# Insecticides

**RICK BRANDENBURG,** professor of entomology, North Carolina State, answered several of our questions related to problem pests and insecticide selection and use.

**Q:** What insect pests will pose the biggest threats this year?

**BRANDENBURG:** I believe that since we have had good rainfall the past two years throughout much of the Southeast, this will be a good year for white grubs in all turfgrass settings. After the drought of 2007, we have seen a steady increase in white grub abundance and damage, and I see no reason to believe that this trend upward won't continue this year. Since we did not experience really cold temperatures (except Florida) this winter, the mole cricket and fire ant populations should be normal or above normal. I believe that fall armyworms will continue their progress toward becoming a major pest in the Southeast. Due to the colder-than-normal temperatures, I believe fall armyworms may be a little later this summer and may lead people to a false sense of security that they aren't going to be a problem.

**Q:** How will current climatological trends impact turf pest infestations this season?

**BRANDENBURG:** It's hard to predict year-to-year fluctuations in pest populations when we look at individual seasonal weather. However, we do know that certain pests are going to become more prevalent if temperatures elevate. Perhaps the most obvious one is the southern chinch bug on St. Augustine grass.

The hotter it gets, the earlier in the season we will see this pest attacking the turf and it will continue to damage turf later in the fall. Fire ants will continue their spread north as will other traditional pests such as mole crickets. Within the context of this coming season, it's more a matter of what the weather is like that season than climate change over a long period of time. If the summer is

## Insecticides

**Arysta LifeScience (www.arystalifescience.com)**

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **ALOFT GC SC and ALOFT GC G (granular)** | Clothianidin/Bifenthrin | Annual Bluegrass Weevil (Adult); Annual Bluegrass Weevil (Larvae); Ants, Nuisance (Excluding fire, harvester, pharaoh and carpenter ants); Armyworms; Billbugs; Black Turfgrass Ataenius; Chinch Bugs; Cutworms; European Crane Fly; Grasshoppers; Leafhoppers; Mole Crickets; Pillbugs; Sod Webworms; Sowbugs; Spittle Bug; Sugarcane Grub; White Grubs (Asiatic Garden Beetle, European Chafer, Green June Beetle, Japanese Beetle, Northern Masked Chafer, Phyllophaga spp. [May or June Beetle], Oriental Beetle, Southern Masked Chafer). |

**BASF Professional Turf & Ornamental (www.betterturf.com)**

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Amdro Pro Fire Ant Bait insecticide** | Hydramethylnon | Imported fire ants, native fire ants. |

**Bayer Environmental Science (www.BackedbyBayer.com)**

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Allectus** | Bifenthren, imidacloprid | Broad-spectrum insect control |
| **Maxforce FC Fire Ant Bait** | Fipronil | Fire ants |
| **CoreTect** | Imidacloprid | Tree and shrub insects |
| **Dylox** | Trichlorfon | White grubs, mole crickets, sod webworms and cutworms, annual bluegrass weevil. |
| **Forbid** | Spiromesifen | Mites |
| **Merit** | Imidacloprid | Broad-spectrum grub and tree and shrub control |
| **Sevin** | Carbaryl | Broad-spectrum insect control |
| **Tempo Ultra** | Cyfluthrin | Broad-spectrum surface-feeding and foliar insects |
| **TopChoice** | Fipronil | Fire ants |

**Dow AgroSciences (www.DowAgro.com)**

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Conserve SC** | Spinosad | Thrips, leafminers, Eastern tent caterpillars, lepidopterous larvae, armyworms, sod webworms and other pests. |

**DuPont Professional Products (www.proproducts.dupont.com)**

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Acelepryn** | Calteryx | Comprehensive control of turf-damaging white grubs, plus surface-feeding insects, including annual bluegrass weevils, billbugs, cutworms and webworms. |
| **Advion Fire Ant Bait** | Indoxacarb | Fire ants. |
| **Advion Insect Granule** | Indoxacarb | A granular insecticide bait for use to control crickets, including mole crickets, cockroaches, and listed crawling nuisance or occasional invader insect pests. |
| **Provaunt** | Indoxacarb | A wide range of caterpillars including armyworms, cutworms, sod webworms, bagworms, fall webworms, gypsy moth caterpillars, tent caterpillars, tussock moth caterpillars, yellownecked caterpillars. |

nice and wet, we will see more grubs; if it is dry, we will see fewer. So, within a season, pest infestations are more impacted by short-term weather.

