

Livestock Poisoning by Pesticides Now Can Be Diagnosed More Easily

Occasional but expensive livestock poisoning by insecticide, and herbicides has led USDA to study and develop some guides in dealing with this hard-to-diagnose type of ailment.

The newer chemicals are a boon to agriculture. Most of them are used on crops intended for livestock feed and can be so used safely. But poisoning can occur when animals are allowed to eat overtreated plants.

THE CHLORINATED hydrocarbon insecticides are an example. They include the well known and widely used DDT, TDE, methoxychlor, benzene hexachlor isodrin, and endrin. These act primarily on the central nervous system — produce many symptoms from severe depression to violent convulsions and death by respiratory paralysis. In autopsies on mildly poisoned animals, the liver, kidneys, and sometimes the brain were found to be affected. But surprisingly few such symp-

toms were found in acute poisoning.

Diagnosis of poisoning by the chlorinated hydrocarbons should be made only after thorough study of the history, symptoms, length of exposure, and lesions. Veterinarian R. D. Radeleff of the ARS entomology research station, Kerrville, Texas, found this is necessary. That's because fully a third of the test autopsies failed to reflect the ailment, even where severe toxic symptoms were present.

IN MAKING AN autopsy diagnosis of suspected chronic poisoning, it's better to analyze the stomach contents rather than the tissues, for excessive amounts of poisons. Or if the animal has been sprayed, it's better to analyze the hair rather than the tissues. The animal may have accommodated itself to chronic buildup of poisons in the tissues but may actually be suffering from serious disorders such as rabies, pseudo rabies, encephalitis, and salt poisoning.

Animals that show clearcut symptoms of poisoning by chlorinated hydrocarbons will usually recover completely if provided a quieting agent, soothing environment, good nursing care, and fresh, uncontaminated feed.

ORGANIC POSPHORUS compounds are closely allied to the nerve gases developed for chemical warfare. These compounds include parathion, methyl parathion, malathion, Dipterex, chlorothion, Guthion, and others. They act primarily by adversely affecting the animal's nervous system. Animals so poisoned breathe with difficulty, slobber, and stiffen. Spontaneous recoveries are common if the poisoning isn't severe or if recovery isn't interrupted. Autopsies on poisoned animals show only some swelling or con-

Wheat Penalty Rate \$1.09 On 1958 Excess

The U.S. Department of Agriculture recently announced a marketing quota penalty rate of \$1.09 per bushel on "excess" wheat of the 1958 crop.

As directed by law, the rate of the marketing quota penalty is 45 per cent of the parity price per bushel of wheat as of May 1 of the calendar year in which the crop is harvested. The current parity price for wheat is \$2.42 per bushel.

Growers approved marketing quotas for the 1958 wheat crop on June 20, 1957. When wheat marketing quotas are in effect, a farmer who does not comply with the wheat acreage allotment established for his farm is subject to a penalty on his farm marketing excess, unless he harvests 15 acres or less or has signed an agreement permitting him to produce up to 30 acres of wheat for feed use on the farm.

Wheat produced on a farm hav-

gestion of the lungs.

Atropine sulfate is a good antidote for organic-phosphorous poisoning. But it must be given in large doses — about one-fourth intravenously and the rest subcutaneously or intramuscularly. Recently, 2-PAM (2 pyrimidyl aldoxime methiodide) — preferably administered with atropine sulfate — was found to be especially good in parathion and diazinon poisoning.

Amount of insecticide applied to the crop is as important as toxicity in evaluating the chemical's dangers. Some highly toxic insecticides are safe because they are used in such small quantities on crops that it's almost impossible for animals to get enough to be poisoned. But some of the less toxic compounds become dangerous because of the much greater quantities used on crops. Important, too, is the size of the chemical particles. The larger the particles in the emulsions, the greater the deposits on an animal's hair.

Many farmers don't understand the effects of concentration and particle size on animals. Plant chemicals generally deposit more oxacants than do livestock preparations. Even though pesticides are properly manufactured, they may be misused. Plant chemicals often are used on animals. This has led to some of our greatest livestock losses.

HERBICIDES HAVE rarely been known to poison livestock despite claims to the contrary, according to Radeleff. The fact that herbicides are used to kill foliage limits the palatability of the treated plants. The only danger lies in consumption of freshly treated plants. And this can be avoided by removing livestock from the treated area for one or two weeks at most. The large dosages of these compounds required to poison also limits the dangers of their use.

Pentachlorophenol — used to defoliate cotton and to preserve wood — was found by Radeleff to be lethal for calves up to a year old at 10 milligrams per kilogram of live body weight and mildly toxic at 25 mg per kg. Sheep were killed by 200 mg per kg, recovered from 100 mg per kg, suffered mildly from 25 mg per kg. Animals aren't apt to eat too much.

LIGHT APPLICATIONS of the algicide Delrad in ponds weren't harmful to cattle or sheep when they drank water containing 100 parts of the chemical per million. Cattle showed severe poisoning at doses of 250 mg. per kg; young calves were severely affected by 150 mg. per kg; and sheep were affected by 500 mg. per kg.

Work elsewhere has shown that 2,4-D and 2,4,5-T (common weed-killers) and their derivatives aren't very toxic. Cattle, sheep, cows, and swine were pastured under test on foliage treated at higher than normal rates with no harmful effects. The toxicity of arsenical compounds is well established. A few are still used and doubtless will continue in use for specialized work.

Large Number of Broilers Likely Next Year as Pullet Placements Rise

Prospects for larger numbers of broiler chickens next year are seeming more certain with the release of the April broiler pullet placement report this week.

by the state Crop Reporting Service.

Ten of the largest primary breeders of broiler replacement stock placed 3,320,000 chicks in April, nine per cent more than the 3,033,000 pullet chicks placed in April 1957. Pullet chick placements by these 10 breeders during the first four months of 1958 totaled 10,690,000 — 13 per cent more than during the same period of 1957.

Dozen DHIA Openings Now In Solanco Area

Dairy Herd Improvement Assn. memberships are being sought for Assn. 10 in the Quarryville and southern Lancaster County area, according to Victor Plastow, associate county agent.

Plastow said Monday that the new record year begins June 1.

A new tester will be hired for the area and the association hopes enough work will be available to make it a full-time position.

At least a dozen herds can be added to the association, Plastow said.

Dairymen interested in joining Assn. 10 should contact Plastow at the Lancaster County Agricultural Extension Office, 202 Post Office Bldg., Lancaster.

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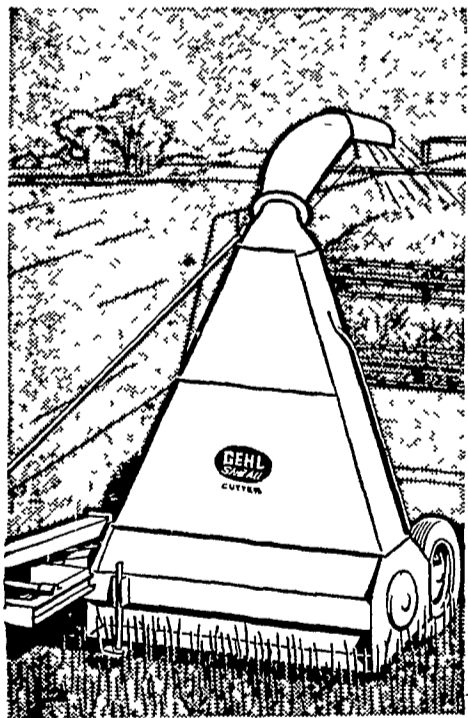
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