Tobacco Insect Control

In North Carolina

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Tobacco Insect Control in North Carolina

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The insecticidal controls for tobacco insects recommended in the tables of this circular are in harmony with the research findings and experience available to date (February, 1950). There are three tables, one for insects in the plant bed, one for insects attacking newly transplanted tobacco, and one for those attacking older plants. Only insecticidal remedies are tabulated, but it should be kept in mind that certain farming practices are often effective in preventing insect damage.

Most insecticides can be applied either as dusts or as sprays. Best results will be obtained with the method that gets best coverage, and this will depend on such factors as wind, size of plants, type of equipment available, and the operator's skill. Sprays are usually cheaper, can be used under windier conditions, and stick better than dusts, but are harder to get under the leaves (where many insects stay) and require more labor. A treatment washed off by rain will sometimes have to be repeated. Special formulations and dosages are often advisable for airplane treatments. Too heavy or uneven applications are wasteful and may hurt the plants.

The Department of Zoology and Entomology at North Carolina State College makes the following warning and cautions about the use of insecticides:

Read Before Using Insecticides

All insecticides are poisons and should be treated as such. Some of the more dangerous ones have been in use a long time, and many people have learned to handle them safely. If anyone is in doubt about the dangers or the safety precautions for any insecticide, he should first get reliable information.

What to do in Case of Poisoning.

If any user feels sick or weak, or has blurred vision, headache, or discomfort in the chest he should avoid further exposure and see a doctor at once. The doctor should be told what material was used, or shown the label on the package. If the doctor does not know the treatment for the poison, he should phone a hospital or the State Board of Health.

Know What You Are Using.

Insecticides have many trade-mark names. Read the small type under "active ingredients."

Extra Care With Parathion or Tepp (Tetraethyl pyrophosphate).

Parathion and TEPP are new insecticides that are especially dangerous to handle and use. Unless you are willing and able to comply with the following precautions, **do not use parathion or TEPP.**

The two most important precautions in handling parathion or TEPP are: (1) Avoid contact with or breathing dust from the concentrates. (2) Avoid prolonged exposure during application of either dusts or sprays. This seems to be especially true if weather is hot.

1. Do Not Breathe the Dust or Mist. Wear the approved parathion mask or respirator. You can get this from your parathion dealer.

Wear the approved mask while handling dust or loading duster or sprayer.

Wear the approved mask while dusting or spraying, and work to the windward.

Wear the approved mask in recently sprayed or dusted areas on calm, hot days, especially when working in orchards or tobacco fields.

Keep the mask clean and with fresh refills.

2. Keep These Insecticides Off the Skin and Out of the Eyes. Never handle concentrated (strong) wettable powder or liquid with bare hands. If some accidentally gets on your hands, wash it off immediately. Wear natural rubber gloves. Never wear synthetic rubber, leather, or cloth gloves. If a drop of the concentrate should splash into the eye, rinse with water for several minutes, and see a doctor immediately. If insecticides get on clothes, change and wash them. If dust or spray goes through clothes, take a bath. A light plastic raincoat, a rain hat, and goggles, give good protection. Wash hands and face after using sprays or dusts. Keep all protective clothing clean of parathion by washing frequently with soap and water.

3. Do Not Get Any Poisons in the Mouth. Wash before eating or smoking. Do not store any insecticides near food or where children can reach them. Bury empty cans or bags.

If the user stays out of the drift and observes the other precautions listed above a mask might not be necessary for short time dusting or spraying operations on low growing plants such as in tobacco beds.

Treatments for Insects of Tobacco Plant Beds

Note: The cool weather common in the spring months slows the action of insecticides, and often a wait of about three days is needed for treatment to be effective.

Insect	Poison	Formula	Dose per 100 sq. yds.	Remarks
Flea bettle	DDT spray	1 lb. 50% wettable powder in 50 gals.	3 to 5 gals.	3 treatments are enough for season. First treatment when plants in 4 leaf stage, second treatment when 2 inches across, and third treatment just before transplanting. Use heavier dosages as plants get larger. The last treatment will protect plants from flea beetles in the field for 10 days. Treatments can be added to blue mold spray or dust.
	DDT dust	5% dust	½ to 1½ lbs.	
Vegetable weevil	DDT dust	5% dust	1 lb.	Dust plants.
	DDT spray	1 lb. 50% wettable powder in 50 gals.	3 to 5 gals.	Spray plants.
Midge larva **or** Crane fly larva	DDT dust	5% dust	1 lb.	Dust ground. Kills in about 4 days.
	DDT spray	1 lb. 50% wettable powder in 50 gals.	3 to 5 gals.	Spray ground. Kills in about 4 days.
	Parathion dust	1% dust	1 lb.	Dust ground. Kills in 1 day. Handle with caution.*
	Naphthalene	flake form	1½ lb.	Scatter on ground. Repeat if needed.
Cutworm	DDT dust	5% dust	1 lb.	Dust ground and plants.
	DDT spray	1 lb. 50% wettable powder in 50 gals.	3 to 5 gals.	Spray ground and plants.
Grub worm	Parathion dust	1% dust	1 lb.	Dust on ground. Handle with caution.*
	Lindane dust	1½ % dust	1 lb.	Dust on ground. Not as effective as parathion.
Grasshopper	Toxaphene	10% dust	½ lb.	Dust on plants.
Aphid	Parathion dust	1% dust	1 to 2 lbs.	Handle with caution.* Residue hazard for 7 days.
	Parathion spray	1 lb. 15% wettable powder in 60 gals.	3 to 5 gals.	Handle with caution.* Residue hazard for 7 days.
	TEPP spray	1 tablespoonful of 20% TEPP to 2 gals. (or equivalent amounts of 10% or 40% TEPP).	3 to 5 gals.	Use within 1 hour of mixing. Handle with caution.* Residue hazard for 12 hours.

