

Controlling Weeds In Pansies

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Treating After Planting

Although two chemical treatments to transplanted pansies looked very promising this past season, the grower is strongly urged to use one of the widely used preplant soil treatments (see below). Granular Eptam applied last fall to newly transplanted pansies and then lightly cultivated into the soil gave good weed control and produced vigorous plants for spring sales (see figures 1 & 2). The 5% granular Eptam was applied at rates of 3 to 6 pounds of actual Eptam per acre. This is done by applying 60 to 120 pounds of the 5% granular per acre or 1.4 to 2.8 pounds per 1000 square feet. Granular Neburon at 4 to 6 pounds of actual material per acre not raked in was also very effective. The 4% granular Neburon was applied at a rate of 100 to 150 pounds per acre or 2.3 to 3.4 pounds per 1000 square feet. Other herbicides such as Simazine and Diuron (Karmex DW) were very harmful to pansies.

The use of Eptam or Neburon for weed control in pansies shows promise especially when the much lower cost than preplant treatments is considered. Work on other crops especially peonies has demonstrated that weed control varies with soil conditions. Although most varieties may be safely treated a few not originally

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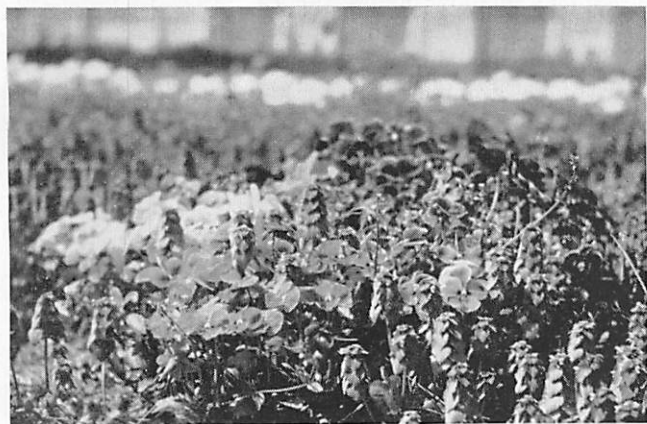


Figure 1. Shows the weeds in an untreated pansy plot.

Pansies

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tested may be severely injured. It is recommended that growers try new herbicide treatments on a small scale in their soil on their varieties before doing any large scale treatments. The effectiveness of granular herbicides depends upon even distribution. The use of a lawn spreader is suggested.

Treating Before Planting

The post planting treatments are much cheaper but experience in their use is limited. On the other hand preplant soil treatments have been used by many growers with very good results. This grower experience and widespread acceptance of the use of steam, methyl bromide, or Vapam is the best recommendation for their use. Careful soil preparation before treatment greatly improves the weed control. Rototill the soil deep enough to insure adequate depth of treatment. Weed seeds and disease organisms are more easily destroyed in a moist soil than one that has been dry for a considerable period of time. Once the treatment has been made, do not cultivate the soil deep enough to bring to the surface untreated weed seed infested soil. The uses of steam, methyl bromide, and Vapam given below are for the most part quoted from "1960 Cornell Recommendations for Commercial Floriculture Crops" pages 19 and 20.

Steam: Is the best and most commonly recommended method for greenhouse and outdoor work. Will kill weed seeds, fungi, bacteria, nematodes, and soil insects. For an effective job, raise temperature of entire soil mass to 180°F for 1/2 hour. Add organic matter prior to sterilization. Sterilize tools and avoid recontamination. Do not place unsterilized flats, pots, or tools on sterilized areas. Plants or seed can be set as soon as soil has cooled down.

Methyl Bromide gas: Methyl bromide is very poisonous to humans but can be applied with complete safety. It can be used in houses where plants are growing although slight leaf injury has been observed on carnations, mums, geraniums, and lilies. The chemical is sold in convenient 1 pound tin cans equipped with a "Jiffy" applicator. Also it is available in 30 pound cylinders for large-scale treatment. At a dosage of 1 pound to 100 square feet it is effective enough for nematodes and weed control. Used at 4 pounds of compressed gas per 100 square feet of bed for 24 hours, it is effective against fungi. A thoroughly tight seal with a plastic cover is necessary to prevent escape of the gas. **WARNING.** Do not use bromine-containing fumigants (methyl bromide, methyl bromide mixture, and ethylene dibromide) for treating soils to be planted to carnations or salvia. Pansies can be planted 3-4 days after treatment.

Vapam: Vapam is effective against nematodes, many weeds and fungi. Apply at the rate of 1 quart per 100 square feet. It can be applied with a sprinkling can or a hose proportioner. If a sprinkling can is used, add required amount of chemical to can, fill with water, stir and distribute evenly over measured area. Treat only 100 to 200 square feet at a time, then water-in thoroughly to carry the chemical through the layer to be fumigated. Vapam should not be used in a greenhouse with growing

plants. Do not plant for 2 to 3 weeks after treatment, then make test plantings of seedlings or cuttings and wait a few days before planting entire crop. If the soil is cold or excessively wet, wait 3 to 4 weeks. This treatment is favored by most outdoor growers. The later the treatment is made in the fall the longer the waiting period.

Direct Seeding

Most growers will use one of the above listed methods for treating the pansy seed beds. Many growers are using one of these treatments for the transplant beds. A few growers are using a light seeding in rows and selling the plants in the spring directly out of the seeded row. With adequate weed control measures this may be profitable as it eliminates the transplanting operation in early fall.