

research continues to determine whether the newer oils can be used during the summer leaf stage. The company has already used oils successfully during the fall, when a larger window of time exists.

"However," adds Funk, "the plants are in a more sensitive stage then, so you have to wait until they become fully dormant, as the oils will delay dormancy."

According to Funk, Davey Tree will begin using oils on a limited basis in the summer of 1992, at a two percent rate. Funk cautions other companies that re-application of oils during the summer can be harmful to trees. "We also don't know if you can apply oils to the same plant in the same year."

Other Davey research findings:

- Vegetable oils (corn, soybean): Funk says research testing of these oils has shown 40 percent control of soft-bodied, sucking insects.

- Citric oil: Has pesticide properties, but high control rates also cause injury to the plant.

- Nemoil: Quality control problems during the extraction process not yet eliminated; has potential.

- Predator insects: The problem is keeping them within the targeted area.

- Funk also looks for Murphy's Oil Soap to receive EPA registration for tree insect control in 1992.



Dr. Roger Funk: Modifying spraying equipment to reduce odor, noise and drift will be the 'salvation of the tree care industry.'

- In company turf research, oils and soaps have shown ability to control all of the common turf insects.

Selective applications are based on refinements in post-pest timing charts, and might be more accurately applied by looking at temperatures and blooming time.

- Applicator education and training: In the past, the manager made the decision to apply control products from his office. Look for applicators to become more responsible in making decisions based on identification of tree, pest and predator insects.

In developing new spray techniques, Davey wants to address what Funk calls the three "triggers" of neighbor complaints: odor, drift and noise. Solutions include:

- Downsizing equipment to suit tree size.

- Odor-masking solutions: one product, called Maskit, will hide the odor of Orthene, in a 3.3-ounce:100-gallon ratio.

- A company-designed turf sprayer with two lines, dispensing fertilizer or pesticide in amounts as small as 4 ml.

—Terry McIver

Post-emergence results are very impressive

Crabgrass control was at 100 percent for some compounds tested at Ohio State University.

■ Tests of late post-emergence herbicide efficacy show a 50 to 100 percent decline in crabgrass for some applications, according to Dr. John Street of Ohio State University.

In evaluations conducted last year at OSU, Street and field technician Jill Taylor documented late post-emergence herbicide efficacy on crabgrass. They presented their findings at the Ohio Turfgrass Foundation Field Day.

Herbicides were applied to crabgrass at the 4- to 6-tiller stages. Irrigation was withheld for two days after treatment.

The post-emergence area was verticut

in two directions in mid-April and overseeded with one pound of crabgrass seed per 1,000 square feet. The stand was maintained at a mowing height of 1-3/4 inches and received an annual total of two pounds of nitrogen per 1,000 square feet. Irrigation was provided as needed to prevent wilt. Treatments were monitored for crabgrass percentage at periodic intervals after application.

"Acclaim has shown good efficacy for post-emergence crabgrass control," says Street. "However, some discoloration and stunting of Kentucky bluegrass occurs, and efficacy drops off dramatically under drought conditions.

"Impact (BASF 514) efficacy was good at the 0.125 and 0.25 ai/A rates. However, effectiveness was reduced some, and rate of activity was significantly reduced, with 50 percent crabgrass still present on September 6 (14 days after treatment)."

Impact's label rate is 0.50 ai/A, according to BASF.

Street called Impact's efficacy "excellent" at the 0.50 to 1.0 ai/A rates, and said 100 percent control was shown in two weeks' time.

Coming in Tech Center:

- Water infiltration through the soil profile, by Dr. Don Taylor

- Fungicides for pythium on golf course fairways

- Preventing nitrate leaching

- Ant control in turfgrass