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Potential Insect Issues in PEANUT



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There have been reports of spider mites in both cotton and peanut in recent weeks. With the continued hot dry weather patterns spider mites along with lesser corn stalk borers, beet armyworms, and other insects could become a problem in peanut. While we are doing all we can to try keep up with water demands and we do not want to see peanut stressed additionally by insects, care must be taken in making control decisions. Make sure to thoroughly scout peanut fields and determine that these pest are in damaging enough numbers to warrant an insecticide application. In cases where insects are at borderline populations make sure that the pest populations are increasing and not starting to crash before making the application. We want to be very careful with insecticide applications in peanut to make sure that we do not fix one problem and end up creating an even bigger problem. Included in this newsletter are some information and suggestion on managing insect pest in peanut. As always if you have any questions or need additional information please contact us or contact your local county agricultural agent.

Hot, Dry Conditions favorable for Peanut Pests - think before treating

Hot, dry weather conditions are favorable for spider

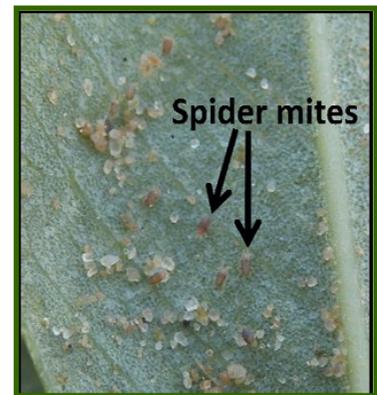
mites in a variety of crops. Recent reports indicate spider mite infestations being found in peanuts. Most of these are small, isolated infestations at the current time. Infestations often start near field margins, weedy areas or on the windward side of the field. Spider mites are carried in the wind by a balloon of webbing.

During hot, dry conditions, spider mites can complete their life cycle in as short as one week; females may live two to four weeks and are capable of laying several hundred eggs. In addition to hot, dry conditions, stressed plants and insecticide applications can result in an increase in the mite population. Broad spectrum, non-specific insecticide applications which kill beneficial insects (predators) allow for a potential explosion of the mite population.

There are several species of spider mites which can infest Texas peanuts. Spider mites have piercing and sucking mouth parts, similar to a drinking straw. They feed by sucking the cell contents out of plants cells, which results in a "bleaching" or speckled appearance of the foliage. Mites usually inhabit the underside of leaves, but will move to the upper surface as the population's size increases. Usually these pests are kept in check by natural enemies; however their populations can out pace predators under favorable conditions.

Spider mite damage in the field resembles wilting, or droughty plants from a distance. When you examine the foliage more

closely, you find the speckling of the leaves which results from their feeding. Extensive feeding results in defoliation, a lack of pod filling and death of the peanut vines. These mites are 0.4 to 0.5 mm in size, so a hand lens is helpful when confirming their presence.



Look on the underside of leaves for the actual mites.

There is no specific threshold for spider mite infestations. One should consider the extent of the infestation, the growth stage of the crop, potential damage if mites are not controlled and the impact of control measures on beneficial insects and potential secondary pests. Recently on the South Plains, spider mite populations in cotton and peanuts have crashed naturally, this may have resulted from the cotton and peanuts becoming inadequate as a host plant due to water stress.

Spider Mites in PEANUT

“It would be advisable to step back and monitor the mite infestation for several days to determine if it is increasing and if beneficial insects may be working to reduce the mite population.”



Heavy infestations of spider mites are capable of defoliating a peanut crop.

Before deciding to treat any spider mite infestation this season, take time to consider the impact of the insecticide application on beneficial insects and the potential for secondary pest outbreaks. Removal of the beneficial insects and mites (some mite species are predators) will allow a release of minor pests which can become problematic. One example would be the beet armyworm. Predator insects feed on and usually keep these foliage feeders in check, but without the predators present, their numbers may also explode in hot, dry weather. The mite population that you were originally trying to control is also capable of repopulating from eggs which are

not killed by the insecticide treatment. It would be advisable to step back and monitor the mite infestation for several days to determine if it is increasing and if beneficial insects may be working to reduce the mite population.

Registered products for controlling spider mites in peanuts include Danitol, Comite and Brigade. Thorough coverage of the canopy is essential to control an infestation. Often it can take two applications to satisfactorily control spider mites. Labeled miticides do not kill mite eggs, only adults. If conditions favorable for the mites continue, eggs hatch and the population re-

bounds in just a few days, necessitating an additional chemical application. Spider mites are at a high risk of developing resistance to miticides, therefore judicious use is encouraged.



