### CHALLENGES OF RAILROAD CONTROL ARE LONG DAYS AND CONSTANT CARE

Each occupation within the Green Industry has its special challenges. In railroad weed control they are long days on spray trains, constant monitoring of application rates, and prevention of drift damage to agricultural crops alongside the tracks.

Perhaps you have seen a railroad spray unit, a short train slowly being pushed down the tracks by a single engine. Two lead cars and five tankers are pushed at a snail-like 15 miles per hour pace across thousands of miles of track each year. Each train has an engine pushing from the rear, tank cars carrying herbicide mixes, a supply car and a lead car to scout ahead and to control two sets of spray booms.

These trains are operated by R.H. Bogle Co., a firm with more than 30 years experience in railroad weed control. As many as 25 railroad companies hire Bogle to clean up weeds along their right-of-ways. This type of weed control provides railroad companies with a more efficient working image, prevention against hazardous right-of-way fires, preservation of wooden ties, and improved visibility at road crossings.

Effective control of the grasses and broadleaf weeds found along railroad tracks necessitates the use of both contact and residual herbicides. And in many instances, field crops such as cotton, tobacco and soybeans are situated very close to the tracks. Consequently, drift control is an extremely important consideration.

According to Bogle Service Engineer Red Shetron, their spray crews avoid crop damage by altering the herbicide spray pattern when necessary. For example, Shetron and his crew frequently spray a mixture of Ortho Paraquat CL and Karmex 80W from one set of booms, and from a second set they apply a mixture containing 2,4-D. When the train is within close range of a farm field, how-



**Shetron's crew** was on the road for 165 days in 1977. In good weather, they run seven days a week, 15 hours a day. Their goal is 125 miles of track per day.

**Chemicals** are mixed at the beginning of each day.



**Shetron** at controls in front of train spots for nearby crops and vegetation.



ever, Shetron turns off the 2,4-D application (because of its high drift potential) and relies solely on the Paraquat and Karmex.

"While we're running, I'm situated in the front car, constantly spotting nearby crops and vegetation along the tracks," Shetron explained. "From there I can cut the 2,4-D when I need to, or even quit spraying entirely if we're too close to susceptible crops. I also stop spraying if there are no weeds to knock down.

"I have two men working with me — J. D. Brown and Dennis Edney," he continued. "They mix the chemicals before we leave in the morning and run the booms while we're applying. In addition to spotting vegetation and crops, I also monitor application pressure and take meter readings at each mile post to see exactly how much material we're applying."

An average of four railroad representatives also man the train, including a roadmaster, engineer, conductor and brakeman.

Bogle spray crews have had relatively few drift problems while doing an effective job of controlling right-of-way vegetation, largely due to the sophisticated equipment now available for railroad weed control.

John McIntosh, representative at the company's head office in Alexandria, Virginia, also emphasized that point. "Our application equipment once consisted of a single, high volume system. Now our trains have multiple systems. The difference is that with the old system we could only spray one chemical at a time. But now we can apply three chemicals at one time ... and at different rates.

"There are naturally different weed problems along a railroad track," McIntosh continued. "There are heavy grasses along the side of the track, while in the tie area where there isn't as much dirt, late annuals are more prevalent. Consequently, we don't need to apply as much chemical in the tie area as we do on the shoulder of the track.

Shetron explained that his spray booms cover a 16-foot swath; there are two parallel booms on each side of the train — the outside one used for applying herbicides like Paraquat and Karmex. The system is powered by two Hale centrifugal pumps: a V-4 Wisconsin and a 318 Chrysler. And the total tank capacity of his train is 53,000 gallons (two 10,-000 gallon cars and three 11,000 gallon cars).

"We've been applying 2,4-D at a rate of one gallon per acre, diluted in 49 gallons of water," Shetron said. "We also use Nalco-Trol drift control agent with the 2,4-D, and it works very well.

"The Paraquat is sprayed at a rate of  $1\frac{1}{2}$  pints per acre, diluted in 50 gallons of water," he continued. "And the Karmex is applied at a rate of six pounds per acre."

He explained that 2,4-D is primarily used for control of vines and other tough perennials. Karmex is applied as a preemergence material, used

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Keeping a railroad spray train running smoothly is no simple trick. Maintenance of equipment is a daily routine, and an important one; breakdowns can be extremely expensive. And the physical demands of the job are exhausting.

"Our train usually covers about 15,000 miles in a year," Shetron said. "We usually start on the West Coast, then as the weather permits, work our way across the country."

To cover those miles, his crew must stay on the road for approximately 165 days. When weather conditions are favorable, they usually run seven days a week and work as much as 15 hours a day. By the time they mix the chemicals and get started in the morning, it usually takes that long to cover the desired 125 miles.

McIntosh added that Bogle's ten spray trains covered a combined total of approximately 75,000 miles of track in 1977. It is, indeed, a big change from the time back in the 1920's when that company first strapped a pressurized tank on a flat car to spray for right-of-way weeds. **WTT** 

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