Herbicides remedy annual clover menace

BY MARK LESLIE

More bentgrass fairways and certain application and maintenance practices have made clover a more serious menace at golf courses in recent years, especially as it relates to agronomy experts.

Though other weeds cause problems, many superintendents nationwide agree that clover infestations generally cause some of the biggest headaches. So Golf Course News surveyed chemical companies to see what is on the market to fight clover.

The universal standbys have been MCP, mecoprop, Dicamba and 2,4-D. But the Environmental Protection Agency and other groups are scrutinizing 2,4-D and Dicamba amidst charges they are dangerous.

"There has been a lot of concern that a widespread ban of 2,4-D is coming," said Assistant Professor Clark Throssell of Purdue University's Department of Agronomy. "Some people feel there are health risks with 2,4-D. But that hasn't been established one way or the other. If a ban is passed, it would surely be a hardship. The industry would have to search for a new chemical."

Cornell University Professor Joseph Neal said he anxiously awaiting the results of a 2,4-D study done by Chemlawn Research and Development, in cooperation with the National Cancer Institute.

"This will give us some of the best and most definitive numbers regarding use and exposure of 2,4-D," Neal said.

Steve Carrell, a direct lawn-care sales representative with PBI Gordon, which claims a major portion of the turf market, said tests being run on 2,4-D will cost the industry about $18 million. The immediate impact of that testing is escalated product prices. If 2,4-D is banned, the effect will be long-lasting and cause major adjustments in available herbicides.

Meanwhile, superintendents are faced with clover that, even if it's just an annoyance, reflects on their groundskeeping.

**What to do?**

"It's very frustrating to control because it comes back so well," said Jim Snow, national director of the United States Golf Association Green Section. "I have one little trick: Spray when there's a good dew on the grass. When the turf's dry the herbicide just beeds on the grass and rolls off. Clover's little leaves don't accept spray very well. And when people spray dry grass that's one reason they don't get control."

Throssell said some reasons clover is more prevalent today than in the past are that more creeping bentgrass is being grown on golf course fairways, the turf is being cut lower, and less nitrogen is being applied — "and that gives weeds more of an avenue to invade."

Michael Shaw of Dow Elanco agreed: "Cultural practices today favor clover, particularly with bentgrass fairways. The close mowing and lower nitrogen fertility. A lot of superintendents are cutting back on nitrogen compared to 10 years ago."

Throssell said in cases of Kentucky bluegrass or ryegrass, the low cutting makes the desired species more susceptible and allows more weeds.

He suggested herbicides be applied in the fall, at least where cool-season turf is grown. "People try to control it too early in the spring," he said.

Neal said products on the market to fight clover work well. "MCP, 2,4-D, Dicamba, Banvel, the Turfon products — they all work well. There are all kinds of three-way mixes to use them. A new product, Confront, is dynamite," he said. "There's enough on the market that clover should not be a problem."

Citing golf course superintendents as normally being good applicants, Neal said, "Invariably, when you examine your applications methods, no matter how good they are they can improve. He suggested:

- Use the correct equipment and calibrate it properly.

"Golf courses often use the same spray equipment for fungicides and herbicides. But low-volume applications are generally better for herbicides while high-volume is better for fungicides. Herbicides are applied at less than 60 gallons per acre and we have had some people use less than five gallons per acre with beautiful results; fungicide is normally used at much higher volumes of water," Neal said.

He said the nozzles of sprayers used for fungicides on greens are too close to the ground, and the uniformity is not good enough.

"You need a separate boom — one that's higher and with wider nozzle spacing and lower pressure and gallonage," he said.

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PBI Gordon, for instance, sells Super Trimec for a broad range of weeds and Mecomec to specifically fight clover.

Dow Elanco's Shaw confirmed that Confront — with active ingredients — will fight a broader spectrum of weeds.

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Shaw agreed, saying a mixture of chemicals will fight a broader spectrum of weeds.

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Course development forecast cloudy

BY PETER BLAIS

Tracking golf course development is the responsibility of the National Golf Foundation programs and concerns the entire golf industry, according to a panel of experts assembled at last month’s Golf Summit ’90 in Palm Springs, Calif. “Golf course development affects everyone (in the industry) either directly or indirectly in our pocketbooks. A lot of our future economic well-being is dependent on golf course development,” said Richard Norton, NGF president/general manager of National Golf Foundation Consulting.