**Q:** What, if anything, is new or different this year in terms of management options?

**BRANDENBURG:** I think the recession has really caused turfgrass managers to look at inputs like insecticides from a more critical viewpoint. Many have looked at reduced rates, more effective timing, generic or off-patent products, and to look more critically at the newest products. Although we have seen numerous new, good products in recent years, I think the most critical differences are the time and effort put into product selection and use to be most cost effective.

**Q:** Can you share with our readers any recent research results that could potentially impact how they manage specific insect pests?

**BRANDENBURG:** We have found time and time again that really understanding the life cycles of the key pests in your area is so critical in timing insecticides and obtaining good control. However, in the Southeast we are seeing the development of new pest problems. Hunting billbugs and sugarcane beetles, to name just a couple of examples, are increasing each year as pests concerns.

I think this is simply a reflection that the management of high-quality turfgrass in the Southeast, and the recent population growth is really a fairly recent concept. It has only been the past 25 to 30 years or so that high-quality turfgrass has become a major commodity in the Southeast, and I believe that the pests are finally figuring it out. The increased presence of earthworms and moles are all a reflection of using more environmentally sound products. I think we will continue to see some pest shifts during the coming years and it will require turfgrass managers to keep their education up to date.

**Q:** What are some general tips that turf and landscape professionals should keep in mind regarding insecticide selection and use?

**BRANDENBURG:** If you take the time to identify your pest problems, know their biology and ecology, and monitor their development, there are products available that will work as good as, or better than, any of the products of the past. ■

### FMC Professional Solutions (www.fmcprosolutions.com)

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Talstar XTRA Granular (new launch May 2010)** | Bifenthrin + Zeta-Cypermethrin | Surface-feeding pests, including fire ant colonies. |
| **Talstar PL Granular** | Bifenthrin | Surface-feeding pests, including ants, spiders, etc. Controls fire ant colonies, too. |
| **Talstar EZ Granular** | Bifenthrin | Surface-feeding pests, including ants, spiders, etc. Controls fire ant colonies, too. |
| **Talstar Pro** | Bifenthrin | Surface feeding pests, including ants, spiders, etc. Controls fire ant colonies, too. |
| **BaseLine** | Bifenthrin | Surface feeding pests, including ants, spiders, etc. Controls fire ant colonies, too. |
| **Onyx and Onyx Pro (Restricted Use for Nursery market)** | Bifenthrin | Provides reliable long-term control of borers and beetles |
| **Aria** | Flonicamid | Through contact and ingestion, the active ingredient in Aria stops both adult and immature aphids from feeding within in one hour of treatment, and eliminates them within three to five days as a result of dehydration and starvation. |
| **Astro** | Permethrin | Borers, beetles, leafhoppers, chinch bugs, cutworms and over 40 other damaging tree and lawn pests. |

### SipcamAdvan (www.sipcamadvan.com)

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Enforce** | Imidacloprid | Delivers long-lasting white grub protection and is also effective against mole crickets, billbug larvae, annual bluegrass weevils, cutworms, chinchbugs and European crane flies. Controls a broad range of pests in landscape ornamentals, flowers, fruit and nut trees, groundcovers and interiorscapes. |

### Syngenta (www.greencastonline.com)

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Meridian 0.33G and 25 WG** | Thiamethoxam | Manages a broad spectrum of grubs and insects on turf. Meridian controls soil and foliar pests at very low rates, through both contact and ingestion activity. It also is effective and suitable for use on trees and shrubs. Insects con trolled include soil pests such as billbugs and white grubs (such as Japanese beetles, oriental beetles, and European, Southern and Northern masked chafer); and foliar pests such as aphids, whiteflies, mealybugs and leafhoppers among many others. |
| **Simitar CS** | Lambda-cyhalothrin | Advanced-generation pyrethroid technology in a proprietary formulation for use on ornamentals and lawns in land scaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields. Scimitar controls turf insects such as chinch bugs, sod webworms, cutworms and bluegrass billbugs. Always read the label. Visit www.greencastonline.com/prod/index.aspx for label information and additional details about each product. |

### Valent Professional Products (www.valent.com/professional)

| Product Name | Active Ingredient | For use in/on |
|---|---|---|
| **Safari** | Dinotefuran | Controls a broad spectrum of tough and invasive pests, including emerald ash borer (EAB), hemlock woolly adelgid (HWA), mealybug, leafminer and armored and soft scale, among many others. |
| **Arena** | Clothianidin | Provides preventive and curative control of white grubs and a broad spectrum of other pests, including scale, billbugs, pyrethroid-resistance chinch bugs, among others—all with a single application. |