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Insect	Poison	Formula	Dose per 100 sq. yds.	Remarks
Mole cricket	Bait	Corn meal, or cotton seed meal 5 lbs.; wheat bran or shorts 5 lbs.; sodium fluoride or paris green ¾ lb.; molasses and water (1 to 10) about 2 qts.	3 to 4 lbs.	Mix dry, then add molasses and water. Scatter in late afternoon, within 2 days after mixing.
	Naphthalene flakes		1 to 2 lbs.	Scatter on ground.
Slug or snail	Metaldehyde bait	Buy readymade.	about 2 lbs.	
	Home made bait	Wheat bran or middlings 25 lbs.; sodium fluosilicate or paris green 2 lbs.; water to moisten.	2 to 4 lbs.	Scatter in late afternoon.
	Lime	Hydrated or air slaked lime		Put in band around edge, or dust whole bed.
	Parathion	1% dust	1 lb.	Reports indicate good results. Handle with caution.*

* See statement in introduction.

Treatments for Insects on Newly Set Tobacco Plants

Insect	Poison	Formula	Dose Per Acre	Remarks
Flea beetle	DDT spray	1 lb. 50% wettable powder in 50 gals.	5 to 15 gals. For plant beds, 5 gals. per 100 sq. yds.	Spray or dust plants either in the plant bed before pulling plants (easier) or in the field after setting out.
	DDT dust	5% dust	6 to 10 lbs. For plant beds, 1½ lbs. per 100 sq. yds.	
Cutworm	Bait	Wheat bran (without shorts) 25 lbs.; sodium fluosilicate or paris green 1 lb.; water to moisten.	15 to 20 lbs.	Mix dry, then add water to make crumbly. Scatter in late afternoon. If possible, treat land before setting.
	DDT dust	5% dust	about 10 lbs.	Dust plants and ground. If possible, dust ground before setting.

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Insect	Poison	Formula	Dose Per Acre	Remarks
Budworm	Bait	Corn meal 50 lbs.; lead arsenate 1 lb.	12 lbs.	A pinch to each bud.
	DDT dust	5% dust	about 6 lbs.	Dust some into each bud.
Wireworm	Chlordane	½ lb. 40% wettable powder in 50 gals.	about 200 gals.	Use a liberal amount of this as transplanting water.
Vegetable weevil	DDT dust	5% dust	6 to 10 lbs.	Dust plants.
Sod webworm	Bait	Corn meal 25 lbs.; paris green 1 lb.; oil of mirbane (nitrobenzene) 1 oz.; water 1 pint.	15 to 20 lbs.	Put some next to each plant, with a stick can.

* See statement in introduction.

Treatments for Insects of Larger Tobacco Plants

Insect	Poison	Formula	Dose Per Acre	Remarks
Budworm	Bait	Corn meal 50 lbs.; lead arsenate 1 lb.	12 pounds	A pinch in each bud.
	DDT	5% dust	about 6 lbs.	Dust some into each bud.
Grasshopper	Toxaphene	10% dust	15-20 lbs.	Put on grass and weeds around edge of field and on edge of tobacco, or over entire field. Chlordane may injure tobacco.
	Chlordane	5% dust	15 lbs.	
Hornworm	Handpicking			Takes labor.
	Toxaphene	10% dust	15 to 25 lbs.	Toxaphene is probably the best remedy and cryolite the poorest. Larger plants take more material for good coverage than do smaller plants. Larger hornworms require heavier dosages than smaller worms, so treat early. Buyers may descriminate against heavy residues of any insecticide on cured tobacco, so try to avoid heavy doses just before priming.
	Toxaphene	20% dust. Use when 10% not available.	12 to 20 lbs.	
	Paris green and lead arsenate spray	1 lb. paris green mixed with 5 lbs. lead arsenate. Use 2 lbs. of mixture to 50 gals.	50 to 80 gals.	
	Paris green and lead arsenate dust	Paris green 1 lb.; lead arsenate 5 lbs.; hydrated lime 10 lbs.	15 to 18 lbs.	
	Cryolite spray	6 lbs. to 50 gals.	50 to 80 gals.	
	Cryolite dust	Use a dusting grade.	15 to 20 lbs.	
	Lead arsenate spray	4 lbs. to 50 gallons	50 to 80 gals.	
	Calcium arsenate and zine spray	4 lbs. to 50 gallons	50 to 80 gals.	

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Insect	Poison	Formula	Dose Per Acre	Remarks
Flea beetle				Same treatments as for hornworm. Cryolite is a good remedy for flea beetles. DDT is also good for flea beetle control, but has not been well tested on older plants.
Aphid	Parathion dust	1% dust	12 to 25 lbs.	Handle with caution.* Residue hazard for 7 days.
	Parathion spray	1 lb. 15% wettable powder to 60 gals.	40 to 80 gals.	Handle with caution.* Residue hazard for 7 days.
	TEPP spray	½ pt. 40% TEPP to 50 gals., **or** 1 pt. 20% TEPP to 50 gals., **or** 2 pts., 10% TEPP to 50 gals.	40 to 80 gals.	Must use within 1 hr. of mixing. Handle with caution.* Residue hazard for 12 hours.
	TEPP dust	0.66% dust or 1% dust	12 to 25 lbs.	Must be used fresh. Handle with caution.* Residue hazard for 12 hours.
Suckfly				Same treatments as for aphid.
Split worm				No treatment.

* See statement in introduction.

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