



DOMINION OF CANADA—DEPARTMENT OF AGRICULTURE
SCIENCE SERVICE

MAKING BORDEAUX MIXTURE

BORDEAUX mixture contains two ingredients, copper sulphate and lime. Copper sulphate (bluestone, blue vitriol) may be obtained in the crystal form or in the pulverized form. Lime for making Bordeaux may be either quicklime (lump lime) or hydrated lime (chemical hydrate).

Formulæ—

The strength of Bordeaux mixture is indicated by formulæ as, 3-6-40, 4-4-40, 5-15-100, etc. The first figure in each formula indicates the quantity in pounds of copper sulphate. The second figure indicates the quantity in pounds of lime. The last figure indicates the quantity in gallons of water.

The various strengths are used for different crops. For example, 3-6-40 Bordeaux mixture is usually recommended for apples, sour cherries, plums, dormant peach trees, and currants; 2-4-40 for pears; 4-8-40 for grapes; and 4-4-40 for potatoes and vegetables. Further details are given in circulars and spray calendars.

Methods

There are two standard methods for making Bordeaux mixture. Where there is no agitation in the spray equipment the stock solution method must be used. Where there is a good spray agitator the instant method is more satisfactory but calls for powdered copper sulphate and hydrated lime. Crystal copper sulphate and quicklime cannot be used to make instant Bordeaux.

Stock solution method—

Two containers are required—one for copper sulphate, preferably wood but under no circumstances metal, and one for quicklime. The copper sulphate solution is made by weighing out one pound of copper sulphate for each gallon of water in the container and suspending it in a bag so that the copper sulphate comes in contact with the water but is not completely covered. If quicklime is used it must be weighed, slaked and diluted to the same proportion.

To make a 4-4-40 Bordeaux mixture, 4 gallons of the copper sulphate stock solution are poured into the spray tank already containing 20 to 30 gallons of water, stirred, and 4 gallons of the stock lime solution added as the volume is made up to 40 gallons. If hydrated lime is used in place of quicklime it may be puddled in a pail of water and poured into the nearly full tank containing the diluted copper sulphate or added as in making instant Bordeaux. All solutions should be passed through a strainer.

Instant Bordeaux—

As the spray tank is being filled with water, sift in the required quantity of pulverized copper sulphate allowing 3 to 5 minutes for it to dissolve. When the tank is nearly full sift in the required amount of hydrated lime. Keep the agitator running during the mixing operations.



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Small Quantities

Gardeners frequently desire to make up 1 to 5 gallons of spray at a time. The following approximate equivalents may be used:—

$\frac{1}{2}$ oz.	per gallon—	3 lb.	per 100 gallons	or	$1\frac{1}{4}$ lb.	per 40 gallons
1 oz.	“ “	— 6 lb.	“ 100 “	or	$2\frac{1}{2}$ lb.	per 40 “
$1\frac{1}{2}$ oz.	“ “	— 10 lb.	“ 100 “	or	4 lb.	per 40 “
2 oz.	“ “	— 12 lb.	“ 100 “	or	5 lb.	per 40 “

Bordeaux mixture should be constantly agitated. If spray nozzles plug frequently, a finer mesh strainer should be used. High grade hydrated lime guaranteed 300 mesh makes a very desirable Bordeaux mixture.

Stock solutions of copper sulphate may be kept for several days but stock solutions of quicklime and dilutions of the completed mixture should be used as soon after mixing as possible.

Always dilute one of the ingredients, preferably copper sulphate, before adding the other.

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