AGRICULTURAL EXPERIMENT STATION
Oregon State College
Wm. A. Schoenfeld, Director
Corvallis

Circular of Information No. 225 December 1940.

TENTATIVE PROGRAM FOR THE CONTROL OF CHERRY LEAF-SPOT, SYNETA BEETLE, AND FRUIT-FLY IN 1941.

By Departments of Agricultural Chemistry, Botany and Entomology
Oregon Experiment Station

LEAF-SPOT

The following recommendations are based upon the results of two years of spraying trials for leaf-spot control. In our 1939 and 1940 experiments, lime-sulphur gave excellent control. Therefore we are tentatively recommending lime-sulphur with the caution that there is a remote possibility of lime-sulphur burn if certain warm and humid weather conditions should prevail. Such conditions might arise at the time for the third application. Our 1939 experiments indicate that wettable sulphur will control leaf-spot in warm weather. To avoid the possibility of lime-sulphur burn, therefore, wettable sulphur (6 pounds to 100 gallons of water) may be substituted for lime-sulphur in the third spray.

Thorough coverage of all the leaves is necessary.

CHERRY FRUIT-FLY

Recent field tests with a lime-sulphur-lead-arsenate combination spray gave excellent control of cherry fruit-fly. Results are based on two years of experimental tests in ten commercial orchards in Lane, Benton, Polk, Linn and Marion counties.

Two properly-timed cover sprays should suffice to control the fly on all varieties of cherries, unless heavy rains occur during the spraying season. The sprays, however, must be thorough, covering all parts of the trees.* The first spray should be applied when the first flies appear in the field. This usually occurs during the last week in May or early in June when Royal Ann cherries show only a trace of color. The exact time of emergence may be determined by "emergence cages." Since the flies begin to lay eggs soon after emergence from the soil, there should be no delay in applying the first spray. A second spray should be applied at the peak of fly emergence or ten days to two weeks after the first spray. If a third spray is necessary, it should be applied about two weeks after the second spray.

Spray Residue Complications. The lead arsenate - lime sulfur combination adheres better and resists the washing action of rainfall more than the molasses - lead arsenate spray mixture. Consequently, larger amounts of the lead arsenate - lime sulfur residue remain on the fruit at harvest time. Chemical analyses, however, of samples from cannery tests show that the effective washing procedure, usually employed by commercial canneries, removes the residue very effectively from the cherries. If the fruit is to be sold locally for fresh consumption,

* It should be understood that this is not a bait spray. For information on the bait spray see your County Agent.

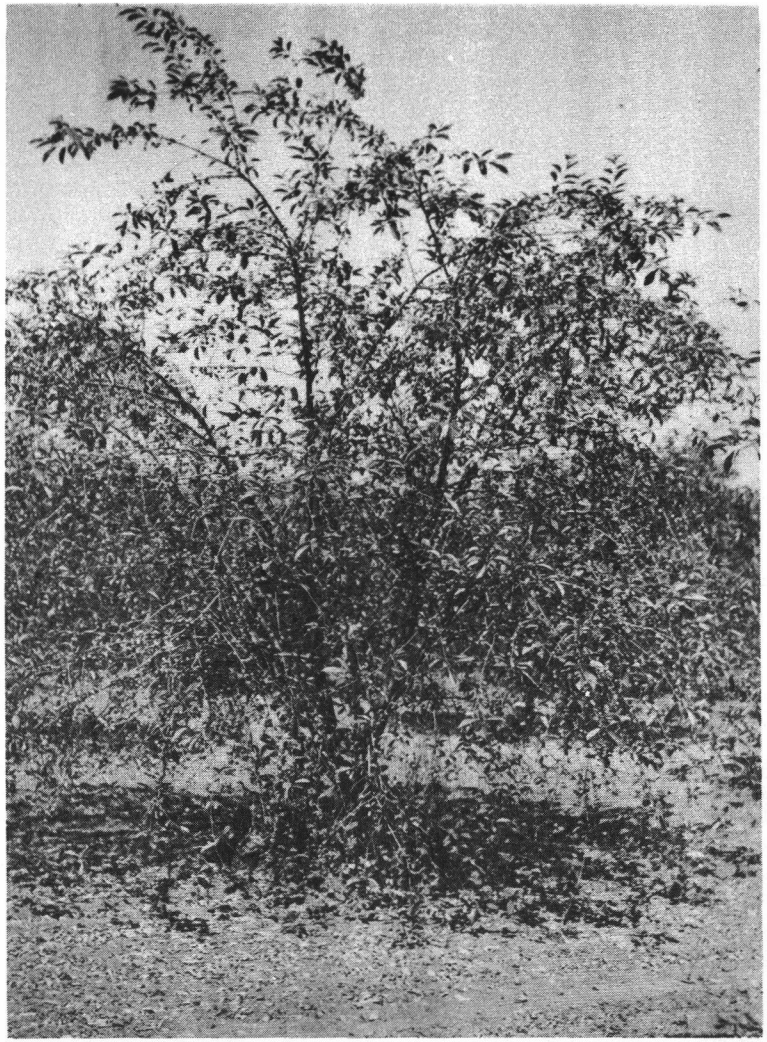
care should be taken to wash any visible spots from the cherries before selling. Unless very heavily sprayed, this may be done by rinsing thoroughly for several minutes in fresh water.

