

Directions for Preparation and Use of Insecticides and Fungicides

The following formulae for the preparation and use of insecticides and fungicides are in accordance with the best practice. This calendar has been prepared exclusively for the fruit and truck growers of the Rogue River Valley; and, with this fact in view, only such matter is included as is thought necessary for the intelligent use of insecticides and fungicides in the control of such insect pests and fungous diseases as are of economic importance in the valley.

BORDEAUX MIXTURE

This is the standard fall spray for apples and stone fruits. Bluestone (copper sulphate) 5 pounds. Lime (unslaked) 5 pounds. Water 50 gallons.

RESIN BORDEAUX MIXTURE

This is the standard spray for blackberries, raspberries, and other cane fruits. Resin 1 pound. Soda crystals 1/2 pound. Water 1/2 gallon.

LIME SULPHUR

This is the standard spray used during the spring for all fruit trees, vines, shrubs, etc., before the buds open. Lime-sulphur in concentrated form may be purchased, but there are many who prefer to boil their own solution.

Put about 10 gallons of water in the kettle or boiler and start the fire. Place the lime in the kettle, and, after slaking has well started, add the dry sulphur and mix it thoroughly, adding water enough to maintain a thin paste.

Table for Diluting Concentrated Lime-Sulphur Solutions. Columns: Reading of Hydrometer, Specific Gravity, Number gals. water to one gal. lime-sulphur solution.

This table is constructed for a dilution of 4.5 degrees Beume or its equivalent 1.030 specific gravity.

Tables Comparing Beume's Hydrometer and Specific Gravities. Columns: Degrees Beume, Specific Gravity, Degrees Beume, Specific Gravity.

Rules for Determining Number of Dilutions and Density of Spray.

If the density of the commercial solution or the home-made wash has been first determined by the use of a hydrometer, sprays of any desired density may be calculated by using the above table.

concentrate in 288 and 13.4 volumes of water are added to it. 13.4 plus 1 equals the number of dilutions. 288 divided by 14.4 equals .020 which is the decimal of the spray and corresponds to 3 degrees Beume.

SELF-BOILED LIME-SULPHUR

This is the standard summer spray for peaches and other stone fruits to prevent the fruit spot disease. Its use, however, is never necessary if proper fall spraying with Bordeaux has been done.

The lime should be placed in a barrel and enough water poured on to almost cover it. As soon as the lime begins to slake, the sulphur should be added after sifting it so as to break the lumps.

THE IRON SULPHIDE SPRAY

This is the standard spray for apple and rose mildew for this district. The following formula is for summer use, or after the buds have opened.

Dissolve the iron sulphate in about 5 gallons of water and add the quart of lime-sulphur, stirring well. Let the black precipitate settle for a few hours and pour off the liquid, keeping the precipitate. Then add 5 gallons of water, stir thoroughly and let settle again.

It is often necessary to apply the iron sulphide before the buds open, and in this case, washing is not necessary. The best way to apply it in the case of apple mildew is with the spring lime-sulphur spray.

DISTILLATE-OIL EMULSION

This is the standard spray for thrips. Water 5 gallons. Lye (98 per cent) 2 pounds. Fish oil 1 1/2 gallons.

Have the water boiling when put into the spray tank and add soap while agitator is running at good speed. When soap is thoroughly dissolved, pour in the distillate-oil slowly, keeping the mixture well agitated.

KEROSENE EMULSION

Kerosene 2 gallons. Hard soap (white-oil soap) 1/2 pound. Water 1 gallon.

Dissolve soap in water by boiling; add hot soda to the kerosene. Do not do this near a fire. Agitate the mixture with a spray pump so as to emulsify the oil.

WHALE-OIL SOAP AND QUASSIA

Whale-oil soap 10 pounds. Quassia 5 pounds. Water 100 gallons.

Place the quassia chips in a sack, cover with about 10 gallons of water and soak for 24 hours. Then boil, remove the chips, add the soap and boil until dissolved.

ARSENATE OF LEAD

Arsenate of lead 4 pounds. Water 100 gallons.

It is better to purchase arsenate of lead than to attempt to make it. In mixing, preparatory to spraying, the amount of arsenate of lead for each spray tank full should be worked into a very thin paste having the appearance of milk of lime.

