

New England CA Finds Hidden Bonus in His Jeep

## Self-Designed Power Spray Rig Was Shortcut to Home Lawn Market

By ROBERT H. J. PELLETIER

Ideal Spray Company, Lynnfield, Massachusetts

**W**HY DID we consider going in to lawn spraying? When our company was a fledgling years ago, we knew lawn service had offered little opportunity for substantial profits in the past. Equipment was often expensive, and choice of chemicals was as scant as results were questionable.

Now all that has changed.

As the years rolled by, and our firm grew with the times, we began to come across certain perplexing customer complaints which recurred with increasing frequency.

Primarily these unhappy customers were concerned about their lawns, and the insects and weeds which had all but taken over.

For example, residential ant infestations seemed to grow worse, and we couldn't figure out why. We'd do a good job inside, and all the ants would be gone. Then in a relatively short while, the pests returned. We finally decided they were migrating from the lawns, attracted perhaps by the transfer of heat through foundation walls into adjacent soil. We believed this heat transfer kept nearby colonies sufficiently active to force ants to seek food inside. Part of our answer was to put down a layer of dust around the building's perimeter, which did help prevent ant migrations.

Right after the war we got a call to control an earwig infestation in Nahant, Mass. It was 1946, and we hadn't any idea how to control earwigs other than to spray with available chemicals. Back then we were already using a lot of chlordane for roaches and ants so we tried it on the earwigs and got 100% control. It seemed easy.

Next year, the same calls came again. By this time the chlordane flyers were beginning to talk about servicing estates and lawns for ants, earwigs, chiggers, webworms, lawn moths, chinch bugs, grubs,

etc. We had 2 or 3 calls on earwigs that year, so we consulted with some authorities to see what the story was.

We learned lawn pest control was the coming thing, and decided to give it a try.

For a few years we tried throwing chlordane dust out by hand; then we tried spraying with hand sprayers. Later on, we decided to build a pump for spraying because there weren't enough calls back then to merit the purchase of special equipment.

We bought a well-known motor, and put a pump together. After half a season, it broke down for good. We didn't know too much about the mechanics of pumping systems then.

Next year, we bought another pump (different brand) and spent two seasons hauling it on and off a trailer from job to job. If the pump broke down, it took from 30 minutes to half a day to repair it. But the experience was educational, and we decided it wasn't worthwhile to carry a pump around from place to place by hand.

So we retired the rig and put

together our first practical unit. For power, we used a Briggs and Stratton motor. We got a diaphragm pump (the Ace type) with what is called a top hat or an air chamber to prevent pulsing. We added bypass and selector valves, strainers, pipes, etc., and 200 ft. of special insecticide hose and were ready to go.

This unit was permanently attached to our trailer and connected with pipes to two 55-gallon drums with bypass returns. These returns fed into the drum in use, and thus acted as an agitator. This agitating system has worked well for us, especially when using emulsifiable chemicals.

We went from job to job with our Ace pump and trailer for 4 years. We didn't realize at the time that lawn spraying was becoming more and more an important part of our business.

We often thought we'd buy a used oil truck, but we were afraid the amount of lawn spraying and termite work wouldn't support such a big investment. We ruled the truck out altogether when we noticed many oil companies were using their trucks for lawn spraying in the summer. We feel quality suffers when these large rigs are used, because we noticed some damage to ornamentals, and some lawns which turned brown.

We think the big truck is responsible because such large quantities of chemicals are mixed in these units, and agitation is difficult if not impossible. Also, there's a lot of settling of chemical overnight. For this reason, one custom-



Cost of the war surplus fuel selector valve PCO Bon Pelletier is pointing at was only \$3.95. Pressure valve and hose connections are easily accessible.

er is apt to get a high percentage of chemical, while another down the street gets mostly water.

Perhaps some of the new, specially designed outfits have overcome this problem.

