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Questions and Answers About the Cherry Fruit Fly
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Many questions about the cherry fruit fly have been asked by cherry growers. The information requested by the growers is presented in this circular letter as answers to the questions asked.

Life History

1. Q. How does the cherry fruit fly spend the winter?
A. The cherry fruit fly spends the winter as a puparium. The puparium is found under the infested cherry trees buried from one to three inches in the ground.
2. Q. When does this pest emerge as a fly from the soil?
A. The fly emerges from the soil usually during the last week in May or the first week in June. The time of emergence will depend on climatic factors.
3. Q. How long are the flies on the trees before egg laying begins?
A. The flies spend from 7 to 10 days on the foliage of cherry or other trees before they begin laying eggs.
4. Q. Where are the eggs laid?
A. The eggs are laid under the skin of the cherry.
5. Q. How long does it take for the eggs to hatch?
A. The eggs hatch in from five to seven days.
6. Q. When does the maggot or larva become mature?
A. The maggot becomes mature in about 14 days.
7. Q. Where does the maggot go after reaching maturity?
A. The maggot drops to the ground and works its way into the ground where it remains as a puparium until May or June of the next year.
8. Q. How long do the flies continue to emerge?
A. Flies may continue to emerge over a period of five to six weeks.
9. Q. How many years will the cherry fruit fly live in the soil before emerging as flies?
A. Most flies emerge in one year, but a few will live in the soil from two to three years.

Control

10. Q. What sprays or dusts are recommended for the control of this pest?
- A. Three spray materials may be used: (1) The poisoned bait spray consisting of lead arsenate 5 pounds, molasses 5 gallons and water to make 100 gallons; (2) the lead arsenate-lime sulfur spray consisting of lead arsenate 2-1/2 pounds, lime sulfur 2 gallons to 100 gallons of spray; (3) 90-10 sulfur-lead arsenate dust.

I. Poisoned Bait Spray

- a. Q. Is more than one bait spray necessary?
- A. Three sprays will be recommended. The first spray should be applied when the flies first emerge from the soil; the second seven days after the first; and the third seven days after the second. Royal Ann cherries may require only two sprays before harvest.
- b. Q. What kind of a sprayer should one use to apply the bait spray?
- A. Either a power or hand spray can be used. Apply the solution as fairly fine droplets on the upper surface of the foliage on all sides of the tree. The spray should be a thorough bait spray. The amount of material used per tree will depend upon its size.
- c. Q. Is it necessary to drench a tree to control this pest?
- A. No. The trees, however, should be well covered by directing the spray over the trees and permitting the liquid to fall on the upper surfaces of the foliage. The spray should reach every part of the tree.
- d. Q. Should a spray be repeated after a heavy shower?
- A. Yes.
- e. Q. Should interplanted trees be sprayed?
- A. All trees regardless of kind should be sprayed if they are interplanted with cherries. Brush along fence rows adjacent to cherry orchards should also be sprayed.
- f. Q. Should Royal Ann and varieties of sour cherries be sprayed as other varieties of cherries?
- A. Yes. Even though Royal Anns may escape infestation due to the early harvest, the trees may harbor flies which will infest cherries later on. Sour cherries are very susceptible to infestation and special attention should be given them.

II. Lime Sulfur and Lead Arsenate Spray

- a. Q. Can lime sulfur and lead arsenate be combined for the control of cherry fruit fly and fungous diseases?
- A. Yes. Recent experimental work with this combination spray in the Willamette Valley has given excellent control of the cherry fruit fly.
- b. Q. Can a combination lime sulfur and lead arsenate spray be used on all varieties of cherries safely?
- A. This material is recommended for sour cherries only.

- c. Q. How many sprays are necessary for the control of the fly?
A. Two sprays should suffice.
- d. Q. When should these sprays be applied?
A. The first spray should be applied when the first flies emerge.
The second is applied at the peak of fly emergence.
- e. Q. Are the sprays applied as a bait spray or as a thorough cover spray?
A. The spray must be a thorough cover spray.
- f. Q. What is the formula for this spray?
A. Lime sulfur 2 gallons, lead arsenate 2-1/2 pounds, and water to make 100 gallons.
- g. Q. Will a heavy cover spray such as is recommended when lead arsenate is combined with lime sulfur cause a spray residue problem?
A. Recent chemical analyses of cherry samples from cannery tests show that effective washing procedure, usually employed by commercial canneries, removes the residue very effectively from the cherries.
- h. Q. Will there be a residue problem if the cherries are sold locally for fresh consumption?
A. Yes. Care should be taken to wash any visible spots from the cherries before selling. Unless very heavily sprayed, this may be done by rinsing thoroughly for several minutes in fresh water.
- i. Q. Can this pest be controlled by cultural practices such as cultivation?
A. Cultivation, parasites, and predators help to reduce the number of flies, but such practice cannot be relied upon for complete control.

III. Sulfur-Lead Arsenate Dust

- a. Q. Can sulfur-lead arsenate dust be used safely on all varieties of cherries?
A. Yes, but it is recommended chiefly for sweet cherries.
- b. Q. How many dust applications should be applied?
A. Two applications will suffice, if there is no rain. If rains occur, the applications should be repeated.
- c. Q. When should the dusts be applied?
A. The first application should be made when the first flies emerge, and the second at the peak of fly emergence.
- d. Q. What is the dust formula?
A. 90-10 sulfur-lead arsenate dust. This means 90 pounds of sulfur and 10 pounds of acid lead arsenate.
