

Sodium Selenate

Dr. W. E. Blauvelt, Dept. of Entomology, demonstrated the method he has developed of using sodium selenate for pest control. Applied to the soil, it is taken up by the plants and accumulates in the foliage. When pests attack the plant they get the poison along with their food and are killed.

Sodium selenate treatment of chrysanthemums, carnations, saintpaulias, and a number of other florist crops is now far beyond the experimental stage, Dr. Blauvelt reported. Hundreds of growers throughout the United States and some in Canada and other countries are now using the treatment with good results. Many growers have treated their entire planting of mums and carnations. Enough material has been sold to growers to treat about 6,000,000 square feet of bench area.

The big advantage of sodium selenate treatment is that it gives continuous pest control with much less time and labor than spraying or other methods. A single application will clean up midge, green and black aphids, red spider mite, and chrysanthemum thrips on mums. A single application after benching will keep the crop practically free of these pests for the season. The treatment does not give reliable control of leaf tyers or the onion thrips which sometimes injure the growing tips. DDT has proved very effective on these pests.

On carnations a single application after benching has given excellent control of red spider mite for 10 or 12 months in many cases. However, in commercial use it is better to repeat the treatment in February, especially on plants to be kept on for a second season. Sodium selenate also controls aphids on carnations but does not usually give good control of thrips on the buds.

Sodium selenate is available in pure form or in a 2% mixture with superphosphate. The phosphate mixture is known as P-40.

Dr. Blauvelt believes the application of pure sodium selenate in water solution is the best method for bench crops and the only method for potted plants. The P-40 has given satisfactory results at 3 pounds to 100 square feet of bench area where it is applied evenly and watered into the soil carefully.

Directions for the use of the pure sodium selenate in solution follow:

1. Obtain sodium selenate from your florist supply house.
2. Stock solution: Dissolve 100 grams in one gallon of water, 1 pound in $4\frac{1}{2}$ gallons. If you don't have accurate scales, get your druggist to weigh it into small lots for you. Store the stock solution in a glass jug.

One quart of the stock solution is further diluted to cover 100 square feet of bench area.

3. Don't apply it until the plants have made good growth. Wait 2 to 4 weeks after benching or after the plants are potted.

4. Apply the sodium selenate through a Hozon proportioner (Hozon Co., Warrensville, Ohio. \$1.50 cash with order) or through your power sprayer.

With Power Sprayer

1. Fill the tank with water
2. Remove nozzle from spray line
3. Make trial run by pumping out the tank of water as though the selenate were in it. Do not use less than 1 pint of water to 1 sq. ft. Push the hose between each row as though you were watering the soil and develop a uniform procedure.
4. Measure the area covered.
5. 1 quart of the stock solution covers 100 sq. ft. Divide the number of square feet covered by 100 and add the resulting number of quarts of stock solution
Example: 20 gallon sprayer tank of water covered 150 square feet of bench area. $150 \div 100 = 1.5$ qts. of stock solution to the tank.
6. Check yourself with each spray tank to see that you are getting the correct coverage.

Pot plants

1 quart of stock solution to 25 gal. of water.
Water as with liquid manure

Applying with the Hozon Proportioner

1. Make a trial run with water as with the sprayer.
2. Put 1 qt. of stock solution with 3 qts. of water in a pail.
3. Drop the side hose of the proportioner in the pail and turn on the water. Be sure the hose is not kinked and do not stop it at the end.
4. The quart of stock solution diluted to 1 gallon covers 100 sq. ft. and it takes about 5 minutes to put it on through the proportioner. This gets about 16 gallons of water to 100 sq. ft.
5. Check yourself frequently to see that the correct amount is put on.

Pot plants

1 quart of stock solution and 7 qts. of water in the pail for the side hose. Use 30 to 40 pounds of pressure on the water line.

CAUTION

1. Syringe off any solution which might get on the foliage.
2. Don't treat plants until 2 or more weeks after transplanting.
3. Be sure to apply the correct amount evenly.