SPRAY SCHEDULE FOR LEAF-SPOT, SYNETA BEETLE, AND FRUIT FLY

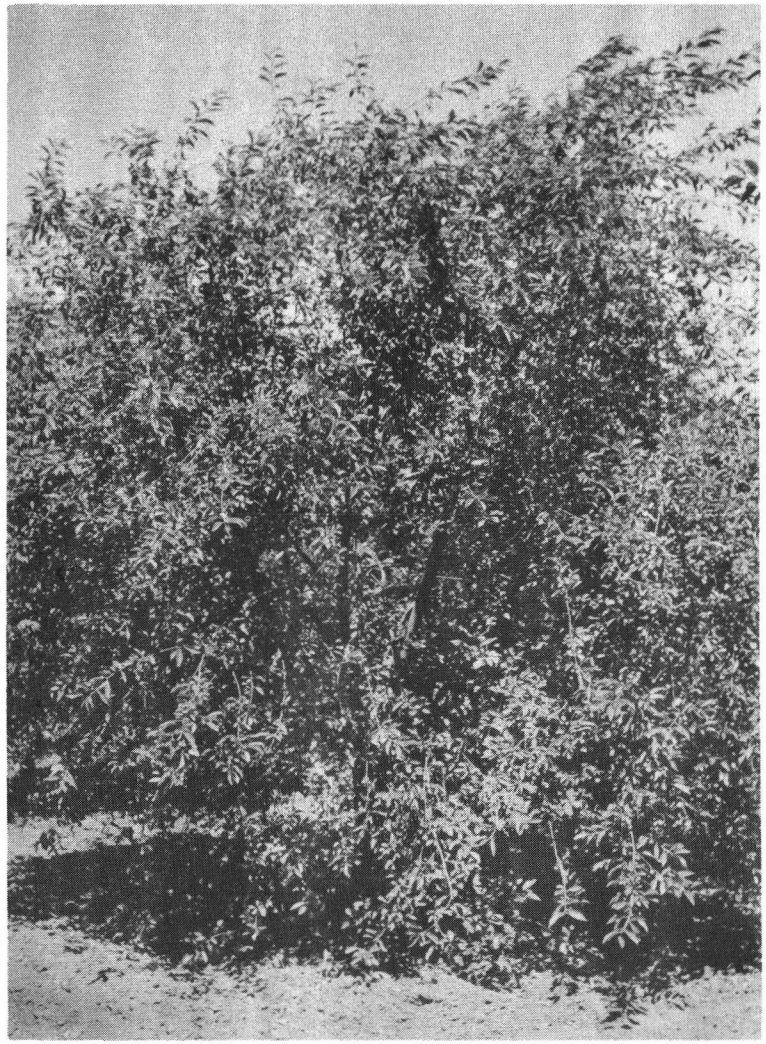
Since it is possible to combine the lead-arsenate spray for both Syneta beetle and fruit fly with the lime-sulphur for leaf-spot control, the following program is suggested:

Time of Application*	Insect or disease	Spray material
1. Petal-fall spray	Leaf spot	2 gals. lime-sulphur (32 Baume) to 100 gals. of spray.
	Syneta beetle	Lead arsenate 4 lbs. plus hydrated lime 2 lbs. added to leaf-spot spray.
2. Shuck-fall spray	Leaf-spot	Same as 1.
	Syneta beetle	Same as 1.
3. Two weeks after shuck-fall	Leaf spot	Same as 1.
	Cherry fruit fly	Add to the leaf-spot spray $2\frac{1}{2}$ lbs. lead arsenate.
4. Four weeks after shuck-fall	Cherry fruit fly	$2\frac{1}{2}$ pounds of lead arsenate to 100 gallons of spray. Add wettable sulfur 6 pounds if spray is preceded by heavy rains.

* These sprays in no way take the place of dormant and preblossom sprays suggested elsewhere for the control of other pests and diseases.



UNSPRAYED CHERRY TREE



SPRAYED CHERRY TREE

There is 80% more healthy leaf surface on the sprayed than on the unsprayed cherry tree, due to the control of leaf-spot through spraying. Notice the leaves on the ground under the unsprayed tree.