

Connecticut Agricultural Experiment Station

NEW HAVEN, CONN.

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Bulletin of Immediate Information, No. 30

March 26th, 1924.

INFORMATION ABOUT INSECTICIDES AND  
FUNGICIDES.

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FUNGICIDES.

**Bordeaux mixture.** Recommended for use on potatoes, muskmelons, grapes, cucumbers and seedbed tobacco,—sometimes for pink and prepink spray on apples. Fresh home-made mixtures are most effective, though commercial preparations are often used successfully. Either stone or hydrated lime may be used. Spray should contain 4 lbs. lime and 4 lbs. copper sulphate in each 50 gals. water.

**Lime-sulphur, dormant or winter strength.** Recommended for use on apples (dormant or delayed dormant), peaches (late dormant), and pears (delayed dormant) for control of peach leaf curl and such insects as San José scale, pear psylla, blister mite and aphid. Strength 1 gal. lime-sulphur in 9 gals. water. Dry lime-sulphur may be substituted at the strength recommended by the manufacturer.

**Lime-sulphur, summer strength.** For use as a general fungicide on apples and as an insecticide for control of the European red mite. Usual strength applied,  $1\frac{1}{4}$  gals. to 50 gals. water. Dry-lime-sulphur may be substituted with good results.

**Dry mix, self-boiled and "atomic" sulphur.** Successfully used on peaches. Strengths recommended: *dry mix*, 8 lbs. superfine sulphur, 4 lbs. hydrated lime, and one-half lb. calcium caseinate to each 50 gals. water; *self-boiled lime-sulphur*, 8 lbs. stone lime, 8 lbs. sulphur, to each 50 gals. water; "*atomic*" or "*colloidal*" sulphur, 5 lbs. to each 50 gals. water.

**Dusts.** Sulphur dusts are satisfactory for use in control of peach scab and brown rot. Pure dusting sulphur is recommended and should be as fine as possible to obtain.

#### INSECTICIDES

**Miscible oils.** Valuable for control of the European red mite when used as a late dormant spray as the buds swell; will also kill scale insects. Strength recommended 1 gal. in each 15 gals. of water. Scalecide or Sunoco spray oil are suitable. Do not use on peach trees.

**Lead arsenate.** Used for control of chewing insects such as canker worm, codling moth, apple and thorn skeletonizer, Colorado potato beetle and others. The dry form of the arsenate is preferable, but the paste may be used. In each 50 gals of water use  $1\frac{1}{2}$  lbs. of the dry powder or 3 lbs. of paste.

**Calcium arsenate.** Should not in general be used on fruit trees, because of danger of burning the leaves,—but may be used on potatoes for control of the Colorado potato beetle; 1 lb. in 50 gals. water is the proper dilution. Sometimes used in dust form on apple trees.

**40 per cent. nicotine sulphate.** Recommended for control of red bug, aphid or other sucking insects, at the rate of  $\frac{3}{8}$  to  $\frac{1}{2}$  pint to each 50 gallons of spray. Commercial preparations are known as Black Leaf 40, Halls Nicotine, and N. P. C. Nicotine Sulphate.

**Dusts.** Nicotine dusts are successful in control of sucking lice on vegetable crops and the arsenical dusts may be used on fruit trees. Sulphur-arsenate dust may be used on apple varieties that are not subject to serious scab infection.

#### SPREADERS.

Any product containing soluble casein and lime, 1 part of casein to 3 parts of lime, may be used to increase the adhesiveness of the above sprays. The most widely known product now on the market is sold under the trade name "Kayso".

#### CAUTION.

If necessary to combine such sprays as nicotine sulphate, lead arsenate and lime-sulphur, combine in the following order: 1. lead arsenate, 2. nicotine sulphate, 3. casein lime, 4. lime-sulphur.

Oil sprays should be thoroughly mixed before dilution, and should not be used unless a complete emulsion is formed. Do not apply in freezing weather.