

# Connecticut Agricultural Experiment Station

E. H. JENKINS, Director.

NEW HAVEN, CONN.

## SPRAY CALENDAR

W. E. BRITTON,  
ENTOMOLOGIST.

### Hydrocyanic Acid Gas.

1 oz. Cyanide of Potash,  
2 ozs. Sulphuric Acid, 4 ozs. Water.  
For each 100 cu. ft. space.  
For dormant stock place the acid and water in an earthen jar in the house, drop in the cyanide and close the house at once for half an hour. Ventilate for ten minutes before entering. In greenhouse use 1 oz. of cyanide for each 1000 cu. ft. of space.

### CARBON DISULPHIDE.

To kill insects infesting stored grain, in tight bins, use 1 lb. for 100 bushels of grain.

### COMMON SOAP.

1 lb. in 8 gals. Water.  
Spray upon foliage to kill red spider, plant-lice and other sucking insects.

### PARIS GREEN.

1 lb. Paris Green,  
3 lbs. Lime, Water.  
100 gals. Water.

Spray upon foliage to kill potato beetle, elm leaf-beetle, and all biting insects. Commonly used with Bordeaux Mixture.

### ARSENATE OF LEAD.

3 lbs. in 50 gals. Water.  
Applied to foliage for the same end and in the same way as Paris Green.

### HELLEBORE.

Dust on the plants, or mix with water, 1 oz. in 2 gals. and spray. For currant-worm and other saw-fly larvae.



## BULLETIN 159

G. P. CLINTON,  
BOTANIST.

### COPPER SULPHATE.

2 to 3 lbs. Copper Sulphate,  
50 gals. Water.

Use only as a winter spray. 1 lb. to 250 gals. water is sometimes used on foliage.

### POTASSIUM SULPHIDE.

3 ozs. Potassium Sulphide,  
10 gals. Water.

Used chiefly in greenhouses, or for powdery mildews.

### FORMALIN.

A. 1 pt. (1 lb.) Formalin in 50 gals. water for grain smut.  
B. 1 pt. Formalin in 30 gals. water for potato scab.  
C. 1 pt. Formalin in 12½ gals. water for soil treatment. Use two thirds to 1 gal. for each square foot of surface treated; cover for 24 hours after treatment; air afterwards.

### Amm. Sol. Cop. Carbonate.

5 ozs. Copper Carbonate,  
3 pts. Ammonia,  
50 gals. Water.

Use *just enough* ammonia (if strong, diluted with several volumes of water) to dissolve the copper carbonate; then dilute to final volume. This fungicide is not as good as Bordeaux, but is used where no sediment is desired on the foliage or fruit.

## FORMULAS. FUNGICIDES.

### BORDEAUX MIXTURES.

4 lbs. Copper Sulphate,  
4 lbs. Fresh Lime,  
45 to 50 gals. Water.

Dissolve the copper sulphate in hot water or from a coarse bag suspended in cold water; slake the lime separately and strain. Dilute the latter to about 20 gals., into which pour the copper sulphate diluted to about 20 gals., stirring the mixture; dilute further to form the forty-five or fifty gallons; or dilute each to 25 gals. and pour together into barrel. Stock solutions of the copper sulphate or lime, rate 1 lb. to 1 gal. water, can be kept indefinitely.

**Dilute Bordeaux Mixture.** Use 2 lbs. copper sulphate, 4 of lime, and make as above directed.  
**Soda Bordeaux Mixture.** 4 lbs. copper sulphate, 1½ to 1½ lbs. soda lye, 50 gals. water. Use only enough lye to make the solution alkaline to test paper.  
**Resin Bordeaux Mixture.** Melt 5 lbs. resin with 1 pt. fish oil over fire, cool slightly, add 1 lb. soda lye with stirring. Add 5 gals. water and boil till the mixture will dissolve in cold water. Use 2 gals. with 48 of Bordeaux Mixture.

## INSECTICIDES.

### Lime and Sulphur Mixture.

20 lbs. Lime,  
14 lbs. Sulphur,  
40 gals. Water.

