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Banner does well under low fertility and moisture conditions. Even low pH. But Banner still gives you quick germination and seedling vigor. A dense, moderately low growing turf that is highly competitive under low maintenance management. A sod of high tensile strength.

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We do!

Bonnieblue Kentucky Bluegrass

Rich dark-green color over a long growing season. Good rhizome and tiller development. Low growth with excellent density even at moderately low mowing heights. Strong disease resistance. A sod with high strength that cuts easily and holds well.

That's Bonnieblue Kentucky bluegrass, and you can stake your reputation on it. We know because at E.F. Burlingham & Sons we value our 70-year reputation as seedsmen—and we're sold on the credentials of Bonnieblue. Credentials that include development of the variety through a special breeding project initiated at Rutgers University in 1962. Our tests and trials across the country on a continuous basis with Bonnieblue consistently ranking among the highest in overall turf quality. And now, the important steps we have taken to maintain genetically pure seed stock and painstaking production for plump, bright, high quality seed.

So, when your reputation is the turf you grow, stake it on the performance of Bonnieblue.

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Birka Kentucky Bluegrass

A newcomer to the ranks of low maintenance Kentucky bluegrasses...one we're glad to stake our reputation on.

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Cover: Painting of rose by Janet Hines of Berwick, Pennsylvania, was commissioned by Weeds Trees and Turf to welcome the Year of the Rose.



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Sands Point Golf Club Gave the Job to Jobe.

John Gresh, superintendent of Sands Point Golf Club in Sands Point, L.I., New York, tells of his results: "Where I used Jobe's

Spikes, pines and evergreens grew 9 inches in 1978, compared to only 4 inches on unfertilized trees. In 5 years, that means two feet of extra growth."



John Gresh found Jobe's Spikes save time, equipment and labor costs. "Pouring tree and shrub fertilizer into drilled holes used to be a time consuming and expensive way to feed trees. That's probably why more of them didn't get fed."



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VIEWPOINT

Ron Morris, Technical Editor

"MONSTER BUG" ATTACKS!

Last year it destroyed \$45 million worth of cotton, this year it could be \$74 million worth of lettuce. Front page news. Government issues emergency permits on chemicals deadly to fish, mildly toxic to animals.

Really sounds like the government knows what it is doing, doesn't it? I was concerned with writing about 2,4,5-T, the infamous "Agent Orange" — which we all know it really isn't — but front page news tends to detract from the issue at hand.

I am against use of unknown, deadly to fish, toxic to animals, types of chemicals. On the other hand I am all for use of chemicals that have been run through the scientific world and many, many facts are known to prove their use reasonably safe.

So, if scientists think the stuff is safe when used as directed, why the furor over 2,4,5-T? Is Rivera a scientist? B — a reporter? C — an investigator? Granted, Agent Orange could've been dangerous. It was a combination of highly volatile esters of 2,4-D and 2,4,5-T, sprayed at extremely high rates. 3,000 to 30,000 times the rate that 2,4,5-T is used on forests by the forest service today. It could've caused grotesquely abnormal children and miscarriages, but if that is so, then the scien-

tists who went to investigate and said that, in the aftermath, the rates for that type of thing were below normal for that area are downright blatant liars.

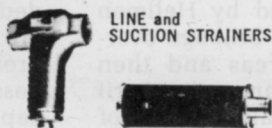
Dioxin, the most deadly poison known, and Agent Orange, have clouded the issues. It is no longer scientific, but now becomes a scare issue. So scary in fact, that EPA refuses to issue a water tolerance level.

In 1976, a reactor in Italy exploded, exposing resident of a small town north of Milan to TCDD, a member of the dioxin family. According to Dow Chemical company, TCDD concentrations were reported in medical journals as 1 million times greater than those that occur from agricultural treatments with 2,4,5-T. There were no embryonic malformations found in thirty women who underwent therapeutic abortions, nor were there any cases of severe human illnesses.

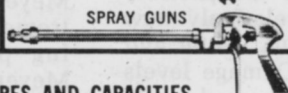
To sum it up, in my opinion, the EPA has let the issue become one of emotions. That should not be the case. EPA should be concerned with reporting scientific data on the toxicity of materials, determined by scientific methods by scientists. This data should stand on its own. If the data shows it is toxic at a certain level, then that level should not be reached in any application.

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GREEN INDUSTRY NEWS

TURF

Lawn care growth evident at Ohio Turf Show

Lawn care appeared to dominate other turf interests at the Ohio Turfgrass Conference and Show in Columbus, Dec. 5-7. Dave Martin, OTF executive director, said that there were more representatives from lawn care companies than golf courses, and this was only the second year separate sessions for lawn care were offered. More than 1,500 turf managers attended the three-day event which enjoyed good weather for a change.

Chemicals and business dominated the lawn care sessions. Late fall fertilization and turf insect control drew large crowds. Dr. J.R. Hall of Virginia Polytechnic Institute and State University said supplying nutrients to bentgrass, after temperatures stay below 55 degrees but before the grass goes dormant, enables the grass plants to build up carbohydrate reserves for the flush of growth in spring. Early spring fertilization can cause carbohydrate depletion in root systems by June, Hall said, because of excessive shoot growth. Hall recommended use of soluble nitrogen for late fall fertilization. His data was limited to a band across the center of the U.S. from the East Coast to the Midwest. A fertilization program where one pound of nitrogen is applied in October, November, December, January and February was recommended.

Drs. Niemczyk of the Ohio Agricultural Research and Development Center and Hellman of the University of Maryland spoke on turf insect control. Niemczyk reported data from tests on chinchbugs and treatment timing, the ataenius beetle, and the greenbug aphid.

Both Niemczyk and Hellman compared treated and untreated chinchbug areas. Niemczyk showed that an April application of Dursban controlled chinchbug damage throughout the year, although



Dr. Harry Niemczyk

chinchbug migration in September into previously treated areas was found. Hellman said the place to check for chinchbugs is where dead and healthy turf meet.

Other tips offered by Hellman were that bluegrass billbugs overwinter in shady areas and then migrate into open areas in April when populations peak. One sign of a sod webworm infestation, Hellman said, is the presence of large numbers of birds on a turf area.

Niemczyk stressed the possible seriousness of two relatively new turf pests, the ataenius beetle and the greenbug aphid. Damage levels from both pests have showed marked increases.

Business sessions, including a four-member panel on starting a lawn care business, also received good attendance. Subjects covered were business expansion through diversification, cash management, and computers for routing and billing.

Perennial ryegrasses and proper overseeding were covered in both lawn care, golf course, and general sessions.



Dr. John R. Hall, III

Hall said strengths of perennial ryegrasses include: medium texture, blends well with Kentucky bluegrass, fast germination, withstands low mowing heights, extended green season, good seedling vigor, and toleration of short-term drought without losing color. Weaknesses, Hall said, are: disease susceptibility, slow lateral growth, faster growing requiring more mowing, and color contrast.

Hall said, "Drs. Reed Funk, Bill Meyer, and Joe Duich have made tremendous contributions in breeding perennial ryegrasses." Bill Meyer, of Turf Seed Co. and Pure Seed Testing in Hubbard, Oregon, spoke to the Golf Course session on Turfgrass Varieties for Overseeding Golf Courses.

Other golf course topics were redesigning greens by Dr. Mike Hurdzan, managing *Poa annua* by Bill Burdick, and sand topdressing by a panel of three superintendents.

The panel pointed out that once sand topdressing is started, it must be maintained or else a layering effect will retard water percolation.