

# Ag and Food NEWSLETTER

## Isoleucine Synthesis

A COMMERCIALY FEASIBLE PROCESS for the synthesis of isoleucine has been developed by Dow. Previous practical development work of this type led to Dow being the first major chemical producer to go into large scale production of methionine. Starting material for isoleucine is fusel oil obtained as a by-product of fermentation. H. C. White of the company's research laboratory says isoleucine process may point the way to large scale production of another amino acid by Dow.

## Argentine Ants In Australia

WESTERN AUSTRALIANS are getting set for an extensive spraying project against the Argentine ant, an insect about half an inch long which inflicts painful bites and has caused considerable damage around the city of Perth. Dieldrin will be the weapon in a battle expected to cost in the neighborhood of £100,000. Shell Petroleum in London says plans are to spray in a lattice pattern over Perth and also on all gutters and pavements. By using a lattice pattern, the ants will either be killed or starved since "worker" ants will cross the treated bands and be killed as they go out in search of food for the rest of the colony. Outskirts of Perth will be treated later. In this way, ants will be squeezed into a small central area easily controllable.

## No Residue Problem

HEPTACHLOR AND CHLORDAN residues will not constitute a health problem, according to work reported at the ACS meeting. The safety of the two insecticides applied to a large number of food and forage crops for insect control has been proved by a great number of toxicological and chemical tests, according to Victor C. Smith, Velsicol Corp. Smith, reporting for a team of Velsicol researchers, said analytical procedures have been developed for detection of chlordan at levels of 1 part in 50 million or heptachlor at 1 part in 100 million. When applied to growing crops at application levels effective for insect control, no harmful residues were found in the harvested crops.

## Foliar Application

CANE SUGAR added to solutions of fertilizers for foliar application will increase the absorption of nutrients into the leaf of the growing plant. According to F. G. Gustafson, University of Michigan botanist, absorption of the material through the leaf surface is increased as a function of temperature and light intensity. Foliar sprays with added sugar, however, are absorbed when applied in the dark. Rates of absorption and effects of conditions of temperature and light intensity were studied by radioactive tracer techniques.

## The Way It Happens

SMOG DAMAGE TO PLANTS is now thought to be a result of a decrease in permeability of plant tissues which upsets the mechanism by which nutrients are absorbed. University of California, Riverside, scientists reported at the meeting of the American Society of Plant Physiologists (Gainesville, Fla.) last week on bean plants fumigated with artificial smog. For periods typical of field attacks plants showed definite decreases in nutrient absorption when observed by means of radioactive tracer techniques. Permeability was not affected when either of the components of artificial smog was applied individually. While study is preliminary, workers are hopeful that additional investigations may lead to ways to alleviate this form of plant damage, which last year rendered unmarketable \$3 million in crops in Southern California.

## More Freedom For Diverted Acreage

USDA HAS LIBERALIZED REGULATIONS covering total acreage allotment of crops for the diverted acre program. Crops which cannot be grown or diverted on acreages are specifically listed and planting of crops not on the list is unlimited. New policy is already stimulating interest in increasing acreage of specific crops in some areas. For instance, California is hopeful that safflower and castor bean acreage will be boosted inasmuch as neither of these is restricted.

## More Research Needed

BYRON T. SHAW, in his transcribed remarks to the NACA, said he believed there are a number of important problems facing the farmer which require more research by the pesticide industry. His list included: more effective control of soil pests, herbicides specific for certain weeds, a chemical to hold back regrowth following chemical defoliation of cotton, and pesticide combinations such as herbicides and insecticides designed for specific crop situations. Shaw also predicted that the acreage control program will result in use of more fertilizers and pesticides by increased efficiency of production on limited acreage.