

# THE BEST OF THE ROADSIDES

When the National Roadside Vegetation Management Association held its conference last fall, it named annual contest winners. Here are brief profiles of three outstanding programs.



The use of wildflowers along North Carolina's highways wasn't implemented as a cost saving measure, says Bill Johnson of the state's DOT. Their purpose is simply to bring color to the roadway.

## Innovation in N. Carolina

by Jerry Roche, editor

**L**andscape engineer Bill Johnson and the North Carolina Department of Transportation took the NRVMA award in the state/federal category. Johnson, one of the founders of the NRVMA, likes to think of himself on the cutting edge of the industry.

"We try to be innovative," he notes. "We try to do things first, change things, look at new programs. We really react well to public sentiment and public influence on our program."

One of Johnson's pet projects is his wildflower program.

"There was a lot of interest in wildflowers. We reacted quickly. We seem to have been a little more blessed with resources than some groups across the nation.

"The wildflower program is probably the most popular thing I've ever seen happen in DOT. It's more popular than roads, really. The response is overwhelming. It's a visible change."

Johnson said he heard his boss speaking to a group recently, saying

that he's been complimented on four things—and three had been on the wildflowers.

"We can't save money using wildflowers," Johnson continues. "That was not its purpose. The purpose was to add color to the roads, to improve aesthetics, to give an interest that is fairly low-maintenance."

What is spent on the wildflower program—and more—is saved by implementing plant growth regulator and low-volume herbicide spraying programs.

"We have documented cost savings on both of those," says Johnson. "The wildflower program is about \$250,000 a year. The other savings are considerably more than that."

Controlling vegetation in North Carolina is no small task. The 400-person Landscape Unit maintains 285,000 acres of routinely-mowed vegetation and nearly 300,000 total acres with reforested areas included. This acreage is among the nation's largest state-maintained highway system with more than 76,000 miles of roadways.

Because of its location smack-dab in the middle of the transition zone, the state DOT maintains a good working relationship with North Carolina State University, especially Dr. Joe DiPaolo (who made the NRVMA award nomination). DiPaolo has done research on turfgrass species that has saved Johnson some money.

DiPaolo, in his nomination letter, notes a 50 percent savings in roadside vegetation control in North Carolina with the use of maleic hydrazide or mefluidide + chlorsulfuron as growth regulators on tall fescue.

"In 1971, fescue was used into the ocean and was certainly not adapted to a large part of the state," observes Johnson. "We now use three different warm-season grasses. We also use regular Kentucky-31 tall fescue, bluegrass and some of the hard fescues in our cool-season mixes. Centipede is a warm-season material that we're very interested in. It's shown some adaptation into the cool-season areas because of its low maintenance. It's really a no-mow type of material."

And how's this for planting? In preparation for the 1987 summer Olympic Festival, the DOT planted an unbelieva-



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ble 53,000 dozen annual flowers, 2,100 junipers, 1,900 crepe myrtles, 1,000 pampasgrass plants, 5,000 daylilies and 28,000 cannalilies along 20 interchanges—in six months.

Finally, one more new program with which the DOT is experimenting involves the state's Wildlife Re-

sources Commission. Recognizing that roadsides serve as a linear wildlife refuge, a pilot project provides roadside feeding areas for small game.

"An added benefit is that this should reduce our maintenance costs," says the ever-frugal Johnson. "We want our roadsides to be more attractive to people and an asset to wildlife as well. From these projects we will be able to develop a program that could receive wider application in the future."

## Two decades of control

by Will Perry, managing editor

**R**ay Dickens, Ph.D., professor of turf management at Auburn University, was presented with the NRVMA's award in the academic category in appreciation of two decades of service to managing roadside vegetation.

Dr. Dickens initiated and developed Auburn's first course in turfgrass management soon after joining its academic staff in 1968. Today, as the primary consultant to the Alabama Highway Department, he remains among the pioneers doing ef-

fective research on managing roadside vegetation.

