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What Bahiagrass Mole Cricket Damage to Look for in the Spring?

In Spring, as in September, look for galleries or horizontal tunnels just below the surface, churned up soil, and patches of yellow grass that later turns brown before completely dying—caused by the new adults and the developing nymphs.

Mole crickets are active in the spring as well as fall, and can substantially reduce forage production in pastures and hay fields in Florida by tunneling of the sod. They feed on leaves and stems of bahiagrass but mainly on the root system. Roots damaged by mole crickets cannot take up water and nutrients to nourish the plant, causing death of the roots and over time the affected bahiagrass stand. The most harmful is the tawny mole cricket, Scapteriscus vicinus.

Beginning in the spring, usually in March, the female insects fly while the males make tunnels and sing to attract females. The females lay eggs in April and May. Eggs incubate for three weeks, and nymphs (that look like tiny adults but have no wings) start hatching and developing. The nymphs feed and develop from May through early September, and many of them become adults (a few spend the winter as large nymphs). In cold weather, mole crickets become inactive deep underground, but they will move close to the surface and feed during warm spells.

The biological control for mole crickets that is available is the parasitic wasp called Larra bicolor. This wasp was first released in Alachua County and has now spread to almost all counties in central and northern Florida. This wasp provides some level of free biological control of pest mole crickets wherever it occurs, and eventually should spread everywhere in Florida. The wasp feeds on nectar at flowers of the plants ‘false buttonweed or larraflower (Spermacoce verticillata) and also on plants of partridge pea (Chamaecrista fasciculata).

Biological control of mole crickets also includes beneficial nematodes. The commercial product is Nematac-S by Becker Underwood. However, at present, this is not an option as the product is not available in the market.

In terms of chemical control, there are some products that are labeled for mole cricket control on pastures and include the following:

Beauveria bassiana (Botanigard ES, Mycotrol O)
Carbaryl (Drexel carbaryl 5% bait)
Pyrethrins and PBO (piperonyl butoxide) (Pyrenonoe Crop Spray)
Pyrethrins (Pyganic crop protection EC)
Checklist for Planting New Pastures

It is the time of year when many are planning to establish new warm-season pastures. If this is the case, going over the establishment checklist will help keep in mind details that may seem obvious but if left unattended will have undesirable impacts such as more weeds or low germination in the field.

√ Study the selection of your pasture plant options and choose those that are adapted to your soil type and climate condition. An adapted forage will propagate and establish promptly helping to reduce the weed control and fertilization costs.

√ Buy or use good quality seed (whether it is vegetative planting or true sexual seed). It may not be the cheapest but keep in mind that in many cases “cheap” turns out expensive.

√ Select an adequate seeding rate that will guarantee a good stand and will help minimize weed control practices. Recommended seeding rates for bahiagrass are 20 to 30 lb/acre; if lower seeding rates are used you will be fighting warm-season grassy weeds that cannot be controlled chemically until bahiagrass is 6 inches tall.

√ Check the right seeding depth. A common mistake when planting seeds that are very small, such as bahiagrass, is to bury the seed too deep. Bahiagrass recommended seeding depth is less than 1/4 in.

√ Make sure that your seedbed is firm. In many cases an additional roller pass after planting is necessary to seal in the soil moisture.

√ If you have not started your soil preparation, you are still on time, use the dry months to till the soil and get rid of the weeds. Check and prepare your planting equipment, thus when the right weather conditions are present (moisture and warm weather) you will be prepared with a seedbed rid of weeds, will have the bag or bags of seed and/or have contracted the sprigging material, will know what seeding rate to use, and will have the seeding equipment ready to go.

For additional information on Forages please check the UF IFAS website Forages of Florida …

...just Google “Forages of Florida”
**Thistle Control**

This is a time when most people are not thinking about pasture maintenance. But right now is when thistles are the most susceptible. In January/February, most thistles are still in the rosette stage (a small ring of leaves on top of the ground) and easily overlooked. However, as warm weather approaches the thistle will send up a stalk and produce a flower. A single thistle plant can produce at least 4,000 seeds that will drift in the wind and produce higher thistle populations in the pasture the following year. Consequently, management practices need to be conducted prior to flower formation for effective thistle control. Even if thistles have not infested your pasture in the past, it is ideal that your pastures are scouted in late fall through mid-spring to ensure that thistles do not get out of control. New infestations are easier to manage than large-scale populations.

Although there are at least nine different species of thistle in Florida, most are closely related and control recommendations will not differ. As a general rule, thistles in the rosette stage are much easier, and cheaper, to control than thistles that are flowering (Table 1). If caught early, a few dollars per acre of 2,4-D ester is the best solution. This application is best when made when daytime temperatures are consistently in the 60s. Applications made during a cold snap can decrease activity.

Now is the time to quickly scout your pastures and determine if enough thistles are present to require a herbicide application. If so, spraying early will always be easier and provide much greater dividends.

For more information on thistle control, reference Thistle Control in Pastures at [http://edis.ifas.ufl.edu/AG253](http://edis.ifas.ufl.edu/AG253).

Table 1.

