

PESTICIDE NOTES

AGRICULTURAL EXTENSION SERVICE

June, 1967

NATIONAL FARM SAFETY WEEK

We are only human. At least once a year we need to take a good look at ourselves in our environment. Farm Safety is a year-round task, but this year July 23-29 has been set aside for this annual observance. A topic has been assigned for each of the seven days. Tuesday has been singled out as "Prevent Poisoning" day, and while poisoning is no more fatal than any of the other categories, we hope you will see that poison prevention gains a place of importance in your mind, along with the other six categories, 365 days of the year.

TRAGEDIES

During the month, an aerial applicator in North Carolina died of poisoning when he breathed dust resulting from the loading of the hoppers aboard his plane.

The pilot took off, became ill and landed. He died in a local doctor's office. This tragedy was certainly uncalled for. Though the poison used was deadly--parathion--methods of loading and application have been successfully designed to eliminate any possibility of poisoning. It is also tragic that at best such accidents as these serve to sharpen our attention to the possibilities of accidental poisoning when we work with chemicals.

A bottle of unmarked weed killer resulted in an estimated loss of \$12,000 for one tobacco farmer in the state. The unlabelled container, left over from last year, was mistaken for insecticide, but was only enough to cover six and one-half acres. The Tar Heel farmer now has three choices--hope that the bottom leaves will survive, replanting, or plowing up and planting soybeans. Generally noted as a "meticulous" farmer in his community, the victim generously



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS, NORTH CAROLINA STATE UNIVERSITY AT RALEIGH, 100 COUNTIES AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING

said, "Chemicals can do the job when properly used, but they must be used carefully. I hope this will be a lesson to other farmers."

TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES
NEGLECTIBLE RESIDUES ON COMMODITY-GROUP BASIS

The Commissioner of Food and Drugs has concluded that the herein-after designated groupings may be used for establishing tolerances for negligible residues.

The term "negligible residue" means any amount of a pesticide chemical remaining in or on a raw agricultural commodity or group of raw agricultural commodities that would result in a daily intake regarded as toxicologically insignificant on the basis of scientific judgment of adequate safety data. Ordinarily this will add to the diet an amount which will be less than 1/2000th of the amount that has been demonstrated to have no effect from feeding studies on the most sensitive animal species tested. Such toxicity studies shall include at least 90-day feeding studies in two species of mammals.

It may be possible to make a reliable estimate of negligible residues of pesticide chemicals to be expected on each commodity in a designated grouping on the basis of data on a representative number of commodities listed in the following designated groups. Tolerances for negligible residues will be established on the group as a whole following the certification of usefulness by the Secretary of Agriculture on the group as a whole. This does not affect U. S. Department of Agriculture requirements for data for registration of labels for each commodity or the requirement for Food and Drug Administration review of these labels and the supporting data for the proposed registration, in accordance with the Interdepartmental Agreement. Commodities not listed are not considered as included in the groupings for the purpose of this paragraph.

<u>Group</u>	<u>Commodities therein</u>
Citrus fruits	Citrus citron, grapefruit, kumquats, lemons, limes, oranges, tangelos, tangerines, and hybrids of these.
Cucurbits	Cantaloups, casabas, crenshaws, cucumbers, honey balls, honeydew melons, melons, melon hybrids, muskmelons, Persian melons, pumpkins, summer squash, watermelons and their hybrids, winter squash.

- Forage grasses** Any grasses (either green or cured) that will be fed to or grazed by livestock, all pasture and range grasses, all grasses grown for hay or silage, corn grown for fodder or silage, sorghum grown for hay or silage, small grains grown for hay, grazing, or silage.
- Forage legumes** Any crop belonging to the family Leguminosae that is grown for forage (hay, grazing, silage, etc.), alfalfa, beans (for forage), clovers, cowpeas (for forage), cowpea hay, lespedezas, peanuts (for forage), peanut hay, peas (for forage), pea vine hay, trefoil, velvet beans (for forage), vetch, soybeans (for forage), soybean hay.
- Fruiting vegetables** Eggplants, peppers, pimentos, tomatoes.
- Grain crops** Barley, buckwheat, corn (field corn, sweet corn, and popcorn), milo, oats, rice, rye, sorghums (grain), wheat.
- Leafy vegetables** Anise (fresh leaf and stock only), beet greens (tops), broccoli, broccoli raab, brussels sprouts, cabbage, cauliflower, celery, Chinese cabbage, collards, dandelion, endive, escarole, fennel, kale, kohlrabi, lettuce, mustard greens, parsley, rhubarb, salsify tops, spinach, sugar beet tops, Swiss chard, turnip greens (tops), watercress.
- Nuts** Almonds, Brazil nuts, bush nuts, butternuts, cashews, chestnuts, filberts, hazelnuts, hickory nuts, macadamia nuts, pecans, walnuts.
- Pome fruits** Apples, crabapples, pears, quinces.
- Poultry** Chickens, ducks, geese, guinea, pheasant, pigeons, quail, turkeys.
- Root crop vegetables** Beets, carrots, chicory, garlic, green onions, horseradish, Jerusalem artichokes, leeks, onions, parsnips, potatoes, radishes, rutabagas, salsify, shallots, spring onions, sugar beets, sweetpotatoes, turnips, yams.

