

ENTOMOLOGY

Grasshoppers Will be Bad This Summer, Survey Shows

GRASSHOPPERS are going to be bad this summer in the great wheat states of the West, if the insects continue to develop at the rate they have started this spring. This is indicated by a survey just completed by field research men of the Bureau of Entomology, U. S. Department of Agriculture.

Survival of eggs in the soil through the winter was practically perfect in all the Great Plains states, Dr. W. H. Larrimer, principal entomologist in charge of the division of cereal and forage insects, informed Science Service. Hatching began in the middle of May. For a time it was checked by the cool, wet weather, though the eggs still remain undamaged. But with the sudden onset of hot weather hatching resumed at accelerated speed.

The prospects are worst in North Dakota, although in South Dakota conditions are worse than was expected. In Minnesota the insects are fewer, because last summer's active poison warfare reduced the breeding stock. From these northwestern states the grasshopper situation is grave, all the way south to Arizona, where it is more serious than at any time in the past fifteen years.

The grasshoppers can be effectively fought by the distribution of sweetened bran baits poisoned with arsenic. This is usually done by the farmers, with aid from the states or counties. However, with the fiscal affairs of all states none too good and some of them desperate, the munitions of warfare may be lacking at exactly the points on the battle line where they are most needed.

Thus, South Dakota has prospects for an unusually severe attack by the enemy, and no money at all to finance a defense campaign. Minnesota, on the other hand, with fewer 'hoppers, still has funds to provide protection for her fields.

There are four principal species of grasshoppers that figure as real crop pests, and all are active this spring. They are known as the two-striped grasshopper, the warrior grasshopper, the differential grasshopper, and the lesser migratory locust. The latter is a relative of the old-time plague, the Rocky Mountain locust.

Other insect pests are also spreading

damage. Mexican bean beetles have been discovered at Monticello, Fla., and in southern Mississippi. This is the first southward extension of their holdings since their first discovery in northern Alabama in 1919.

Among enemies of cereal crops, the chinch bug and the corn ear worm figure prominently; fruit aphids and plum curculio are raiding orchards, while the messy webs of the tent caterpillar are disfiguring roadside trees all the way from Maine to Maryland.

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ARCHAEOLOGY

Grave of Young Girl Opens Fashion Mystery

FOUND—young girl's body in an oak coffin. This discovery in Denmark has opened up a scientific mystery. Archaeologists are puzzled, not to account for the girl's death, but to account for her unusual costume.

When the coffin was opened it showed a girl of the Bronze Age, with fair bobbed hair and a short skirt. That was as surprising to the archaeologists as if

CHEMISTRY

Alcoholized Gasoline Inferior, Says Petroleum Chemist

ALCOHOLIZED gasoline, advocated by groups of agricultural interests as a means for using up some of the surplus grain crops, is vigorously attacked as an inferior fuel at an increased cost, by Dr. Gustav Egloff of the Universal Oil Products Company, Chicago. He states that the American Automobile Association has made road tests using a ten per cent. alcohol blend motor fuel, which show decreased efficiency of about six per cent. when compared to gasoline.

"My own personal tests," he adds, "with alcohol blends purchased in the open market at Peoria, showed definitely that there is a mileage decrease per

they had opened an American grave of 1776 and found a colonial maid with bobbed hair and knee length dress. The usual Bronze Age styles are well known, from previous tomb discoveries. Women and girls in northern Europe, centuries before Christ, ordinarily wore sedate, long dresses and long hair neatly caught in a net.

France, the land of fashion, is appropriately enough trying to solve the Bronze Age fashion puzzle. In the scientific journal *L'Anthropologie* M. R. Lantier suggests that the short skirt may have been a religious costume, or else a house dress.

When a young girl made offerings to the gods in ancient Denmark, she may have worn this special costume, and if a young priestess died, she perhaps had the privilege of being buried in her official dress. M. Lantier's reason for this theory is that votive figures have been found wearing similar costumes.

