

Do You Know?

The British Association for the Advancement of *Science* is 113 years old.

Colombia is now producing enough *cement* for its own needs.

Canada has a 22% increased *wheat* acreage this year, nearly 4,000,000 acres.

Potash-containing dust from the recent eruption of Vesuvius may be sent to England for use as fertilizer.

In hot, dry countries, people sometimes carry *cucumbers* to eat and quench their thirst, as they are approximately 96% water.

Steel bottles are used to hold oxygen for high-flying air crews; the oxygen is compressed at 122 times atmospheric pressure.

Big weeds in a garden as tall as the crop plants should be cut off and not pulled, as pulling injures the roots of the crops.

Lead is being used in many civilian applications at the present time because it is one of the most available metals for non-war purposes.

Phosphorus, now used in large quantities to make smoke screens in battle areas, is an essential constituent of all tissues of the body.

Hybrid hevea *rubber plants*, resistant to South American leaf blight, have now been developed in Brazil by crossing Oriental strains with the best and most resistant Brazilian plants.

An all-cotton *gauze bandage*, recently developed, fits and clings better than ordinary gauze because of its stretchability, semi-elasticity, and roughened surface that decreases slipperiness.

Wild turkey distribution seems to indicate a definite correlation between turkey population and certain types of soil containing sufficient calcium and phosphorus occurring in "granite" soil.

Algae or green slime can be controlled in a garden pool by potassium permanganate; a teaspoonful of a saturated solution of this chemical for each gallon of water in the pool will not injure lilies or fish.

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cultural spray, however, scientists would like to know whether the liver or other organs may be seriously damaged by eating it on vegetables and fruits. The amount on each apple or tomato would be small, but in the course of a few years, quite a lot might accumulate in the body from such sources. Suitable precautions may need to be worked out for those who handle it in manufacture or in large-scale use on mosquito-breeding places and the like.

Lethane Family

DDT, however, is only one of the new weapons chemists have given us against insect foes. Many Victory gardeners and farmers are already familiar with the Lethane family of insecticides, developed by scientists of the Rohm and Haas Company in Philadelphia. Soon they will be learning to use a new member of this anti-insect chemical group, Dithane.

Dithane is diethylene-sodium-bisdithiocarbamate. It is fatal to both chewing and sucking insects and also to another kind of crop pest, the fungi. This triple-barrelled action is combined with another unique feature. When dithane is sprayed on the ground, plants can absorb it through their roots and become immune to insect and fungi destruction. Leaves of plants will also take up dithane when sprayed in a liquid form.

What this means in terms of more food for the hungry war and postwar world is seen from field tests in which potato yields were from 25 to 100 bushels more per acre than when conventional fungus destroyers were used.

The Lethane family of insecticides are thiocyanates, as deadly to insects as the name suggests, but said to be harmless to humans and other warmblooded animals, on the basis of tests made for Rohm and Haas. At first the Lethanes were used in combination with rotenone for agricultural uses, stepping up the killing power of the rotenone to a high degree so that this war-scarce substance could be stretched to protect more and more crops. One of the newest Lethanes, however, is powerful enough to be used without rotenone, and, in fact, is more powerful against some crop-destroying pests than rotenone.

Lethane 384 Special proved itself valuable in controlling head lice in children in England's crowded schools and nurseries, and in freeing air raid shelters from these and other vermin.

It performed a real war service, ac-

ording to reports from the British Ministry of Health, among women fire watchers guarding London and other English cities. Coming from all walks of life, some of these women were more fastidious about preserving the permanent waves in their hair than about the cleanliness of hair and scalp. Daily delousing of the pillows, mattresses and blankets on which they rested during their watches was impossible under war conditions. So head lice became a real problem and the British authorities are grateful to Lethane for solving it.

U. S. Authorities Skeptical

But their enthusiasm is not shared by some authorities in this country. A few experiences, not yet published, make them wonder how the British escaped serious skin and scalp injury. These same authorities also take a cautious attitude toward the Lethanes because they are cyanide-containing compounds and even the layman knows about poisonous cyanides such as hydrogen cyanide. On the other side of the picture, thousands of gallons of Lethane sprays have been used in the past several years without any reports of injury except to the insects.

The history of DDT and the other new insecticides is still in the making and will probably repeat the history of the sulfa drugs and similar weapons we use against our enemies of the insect and microscopic world. Enthusiastic reports of benefits are likely to be followed by reports of harm and, eventually, by knowledge of safe methods of use.

Science News Letter, August 5, 1944

MILITARY SCIENCE

Wool Jacket Issued to U. S. Soldiers in Europe

➤ AMERICAN soldiers fighting in Europe will be issued a new wool field jacket, made of olive drab serge.

Designed primarily for combat use, it will take the place of the enlisted men's olive drab coat which has not proved practical in actual fighting. The old coat does not leave the arms free for action and is uncomfortable.

The wool jacket has a convertible collar which may be turned up tight around the neck. It has two inside breast pockets and two outside breast pockets, adjustable shirt-type sleeves, and adjustable waist.

The War Department has ordered 4,000,000 jackets to be delivered soon.

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