- Seed and pod vegetables Black-eyed peas, cowpeas, dill, edible soybeans, field beans, field peas, garden peas, green beans, kidney beans, lima beans, navy beans, okra, peas, pole beans, snap beans, string beans, wax beans, other beans and peas (except dried beans and peas).
- Small fruits Blackberries, blue berries, boysenberries, cranberries, currants, dewberries, elderberries, gooseberries, grapes, huckleberries, loganberries, raspberries.
- Stone fruits Apricots, cherries (sour and sweet), damsons, nectarines, pawpaws, peaches, plums, prunes.
- Stored commodities other than fruits, grain, and vegetables. Cottonseed, dried beans (all), dried peas (all), hay, peanuts.
- Stored fruits and vegetables. Same crops as specified in this list for cucurbits, fruits, nuts, and vegetables.
- Stored grain Same crops as specified in this list for grain crops.

HANDLING WETTABLE POWDERS

On certain occasions it may be necessary for you to apply wetttable or sprayable powder pesticides. Wetttable powders do not dissolve in water, but are carried in suspension; and as the spray is applied the water evaporates leaving the desired pesticide residue on the surface. Since these wetttable powders do not form solutions, it is essential that sprayers be built to apply them.

When applying wetttable powders mechanical agitation is most desirable although an agitator nozzle on the end of the by-pass hose is satisfactory. Large capacity pumps are more desirable than small capacity pumps in order to supply enough pressure and "by-pass flow" for agitation of the spray suspension.

Intake screens should be 50 mesh and nozzle screens should be 40 mesh or slightly coarser than the intake screen. When operating take care and do not let the sprayer run dry, since wetttable powders are abrasive mixtures which can cause excessive wear if the pump were allowed to run dry. Nozzles will generally wear but if aperture plates are stainless steel or steel, wear is negligible. It pays to run clean

water through a sprayer after using wettable powders, many times the wettable powders can settle out sticking by-passes, nozzles and valve seats, sometimes causing difficulty on the next spray job.

BEEES AREN'T THE ONLY STINGERS

The stings of Hymenoptera (ants, bees, wasps, yellow jackets, and hornets) cause almost twice as many deaths as do rattlesnake bites. Most of these deaths are due to anaphylactic responses, which sometimes lead from shock to death in a matter of minutes. Multiple simultaneous stings from bees are not usually serious in nonsensitive persons. Conversely, a single bee sting in a sensitized person might be fatal.

In most cases, excessive first-aid treatment of arthropod bites and stings is of little value. It is permissible to place an ice pack on the wound for several hours, and subsequently to apply an analgesic-corticosteroid ointment to the affected area. Any person known to be sensitive to the venom of arthropods should be rushed to a physician. Persons markedly sensitive to bee or related venoms should be desensitized under the care of a physician. If a person knows he is sensitive to these venoms, he should have an epinephrine-antihistamine kit readily available when he is in areas where stings are apt to occur.

REAL DEVELOPMENTS OCCUR AMONG PEOPLE, NOT IN FOOD LABORATORIES

"We are losing the race to keep up with the food needs of our exploding population."

Bernard H. Lorant, vice president of a chemical company at Chicago, told a Tennessee civic group, "We will make little progress towards solving the world food crisis until the public is fully informed and aroused." Progress in research requires a knowledgeable public, he said, and "by virtue of such knowledge they will be more understanding of the objectives of research."

"We must be totally aware of the environment, the public attitudes, in which our research is to be done. This is why I have been to Europe, India and Japan several times during recent months. It is why I am going back to Europe again very soon."

He pointed out the strain on today's research directors when he said, "When we know that 300 million of the world's children are mentally retarded due to poor diets, it makes us sick to hear knowledgeable critics of agricultural chemicals sowing their seeds of dissent, dissatisfaction and disaster, when instead, we should be sowing grain for hungry bodies."