TOBACCO SPRAYS

Tobacco black leaf 1 gallon. Water 65 gallons.

HELLEBORE

Hellebore 1 ounce. Water 2 gallons.

This is valuable as an insecticide for use on vegetables which are almost ready for market and on which arsenicals cannot be used.

PYRETHRUM

Pyrethrum 1 ounce. Water 2 gallons.

This is a contact insecticide but is not poisonous to man. Burning a little pyrethrum powder in a room will tend to destroy flies and mosquitoes.

CARBOLATED LIME

This may be used for root maggots. Work the mixture into the soil.

Lime (unslaked) 10 pounds. Carbolic acid (crude) 1 to 2 pints. Water 50 gallons.

Slake the lime with a little water, add the rest of the water and the carbolic acid.

CARBOLIC ACID EMULSION

This, like the above formula, may be used to destroy eggs and young maggots infesting onions, radishes and other garden crops.

Carbolic acid (crude) 1 pint. Soap (hard) 1 pound. Water 1 gallon.

Dissolve soap in boiling water; add acid and stir or churn, as in making kerosene emulsion, until the substance becomes creamy.

BRAN-ARSENIC MASH

White arsenic 1 pound. Brown sugar (or molasses) 1 to 2 pounds. Bran 6 pounds.

Thoroughly mix the above and add enough water to make thoroughly wet. A spoonful should be placed near the crown of each tree.

BRAN-PARIS GREEN MASH

Paris Green 1 pound. Bran 40 pounds. Molasses or sugar 1 to 2 pounds. Salt 1/2 pound.

Make a mash by adding water; add molasses (or sugar) and salt; mix thoroughly and scatter in small piles among plants or in beds before planting.

FORMALIN

Formalin (40 percent solution) 1 pint. Water 30 gallons.

This is a preventive of potato scab and smut of grains. Potatoes and grains should be soaked in it for about two hours.

CORROSIVE SUBLIMATE

This is the standard disinfectant when working with PEAR BLIGHT. No other disinfectant should be used to wash the cut surfaces or to disinfect the pruning tools.

Corrosive sublimate 1 part. Water 1000 parts.

Corrosive sublimate may be purchased in tablet form at drug stores, and directions for making solutions will be found on the container.

PINE TAR

For soil-infesting, seed-eating insects such as the wire worm, tar may be used with good results.

Pine tar 1 teaspoonful. Seeds 15 pounds.

Dampen the seeds, such as corn, squash, canteloupes, etc., with a little warm water. Put in the tar and mix thoroughly; allow to dry before planting.

STICKY PREPARATIONS

Tanglefoot may be purchased in cans or pails. It is manufactured by O. and W. Thum Co., Grand Rapids, Michigan.

WHITEWASHES

Lime (unslaked) 40 pounds. Salt 30 pounds. Rice flour (or ground rice) 3 pounds. Spanish whiting 1/2 pound. Glue 1 pound. Water 5 gallons.

Slake the lime in warm water and cover so as to keep in the steam; strain through a fine sieve or strainer; add the salt, well dissolved, in warm water. Then add the rice boiled hot; the Spanish whiting, and finally the glue which has been previously dissolved over a slow fire.

WHITTEWASH FOR TREES

Lime (air slaked) 30 pounds. Tallow 4 pounds. Salt 5 pounds. Water Enough to make wash flow well.

When old trees are cut back for top working, they may be protected from sun scald by using the above wash.

WHITE LEAD PAINT

White lead, slightly thinned with linseed oil, should be used where large cuts are made, or in case where the wood is exposed by the removal of the bark and cambium as in the case of pear blight eradication.

GRAFTING WAX

Resin 4 pounds. Beeswax 2 pounds. Tallow 1 pound.

White lead, slightly thinned with linseed oil, should be used where large cuts are made, or in case where the wood is exposed by the removal of the bark and cambium as in the case of pear blight eradication.

GRAFTING WAX FOR WALNUTS

Beeswax 1 pound. Resin 5 pounds. Linseed oil 1 pint. Lamp black 1 ounce.

This is the standard summer spray for sucking insects, such as green aphids, woolly aphids and other aphides.

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