

Africa. It will also be widely used in Norfolk, Va., to eradicate the white-fringed beetle, a native of South America that attacks all kinds of plant life.

A sex attractant will be used to lure male pink bollworm moths to insecticides or sterilizing chemicals as result of research of U.S. Department of Agriculture tests at Torreon, Mexico. The larvae of this insect feed on cotton bolls. Natural sex lures have been identified for other insects, such as the gypsy moth and the cockroach.

Scientists at the University of Hawaii have learned that plant-attacking insects can be killed, attracted or repulsed by ultrasonic waves. Male mosquitoes can be lured into an electrified screen by a sound imitating the noise of a female mosquito's wings. Flies are repulsed by the sound of a rubber stopper turning in a bottle. A sonic screen of sound resembling the ultrasonic cry of a bat could keep pest moths from attacking orchards.

Research on a Sonic Weapon

Although many of these methods are in the development stage, the research is continuing to develop a sonic weapon that would be specific for insect pests and economical to use.

Every year about a billion and a half

acres in the U.S. are treated in some degree with weed-killing chemicals. They are used in 33 million U.S. family gardens. On the farms the average yearly loss of crops due to weeds is estimated at about five billion dollars, while millions are spent in suburbia on weed-killers.

New chemicals on the market for this year's crop include:

Dichlobenil, effective for Spanish needles, ragweed, tearthumb, several grasses and other weeds in cranberry bogs.

Eptam, Stauffer R-1607, Tillam and Casoron for marigolds and petunias. These insecticides are effective against yellow foxtail, tumbleweed, lambsquarter, winter cress, Pennsylvania smartweed and hairy crabgrass.

Atrazine for quackgrass control in cornfields.

Monobor-Chlorate-Granular, a water-soluble compound, effective against Johnson grass and Dallis grass.

Titrac, a liquid herbicide for economical control of deep-rooted weeds, MCPB for 95% effective removal of Canada thistle in pea crops.

In addition to weed control among crops, herbicides are being used to clear waterways of clogging weeds and roadsides of fire-causing brush and undergrowth.

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ENTOMOLOGY

Tiny Wasp Battles Major Citrus Pest

➤ ONE OF FLORIDA'S most destructive citrus pests is losing its battle for existence to a tiny gnat-like wasp.

The parasitic wasp, imported from Israel, is "becoming an important factor in the biological control of Florida red scale," reports Dr. Martin H. Muma, University of Florida entomologist. In Israel the insect effectively controlled the same insect pest in two to three years.

The scale-fighting wasp was introduced in Florida in 1960. It has spread from central Florida to the east and west coast areas and as far south as Miami. The high winds of hurricane "Donna" are thought to have increased the spread of the insect.

The wasp parasite, *Aphytis holoxanthus*, was imported into Israel from Hong Kong. U. S. breeding stock of the wasp came directly from Israel.

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AGRICULTURE

Grapes to Be Harvested By Special Machine

➤ BACCHUS and a few connoisseurs may rebel, but the machine age is even taking over one of man's ancient sources of pleasure—the grape.

After five years of research and experimental efforts, scientists at Cornell University have come up with a complicated machine that will do the work of 25 people in harvesting grapes. Now in the last stages of remodeling, this device successfully removes more than 95% of the fruit, Prof. E. Stanley Shepardson, agricultural engineer at the N. Y. State College of Agriculture, reported.

As the machine moves continuously along a row of vines, a vibrating, freely rotating spiked wheel shakes the wire and the grapes drop from the bunches. Grapes must be grown hanging from single wire supports for this harvester. An air blast removes leaves and other debris, and then the grapes are stemmed and pumped to a container for transport to the factory.

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AGRICULTURE

Taste "Juries" Test Ripeness of Fruit

➤ JURIES of people who like fruit are the best taste meters. They are helping scientists devise a ripeness test for peaches, plums and pears which often look ripe before the pleasing taste has developed.

Fruit farmers need to know how ripe the fruit must be in order to be acceptable to consumers and then have a quick way to measure the ripeness. The best means found so far are two old ones, testing of sugar content and softness of fruit. Research on these two at the University of California, Davis, has established a "breaking point" for the fruit, after which it will ripen after picking.

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MEDICINE

TB-Like Germ From Fowl

➤ A STRANGE, new drug-resistant germ that causes a tuberculosis-like disease in man may come indirectly from chickens and other fowl.

Scientists at the University of California, Los Angeles, and the Olive View Hospital at Los Angeles, have found a marked similarity among certain bacteria from chickens and a TB-like germ known as the "Battey" strain. Similar bacteria were also isolated from swine.

Conducting the study were Lois A. Scannon and Drs. M. J. Pickett, Seymour Froman and Drake Will.

The "Battey" strain of bacteria causes progressive lung disease in humans but is quite different in many respects from the true tuberculosis germ.

The new germ has been a problem recently in many parts of the world, including the southeastern part of the United States. Drugs that have been effective against tuberculosis bacteria have frequently not been effective against the new germ.

One clue pointing to fowl as a source of the new organism is that children given a tuberculin skin test have shown a reaction to the fowl variety of bacteria earlier than to the human variety. This suggests that children have been introduced to the bird germ first, possibly in milk.

The researchers have shown that these bacteria can survive for a long time at high temperature. Thus pasteurization may not always destroy such germs.

The bacteria infecting humans may be a slightly modified version of the fowl and swine forms, the UCLA investigators said.

Infection of humans would not likely be

acquired directly from chickens. Rather it may be the result of a chain of events, including contamination of soil by fowl, infection of cattle from soil and plants, and then introduction into humans via milk.

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MEDICINE

Heart Damaging Virus Fatal to Newborn Infants

➤ A VIRUS fatal to newborns because of the severe damage it inflicts upon their heart muscles may be taking many more infant lives than medical men now realize.

Dr. J. Neal Middelkamp, pediatrician at Washington University Medical School, St. Louis, reported that the virus, Cocksackie B, has been pinned down as an infant killer only in the last few years. As a result, the perils of this virus may not yet be generally recognized by medical authorities and it may escape detection even at autopsy.

Only some 40 to 50 infant deaths have been attributed the world over to the Cocksackie B since its lethal capacity was first observed ten years ago. Six of the deaths were recorded at the St. Louis Children's Hospital where Dr. Middelkamp isolated the virus from the diseased hearts following autopsies.

With more and more Cocksackie B data beginning to find its way into the medical literature and knowledge of the disease increasing, death among infants may turn out to be more prevalent than it now seems, Dr. Middelkamp said.

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