Boil one hour, and apply while fresh to dormant trees to kill San José Scale-Insect.

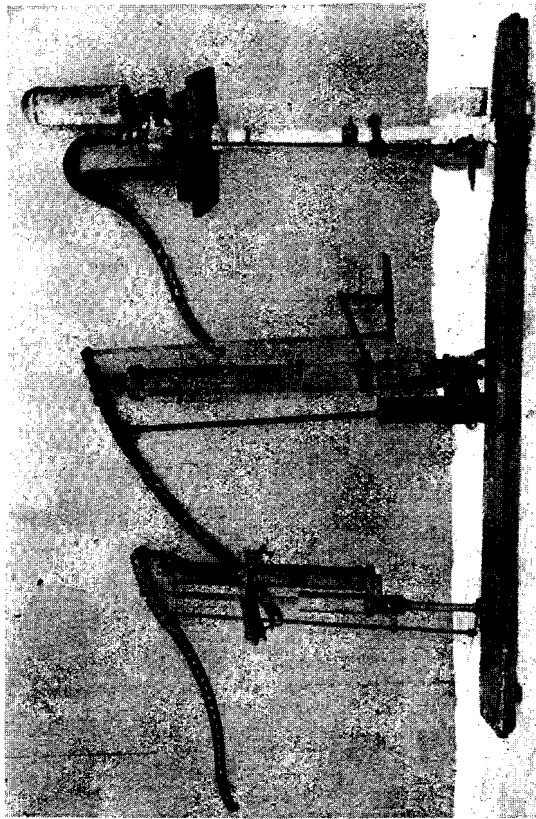
### KEROSENE EMULSION.

2 gals. Kerosene,  
¼ lb. Common Soap,  
1 gal. Water.

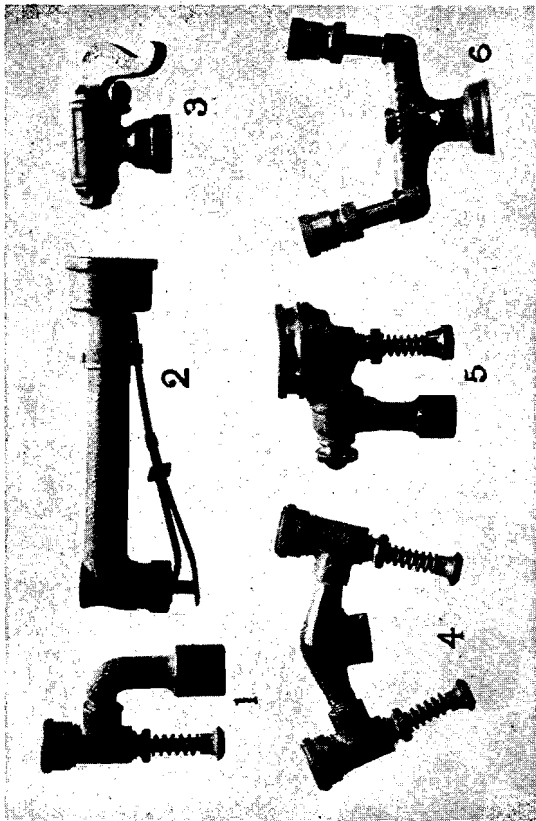
Dissolve the soap in hot water, add the kerosene, and churn together until a white creamy mass is formed which thickens on cooling. Dilute nine times before using.

### "SOLUBLE OIL" FOR SPRAYING.

"Scalecide," "Target Brand Scale Destroyer" and "Kill-O-scale" give good results when mixed 1 part with 15 parts of water. Can also be made at home. See Bulletins 75 and 79, Delaware Station, and Storrs Station Bulletin 49.



THREE TYPES OF BARREL PUMPS.



SOME SPRAY NOZZLES IN COMMON USE.

- 1, Single Vermorel.
- 2, McGowen.
- 3, Bordenux.
- 4, Double Vermorel.
- 5, Mistry.
- 6, Double Spramotor.