The girl's costume was of brown and bronze. Her fair short hair was bound with a fillet of wool. A short jacket of brown wool reached to the hips. Her knee-length skirt was made of intertwined, twisted strings, like a fringe, held in place at the bottom by a lacing. A tasseled belt of wool was fastened at her waist. A bronze earring was in her left ear, and bronze bracelets at her wrists. At the head of the body was a box made of bark containing the cremated remains of a child about seven or eight years old.

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gallon when using the blend, compared with gasoline."

Dr. Egloff's conclusions contradict those of the advocates of alcoholized gasoline almost point for point. They claim snappier starting; he states that starting is made more sluggish. They claim better acceleration; he declares that the alcohol blend gives poor acceleration. They claim more miles per gallon; he states that the new fuel gives a lower mileage. And so on for a dozen other vital points in fuel performance.

A source of trouble, in Dr. Egloff's opinion, will be the active solvent properties of alcohol. "When blended with gasoline it has a solvent, cleansing and

loosening action on the metal parts of the tank, fuel lines and carburetor, particularly when the float is of cork shel-laced type," he says. "The blend is also markedly corrosive to galvanized parts. The sediment carried down by the alco-hol fuel tends to plug up feed lines, filters and jets giving endless difficulty."

Dr. Egloff, as well as a number of his colleagues, hold that if alcoholized gaso-line comes into general distribution it will add to Uncle Sam's troubles in reg-ulating the beverage alcohol traffic. While alcohol will remain blended with gasoline so long as little or no water is present, it can be separated out by the addition of water. It is claimed that bootleggers will make any "gas" tank a source of "alky," leaving the complaisant tank owner still in possession of de-alcoholized but still saleable gasoline.

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MUSEOLOGY

Museum Makes Debut As Conference Scene

LONDON'S new Museum of Practical Geology had a strange debut for a museum, June 12.

Halls built for the proud display of gold and other mineral treasures of the British Empire found their first use as a stage for talk about gold and the world resources available in battling a world depression.

Construction of the new museum building was hastened to completion so that the fifteen hundred delegates to the world economic conference might move in. Exhibit halls have been turned into conference rooms, reception rooms, and lounges for the delegates. The great central hall is the formal meeting place for the sessions, with rows of desks installed and a dais where the King of England stood on the opening day to greet the conferees.

The institution which will take over the new building when the conference departs has a history of almost a century back of it. It was established in 1837, through efforts of the founder of Eng-land's Geological Survey, to preserve specimens of ore and metals and gem stones collected by the Survey. A few years later the collection moved into a building erected especially for it, where it has remained until the present.

Its new home is a dignified structure of white stone located between the Science Museum and the Natural His-tory Museum in South Kensington.

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MEDICINE

Tannic Acid Bath Features Modern Treatment of Burns

A THREE-HOUR bath in tannic acid during which the burns be-come well tanned is a feature of the modern treatment of extensive burns as described by Dr. Donald B Wells of Hartford, Conn., at the meeting of the American Medical Association.

The use of tannic acid relieves the pain sufficiently so that the burned areas can be thoroughly cleaned. In this way infection can be prevented. Infection alone was the cause of the exhausting illness, many of the complications and a majority of the deaths from burns in the old days, in Dr. Wells' opinion.

The person with extensive burns is placed in a large tub of tannic acid solu-tion, according to Dr. Wells' plan of treatment.

"He receives quantities of liquids to drink, in order to balance the loss of water. As soon as his pain is some-

what relieved, several attendants begin to work. For three hours they remove burned tissue as the solution loosens it and clean unburned areas with soap and water.

"By the time the patient is ready to be placed in bed a tan has formed over the burned portions. Then for seventy-two hours warm air is blown on him from an ordinary hair drier, while he is more or less constantly sprayed with tannic acid solution. After this the blow-er is used alone until the tissue has be-come perfectly firm, for only a little perspiration may break it and invite invasion by germs," Dr. Wells ex-plaind.

The method is especially successful in burns from gasoline explosions, ignited clothing and extensive scalds, he said. It can be used in any good hospital.

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