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Pasture and Hayfield Caterpillars



“Armyworm” is the general term used by producers to designate foliage feeding caterpillars such as fall armyworms and the striped grass looper. These two moths (adult caterpillars) are pests, in the Lepidoptera insect family, that like to feed on foliage and stems of grasses. They are active from spring until fall and their damage can be extensive. Their larval stage is within 14 to 21 days, and as the larvae grow their capability to chew foliage and leaf tissue also increases. In Florida, several generations per year can occur peaking from June through September. Be prepared and know the chemical control options that are available.

In the past, recommendations have been the use of Malathion and Sevin. Malathion is an organophosphate insecticide (same compound found in nerve gases) of relatively low human toxicity. However, it may break down (usually when it enters an indoor environment) to a compound that can be 60 times more toxic than malathion becoming a serious poison, thus the importance of properly handling this pesticides. Sevin (manufactured by Bayer Crop Science) is an insecticide that belongs in the carbamate family of neurotoxins and it is highly toxic. Another formulation is Sevin XLR Plus, same as regular Sevin but with an added protection or wash-off resistance after heavy rains or overhead irrigation. Malathion and Sevin are fairly weak materials for control of armyworms. Sevin may be a slightly better, but they would need to be put out when the larvae are very small. Fall Armyworm larvae need to be treated when they are ½ to ¾ inch in length. Longer larvae might be difficult to control. A cost-effective option for treatment of armyworms is the mixture of 4 oz of Sevin XLR + 4 oz of Malathion.

Two relatively new options are Tracer and Dimilin 2L. Tracer is manufactured by Dow AgroSciences, and Dimilin 2L by Chemtura. Tracer works best when using the higher recommended rate of 2 oz/acre. Dimilin 2L is an insect growth regulator, and because it takes a couple of weeks to kill the insect, its recommended application timing is at first sign of hatch outs and prior to larvae reaching ½ inch. You need to use Dimilin when (worms) are small or whenever there are many eggs being laid and no damages are evident. Dimilin 2L must be ingested and larvae must molt before population are reduced.

Basic Treatments for Fall Armyworm and Loopers in Pastures and Hayfields

Product	Rate	Restrictions (waiting time prior to utilization)	Number of applications per year
Malathion 57% EC	2 pints per acre	None	No restrictions
Sevin XLR	1 to 1.5 quarts/acre	14 days for hay or grazing	Two (2) or less
Dimilin 2L	2 fl oz per acre/cutting	No restrictions for grazing 3 days for hay	No more than 6 fl oz per year. Cannot apply more than 2 fl oz per acre/cutting
Tracer	1-2 fl oz/acre	3 days for hay or until it has dried if grazing	

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Upcoming Field Days

May 29

2008 Corn Silage and Forage Field Day, Citra, FL

UF/IFAS Plant Science and Education Research Unit
2556 West Highway 318

For more information: <http://plantscienceunit.ifas.ufl.edu>

To register, call Pam Gross at (352) 392-1916 or visit
<http://animal.ifas.ufl.edu/extension/CSFD/index.shtml>

June 7

8th Annual Perennial Peanut Producers Field Day

2008 Sunbelt Expo in Moultrie, GA

<http://nfrec.ifas.ufl.edu/Calendar/PerennialPeanut-Jun2008.pdf>

June 18

14th Annual Gulf Coast Turfgrass Expo & Field Day

West Florida REC, Jay, FL

Register at www.miltongators.com or contact (850) 983-5216 ext. 113

Aeschynomene (Joint Vetch or Deer Vetch) a Warm-season Annual Legume



Aeschynomene (aeschynomene americana) is a summer annual legume mostly grown in South Florida to add nutritive value to the perennial grasses at a time when their nutritive value or quality experiences a slump. It is highly palatable to deer and cattle, and many ranchers use this legume to put extra pounds on calves and all classes of animals during the summer time. This legume is adapted to the wet conditions of the flatwood soils in south Florida.

Aeschynomene should be overseeded into pastures in flatwoods as soon as the summer rains begin which is usually in the first half of June. Do not plant on dry upland sands. Overseed into pastures that have been grazed short. Planting into a low sod will allow more light to penetrate the canopy, favoring the slow growing *Aeschynomene* seedling, and also reducing the competition for nutrients that a tall grass stand would impose. Seeding rates are 5 to 7 pounds of dehulled seed per acre and it should be done early in June if summer rains have arrived. Seeding in April or May is risky because if the initial rains at this time do not continue for a week or two, then, the emerged seedling will likely die. On the other hand, if planting is delayed past the middle of June, be aware that the amount of grazing time will be reduced because of consequent delayed development of the *aeschynomene* seedling. If the summer rains start and continue, the first crop of seedlings will continue to grow and develop into productive plants.

