



The Herbicide Market

HIGHWAY WEEDS

By **A. PETE NICAS**, Manager
Industrial Herbicide Sales
Agricultural Division
Ciba-Geigy Corporation

IT IS ESTIMATED that 25 percent of all herbicides sold in the U.S. for non-agricultural uses are utilized in highway and roadway programs. Contact and selective herbicides are applied to more actual acres than residual or soil-active herbicides. However, the latter group of herbicides which are used for bare ground applications equals the market value of contact and selective herbicides combined.

Selective vegetation control involves general or spot application of herbicides on roadsides for brush, broadleaf weed and noxious weed control. These treatments provide the following benefits: (1) Improved visibility for drivers; (2) Removal of vegetation that is detrimental to crop lands, livestock and humans; (3) Acceptable levels of desirable grassy vegetation along with protection from wind and water erosion; (4) Improvement of aesthetic values.

Residual or soil active herbicides yield bare ground around shrubs, trees, shoulders, guard rails, pavement cracks, sign posts and delineators. With the exception of erosion

control, residual herbicides provide the same benefits as selective herbicides. They are also used to prevent vegetation from destroying paved surfaces.

Compared to mechanical or hand methods of vegetation control, proper use of herbicides generates significant cost savings and provides more effective control of vegetation in most situations.

There is a general increase in the use of residual herbicides on highways. And the trend is expected to continue for the following reasons: (1) Rising labor and machinery costs; (2) Fuel shortages and/or rising fuel costs are expected to generate even more interest in chemical vegetation control as a replacement for mechanical methods; (3) More interest in highway beautification; (4) Increased interest in landscaping with ornamentals and ground cover will continue to increase the need for weed control to insure aesthetics and survival of desirable species; (5) Development of new products; (6) Increased manufacturer and highway department knowledge in the areas of product and application technology.

Most highway herbicide applications are made by the maintenance departments of the various highway departments. Biggest exception is in

the Midwest where numerous counties and a few states contract all or part of their application work. Custom applicators, weed control specialists and tree maintenance companies share in the contracted market which is estimated to account for less than a fourth of the national expenditure for herbicides used on highways and roads.

For the independent applicator it appears that the best way to break into the highway market may be to approach a county or township highway department that is not doing any highway weed control. In other words, go to someone who hasn't done it before and explain what you can do.

Ed Edwards, owner-operator of Edward's Spraying and Construction, Clear Lake, Iowa started doing that 26 years ago. His first contract was with the highway department of Polk County (Des Moines area), Iowa. Since then his business has grown to where Edwards services more than 40 Iowa and Minnesota counties.

"I first saw the need for this type of service about 30 years ago," Edwards recalls. "County highway crews were doing the brush and weed control as well as all their other maintenance work. Road repair and maintenance demands were usually heavy in early spring — the time when weed control applications should be made. Often they got caught short of time and it was difficult for them to get applications made at the optimum time for control."

After touring several states to learn what others were doing in industrial and roadside weed control, he developed a program and presented it to the county highway department.

"We emphasize application," Edwards says. "That's our specialty. There are a lot of good products available to fit any particular need — Pramitol, for example, is good for right-of-ways where no vegetation is wanted."

Beyond the business expansion potential offered to horticultural and industrial contractors, highway work offers opportunities for agricultural applicators. These applicators already have much of the equipment and knowhow required, and some firms are finding highway work a good way to utilize idle equipment and personnel during part of the off-season. One such firm is Auburn Fertilizer and Chemical, Auburn, Illinois.

"Usually by the time bids have to

be placed for state jobs — March-April — we have an idea how much time we'll be tied up with fertilizer application," says Joe Powell, applicator. "If fall weather allowed completion of most of it, we try to get some highway weed and brush control work. It offers good margins and a chance to utilize idle equipment and labor."

Based on our experience in highway weed control we estimate that per mile herbicide expenditures range from as little as \$2 to as much as \$21. Selective herbicides find widespread geographic usage while the larger use of sterilents and contact herbicides is found mainly in the south where bermuda and johnsongrass are serious problems.

Ciba-Geigy herbicides are used extensively for highway weed control. Because of their broad control spectrum and universal geographic adaptation, their popularity continues to increase.

