

Whale-oil Soap and Black Leaf.—A cheap and efficient aphid-spray is made by the following formula: Whale-oil soap, 2 lb.; Black Leaf, 1 quart. Dissolve the whale-oil soap as above and mix it with Black Leaf in 40 gallons of water. By adding 2 lb. of arsenate of lead to this formula it becomes an efficient spray against leaf-eating insects as well as aphids.

Besides the sprays mentioned above, lime-sulphur is used in the control of insects, especially the scale-insects.

FUNGICIDAL SPRAYS.

(1.) *Lime-sulphur*.—This spray, both for summer and winter spraying, is becoming very popular. It is an efficient fungicide, and also is useful in the control of many insect pests. It can be manufactured by the grower without infringement on any patent, but it is found at present prices of manufacture to be more economical to buy the commercial mixture. Most brands on the market have been giving good satisfaction, among which are some manufactured in our own Province. It is a good plan to have on hand a hydrometer (specific gravity and Beams scale attached) to test the commercial mixture before using. The reading as given by the hydrometer is not always a sure indication of the strength of the commercial mixture, as something might be added which would raise the hydrometer test without increasing the fungicidal strength of the spray. With most commercial mixtures it can be used to advantage.

Dilutions.—The following is a table showing dilutions of different strengths of commercial lime-sulphur. This shows the dilutions which are giving the best results, and although they might seem a little strong, they are not too much so for aphides. There can be no injury from this strength for the dormant sprays, even when the buds are swelling. For summer spraying for apples and pears this is diluted with three and a half to four times as much water. For the tender foliage of plums and prunes use five to six times as much water.

TABLE FOR DILUTING CONCENTRATED LIME-SULPHUR SOLUTIONS.

°F.	Hydrometer Scale Specific Gravity.	AMOUNT OF DILUTION.	
		Number of gallons of water to one gallon of lime-sulphur solution.	For dormant spray.
36.....	1.310.....	1 gallon lime-sulphur.....	9.3 gallons water.
.....	1.290.....	1 gallon lime-sulphur.....	9.6 gallons water.
34.....	1.288.....	1 gallon lime-sulphur.....	8.3 gallons water.
33.....	1.277.....	1 gallon lime-sulphur.....	8.2 gallons water.
32.....	1.267.....	1 gallon lime-sulphur.....	7.9 gallons water.
31.....	1.256.....	1 gallon lime-sulphur.....	7.5 gallons water.
30.....	1.246.....	1 gallon lime-sulphur.....	7.2 gallons water.
29.....	1.236.....	1 gallon lime-sulphur.....	6.9 gallons water.
28.....	1.226.....	1 gallon lime-sulphur.....	6.5 gallons water.
27.....	1.216.....	1 gallon lime-sulphur.....	6.2 gallons water.
26.....	1.206.....	1 gallon lime-sulphur.....	5.9 gallons water.
16.....	1.041.....	1 gallon lime-sulphur.....	0.4 gallon water.
5.....	1.034.....	1 gallon lime-sulphur.....	0.1 gallon water.

Some growers think it better to add some lime. This is not necessary, as it does not strengthen the spray, but in some cases it is supposed to have the opposite effect. When it is added, it is advisable to use the spray within a few hours after mixing or it will deteriorate.