

TIMELY TOMATO TOPICS

Plant Growing
Seed Treatment
Spraying Schedule

By

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BORDEAUX MIXTURE

Bordeaux is made from copper sulphate (bluestone, blue vitriol), lime, and water. The first figure of a bordeaux formula always indicates the amount of copper sulphate in pounds, the second figure the amount of hydrated lime in pounds, and the third figure the amount of water in gallons. A 4-2-50 bordeaux will require:

4 pounds copper sulphate, 2 pounds hydrated lime, 50 gallons water.

Lime is available in two forms: "quick" or "lump" lime and hydrated lime. All formulae in this bulletin for making bordeaux, specify hydrated lime. If "quick" or "lump" lime is used, reduce the amount to two-thirds that specified for hydrated lime in the formula. Some kinds of lime are undesirable for spraying purposes.

"INSTANT BORDEAUX" METHOD

A method used extensively recently involves the use of pulverized, powdered, or sugar copper sulphate. This does not have to be made up into a stock solution as it dissolves quickly, with agitation, in the sprayer tank. A satisfactory procedure follows:

1. Fill sprayer tank about one-fourth to one-third full with water.
2. With the agitator in operation, place the copper sulphate on the tank screen and wash through, and continue to add water until the tank is nearly full. Allow about two minutes for the copper sulphate to dissolve thoroughly.
3. Place hydrated lime on the tank strainer and wash through, or mix with water in pail or tub and pour through tank strainer.
4. Add calcium arsenate or nicotine sulphate at this time if either is to be used. Fill tank with water and apply. Keep agitator in operation continuously after copper sulphate is added.

Seed Treatment—Soak the seed in a 1-3000 solution of mercuric chloride or a 1-1200 suspension of New Improved Ceresan for 5 minutes. The mercuric chloride solution is made by dissolving one-fourth ounce of the white powdered form in $5\frac{1}{2}$ gallons of water. The 1-1200 suspension of New Improved Ceresan is prepared by mixing one-half ounce of the commercial dust in $4\frac{1}{2}$ gallons of water. Both disinfectants are corrosive to metals and should be put in wooden or earthenware containers. Not more than one pound of dry or one quart (by volume) of wet seed should be treated in each gallon of treating solution, and the solution must not be used more than once. For ease in handling during the disinfection process, the seeds may be placed loosely in a large cloth bag. During treatment the seed should be stirred with a stick to remove air bubbles and insure wetting the seed coats. Treated seed must be drained and dried thoroughly. Both disinfectants are poisonous and must be handled with care. Used solutions should be disposed of where persons or animals will not drink them.

POISON BRAN BAIT FOR CUTWORMS

Mix very thoroughly

- 1 bushel of bran
- $\frac{1}{2}$ gallon of cheap molasses
- a little water
- 1 pound white arsenic or 1 quart arsenite of soda (not arsenate of calcium) or—1 pound paris-green.

Apply on average 30-40 pounds wet bait per acre.

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PREPARATION OF SEEDBED

1. Disinfect all tools, frames, and flats where tomato plants were previously grown—two weeks before planting (one-half gallon formalin in 50 gallons of water).
2. Use only virgin soil or soil sterilized by steam or treated with formaldehyde.

SEED

1. Quantity needed—two ounces of seed to produce plants for one acre.
2. Treat the seed in a 1-3000 solution of mercuric chloride or a 1-1200 suspension of New Improved Ceresan for 5 minutes, wash in running water for 15 minutes, and dry thoroughly. (See next page for details).
3. Dust the seed with red copper oxide (one ounce to two and one-half pounds seed) before planting.
4. Suggested tomato varieties:

Early market varieties:

Morse 498
(Earliana type)
Valiant

Mid-season varieties for market,
canning and home use:

Stokesdale
John Baer
Pritchard

Late varieties:

Rutgers
Marglobe
Baltimore (for canning only)

PLANT GROWING

1. Sow the seed about 6 to 8 weeks before time to set out in the field.
2. Sow the seed in rows one and one-half inches apart and 8 to 10 seeds per inch.
3. Water only on mornings of bright, clear days; soak thoroughly—do not sprinkle.
4. "Prick out" seedlings for transplanting when the second true leaf appears. (Seedlings should be out of flat within three weeks of sowing.)
5. "Spotting" distances: Standard flat (12 inches x 24 inches) not more than 80 plants; minimum spotting distance in cold frame 3 x 3 inches, minimum size bands and pots 3 inches, larger sizes for early production.
6. Fertilize compost for flats, bands, or pots with 2-16-8 or 2-12-6 at rate of one pound per wheelbarrow of compost.

SPRAYING

Make three to five applications of bordeaux mixture 2-2-50 on young plants in the cold frame. One of the insoluble or fixed copper sprays may be used to replace bordeaux mixture if desired, but should not be used full strength on seedlings. Keep the young plants protected with a copper spray from one week after transplanting until they are set in the field.

FIELD PLANTING

1. Plant only in fields where rotation has been followed and tomatoes or related crops (potato, pepper, eggplant) have not been grown for two or more years.
2. Consult your county agricultural agent for fertilizer recommendations.
3. Spread poison bran bait* not later than the night before planting TO rid the field of cutworms, (See next page).

The date of planting varies for different sections. Consult your county agricultural agent for planting dates in your section.

4. Planting distances and number of plants required per acre:

| | | | |
|----------------------|----------------------|----------------------|--------------|
| 3 x 5 feet | 2,904 plants | 4 x 5 feet | 2,178 plants |
| 4 x 4 feet | 2,722 plants | 4 x 6 feet | 1,815 plants |
| | 6 x 6 feet | | 1,210 plants |

FIELD SPRAYING

1. Apply four to six sprays to protect plants from leaf blights and flea beetles. Use a 4-2-50 *bordeaux plus one pound of calcium arsenate. If tomato worms appear, apply additional sprays. If an insoluble or fixed copper spray is used to replace bordeaux mixture, use sufficient insoluble copper compound to provide one pound of metallic copper in each 50 gallons of spray. This provides the same copper content as the recommended 4-2-50 bordeaux mixture. If an insoluble copper is used, a sticking and a wetting agent should be added to the spray to insure coverage and proper adherence to the leaves; calcium arsenate should be added if no insecticide is contained in the spray compound as prepared by the manufacturer.
2. Spraying is far superior to dusting but if only dusting equipment is available, use a 15-5-80 (monohydrated copper sulphate-calcium arsenate-hydrated lime) dust, applied early in the morning when plants are wet with dew.
3. Discontinue spraying when the first fruits begin to turn red.

FIELD SANITATION

1. Keep all fields free from horse-nettle, nightshade, and ground-cherry; these plants are hosts for mosaic.
2. Plow under deeply or burn all crop remains at end of season.

*See next page for details.