“Note the speckling of the leaf caused by the feeding of these mites.”

Miticide Products for Peanut			
Insecticide/Miticide	Rate/Acre	A.I. lb/Acre	Comments
Bridgade 2EC	5.12 – 6.4 fl oz	0.08-0.1	Apply in a minimum of 10 GPA by ground or 2 GPA by air. Apply at 14 day intervals and do not apply more than 0.5 lb ai/acre per season. Do not apply within 14 days of harvest.
Omite 30WS	3-5 lb	0.9-1.5	Apply in a minimum of 20 GPA. Do not make more than 2 applications per season with a minimal spray interval of 14 days. Do not harvest within 14 days of the last application.
Comite II	35 fl oz	1.68	Leaf phytotoxicity may occur when temperature are greater than 90 F. Do not make more than 2 applications per season with a minimal spray interval of 14 days. Do not harvest within 14 days of the last application.
Danitol 2.4EC	10.67- 16 fl oz	0.2-0.3	Apply foliar with ground equipment only. Do not dig or feed peanut vine or hay within 14 days of last application. Do not exceed 0.8 lb ai/A.
Do not hay or graze Bridgade 2EC, Omite 30WS, Comite II.			
Omite and Comite are specific to mites, and have less impact on beneficial insects and honey bees. Danitol and Brigade are broad spectrum insecticides which have significant negative impact on beneficial insects.			

Other Insect Pest

Additional pests which may become abundant and problematic in peanut fields during hot, dry weather include beet armyworms and lesser cornstalk borers. Beet armyworms feed on foliage, while the lesser cornstalk borers are below ground feeders.



Lesser Corn Stalk Borer

In hot, dry weather the peanuts are highly attractive to the adult beet armyworm moth and the lesser corn stalk borer moth. Because the peanuts are green and moist, the adults lay eggs in the foliage and then the larvae hatch and begin feeding on the crop.



Beet Armyworm Larvae

Foliage feeding insects such as beet armyworms, bollworms, and fall armyworms reached treatable levels last year in some fields. We have seen very few fields infested with these foliage feeding insects this year. However, it is important to scout fields weekly for these pests. The peanut plant tolerates foliage loss to an extent. However, extensive feeding damage may lower peanut yields. The peanut plant is most susceptible to insect foliage damage at 60 to 90 days of age. Always scout field thoroughly before applying insecticides to determine if economically damaging num-

bers of worms are present. If chemical control measures become necessary, apply when worms are small. Spanish and Valencia peanuts can tolerate approximately 6 to 8 medium-to-large larvae per linear row foot before significant yield losses occur. Runners and Virginias have more foliage area and can tolerate 10 to 12 worms per foot of row. After insecticides are applied be sure to continually monitor the field for secondary pests such as spider mites.

The lesser cornstalk borer is a small slender larva that is primarily a subterranean feeder, living beneath the soil surface in a silken tube. The larva injure mature plants by feeding on pegs, pods, stems, and roots. Pegs are cut off below the ground surface and developing nuts are hollowed out. Stems and roots are scarred and may be girdled. The lesser cornstalk borer is usually more harmful to peanuts grown under dryland conditions and during drought years. Prolonged rainfall and irrigation contribute to larval mortality. Inspect fields at least weekly to determine if lesser cornstalk borers are present. Select field check locations at random, with a minimum of eight sample sites per field. Examine the soil surface for feeding damage, silken larval tubes, and larvae. Later in the season, also examine pegs and peanuts. To obtain a percent infestation figure, divide the total number of plants inspected into the number of infested plants found. Yield or quality losses do not occur until certain infestation levels are reached. Treat peanuts when 10% are infested prior to pegging and 15% infestation after initial pegging.

Southern corn rootworm larva feed on the pods. When scouting for pod feeding pests pull

up approximately 3 row feet per sampling site in the field. Sample at least 8 sites per field. Be sure and sift through the soil at each sampling site to locate pod feeding pests. Then examine the pods for feeding damage such as holes in pods. The larvae of the southern corn root worm are yellowish white with a brown head. The adult is a small lime green beetle with black spots on its back. As with any insect, make sure the insect is present and do not apply insecticides based on damaged pods alone.

Before making the decision to treat an insect infestation during these hot, dry conditions, consider the impact on beneficials and the potential treadmill of pesticide applications which can potentially follow. Remember that this crop's potential is already limited by the extreme weather conditions we are experiencing.



Corn Root Worm Larvae



Corn Root Worm Damaged Pods

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