Wave of New Pesticides Ready for Market

Superintendents, in search of more efficiency, ponder postpatent offerings

By Thomas Skernivitz MANAGING EDITOR hat do superintendents want from new pesticides in 2006? According to the major manufacturers of fungicides, herbicides and insecticides, the requests are as varied as they are numerous:

- Increased efficiency of maintenance operations.
- Consistency in performance.
- Flexibility in application timing.
- ► Faster weed control, with visible results within 24 hours.
- Alternative chemistries, especially when resistance is an issue.

More granular products. They're easily measured, mixed and cleaned up.

Control products combined with fertilizers.

Finally, the superintendent wants to take advantage of the constantly evolving postpatent product market.

"The superintendent realizes he can do more with his tightened maintenance budget by considering alternate brands formulated with the active ingredients he knows and trusts," Robert Yarborough, the turf and ornamentals business manager for Advan LLC, says. "At the same time, they know it is critical to explore new chemistries."

As for what's new on the pesticide front in 2006, several companies weigh in with these offerings:

Herbicides

Superintendents in both warm- and cool-season geographies will discover Monsanto Co.'s treatment for annual and perennial sedge, grasses and broadleaf weeds. Certainty Turf Herbicide replaces Manager Herbicide and offers a wider spectrum of weed control against yellow and purple nutsedge, the *Kylinga* species, *Poa annua, Poa trivialis* and many broadleaves, including white clover. "Certainty offers one of the first viable options for superintendents to use *Continued on page 40*

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in addressing *Poa trivialis*," Scott Helms, Monsanto's manager of U.S. Selective Chemistry & IT&O Marketing, says.

FMC's QuickSilver herbicide targets silvery thread moss on bentgrass tees and greens. Recently approved for the use in 49 states, the herbicide retains its previous registration — weed control in newly seeded, sodded or sprigged turfgrass. It can be tank-mixed with reduced rates of atrazine.

"Moss control is a growing issue for superintendents in many geographies," says Nancy Schwartz, FMC's turf and ornamental product manager. "There are few solutions, with nothing covering three key measurement factors for superintendents: ease of use, safety and performance."

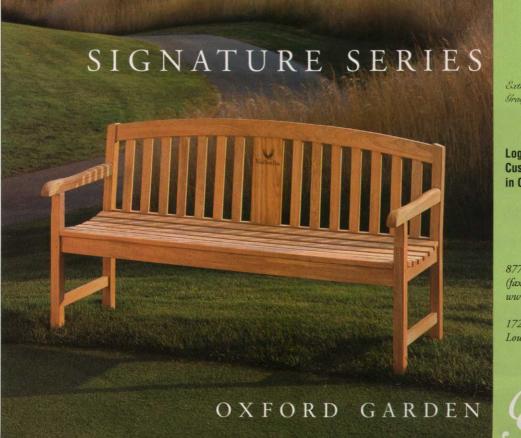
PBI/Gordon is readying a product for post-emergent crabgrass and broadleaf control. Unnamed as of this report, the company expects to begin shipping the specially formulated mixture of quinclorac, sulfentrazone,

2,4-D and dicamba in May.

"It's different in that it's not a single product for post-emergent grass and post-emergent broadleaf control," Bill Brocker, PBI/Gordon's vice president of marketing, says. "The new product is very strong on nutsedge and crabgrass post-emergent. It has decent activity on goosegrass, plus it has traditional excellent activity on spurge, wild violets, English daisy and the regular perennial and annual lawn weeds."

PBI/Gordon's advertising manager, Laylah VanBibber, says her company is one that will benefit from the expiration of so many patents. "It is our intention to be introducing new problem-solving formulations into the industry based on actives that are coming off patent and our formulation expertise," she says.

Gowan Company recently launched SedgeHammer, a new selective herbicide for use in controlling both yellow and purple nutsedge in cool-season and warm-season tur-*Continued on page 42*



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"(E2Y45) has a similar profile to indoxacarb ... with a different mode of action."

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fgrasses, with demonstrated safety to most turfgrass species.

Turf professionals can be assured that SedgeHammer has the type of formulation, use rates, packaging, efficacy, and safety to both cool- and warm-season turfgrass that they have grown accustomed to with its predecessor, Manage Turf Herbicide," Kory Wheeler, Gowan's SedgeHammer Herbicide product manager, says.

Susan Carney, the communications manager with Dow AgroSciences, says superintendents are seeking products that can be tankmixed, such as the company's Spotlight herbicide, which offers post-emergence control of broadleaf weeds and clover.

Insecticides

DuPont Professional Products is focusing on expanding the utility of its breakthrough active ingredient, indoxacarb, present in its granular fire ant bait, Advion.

"We have registration, we're just making some minor changes to the label to make it more flexible for golf courses and landscape ornamentals," Mike McDermott, DuPont's global business manager, says.

The company plans a second-quarter launch of Advion mole cricket bait. "We're developing a variety of roach and ant products for the professional pest control market," he says.

In addition, DuPont is readying two other insecticides for registration, including a new class of chemistry the company currently refers to as E2Y45.

"It has a similar profile to indoxacarb ... with a different mode of action," McDermott says. "It appears to be a very strong turf product, with excellent grub activity.

"We haven't had a lot of new products coming out this past decade. But over the next seven years, we will be launching four to five new active ingredients, never mind all the product presentations based upon these new active ingredients."

