

MSU Extension Publication Archive

Archive copy of publication, do not use for current recommendations. Up-to-date information about many topics can be obtained from your local Extension office.

Timely Tomato Topics
Michigan State University Extension Service
Horticulture, Plant Pathology, Entomology
Issued March 1936
3 pages

The PDF file was provided courtesy of the Michigan State University Library

Scroll down to view the publication.

TIMELY TOMATO TOPICS

Plant Growing
Seed Treatment
Spraying Schedule

By

DEPARTMENTS OF HORTICULTURE, PLANT PATHOLOGY
AND ENTOMOLOGY

MICHIGAN STATE COLLEGE
Of Agriculture and Applied Science

EXTENSION DIVISION

R. J. Baldwin, Director

Bordeaux Mixture

Bordeaux is made from copper sulphate (blue stone, 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 6-6-100 Bordeaux will require:

6 pounds copper sulphate, 6 pounds hydrated lime, 100 gallons water.

Lime is available in two forms: "quick" or "lump" lime and hydrated lime. All formulae in this bulletin for making Bordeaux, call for 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.

If it is desired to make Bordeaux by the standard stock solution method consult the spraying calendar.

Seed Treatment

Soak the seed for five minutes in a 1 to 3,000 solution of corrosive sublimate, (1 oz. in 22½ gallons), and wash for 15 minutes in running water. The corrosive sublimate solution should not be put into metal containers and should be used only once. After one batch of seeds has been soaked, the germicidal action of the solution is greatly reduced and a fresh solution must be used for each batch of seeds. For ease in handling during the disinfection process, the seeds may be placed in a cloth bag, large enough to allow for the swelling of the seeds. During the treatment the seeds should be stirred with a stick to remove air bubbles and insure the wetting of the seed coats. After the washing process the seeds should be spread out to dry in a well-ventilated place.

Poison Bran Bait for Cutworms

Mix very thoroughly

- 1 bushel of bran
- ½ gallon of cheap molasses
- a little water
- 1 pound white arsenic or 1 quart arsenite of soda (not arsenate of lead nor arsenate of calcium) or—1 pound paris-green.

When thoroughly mixed, stir in enough amyl acetate (banana oil) to scent the mass slightly—about two or three ounces, at most.

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

References

Bulletins, available from Michigan State College, covering important phases of tomato production.

Ext. Bulletin No. 156 "Tomato Growing in Michigan".

Cir. Bulletin No. 139 "Tomato Diseases in Michigan."

Ext. Bulletin No. 20 "Hotbeds and Cold Frames".

Ext. Bulletin No. 130 "Small Sash Houses for Growing Vegetable Plants".

Sp. Bulletin No. 133 "Fertilizers—What They Are and How to Use Them".

Cir. Bulletin No. 53(revised) "Fertilizer Recommendations for 1936".

Sp. Bulletin No. 183(revised) "Common Insects of Field and Garden Crops".

TIMELY TOMATO TOPICS

PREPARATION OF SEED-BED

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, soil sterilized by steam or treated with formaldehyde.

SEED

1. Quantity needed—two ounces of seed to produce plants for one acre.
2. Use adapted tomato varieties—see Ext. Bul. 156.
3. Treat the seed in corrosive sublimate (1-3,000, i. e., in a solution made by dissolving one-third ounce of the poison in about seven and one-half gallons of water) for five minutes, wash in fresh running water for 15 minutes and dry thoroughly. (See back cover for details.)
4. Dust the seed with red copper oxide (one ounce to two and one-half pounds seed) before planting.

PLANT GROWING

1. Sow the seed about eight to ten weeks before time to set out in the field.
2. Sow the seed in rows one and one-half inches apart and 10 to 12 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 over 80 plants; minimum spotting distance in cold frame 3 x 3 inches, minimum size bands and pots three 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 4-4-100* on young plants in cold frame. Keep plants covered with Bordeaux from one week after transplanting until they are set into 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. See Cir. Bul. 53, 1936.
3. Spread poison bran bait* not later than the night before planting to rid the field of cutworms. See back cover.

The date of planting varies for different sections. Consult your county 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 6-6-100* Bordeaux plus two pounds of calcium arsenate. If tomato worms appear apply additional sprays.
2. Spraying is far superior to dusting but if dusting equipment only is available use a 15-5-80 (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 remnants at end of season.

*See back cover for details.