

**C**AR-HAPPY Americans have prompted a revolution in travel, and following in the exhaust-fumes wake are economic booms which couldn't be predicated 40 years ago.

This country now boasts the most extensive, and most expensive, highway system in the world. Our vast maze of roadways are costly to maintain. A major side-effect of this roadbuilding spree is a tremendous new market for turf spraying, weed control, and brush elimination. During the next decade, this roadside spraying industry is expected to reach Herculean proportions, and contract applicators all over the country are bidding for their share of the business.

*Weeds and Turf* has just completed a major survey of weed control practices on state and federal highways. Data gathered in our investigations reveal a significant increase in the use of contract sprayers by state officials who prefer not to treat all their own roadways.

Opportunities for contract roadside spraying are varied. A partial breakdown of services they are

**Typical rural road** is sprayed for brush control by a contract applicator. This is a franchise operator associated with the Vegetrol group.



Large, specially built spray rig used for spraying MH-30 on Eastern turnpike was constructed by the F. E. Myers and Bro. Co.

## Highway study shows wide

performing includes the following:

- (1) Soil sterilization around signposts, guardrails, etc.;
- (2) Selective weed control through broadscale spraying;
- (3) Broadscale brush control;
- (4) Selective weed control in turf areas, either post-emergence selective spraying, or pre-emergence control of such turf pests as crabgrass;
- (5) Fertilization of seeded areas (in some states, fertilizer is combined with selective weed-killers such as 2,4-D when turf is treated);
- (6) Spraying growth retardants such as MH-30; and
- (7) Spraying trees and ornamentals in landscaped areas along superhighways.

What selling points do CAs use to sell a chemical control program to county or state road officials? Why should those few states which now shy away from chemical treatment embark on this new avenue of maintenance? And why should states with limited spraying programs decide to increase use of chemicals?

Several good reasons are included in a booklet from the Connecticut Agricultural Experiment Station entitled, "Chemical Control of Weeds and Brush Along Roadsides."

Dr. John F. Ahrens, author of the pamphlet, maintains that

chemical treatment enhances the safety, beauty, health, and economy of our highway systems. Improved visibility, better pedestrian walkways, and elimination of fire hazards are among the advantages Dr. Ahrens cites. He also points out that noxious weeds, such as ragweed and poison ivy, can be controlled economically by regular spraying.

More important to cost-conscious highway departments is the economy of chemical control versus mechanical mowing. Annual cost for roadside mowing in the U.S. is staggering, and states are desperately seeking a cheaper way to get the job done.

How are the states tackling this economic headache? Our survey shows that 44 out of 50 now have a chemical control program of some sort. Some of these are just getting underway, while others have been successfully in existence for several years.

Of the 44 states which use chemical methods, 35 report they have a well-organized, extensive roadside spraying program.

What is really significant to the readers of *Weeds and Turf* is that 43% of these states use contract applicators for all or part of their chemical roadside maintenance (Figure I). Here is a big, lucrative market waiting for the capable, aggressive, well-equipped company.

It is logical to expect an in-

**Figure I**  
**Analysis of Representative States Which Use Contract Applicators to Spray Roadside Weeds, Turf, Brush, Trees or Ornamentals**

State	Miles Treated Annually	Number of Treatments Yearly	Percentage of Work Contracted Out	Average Cost Per Mile	Months Work Is Performed
Colorado	1000	one	20%	na*	April-June
Idaho	4000	two	100%	\$30.00	Summer
Illinois	10,000	one	60%	16.00	April-September
Indiana	6000	two	66%	25.00	April-November
Iowa	8770	one	13%	28.00	May-July
Massachusetts	na*	na*	90%	na*	March-August
Michigan	1406	one	40%	25.00	Spring, fall
New Jersey	1015	three	95%	30.30	April-September
Ohio	11,763	two	65%	18.00	February-August
Pennsylvania	14,000	two	24%	21.00	May-September
Rhode Island	na*	one	90%	.015/ft	April-August
Wisconsin	1900	two	100%	60.00	May-August
Wyoming	5307	two	50%	na*	na*

These are not all the states which use contract applicators. In cases where figures were inconclusive, unavailable, or indeterminable, listing has been omitted. To interpret this data usefully, compare with Figure II. Only state which did not reply at all was Missouri. \*na: not available.

## use of custom sprayers

crease in contracted highway spraying in the next few years, as spraymen become more and more adept at their trades, gain valued experience and equipment, and recruit and train capable personnel.

Public opinion, moreover, may demand that tomorrow's chemical applicator be a trained, licensed, insured professional who can guarantee results, and provide safeguards. Men whose fulltime business is outdoor spraying with pesticides are in a better position to placate the public's fear of chemicals than are state workers who may have a variety of duties.

Reasons for using contract applicators are varied, but the most

immediately obvious one is cost. According to our survey, average cost per mile for contract application is \$28, while average for state-performed work is \$65.

Fees for contract spraying ranged from \$17 to \$60 per mile, while state-performed treatments cost from \$12 to \$400 per mile. It's probable that the \$400 figure includes additional operations of some kind.

