

FORMULAE FOR INSECTICIDES

INSECTICIDES FOR BITING AND LAPPING INSECTS.

1. ARSENATE OF LEAD PASTE.

Use 2 to 3 lbs. to 40 gals. of water, or of lime-sulphur or of Bordeaux mixture.

2. ARSENATE OF LEAD POWDER.

Use 1 to 1½ lbs. to 40 gals. of water, or of lime-sulphur or of Bordeaux mixture.

3. ARSENATE OF LIME (Calcium arsenate).

Use ¾ to 1 lb. if in powder form to 40 gals of Bordeaux mixture. Double the amount if in paste form. (There is some doubt yet whether this poison is always safe with lime-sulphur. It is not safe alone).

4. PARIS GREEN.

Use ¼ to ½-lb. with 40 gals. of Bordeaux mixture. (This poison is not safe with lime-sulphur.)

FORMULAE FOR FUNGICIDES

I.—BORDEAUX MIXTURE.

Copper Sulphate (Bluestone) 4 lbs.
Unslaked Lime 4 lbs.
Water 40 gals.

Dissolve the copper sulphate in a wooden or brass vessel with hot water, pour into a barrel and add cold water to make 20 gals.; slake the lime, preferably with hot water; add cold water to make 20 gals. Stir both barrels well and pour lime into the copper sulphate barrel. (Never mix concentrated milk of lime and copper sulphate solutions).

A stock solution of each may be made and kept indefinitely if not mixed:—Dissolve 40 lbs. copper sulphate in 40 gals. of water by suspending just below the surface of the water in a coarse sack. Each gallon of the liquid will now contain 1 lb. copper sulphate. Slake any desired quantity of lime and put into a box or barrel in shaded place, or sunk in the ground. Keep covered with small amount of water to exclude the air. Calculate how much is required for 4 lbs. lime if well stirred.

To test Bordeaux mixture, let a drop of ferro-cyanide of potassium solution fall into a little of the mixture in a saucer. If this causes it to turn reddish brown, add more lime until no change takes place.

II.—LIME-SULPHUR WASH.

1. HOME BOILED (for use on dormant wood only):
Fresh stone lime 20 lbs.
Sulphur (flour or flowers) . . . 15 lbs.
Water 40 gals.

Slake 20 lbs. of lime in about 15 gals. or more of boiling water in a kettle or other boiling outfit. While slaking add the 15 lbs. sulphur made into paste by the addi-

240 divided by 30=8. This means that each gallon of such a wash must be diluted to 8 gals. with water to give us a strength of 1:030, the proper spring strength. For the second application 1:009 is about the right strength. To get it divide the 240 by 9, which gives 26%, or roughly speaking 27. This means that each gallon of a wash of the strength of 1:240 must be diluted to 26% or 27 gals. to make the right strength for the second application. For the third application and any later ones 1:008 is about the right strength, and to get this we proceed in the same way and divide 240 by 8=30, so that each gallon must be diluted to 30 with water for this application. If the strength of the concentrated were 1:212 or any other number, you would in the same way divide the three figures to the right by 30, 9 and 8 respectively to get the proper dilutions for each spraying.

TABLE FOR CHANGING BEAUME READINGS INTO THEIR EQUIVALENT SPECIFIC GRAVITY READINGS.

Beaume.	Specific Gravity.	Beaume.	Specific Gravity.
18	= 1:141	27	= 1:230
19	= 1:150	28	= 1:240
20	= 1:159	29	= 1:250
21	= 1:168	30	= 1:260
22	= 1:178	31	= 1:271
23	= 1:188	32	= 1:282
24	= 1:198	33	= 1:293
25	= 1:208	34	= 1:305
26	= 1:219	35	= 1:317

Note.—Commercial lime-sulphur should be tested with the hydrometer and diluted according to the same rules as the home-made concentrated form.