Pramitol is used primarily for controlling hard to get perennial broadleaf weeds and grasses. This product in combination with Princep provides control of both deep-rooted perennials and late-germinating broadleaf weeds and grasses. A new use for Pramitol 25E that is growing rapidly is in combination with asphalt cutbacks to prevent degradation by weed breakthrough after they are applied on shoulders, on cracked asphalt surfaces, country roads and under highway fences and guard rails. This treatment extends the life of the new surface resulting in considerable savings in time and labor.

Princep is a broad spectrum herbicide that is particularly effective in controlling shallow-rooted annual weeds. An additional asset is its safety to desirable trees, shrubs and some ground covers. Princep is used extensively for weed control around ornamental plantings and in highway spray programs where safety to deciduous fruit and nut trees and/or citrus is an important consideration.

AAtrex and Atratol (AAtrex plus Pramitol) are also used for highway weed control, especially in the Pacific Northwest.

Private applicators have the tools and knowledge to tap this large potential market. They have the skills necessary to meet the growing and increasingly specialized demands of highway work and the modern herbicides to fit virtually any job requirement. With the added benefit of being able to keep expensive

equipment working more of the time, highway weed control appears to be an area the applicator should investigate as a means of expanding his business. □

AQUATIC WEEDS

(from page SS)

biological controls have simply not been proven effective. They may create a different nuisance than the one they were employed to control, and in turn, require additional control measures.

Chemical herbicides have proven the most practical. Comparatively, they provide low-cost aquatic weed control with minimum labor. The algae and aquatic weeds are killed and decompose, eliminating the need for physical removal to another site, or the need for additional control measures. In many cases, they are the only means of economic control — for example, in a dry, hot western summer where continued irrigation is mandatory for healthy crops.

There are a variety of aquatic herbicides available produced by various companies including Chevron, Dow, Pennwalt, Shell and 3-M. Some of these companies offer aquatic herbicides with several variations effective on nearly all aquatic weeds and algae found in water environs.

Perhaps it is prudent, at this time, to point out that there are aquatic weed control chemicals—and chemicals that kill water weeds, algae and other vegetation also. Water is a life-source of the human—yet, all too frequently, chemicals known to have toxic residues on fish and/or humans are used against water weeds and algae.

Sometimes these chemicals are also effective against other useful vegetation—and have been known to kill valuable economic crops many miles "down-stream" from the point of application. The EPA (Environmental Protection Agency) and many states have laws or controls applicable for use of herbicides in such water bodies. In many states, application of aquatic weed and algae control chemicals may only be applied by licensed applicators. In others, permits must be obtained. In still others, no legislation exists. And, of course, there exist various combinations of the requirements. Most professional herbicide applicators are aware of such laws in their states — but it is always wise to check.

The season for aquatic weed control exists from three months to year-round — depending on geographic region and the nature of the market. Summer weed control is particularly prominent in areas of the country where lakes and ponds are frozen throughout three winter.

Conversely, it is this winter season that represents one of the best selling opportunities—since it provides the opportunity to "pre-sell" aquatic weed control . . . making it possible for the professional applicator to book jobs in advance and plan ahead to the busy months. It also makes control easier, since aquatic weeds are best controlled during their early growth periods.

There is a strong trend in aquatic weed control toward greater professionalism. Fewer and fewer applicators are working job by job — but instead, are providing year-round complete aquatic vegetation control management on contract. Further, it remains one of the few rapidly growing markets in the agricultural and/or herbicidal chemical application market.

Many applicators already have on hand the necessary equipment to enter the chemical segment of aquatic weed control. Practically all of the aquatic chemicals come in liquid, granular or pellet formulations. The few powder formulations on the market are generally tank-mixed with other liquid formulations before application.

For the professional applicator, probably the most common equipment is the boat combination. Judging investment is still difficult because of the wide variation in boats, motors, pumps, etc. However, an estimate in round figures for a set-up that could handle most sizable jobs would include:

Boat—16 ft.	Approx. \$	300.00
Motor—9.5 h.p.	Approx.	350.00
Trailer	Approx.	250.00
Pump and fittings	Approx.	250.00
Miscellaneous equipment		
Safety goggles, gloves, oars, tools, etc.	Approx.	150.00
		TOTAL \$1,300.00

Obviously, these figures would vary throughout the country. They would also vary depending on the "newness" of the equipment and the amount of equipment already on-hand. And, finally, they would vary depending on the market intended.

(continued on page ZZ)