Check the *Aeschynomene* fact sheet at the following link <http://edis.ifas.ufl.edu/AA189> for additional establishment information.

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Update on New Releases of Bahiagrass

UF-Riata is a novel diploid bahiagrass developed for fall and early spring forage production for the southeastern U.S. It has improved forage growth under short-daylengths and during the cool season. This new bahiagrass was developed by the University of Florida, the USDA-ARS Coastal Plain Experiment Station and the USDA-ARS Subtropical Agricultural Research Station (STARS)-Brooksville, Florida. This bahiagrass exhibits lower photoperiod sensitivity, improved leaf tissue cold tolerance, and increased forage production during the cool season compared to the standard bahiagrass cultivars Argentine and Pensacola. Multi-location variety trials show UF-Riata is similar in total season yield to Tifton 9, with an improvement in seedling vigor and leaf tissue cold tolerance that promotes late fall-season growth and early spring-season growth. UF-Riata seasonal forage yields have been greater than 25% compared with Argentine and Pensacola, and 5-10% compared with Tifton 9 in north Florida. UF-Riata is well adapted throughout the southern Coastal Plains and Peninsular Florida. UF-Riata will be sold by variety name and only as a class of certified seed. It will be marketed by Ragan-Massey Seed and should be commercially available in 2009.

TifQuik is a novel diploid bahiagrass population developed by the USDA-ARS Coastal Plain Experiment Station for rapid seed germination for the southeastern U.S. The population exhibits less hard seed dormancy, very rapid establishment, excellent seedling vigor and high forage yield compared to the standard bahiagrass cultivars Argentine and Pensacola and Tifton 9. TifQuik has been tested in a number of locations as part of a multi-state effort between USDA-ARS scientists in Georgia and at the University of Florida. This cultivar has shown superiority at early establishment and an aggressive seedling vigor that should allow the cultivar to gain rapid acceptance in bahiagrass growing regions of the southern Coastal Plain of the U.S. TifQuik will be sold by variety name and only as a class of certified seed. TifQuik will be available from the Georgia Seed Development Commission and should be commercially available in 2009.

Management of these new cultivars is similar to that of Tifton 9. UF-Riata and TifQuik are not tolerant of severe overgrazing. While Argentine and Pensacola bahiagrass are tolerant to overgrazing, constant defoliation of Tifton 9, UF-Riata and TifQuik will result in some stand loss and subsequent weed encroachment. Care must be given in the grazing management of these new cultivars to adequately rest the pasture and allow for regrowth to a 6 inch height between grazing events. Rotational grazing is a good approach since it allows bahiagrass pastures to recover from livestock grazing and provides other benefits, as well.

Hay production from both these two new cultivars typically results in higher seasonal tonnage than from Argentine and Pensacola. Hay harvests can be made several times throughout the growing season. Forage should not be allowed to grow rank since digestibility decreases and infections from several fungal leaf diseases may harm the health of the stand. Should weather conditions prevent timely hay harvests, then options for grazing, mowing or ensiling the forage should be considered.

It is important to purchase certified seed of UF-Riata and TifQuik from a reliable seed source. This insures the purity of the cultivar, high percent germination and freedom from weed seed.

Calcium requirements of new peanut varieties

Most of the newer, higher yielding peanut varieties are large seeded and have a higher requirement for calcium (Ca) than smaller seeded varieties. Calcium is the element most commonly deficient for peanut. Calcium deficiency results in high incidence of pod rot and unfilled pods “pops”. These peanuts also have much lower germination if saved for seed. Georgia research has shown that Ca applied as lime should not be turned under and that turned under lime had yields comparable to no lime. Even though peanut has a lower Ca requirement than for soybean or cowpea, peanut does have an exceptional need for Ca for seed maturation and quality. Lime should be applied to fields well in advance of planting and may be applied to strip tilled fields as a surface application. Calcium is routinely applied as gypsum at pegging time on sandy soils for rapid replenishment of soil solution Ca. This is not as necessary on heavier soils that have higher diffusion gradients toward the pods if adequate soil moisture is available.

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Soybean Seed Reports

Low germinating soybean seed - Here are reports of soybean seed with as low as 70% germination. Since soybean seed are in short supply and prices are high, there is a good chance that they will be planted to meet the seed needs. Consider planting seed no deeper than 1 ½ inches into moist soil so that germination will be rapid. Seed treated with fungicides should be considered if conditions for germination and growth are not optimal. Planting into green residue or residue that was recently incorporated into the soil can result in seedling diseases. Lesser corn stalk borers are also a problem when planted into green residue of weeds or crops. Soil insecticides should be used at plant to help control soil insects and to help ensure a stand of soybeans.

