Budgets Up Weeds Out In Idaho

New standards of roadside weed control are evident in an Idaho county known as one of the nation's top producers of seed. That's the story of the early 1970's for the Canyon County Weed Department, where weed specialists have moved ahead with a control program based on wide support in both town and country.

Community support has been an essential element in the success of the Canyon county weed program. It comes in part from a revitalized county-wide committee of 32 farmers and citizens, known as the county weed committee. Support has been stimulated by effective leadership of the county weed supervisor, Gordon Pettis, and the county agricultural agent, Merle Sampson.

And success stems also from the administration of the roadside weed control program, especially in two of the county's highway districts—the Canyon county district and the Nampa district—which represent more than 800 of the county's 1300 miles of paved and unpaved roads. Here the involvement of road maintenance supervisors such as J. E. Howsmom and Floyd Davenport has been critical.

Behind the scenes, yet basic to the program, has been two years of trials with a variety of weed treatments and the decision to build the Canyon county roadside weed program around fall application of (continued on page 32)
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Krovar I, the compound that has been yielding new economic performance in the control of troublesome weeds.

Canyon county, located in the rich agricultural belt of southwestern Idaho, produces about 10 per cent of the state's crops. Annual value of these crops is close to $100 million. The county rates first in the nation in the production of alfalfa seed, sweet corn seed, and red clover seed. It also has large acreage in sugar beets, potatoes, vegetable seeds, and wheat.

Surface irrigation is essential to these crops and depends on a system of canals and ditches that interlace the county roads and could provide an all-too-easy route for weed seed to reach the fields, unless continuing efforts are made to keep roadside vegetation down.

"The roadside weed program is of great interest to our county weed committee," reports weed supervisor Pettis. "The committee exercises its influence in all four of our highway districts. Members keep after their neighbors to control the weeds. They are impressed with the improvements we have been able to achieve in our roadside program—especially in the Canyon county district and the Nampa district."

Weed challenges in this Idaho county are numerous and involve annual newspaper ads to alert residents in cities and towns to their weed responsibilities. As far as species are concerned, Pettis rates Canadian thistle, morningglory and white top as the toughest. But he notes that puncturevine—new in the last 10 years—and Kochia weed, salt grass and sandbur also have been an increasing problem. Gordon Pettis views these weed problems, not only from the roadside point of view but also from the perspective of the farmer and the new resident of a suburban development.

"Our most enthusiastic support for roadside weed control obviously comes from the large farmer who can measure the impact of a good program on his yields," says Pettis. "One of our big needs is to generate understanding about weeds among those who build or occupy new homes in the developments. Roadside control is important to everyone."

Back in 1969 a trial program was initiated in Canyon county to determine when and how to treat roadside areas most effectively to get maximum weed control on an economic basis. The first year a series of plots were put down, involving atrazine, Hyvar X, simazine, Tordon, and dinitro—with rates ranging from two to 10 pounds per acre and applications being made in eight-foot bands along roadside areas of a half-mile to six or eight miles. At the time, Hyvar X was being used as the standard treatment for the bulk of the roadside weed program. Treatments were made in the fall of 1969 and in the spring of 1970.

A second year of trials was initiated in the fall of 1970 with treatments that involved Hyvar X, simazine, Karmex, and Tandex. By this time, Pettis had determined that fall treatments looked best, because they had received moisture needed to activate the chemicals. Spring and

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summer rains in the area are variable.

These 1970 trials were again made at various rates. And while a treatment of Hyvar X at four pounds and simazine at two pounds went down on more than 100 miles of roadside, another tank mix of Hyvar X bromacil and Karmex diuron (four pounds each) showed the ability to provide lasting control of the broadest spectrum of weeds.

In 1971 supervisor Pettis settled on the newly available compound, Krovar I, which included both bromacil and diuron. The treatments were made at a seven-pound-per-acre rate to clean up and control a variety of weed problems on more than 180 miles of Canyon county highway district roads. All treatments were made in October and November and showed the ability to control weed growth for months following application.

In 1972, Krovar I was used at two rates — seven-pounds-per-acre and four-pound-per-acre. The heavier rate went on areas receiving an initial treatment of a residual compound; the lighter rate was used for retreatment areas.

The Canyon county trials have established some interesting comparisons in roadside weed costs which apply at least for this intermountain area. In 1970, the combination of four pounds of Hyvar X and two pounds of simazine represented about $59 per mile including application; this was the most widely used treatment. But in 1972 the cost of the initial seven-pound rate of Krovar I was about $46 per mile and the four-pound retreatment rate was down to about $29 per mile, both including application.

"We have boosted the number of miles covered under our roadside program," says Pettis. "And we have done it for less cost. In 1970, for example, we spent more than $13,000 (continued on page 35)
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to treat 225 miles of roadside. In 1972 we spent less than $8,000 and treated 255 miles. Yet we got control that was better. We're getting a lot of good reaction to the program from the farmers."

This Idaho weed program on paved roads really starts when new roads are planned. In recent years about 15 to 20 miles of roads per year have been built in the Canyon county highway district and almost as many in the adjacent Nampa district. Shoulders and pits are built to provide good drainage, but they are also planned so a single chemical treatment can provide long-lasting weed control without erosion — thus minimizing the need for costly roadside mowing. As a result, mowing has been all but eliminated in county roadside maintenance. Last year, for example, it involved just one man in Pettis' nine-man crew for the equivalent of a few weeks.

"Our objective in our program for unpaved roads has been a clean borrow pit," says Pettis. "One problem on paved roads, of course, is salt grass and other weeds that germinate right at the edge of the paving or oil. And we all know that some weeds come right through asphalt. That's why we have worked so hard to build understanding with our maintenance supervisors. A good weed program does rest on well-planned roads and on teamwork between those who build and maintain the roads and those who control weeds.

Three-hundred gallon spray rigs mounted on a pick-up truck with an eight-foot boom and an auxiliary hose are standard equipment in both the Canyon county district and Nampa district. Two trucks are used for roadside spraying in the fall in both these districts. In the summer they switch to control programs on noxious weeds. But economies have been established. Puncture vine formerly involved four or five treatments with 2, 4-D. Now a single annual treatment with Krovar I will control it. As a consequence of this and other improvements, the county weed department operates only five spray rigs instead of nine. Yet it still handles a wide range of weed programs — roads, (in the Canyon county district) and railroads, shopping centers, vacant lots, etc. (throughout the county).

The weed department spray rigs can apply either an eight-foot or a twelve-foot wide pattern. They are handled by skilled operators who have other jobs in seasons when spraying is not scheduled. Pettis, a former farmer himself, knows the importance of weed know-how and care in herbicide application and he has a crew of experienced men working with him in the county weed program.

"Weed control is a job for specialists," agrees road maintenance supervisor Floyd Davenport of the Nampa district. "We have lots of people in the county who welcome our spray program because it helps keep weeds out of fence lines and out of ditches bordering the fields. They know that our spray crews do a real job; that's one reason we find some of the farmers moving their crop lines right out to the edge of the road."

Impact of the area's weed control can be judged best by the men who have been using the new compound. Spray operator Tommy Didge in the Nampa district says he's been looking for sandbur — one of the district's tough weeds — but hadn't seen any on roadsides by early June, following last fall's treatment. Maintenance supervisor Davenport looks for added reductions in mowing this season.

Road maintenance budgets are up in Canyon County, but weed control costs are being kept down. "It's a matter of better planning, better training of our spray operators, and better weed compounds," sums up Floyd Davenport. "We've got better control of the weed problem than we have ever had."