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Rate</th>
<th>$/A a</th>
<th>Thistle Growth Stage</th>
<th>Thistle Growth Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rosette b</td>
<td>Bolting c</td>
</tr>
<tr>
<td>2,4-D</td>
<td>2 qt/A</td>
<td>6</td>
<td>90</td>
<td>85</td>
</tr>
<tr>
<td>Metsulfuron d</td>
<td>0.3 oz/A</td>
<td>4</td>
<td>90</td>
<td>40</td>
</tr>
<tr>
<td>Weedmaster</td>
<td>2 pt/A</td>
<td>5</td>
<td>95</td>
<td>90</td>
</tr>
<tr>
<td>Remedy Ultra</td>
<td>2 pt/A</td>
<td>15</td>
<td>95</td>
<td>90</td>
</tr>
<tr>
<td>Pasturegard HL</td>
<td>1.5 pt/A</td>
<td>18</td>
<td>95</td>
<td>90</td>
</tr>
<tr>
<td>GrazonNext HL</td>
<td>1.0 pt/A</td>
<td>8</td>
<td>99</td>
<td>95</td>
</tr>
</tbody>
</table>

*aApproximate herbicide costs.

bThe rosette stage is when the thistle forms a low-growing ring of leaves.

cThe bolting stage is when the thistle forms a stalk and prepares to flower.

dFor use in bermudagrass only.
Early Burndown for Cotton

Although planting season is still a few weeks away, it is time to start planning the spring burndown program. Wild radish and cutleaf eveningprimrose are two species that commonly escape control from glyphosate applications. If not controlled, these weeds will compete with the crop well into the summer and result in greater than expected yield loss.

Since these weeds are not controlled by glyphosate alone, other herbicides should be added to the weed management program. The most effective way to control these weeds is to spray 2,4-D (16 or 32 fl oz/A) or Clarity (8-16 fl oz/A) in early March, then follow up with a glyphosate or Gramoxone application near planting. This will allow plenty of time for these herbicides to dissipate from the soil before cotton is planted. However, these herbicides can be tank-mixed with glyphosate or Gramoxone. Table 1 details the effectiveness of different herbicide combinations on control of radish and primrose. These data show that both weed species are highly sensitive to 2,4-D and Clarity, regardless if they are mixed with glyphosate or Gramoxone. The addition of Valor was less effective on both species. Regardless of which herbicide is used, planning a few weeks ahead will dramatically improve early-season weed control for only a few extra dollars per acre.

It must be noted that cotton planting should be delayed for approximately 30 days after 2,4-D application, and 21 days plus one inch of rainfall for Clarity. The planting restriction for Valor is 10 to 28 days plus an inch of rain, depending on herbicide rate and tillage type.

Table 1. Control of wild radish and cutleaf evening primrose with burndown applications.

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Wild Radish</th>
<th>Cutleaf eveningprimrose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roundup Wmax 22 oz</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>2,4-D 16 oz + Roundup Wmax 22oz</td>
<td>75</td>
<td>97</td>
</tr>
<tr>
<td>Clarity 8 oz + Roundup Wmax 22oz</td>
<td>85</td>
<td>90</td>
</tr>
<tr>
<td>2,4-D 16 oz + Gramoxone Max 32 oz</td>
<td>80</td>
<td>97</td>
</tr>
</tbody>
</table>
Recently, the Environmental Protection Agency (EPA) announced proposed changes to the agricultural Worker Protection Standard (WPS) to increase protections from pesticide exposure for the nation’s 2 million agricultural workers and their families. Proposed changes to the Agricultural Worker Protection Standard (WPS) include:

- Increased frequency of mandatory trainings (from once every five years to annually) to inform farm workers about the protections they are afforded under the law, including restrictions on entering pesticide-treated fields and surrounding areas, decontamination supplies, access to information and use of personal protective equipment. Expanded trainings will include instructions to reduce take-home exposure from pesticides on work clothing and other safety topics.
- Expanded mandatory posting of no-entry signs for the most hazardous pesticides; the signs prohibit entry into pesticide-treated fields until residues decline to a safe level.
- First time-ever minimum age requirement: Children under 16 will be prohibited from handling pesticides, with an exemption for family farms.
- No-entry buffer areas surrounding pesticide-treated fields for protecting workers and others from exposure from pesticide overspray and fumes.
- Measures to improve the ability to enforce compliance including requiring employers to keep records of application-specific pesticide information as well as farmworker training and early-entry notification for two years.
- Respirator use must be consistent with the Occupational Safety & Health Administration standards for ensuring respirators are providing protection, including fit test, medical evaluation, and training.
- Make available to farm workers or their advocates (including medical personnel) information specific to the pesticide application, including the pesticide label and Safety Data Sheets.
- Additional changes that may make the rule more practical and easier to comply with for farmers. Continues the exemptions for family farms.

EPA invites those affected to share personal views on the proposed changes. The public’s thoughts on these proposed changes will help guide final decision-making. For providing comments and obtaining greater details, see http://www.epa.gov/oppfead1/safety/workers/proposed/index.html
Calendar of Events

To follow the link, press “Ctrl” and put cursor over link, and “click.”

Apr. 17  Certified Crop Adviser Educational Seminar and CEU Session, Lake Alfred, FL and offered through video conference
http://www.crec.ifas.ufl.edu

Apr. 21-23  2014 Southern Pasture and Forage Crop Improvement Conference, Biloxi, MS
http://www.agrilife.org/spfcic/2014

May 4-7  Southeast Pest Management Conference. Theme: “Bug Thugs”, Gainesville, FL
http://entnemdept.ifas.ufl.edu/sepmc

May 5-8  2014 Aquatic Weed Control Short course. Coral Springs, FL
http://www.plants.ifas.ufl.edu

May 7-9  63rd Annual Florida Beef Cattle Short Course. Gainesville, FL
http://www.conference.ifas.ufl.edu

May 13-15  16th Annual National Value-Added Agriculture Conference. Baltimore, MD
http://www.agmrc.org

June 15-21  Florida Cattlemen Association Annual Convention. Marco Island, FL
http://www.floridacattlemen.org

July 13-16  2014 Aquatic Plant Management Society Annual Meeting. Savannah, GA
http://www.apms.org

Aug 1-2  2014 FL Small Farms and Alt Enterprises Conference. Kissimee, FL
http://smallfarms.ifas.ufl.edu/