Soybean plant population - It is often recommended that growers plant 8-10 soybean seed per foot of row in 30-36” wide rows. Our research shows that populations as low as 4-5 seed per foot will yield as high as the higher populations. Before the lower seeding rates are used, be certain that you have high quality seed and good planting conditions so that planted seed will result in plants. If planting in the May 15 to June 15 time period, 30-36 inch wide rows will out yield more narrow rows and can be planted with conventional planters whereas 7-10 inch rows are usually planted with a grain drill and the spacing is much less precise than with planters.

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Headline Fungicide for Plant Health in Cotton

Headline fungicide has been labeled for disease control in cotton for 2008. Hardlock of cotton research has been done mainly with Topsin M fungicide. Topsin M has been found to be effective against leaf diseases and will have a large impact on yield in years with high hardlock damage. Topsin M has a section 18 that is valid through July 21, 2008. Headline can be applied to cotton for two applications; and if more than two applications are needed consider using Topsin M for the first one or two sprays starting in early July at first bloom followed by up to two sprays with Headline.

Controlling leaf diseases on cotton has been shown to provide as much as 150 lbs/A more lint than the control. Fungicide applications during 6-8 weeks of bloom (July and August) has produced 400-600 lbs/A more lint in years when hardlock disease was high.

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Working with Pesticides

Pesticides can enter the body in four main ways: by mouth, by inhalation, or by contact with the skin or eyes. In most pesticide handling situations, the skin is the part of the body most likely to receive exposure. About 97% of human exposure to pesticides during application of liquid sprays occurs through contact with the skin. To prevent exposure, pesticide applicators should wear protective clothing and personal protective equipment (PPE). The use of gloves while handling pesticides can go a long way in reducing dermal exposure.

For general information on PPE, refer to EDIS Documents PI-28 Pesticide Applicator Update: Choosing Suitable Personal Protective Equipment <http://edis.ifas.ufl.edu/PI061> and PI-119 Worker Protection Standard: Personal Protective Equipment (PPE) <http://edis.ifas.ufl.edu/PI156>.

Every pesticide product label contains specific information about necessary clothing and equipment to be worn while mixing, loading, and applying that product. The information may be found in the "Precautionary Statements" section of the label (see example below). Remember, the label is the law. Read it and wear the appropriate equipment. More detailed information about chemical and physical hazards associated with a specific pesticide may be found by reading the products Material Safety Data Sheet (MSDS). The MSDS is available from the pesticide dealer. For guidance in understanding the MSDS, refer to EDIS Document PI-35, Understanding Material Safety Data Sheet Language <http://edis.ifas.ufl.edu/PI072>.

Handlers who may be exposed to the concentrate through mixing, loading, application or other tasks must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, Nitrile rubber, neoprene rubber, or Viton.
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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Glove Selection for Working with Pesticides



Butyl Rubber

Photo: Fred Fishel

Pesticide labels frequently specify use of either waterproof or chemical-resistant gloves. Keep in mind that waterproof materials are not necessarily chemical-resistant. Gloves used for handling pesticides should be unlined and not made of cotton, leather, canvas, or other absorbent materials.

Polymers used for chemical-resistant gloves include barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene plastics, polyvinyl chloride (PVC), and Viton®. These materials are used either individually or in various combinations in commercially available gloves.

A comprehensive report is available electronically through UF/IFAS EDIS at

<http://edis.ifas.ufl.edu/PI157>

This document explains how to select gloves suitable for handling pesticides. A chemical-resistance chart for various approved materials is presented, and more examples of the types of available gloves are displayed.

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Calendar Dates

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| June 1-4 | Florida State Horticultural Society and Crop Science Society of Florida Meeting , Marriott North, Ft. Lauderdale, FL
Visit www.fshs.org or call Eric Simonne, at (352) 392-1928, ext. 208 for information. |
| June 17 - 19 | 2008 Florida Cattleman's Association Convention
Marco Island, FL |
| July 7-11 | 2008 American Society of Animal Sciences and American Society of Dairy Science Annual Meeting. Indianapolis, IN |
| July 14-17 | Southern Regional Cooperative Soil Survey Conference
Paramount Plaza hotel & Conf. Center, Gainesville, FL |
| July 13-17 | Caribbean Food Crops Society Meeting
Miami, FL ~ Hosted by UF/IFAS |
| July 13-15 | Southern Peanut Growers Conference
Edgewater Beach Resort, Panama City Beach, FL |
| Nov. 5 | 2008 Florida Ag Expo
Gulf Coast Research and Education Center in Balm, FL
Visit http://glafexpo.ifas.ufl.edu
Or contact Christine Cooley (813) 634-0000 x 3101 ccooley@ufl.edu |
| Nov. 11-14 | Methyl Bromide Alternatives conference , Orlando, FL
http://mbao.org/ |

For upcoming Field Days, see Page 3