His early work showed the effectiveness and economy of weeping lovegrass as a temporary cover when seeded in a seed mixture. At the same time, he was helping identify the areas on which crown vetch, an attractive cover, is adapted.

Dr. Dickens also provided the research needed to select *Sericea lespedeza* adapted for acid road cuts. This cooperative work resulted in the release of two cultivars recom-

mended specifically for highways: *Interstate* and *Interstate 76*.

Dr. Dickens' recent research on highway vegetation has emphasized chemical growth control, particularly MSMA and 2,4-D, in lieu of mechanical mowing. Dr. Dickens' cost-effectiveness studies of fan-cage sprayers compared to other application methods is indicative of research that has resulted in a sharp drop in maintenance costs for the state of Alabama Highway Department.

Dr. Dickens' research is largely re-



Dr. Ray Dickens, of Auburn University, has been instrumental in Alabama's roadside management.

responsible for the state eliminating tall weeds and grass in favor of bermudagrass during the summer. Winter weeds are controlled by herbicide applications during bermudagrass dormancy.

Dickens' 1978 study of several roadside mulch materials showed that seedling establishment is increased by adding cellulose, excelsior, or other mulch materials to erosion control nettings. He also showed that incorporating plant nutrients into the adhesive appears to be an acceptable method of applying fertilizers to mulched areas.

Dr. Dickens also aids in writing and interpreting construction specifications and arbitrating conflicts between contractors and the state highway department.

## Orange County Weed Busters

by Terry McIver, associate editor

**B**ill Tidwell, winner in the county category, is the supervisor for EMA/Public Works for Orange County, Anaheim, Calif. Originally a park ranger, Tidwell has steadily progressed up the educa-

tional and professional ladder. He earned his masters degree in environmental studies, and holds lifetime teaching credentials in ecology and agriculture.

Tidwell's division is responsible

for managing all vegetation, including trees, brush, noxious weeds, grass and litter on all county-owned land. This includes 813 miles of county-owned roadway; 303 miles of flood control channels, basins and drains; 15,000 acres of park land and a few hundred thousand landscape trees. The total area adds up to 26,000 acres.

Aesthetically, Tidwell's "Weed Busters" crew has kept up with county development and growth. The unit has managed to keep the areas under its jurisdiction attractive despite the hazards of a roadway system which operates at near rush hour volume all day long.

"The road shoulders are kept free of weeds with a program of tank-mixing a post-emergence and pre-emergence herbicide to keep weed seeds from germinating while controlling existing weeds," says Tidwell. "The county is using low maintenance landscaping instead of high maintenance exotic plants which require constant care, minimizing the time the crews must spend on the well-traveled highways."

Tidwell says Orange County's pesticide section excels in the areas of application and applicator safety. Pesticide use is regulated by agri-



**Bill Tidwell: Dealing with Proposition 65 positively.**

cultural commissioners in the state, however, because the county is a public agency, the management has directed the group to comply with all Cal-OSHA safety requirements as well, says Tidwell. Notable is the fact that all personnel in the section have a state applicator's license, and all suspected groundwater contaminants were removed three years before the passage of Proposition 65.

For extra added innovation, Orange County uses a high-line boom for certain applications. The unit's

spray crew can treat a 14-mile long, 300-foot wide stretch of flood control channel in 12 hours. On-board computers are also used in the trucks to track scheduling and progress.

Perhaps the most innovative aspect of Tidwell's operation is the use of computerized herbicide recommendation inventories which include roadways, flood control channels and parks. These recommendations are used to schedule activities, document use and order materials. It is combined with the vegetation section of a Maintenance Management Plan that is used for all the county's public works operations. This information allows the manager of public works to determine that all functions are staying on course and on time while staying within the budget for that activity. "Research of this current information allows excellent forecasting for future budgets," Tidwell explains.

*ED. NOTE: Mayor Jerry E. Abramson of Louisville, Ky. and the city of Boca Raton, Fla. tied for the NRVMA award in the municipal category. They were not included in this installment because of space considerations, but will be noted in future issues of LANDSCAPE MANAGEMENT. LM*

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