage worms have developed a resistance to DDT similar to the fairly well established strains of DDT-resistant houseflies. In the Midwest the clover insects such as the clover leaf weevil and grasshoppers and the grain insects; chinch bug and corn borer will probably be the major pests. The greenbug is considered to be a pest in the winter wheat region of Kansas, Missouri, Oklahoma, and the Texas Panhandle.

Some of the other insects which may give trouble in the Middle West include: chinch bug, Arkansas, Missouri, Illinois, and Indiana; corn root worm, Nebraska, Illinois, Iowa, and Kansas. The codling moth and red spider will be trouble-some throughout the area. In the Northeast the gypsy moth is developing as a major threat to the trees in certain areas. Connecticut is anticipating a record outbreak. The codling moth, mites, and apple scab are also threatening the apple crop.

#### Screw Worm

The screw worm causes an estimated loss of \$15 million per year to livestock. The destructive pest is the larva of a fly which is somewhat larger than the housefly. The fly lays as many as 300 eggs on wounds in livestock. The maggots hatch from the eggs and feed on the flesh of the animal.

The screw worms cannot survive cold weather, and usually overwinter in southern Texas, Florida, and California.

Last year the screw worms were particularly severe due to the fact that they seem to have overwintered about 150 miles north of their usual range. The mild winter permitted the northward spring migration to begin a month ahead of normal.