Progress and Trends

While this may appear to be a throwback to the glory days of the 1960s, new course development has been very strong the last four years. More than 300 courses are expected to open in 1990 alone.

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likely to be restricted because of potential to contaminate ground water. We may lose popular pesticides through special review.”

He said 2,4-D is in “a tenacious situation.”

The agency proposed new applicator certification and training regulations in early November and the golf industry had 120 days to present comments to the agency. The final rule will be written sometime in 1991, he said.

Also next year, the EPA’s agricultural chemicals and ground water strategy will be released. It will develop management plans that will have to be tailored to local ecological and soil conditions, he said.

“Even chemical companies have reduced nitrogen content to grasses that are vulnerable to contamination. If states don’t have those plans, pesticides won’t be able to be used,” Crampton said.

He added that the research agenda the GCASA and USGA are coordinating is crucial because it is “tailoring inputs to a project.”

Regarding wetlands, Crampton said, “The law is pretty clear. If wetlands are involved you can go elsewhere to build your golf course development unless you can prove that any other site is impossible, that environmental problems will be mitigated and you will not harm the existing ecosystem.”

Delays in permitting can be skirted if a site’s wetlands are considered in a project.

Yet, with all the discussion about the environment, the very lack of public knowledge may be the biggest environmental threat, Crampton added. “You can’t be sure of the impact of projects. There are scientists who simply do not have the training or background to do an effective job. We’re talking millions of dollars of decision-making they make with a stroke of the pen,” he said, stressing the need for “responsible professionals at the other end.”

Hurdzan added: “I’ve never heard of a golf course being denied when the cooperative went through the review process. There are those who purport to be environmentalists, who offer their services as environmentalists, who simply do not have the training or background to do an effective job. We’re talking millions of dollars of decision-making they make with a stroke of the pen,” he said, stressing the need for “responsible professionals at the other end.”

Crampton inferred.

“The decision to allow a golf course to be built in a community is an emotional one. It is not scientific. Increasingly, we are being told that courses are being given to stop courses from being built,” he said. “Developers and course owners are looking in the mirror and saying ‘if I can get in at the front end, dialogue with the community, and make the sale based on the facility’s environmental benefits, and other benefits the facility can bring.’

“Protecting the environment is a high priority for all Americans. We are environmentalists. I am happy with the positive initiatives being taken by the allied associations.”

The future

While PBI Gordon’s Carroll said most non-phenoxys products “are not economically feasible option right now,” other experts say scientists are concentrating their research on non-phenoxys, post-emergence products.

“There are thousands of products that can replace 2,4-D but are a lot more expensive,” said Dow Elanco Product Marketing Manager David Maurer.

“Our research and development people are looking primarily at triclopyr and others in that same line of chemistry, with very low rates going out. This requires your developing a scientific research agenda of the type the USGA and superintendents have planned. It also calls for serious soul-searching by course architects and developers about the scope and magnitude of these projects.”

He said that notwithstanding a development’s amenities, there are people who will use “whatever arguments they can to put it down, including pseudo-science and there’s a lot of pseudo-science out there. It’s almost a fact.”

“The environment and environmentalists are not always at fault here. You have to develop a code of practices that do not skew solutions and excesses and you have to stick with it.”

Crampton suggested more cooperative research with the EPA, saying, “We can even call a lab personnel one. This can help lessen the impact of the major pesticide re-registration review that’s under way.”

Dr. Michael Hurdzan, former president of the ASCGA, agreed that people in the industry will have to get politically involved.

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NGF studies show parts of the United States have too many golf courses. Far more have too few, with Baby Boomers lining up to enter the golf market, the limiting factor for golfers is demand, Norton said. It’s supply.

“If Boomers act like their parent’s there’s a lot of potential demand for courses out there,” the NGF official said.

Existing courses will help satisfy a potential demand the NGF says could almost double from 474 million rounds annually in 1990 to 884 million by the year 2000. But with existing facilities at 85-90 percent of desired capacity, there isn’t much room there to meet increased demand,

And that means new courses are needed. But they can’t be placed anywhere. They must be built where they’re needed, at the right price, at the right investment and for the right fee,” Norton said.

While there is a need for new facilities, Norton said there are four main factors constraining golf course expansion — global and domestic economies, upward cost pressures, profitability and financing.

New construction is affected by external economic factors. For ex—

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