

## EARTHWORMS IN POT PLANT SOILS

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Why are earthworms seldom found in greenhouse soils? Soil disinfestation by steam or chemical treatment usually eliminates them. So do some other soil treatments. Earthworms are not the target organisms but they disappear.

It is probably illegal to apply anything to the soil to kill earthworms. They are generally beneficial outdoors. But in the soil of potted plants they may work the soil over until it is a massive clod. Which chemicals are providing an auxiliary benefit by reducing earthworm problems?

Of the many soil treatment chemicals used on soils in which plants are living, aldicarb (Temik), benomyl (Benlate) and di-syston (Bonide Systemic Granules) were selected.

Six inch (15 cm) pots containing autoclaved greenhouse soil were seeded with 10 earthworms each. The soils were moistened and peat moss applied to the surface of each pot to provide a food source for the worms. A week of incubation at 20°C (68°F) was allowed for stabilization of the system after which time pesticide applications were made according to the manufacturers directions.

Eight fluid ounces of a 1 lb/100 gal (1200 ppm) benomyl suspension was applied to one of the pots. Temik and di-syston were surface applied at the rate of 200 mg and one teaspoon per pot respectively. The temik, di-syston and control pots were then moistened with 8 fluid ounces of water. Earthworm activity was observed after two and seven days of incubation during which time soils were moistened with water when deemed necessary.

After two days of incubation the earthworms had died in the temik treated pot while the condition of the earthworms in the di-syston and benomyl treated pots was good and comparable to that of the control. After seven days of incubation, the condition of the earthworms in the benomyl treated pot was poor relative to the control. The di-syston treated pot showed no ill effect on the earthworms.

It would appear that Temik, when used for control of labelled pests on approved crops, will incidentally reduce the earthworm problem in potted crops and benomyl might.