Applicators who want to sell their county or state a highway spraying program can also point out that private firms have insurance, trained personnel whose full-time job is contract spraying, and flexibility in schedule.

And the use of chemicals in gen-

eral is apt to increase, whether applied privately or publicly. According to Dr. F. L. Timmons of the U. S. Department of Agriculture, 35 highway departments used chemical weed control in 1956. (Dr. Timmons' figures appeared in the May, 1958, issue of *The American Road Builder*.) This is considerably lower than the 44 states which reported chemical programs in 1962.

Duration of spraying season varies according to climate, type of control desired, and extent of spraying program. Applicators can analyze their own areas to determine when to go after this highway business, and decide how to fit these added contracts into their overall operation.

Jobs are let both on a statewide

(Continued on page W-28)

**Figure II**  
**Analysis of Representative States Which Presently Do Not Use Contract Applicators to Spray Weeds, Turf, etc., Along Roadsides**

State	Miles Treated Annually	Number of Treatments Yearly	State's Yearly Expenditure for Weed Control Chemicals	Average Cost Per Mile Including Labor	Months Work Is Performed
Arkansas	500	one	\$50,000.00	\$200.00	March-June
Connecticut	3450	variable	45,000.00	25.00	variable
Florida	spot spraying only	na*	—50,000 lbs.	na*	na*
Maine	2500	one	na*	20.00	April-September
Maryland	250	two	6,000.00	3.75/acre	April-September
Nebraska	1000	one-four	4891.36	30.00	May-October
Oregon	7500	three	150,000.00	33.00	na*
Texas	10,000	one	100,000.00	15.00	April-July
Utah	4941	one	43,964.00	22.42	April-October
Vermont	1000	one	9,000.00	20.00	June-September

These states and those in Figure I do not comprise all states with definite road spraying programs. States listed are ones which reported in sufficient detail to be of value to contract applicators. Only state which did not reply at all was Missouri. \*na: not available.

## Highway Spray Survey

(from page W-11)

basis and on a county level. Usually the state takes bids on larger jobs, on major highways, and on inter-county contracts. Smaller firms with fewer branches or less extensive equipment are best suited to bid on local projects.

Frequently, large firms which take a statewide job will prefer to subcontract some smaller strips of roadways located miles from their nearest company office. In these cases, local spraymen should investigate the chances for participation on a regular basis with larger outfits which have no office in the immediate area. It's frequently economically infeasible to transport a spray rig several hundred miles to treat an isolated infestation.

### Check State Recommendations

Some states issue recommended chemicals, concentrations, and spray schedules to companies which bid on highway jobs. Occasionally, these specifications may even suggest which power spray

rigs should be used. Obviously, if a CA is interested in launching a highway treatment service, he should check both state and county highway departments to see if such recommendations are available.

Suppliers can help, too. Most major manufacturers, both chemical companies and equipment firms, offer brochures and pamphlets on roadside spraying. Many of these bulletins are directly slanted to contract work, and will fill in some general voids in the contractor's knowledge of the market.

There are also a number of franchise arrangements open to applicators. Some leasing firms supply local spraymen with equipment big enough to handle highway weed control. Some of these same "parent" organizations will work with neophyte operators to help teach the lessor how to get the job, and how to do it.

Such leasing companies with franchise-holders all over a single state can frequently work out cooperative arrangements which permit each individual firm to operate in its own section.

If large spray rigs are already a part of the CA's equipment, minor adjustments and a few new booms and nozzles can put the firm in a competitive position. With certain chemicals and delicate applications, however, specially developed sprayers are advisable. This is particularly true with some of the new growth-regulating products.

### Move into Road Jobs Slowly

As with all new ventures, highway spraying is a market to be entered cautiously. Mistakes can be extremely expensive. Know-how must be gained, either by trial-and-error on small test plots, or by hiring a supervisor whose experience or education guards against costly errors.

But the market is here, today. It's promising and profitable. Knowledge is available from suppliers, universities, and from trained supervisors looking for a good position. Enterprising firms with an eye to the future should look into the highway market to see what opportunities exist for expansion.



# You Bet Your Bottom Bug!

You can bet your bottom bug that a new Acme Mask won't have any. Superior craftsmanship and careful testing of every mask that leaves the factory assures you that Acme masks are bugproof. Acme gives you fullest vision of any mask on the market; the big Acme eyepieces are kept fog free by our patented jet air valves (inhalation valves). Speech isn't limited, either, when you have an Acme mask. Acme's speech relay valve sets closer to the mouth giving greater speech freedom than most masks can with a special speech diaphragm. Find out more about this superior protective gas mask. Write to us for illustrated literature.



*Stumped on what gas you're up against? Send for the free Acme Protection Guide which describes over 500 toxic gases, gives their effects to the human body and recommends the best type of protective mask canister.*

**Acme Protection Equipment Company**  
1225 Kalamazoo St. South Haven, Michigan