RECORD SHEETS CAN BE IMPORTANT

Most agricultural producers are pretty good businessmen, and like most businessmen, they have learned the value of records. The Pesticide Education Committee has developed a "Pesticide Application Record" sheet, with the help of several of the county personnel. Simplicity, essential information, etc., brought forth the sample reproduced here. Punched for notebook use, and printed on 8½ by 11 paper, the record sheet can be reproduced easily.

Look it over, let us have your views, and we'll see about developing a supply.

PESTICIDE APPLICATION RECORD

Grower's Name _____ Crop _____
Address _____ Planting Date _____

Pesticides are essential for the production of an economical, abundant and wholesome food supply. READ AND HEED THE LABEL.

Field Name or Number	Pest(s) Controlled	Material(s) Used and Formulation(s)	Rate/Acre Spray or Dust	Weather Conditions	App. Date

NOTE: Use one sheet for each crop. Keep pages in a loose-leaf notebook.

ARE BIRDS REALLY NICE?

Birds are great insect eaters, but their diet isn't always restricted to "them mean little bugs." Professor M. E. Gardner, here at N. C. State University, presents some views and action of a neighboring state which gained notice here and there. Perhaps you missed it....

// Much concern is being expressed in some areas about the severe damage to certain crops caused by birds. In Virginia a "Nuisance Bird Committee" has been established to inform the public of the magnitude of the problem; and to study available means of providing appropriations for the research, education and control needed to combat the problem.

// It is estimated that birds are costing Virginia farmers \$25 million annually. It is also felt that, unless proper control measures are adopted, the entire agricultural economy may be in jeopardy. Chief offenders are grackles, starlings, redwing blackbirds, cowbirds, crows, sparrows and others. It is estimated that the redwing blackbird has increased 300 per cent in Virginia since 1962.

It is reported that corn has suffered massive destruction. When young plants appear above ground in the spring, hordes of hungry grackles attack, often necessitating the replanting of an entire field. In late summer, when the corn reaches the "milk" stage, grackles and blackbirds feast on the ears and expose them to insects, molds and water damage. Small grains, peanuts, apples, peas, tomatoes, strawberries, cherries and blueberries also suffer extensive damage. Large quantities of livestock and poultry feeds are consumed and contaminated by starlings and blackbirds.

In densely populated areas, where diseases are most likely to spread, birds carrying disease organisms pose a definite threat. Eastern equine encephalitis, gastro enteritis, and histoplasmosis are all caused by organisms carried by birds. As is well known, cities are also faced with sanitation problems caused by birds. One building in Washington has a \$20,000 annual appropriation to keep it clean.

Dr. Roy Kottman, Dean of Agriculture at Ohio State University, has stated: "We can no longer tolerate damage caused by the redwing blackbird. . .15 million tons of grain are destroyed annually . . . enough to feed 90 million people."

A North American Conference on Blackbird Depredation is also working on the problem. While it is too soon to determine the methods to be used, . . . it is imperative that a workable solution be found."

Credit is given a Virginia Department of Agriculture bulletin for much of the data reported.//

SUMMARY

methyl bromide

Type Pesticide: Insecticide

Date Issued: June 9, 1967

Formulations Accepted: All

Summary page: 522

No. 67-85

USE	TOLERANCE PPM	DOSAGE	LIMITATION AND/OR DIRECTIONS
Straw- berries	30	2.5 lbs. actual	Field treatment of plants under tarpaulins. Expose to fumiga- tion for 1.75 to 2.75 hours de- pending on temperature.
		harvest 1000 sq. ft. fumiga- tion)*	

DELETE THE FOLLOWING ENTRY FROM THE SUMMARY:

Straw- berries	30	2.5	Expose to fumigation for four hours.
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copper (ammoniacal)

Type Pesticide: Fungicide

Date Issued: May 26, 1967

Formulations Accepted: 10% metallic
copper liquid

Summary page: 163

No.: 67-73

USE	TOLERANCE PPM	DOSAGE	LIMITATIONS AND/OR DIRECTIONS
Tomatoes		lbs. actual copper/A. 0.5*	No time limitations.

copper (ammoniacal)

Type Pesticide: Fungicide

Date Issued: May 12, 1967

Formulations Accepted: 10% liquid

Summary page: 163

No.: 67-65

USE	TOLERANCE PPM	DOSAGE	LIMITATIONS AND/OR DIRECTIONS
		lbs. actual copper/A.	
Beans		0.5*	No time limitation.
Celery		0.4*	No time limitation.
Melons		0.5*	No time limitation.
Peanuts		0.5*	No time limitation.
Sugar beets		0.5*	No time limitation.
Squash		0.5*	No time limitation.

