Virginia Cooperative Extension

Integrated Pest Management

REVISED 2001 PUBLICATION 444-116W

Commercial Peanut IPM

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Insects[1]

Lepidoptera Pests:
(Corn Earworm and Fall Armyworm)

- Monitor for these pests by reaching halfway across 2 row-feet of plants and shaking the foliage towards the row middle. Repeat this process on the opposite row and also repeat throughout the field.
- Natural enemies are usually present within fields and should be considered prior to treatment.
- Treat if an average of 8 or more worms is found per sample or 4 per row-foot. Worms are much easier to control when they are small (< 1/2" long). Re-scout fields soon after application to monitor effectiveness.

Potato Leafhopper (PLH):

- Scout peanut plants for PLH beginning in mid-June through August. Apply when 25% of the leaves show tip yellowing and active adult and immature leafhoppers are seen. If a *Lorsban* treatment for Southern corn rootworm is applied, populations of PLH are also greatly reduced.

Southern Corn Rootworm (SCR):

- Preventative chemical treatment is the best strategy against rootworm damage. The SCR Risk Index Calculator found on-line at http://www.isis.vt.edu/cgi-bin/scrRisk can be used to obtain a numerical risk assessment along with a non-treatment or treatment recommendation. This assessment is based on information gathered by the producer such as peanut cultivar, soil texture, field drainage, rootworm history, and planting date.
- Once a rootworm infestation is established, control is difficult and often ineffective.
- Adult spotted cucumber beetles can be readily observed in peanut fields. If present in moderate to high numbers from mid-July to early August, this could be a warning of a later problem.
- Rootworms have a higher survival rate in soil containing higher levels of organic matter and clay.
- Early planting and/or the use of early maturing cultivars may reduce the risk of SCR infestation. However, altering the planting date in this way may increase the risk of thrips infestation. If high populations of thrips have been observed in the past, preventative SCR options should be employed.

Thrips:

- Systemic treatments can be applied in furrow at planting where thrips have been a past problem.
- Scout peanut fields beginning at emergence and continue for approximately 6 weeks after planting.
- Apply foliar treatment when 25% of the leaves show thrips damage and pest populations are active.
- Later planting (mid-May) often helps to reduce thrips pressure in peanuts.

Twospotted Spider Mites:

- Begin monitoring fields in mid-June through mid-September for leaf speckling and crinkling. Look on the undersides of leaves to see active mites crawling. Chemical treatment should be applied if feeding evidence or actual mites are found. The most effective treatments are applied early in the infestation cycle before large numbers of eggs are deposited.
- Natural enemies and disease often keep mite populations under control. However, spraying for PLH or corn earworm (CEW) can disrupt beneficial populations and flare mites.
- Spider mites will readily move into peanuts when corn dries down or is harvested or if infested weedy borders are mowed. Avoiding these activities until after peanut harvest may help prevent infestations.

Consult the Field Crop PMG (456-016) for insecticide recommendations.

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Diseases[2]

Seed Rot and Seedling Diseases:

- The use of treated seed is essential for control of these diseases. Common seedborne pathogens of concern include *Aspergillus niger, Rhizoctonia, Rhizopus* spp. and *Cylindrocladim parasiticum*.

Major Diseases: (Early Leaf Spot, Cylindrocladium Black Rot (CBR), Southern Stem Rot, Web Blotch)

- Peanut fields should be scouted once a week beginning after pegging and continuing until harvest.
- The Peanut/Cotton InfoNet (www.ipm.vt.edu/infonet/) and Peanut Hotlines (800-795-0700) provide daily weather-based advisories to help with proper timing of fungicide applications.
- Cultural controls are extremely important tools for disease control. These include:
  - ***Sanitation practices:*** (e.g. moldboard plowing to bury crop residues and washing equipment)
  - ***Crop rotations:*** (e.g. using corn, grain sorghum, fescue, other grass crops and cotton)
  - ***Resistant varieties:*** (e.g. early leaf spot • NC 7 and NC 12C; CBR • NC 12C and Perry; Sclerotinia blight • Perry and VA 93B)
  - ***Others:*** (e.g. maintaining proper soil pH, reducing vine injury, altering planting dates, etc.)

Consult the Field Crop PMG (456-016) for fungicide recommendations.

Weeds[3]

- Proper weed identification is the key to successful weed control.
- Scout and keep records of the weed species present, their location and population density, then design a control program for the specific problems in each field.
- *Bermudagrass, purple nutsedge, eclipta, common ragweed, spurred anoda, Texas panicum, morningglory* spp., *yellow nutsedge, horsenettle, and prickly sida* are the most difficult to control.
- Herbicides are useful weed control tools if used properly and at the right time.
- Cultural practices such as rotations to corn allow for herbicidal control of perennial broadleaf weeds.

Consult the Field Crop PMG (456-016) for herbicide recommendations.

Nematodes[4]

- Both diagnostic and predictive nematode assays provide producers with data on the numbers and kinds of nematodes in the soil along with recommendations for control. Soil samples for diagnostic assays are processed without charge to determine the cause of production problems during the growing season. Predictive nematode assays are done on samples collected after harvest and are processed at a cost of $11 per sample (must be collected no later than November 20).
- The most common are the **northern root knot, stubby root, lesion, ring,** and **sting** nematodes.
- Crop rotations with corn and cotton reduce populations of northern root knot nematode in peanuts.

Consult the Field Crop PMG (456-016) for nematicide recommendations.

References

(1) Herbert, D.A., Jr. 2000. Peanut Insects. *In* Peanut Production Guide. Tidewater Agricultural Research and Extension Center Information Series No. 430, pg. 45-61.

(2) Phipps, P.M. 2000. Peanut Diseases. *In* Peanut Production Guide. Tidewater Agricultural Research and Extension Center Information Series No. 430, pg. 62-71.

(3) Swann, C.W. 2000. Weed Control in Peanuts. *In* Peanut Production Guide. Tidewater Agricultural Research and Extension Center Information Series No. 430, pg. 16-44.

(4) Phipps, P.M. Extension Plant Pathologist, Tidewater Agricultural Research and Extension Center, Virginia. Personal communication, November 29, 2000.

Note: The Pest Management Guide is available on-line at http://www.ext.vt.edu/pubs/pmg. Also, the Peanut Production Guide (Tidewater Agricultural Research and Extension Center Information Series No. 430) is updated annually and may provide additional information. It is available on-line at http://www.vaes.vt.edu/tidewater/peanut.

For further information, contact your local Extension agent.