DuPont also plans to launch its Provaunt herbicide in the first quarter.

The EPA in December approved the use of Bayer Environmental Science's Allectus insecticide to be blended with fertilizer. The product, which contains imidacloprid and bifenthrin, follows in the path of previously registered Allectus G and Allectus SC.

Superintendents can now utilize fertilizer that has been impregnated with Allectus. Applied in combination with the fertilizer or as a granular or liquid, Allectus is effective above and below the surface. Some of the pests it controls include all major white grub species, billbug larvae, annual bluegrass weevil larvae, mole crickets, chinch bugs, cutworms, sod webworms and fire ants.

"We're excited about Allectus," Scott Welge, Bayer's business manager of fungicides, says. "It's the only product available that controls all major surface-feeding and subsurface insects."

At BASF, officials are anticipating a new fire ant bait that will be released in 2007. The yet-to-be named product will contain the active ingredient metaflumizone and will replace the company's Amdro Pro.

"Amdro Pro is a tried-and-true technology. It's been around a long time, and we're ready to freshen things up a bit," says Toni Bucci, BASF's turf and ornamental business manager. "We're bringing in a new proprietary BASF chemistry, one that was discovered in our labs, and we're proud of it."

Chemtura Crop Protection is developing a botanical nematicide for the suppression of turf and ornamental parasitic nematodes, including lance, sting and stubby root nematodes. The company expects federal registration in early 2006.

Bell Laboratories can boast of two new products that kill moles and other small animals. Rodent Rid controls outdoor pests, including moles, pocket gophers and ground squirrels. Its active ingredient, 2 percent zinc phosphide, is formulated with human food-grade ingredients for highly palatable bait that competes well with food in the animals' natural environment.

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Another Bell Labs product, Talpirid, is a mole bait. Its size, shape and feel encourage moles to consume the bait in the same manner as its primary food source, the earthworm. Once consumed, the active ingredient, bromethalin, capitalizes on the mole's unique physiology and kills the rodent in 24 hours.

Fungicides

Syngenta plans on launching a pair of fungicides that combine the best of pre-existing products.

Headway, which is targeted for almost all turf diseases, will suit everyone that had already been using Heritage or Banner. "Banner picks up dollar spot, which Heritage misses, and Heritage picks up pythium, which Banner misses, and they complement each other on many of the other diseases,"

says Dave Ross, Syngenta's turf and ornamentals technical manager. "It's not just a thrown-together formulation; it's a high-quality formulation. ... The two products enhance themselves when you put them together."

Instrata, a combination of three active ingredients, is indicated for snow mold. "There are about four different pathogens that cause snow mold across the northern tier," Ross says. "No single active gives complete control, and many superintendents are using tank mixes of several products. This is one single product to control all of those pathogens."

Pending EPA registration, Bayer plans to introduce this year what it calls a "unique" fungicide specifically developed for golf courses. Tartan addresses turf stress and the diseases common to fairways, greens, tees and rough areas, including dollar spot and brown patch.

Further into the future, Bayer is developing a fungicide that, Welge says, will provide "unsurpassed control" of anthracnose in cool-season turfgrass varieties.

Arysta LifeScience in January received federal registration for Disarm (fluoxastrobin), a material the company licensed from Bayer CropScience. "It's a strobilurin chemistry," says Tom Kroll, Arysta Lifescience's product manager of fungicides and turf and ornamental products.

The launch of Disarm will be limited this season to establish its performance on labeled diseases and to determine its activity on other species. "We will be confirming 2005 results that illustrate the material is effective on pythium," Kroll says.

Cleary Chemical is planning to pump up the marketing efforts of two recent launches, 3336 Plus and 26/36 Fungicide.

The addition of the active ingredient thiophanatemethyl is what separates 3336 Plus from its predecessor, 3336, according to Don Breeze, Cleary's director of new business. The product, he adds, is primarily positioned as a fairway fungicide.

In addition, the company's patented Cleartec Activation Technology allows 3336 Plus 50 percent longer control, says Rick Fletcher, Cleary's technical and regulatory manager.

"It is a method which really changes the way thiophanatemethyl interacts with the growth of the disease," Fletcher says. "What we find is that where we can put out 3336 by itself, and then put out 3336 Plus next to it, the testing we have done the last three to five years continues to show us the same output — up to 50 percent longer control when we use the Cleartec technology."

26/36 Fungicide, a combination of iprodione and phiophanatemethyl that Bayer and Cleary jointly produced, is predominantly focused on dollar spot and brown patch.

"We put these two together to enhance spectrum, especially in some areas where we may have dollar spot resistance," Fletcher says.

BASF plans on offering a new herbicide by 2008 and a new herbicide and fungicide — both featuring new chemistries — by 2010.

"I think what superintendents will see is that it will give them some additional resistance management tools and some more breadth of control for certain diseases and weeds," Bucci says.

All in all, superintendents have a pretty simple goal when it comes to pesticides, according to Steve Jedrzejek, Chemtura's commercial manager of specialty products.

"Peace of mind is very important," he says.

"No single active gives complete control (over snow mold), and many superintendents are using tank mixes of several products."

DAVE ROSS, SYNGENTA TURF AND ORNAMENTALS TECHNICAL MANAGER