Control

SOYBEAN INSECTS

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Control Soybean Insect Pests

Until recent years soybeans were thought of as a crop with comparatively few insect pests. This may still be the case in the large soybean-producing areas of the mid-west. However, in the southeastern United States, and Virginia in particular, soybeans are attacked from the seedling stage to harvest by a succession of insect pests.

Effective chemical control measures exist for the major insect pests of soybeans. Unfortunately, the problem is usually one of deciding if the actual or potential damage would justify treatment. This is especially true of the numerous foliar-feeding insects, as it has been shown that leaf surface must be appreciably reduced before a loss in bean yield is noted. In each case the grower will have to study and make the decision himself. Many factors must be considered. Among the more important of these are the infestation level; anticipated damages if left uncontrolled; cost of control; general condition and stage of growth; and the expected yield and price of the crop. Insecticide application should be timed with occurrence of the pest.

General Control Information

Do not feed treated plants or ensilage made from treated plants to poultry, dairy animals, or animals being finished for slaughter after treatment with DDT, Toxaphene, or DDT-Toxaphene mixtures.

Sevin, if used as recommended, may be applied up to the day of harvest without exceeding established tolerances. Hay or ensilage from Sevin-treated soybeans may be fed safely to livestock.

Airplane Spraying:

Much of the treatment of soybeans to control insects is by airplane dusting or spraying. Aerial spray operators usually try to apply about 2 gallons of spray material to the acre. On soybeans with heavy foliage, this amount of spray does not give sufficient coverage for satisfactory control of the corn earworm or fall armyworm feeding on the pods. It is recommended that insecticide be sprayed on soybeans in at least 4 gallons of liquid per acre. If aerial dusting is done, sufficient material should be used to assure adequate plant coverage.

Sprayer Application:

Tractor-mounted sprayers (low-gallonage, low-pressure) can be used to apply insecticides for control of soybean insects.
If the beans are large some of them will be lost when they are pushed down under the wheels of the tractor. With ground sprayers, apply the recommended amount of the insecticide in 10 to 20 gallons of water per acre. Sprayers should be calibrated accurately before starting the spraying operation. Usually, from 30 to 40 lbs. of pressure is sufficient.

Control of Specific Pests

**Thrips:**
These pale-yellow, slender, near-microscopic pests occasionally injure seedling beans and can seriously reduce stand. Thrips injury is difficult to recognize as it is easily confused with any condition that results in yellowing and withering of lower leaves and stunting of young plants. Shaking a plant over a piece of white paper will usually dislodge numerous thrips. Against this white background, an estimate of their numbers can be made.

Thrips can be controlled by a dust or spray application of either DDT or Sevin. Apply 10 to 15 lbs. of a 10% DDT dust per acre; or 1 to 1-1/2 lbs. of actual DDT per acre in spray form; or 15 to 20 lbs. of a 5% Sevin dust per acre; or 1 lb. of actual Sevin per acre in spray form. Spray or dust nozzles should be directed over the row. One application is usually sufficient.

**Bean leaf beetle:**
This small, active, light-yellow and black beetle is about 3/16" long. It injures soybeans by eating small shot-like holes in the leaves, as well as feeding on the blooms. They attack seedlings and full-grown beans. Control measures, using either DDT or Sevin, are the same as given above for "Thrips."

**Mexican bean beetle:**
This is a common pest of soybeans. Both the larvae and adults are general foliage feeders, and can occasionally defoliate a field. Full-season beans are usually more prone to injury than late-planted beans. Control is readily obtained with Sevin. Apply 15 to 20 lbs. of 5% Sevin dust per acre or 3/4 to 1 lb. of actual Sevin per acre in spray form. Effort should be made to divert the pesticide to the under surface of the leaves.

**Stink bugs:**
This group of green or brown shield-shaped bugs is of especial importance because their feeding on the maturing pods appreciably lowers the grade and value of harvested beans. In recent years they have been particularly troublesome in the Northern Neck area of Virginia. For control, use a combination
Toxaphene-DDT dust or spray. If a dust is preferred, use 20 lbs. per acre containing 7% DDT and 14% Toxaphene. For a spray, use 1 lb. actual DDT (1 quart of 25% DDT emulsifiable concentrate) plus 2-1/4 lbs. actual Toxaphene (3 pints of a 6 lb. to the gallon emulsifiable concentrate), added to 10 to 20 gallons of water, per acre. Sevin is also effective, and can be used as a 5% dust at the rate of 20 to 30 lbs. per acre; or 1 to 1-1/2 lbs. of actual Sevin in spray form per acre.

**Corn earworm and fall armyworm:**

Both of these destructive pod-feeders are quite similar in appearance, can and do occur in the same field at the same time, and usually are treated as a "complex" to avoid error in choosing an appropriate pesticide. This group comprises the most serious insect pests of soybeans in Virginia. To avoid serious losses, inspect beans frequently during pod formation. Small worms are much easier to control than large ones. Control measures, using either the Toxaphene-DDT mixture or Sevin, are the same as given above for "Stink bugs."

**Miscellaneous soybean insects:**

Velvetbean caterpillar, Japanese beetles, blister beetles, green cloverworm, and grasshoppers occasionally feed on the foliage of soybeans. If control measures appear necessary, apply either the dust or spray form of the DDT-Toxaphene mixture. For dust, use 15 to 20 lbs. per acre of the 7% DDT-14% Toxaphene mixture; and for a spray, use 1 lb. actual DDT (1 quart of 25% DDT emulsifiable concentrate) plus 2-1/4 lbs. actual Toxaphene (3 pints of a 6 lb. to the gallon Toxaphene emulsifiable concentrate) added to the appropriate amount of water, per acre.

Remember, if DDT, Toxaphene, or the combination of these materials are used, the treated plants cannot be fed to poultry, dairy animals, or animals being finished for slaughter.

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