DELETE THE CANTALOUPE ENTRY BECAUSE THEY ARE INCLUDED AS MELONS.

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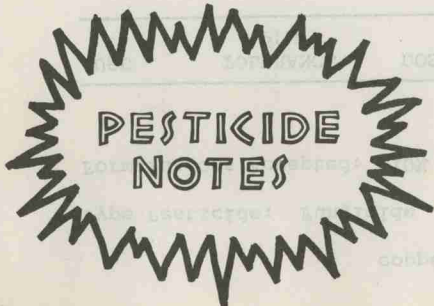
OFFICIAL BUSINESS

RECYCLE WHEN YOU RECYCLE

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0.25	NO TIME LIMITATION
0.25	NO TIME LIMITATION
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PESTICIDE NOTES



NOVEMBER 1967

FROM WEST TO EAST

If people didn't do such dumb things we wouldn't have to worry so much about pesticides.

We read about a six-month-old boy whose graduated nursing bottle was used for measuring out ethion concentrate...

And a spray rig driver who kept his drinking water in a jug next to an identical one containing paraquat...

Then this farmer who made these neat cattle feed troughs out of empty parathion drums...

For people like that, there's one more bit of wording we should put on the label: "If you can read this, you are too damn close!"

(AGRICHEMICAL WEST)

AND, DDT LEVELS IN HUMANS

Analysis of fat samples from 130 subjects indicated that the general population of the US had a mean storage level of 4.0 ppm DDT and 7.8 ppm DDE. Geographic differences were not evident.

(AGRICHEMICAL WEST)

ALL READY, YET

A very nice letter came from Halifax County pointing out that the pesticide application record sheet could be applied on a field basis as well as a farm basis. If County Coordinators in Pesticide-Chemicals haven't seen them...they were inserted in the last packet from the Pesticide Education Committee, thanks to Professor Wells. If there are any further comments, please shoot them in.

(Dr. H. E. Scott)

- MORE -

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS, NORTH CAROLINA STATE UNIVERSITY AT RALEIGH, 100 COUNTIES AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING



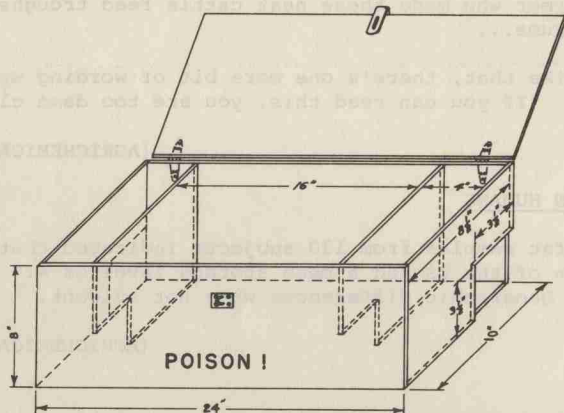
SPOTS...Special

Special radio pesticide-chemical spots will be going to radio stations shortly. Reese Edwards in AGInfo Extension Radio has recorded several which will be sent to the Agri-News Stations in the 100 counties blanketing North Carolina.

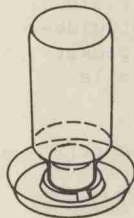
OF RATS and Mice....

Everybody's getting into the rats and mice business. N. C. State University Agricultural Information is joining with other agencies in helping thwart the rat and mouse. A new publication, forthcoming shortly, will aid the folks who are attacking the problem on an individual basis. Others will find the information useful too, for Vernon Cunningham, F&S, Department of Interior has gone to great lengths to supply essential information. In a nutshell, Cunningham says control involves not cleaning up until rats and mice have been trapped. Then, start clean housekeeping. Following are some illustrations for mental note.

Baffles keep pets and children out as well as prevent rain, dirt, poultry litter, etc., from contaminating bait.



Plan now to build permanent-type bait stations similar to this one and fasten them to alternate walls at litter level every 30-50 feet of building length. These bait boxes can be made of scrap lumber and should be ready for use as soon as the building is completed.



Provide a fresh, clean source of water with your cereal bait. A water-soluble anticoagulant can be added to the water. Use 1-quart chick founts to expose the water or liquid bait. Place the waterers beside the feeders.

Place a fresh anticoagulant bait in the center compartment of this box. Prepare a feeder for this bait from a clean, dry paper milk carton as shown here. Make horizontal cuts $\frac{1}{2}$ " from bottom and $1\frac{1}{2}$ " each way from opposite corners. Push portion above cut inward to form self-feeder. This will keep the bait fresh and clean and reduce waste.