Our own answer, when we needed more equipment, was a 1960 pickup Jeep with 4-wheel drive. To add a power take-off, we hooked up the transmission so it runs a Hypro 6-neoprene-roller pump. This is located underneath the Jeep, completely out of the way. This pump is again connected to two 55-gallon drums carried in the box of the Jeep. As can be seen in the pictures, we have bypasses, relief valves, selector valves, and hose connections all conveniently attached to the outside right hand side of our pickup.

We put away our 200 ft. of  $\frac{3}{8}$ " insecticide hose and bought 300 ft. of  $\frac{3}{4}$ " garden hose which is easy to handle and does not kink. It is rubber with neoprene housing and is guaranteed by the manufacturer "to withstand 15 times house pressure." We use this type of hose because it delivers a good quantity of chemical, saves time, and is light and easy to maneuver. We've now used this hose for 3 years without any unusual breaks or harmful effects from the chemicals we spray. These chemicals are the emulsifiable type, such as chlordane and dieldrin, used primarily for lawn treating and termite work.

The pump itself is almost fool-

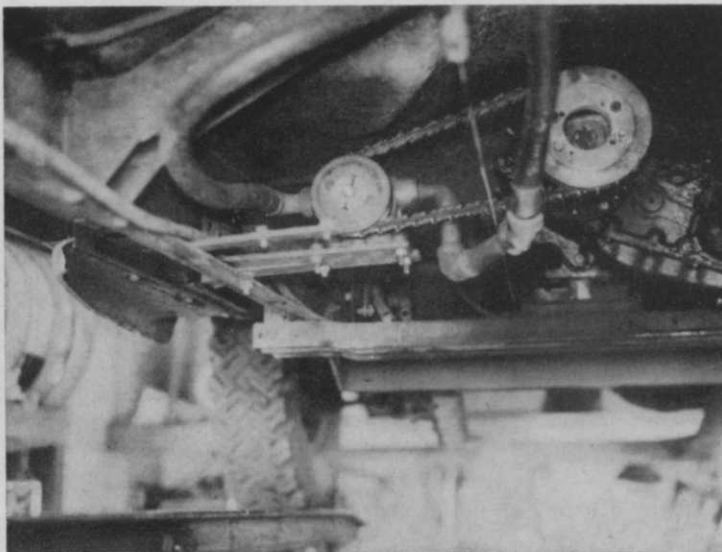
proof. We can completely overhaul it, replace the rollers with a whole new set, and be back in business in a half hour at the most.

#### Extra Benefits

There are also "secondary values." For example, our power take-off system is safe. Children are always around looking at our equipment, but now there's no chance they'll get their fingers caught in the mechanism. The whole unit runs directly off the Jeep and we find it 100% efficient.

For our belt drive we use link belts which are easy to adjust on the job without having to move pumps, etc., on slotted bases. There are belts on the market today which can save precious time and expense with the elimination of one link, or cutting off 1" and reconnecting the belt with special connectors. These pulley belts cost about the same as the old continuous type which have no connections, and which have a bad habit of wearing out or expanding at the wrong time. This required using all kinds of tools to move motors and get everything going again.

We are amazed that so many contract applicators have trucks which could be converted like ours, and so few have used this device. Right at their fingertips, they have the means to add a power take-off directly to their vehicles. With the proper arrangement of pipes, hoses, adapters, etc., operators can have one of the sweetest spray rigs available.



Author Pelletier says his Jeep power take-off (upper right-hand corner) is efficient and a real timesaver. The Hypro pump is driven by a link belt. Note  $\frac{3}{4}$ " feed lines on both sides of the pump.

## Insects Promising for Control of Alligatorweed, USDA Says

Several South American insects may be useful for alligatorweed control, according to a report from the U. S. Department of Agriculture. Alligatorweed is a costly aquatic pest in the South.

Research has shown insects can be pitted against weeds with effective results, USDA scientists say. In the western U.S., for example, a beetle imported from France successfully controls the noxious Klamath weed, which once infested millions of acres of rangeland.

Especially promising for alligatorweed control is a flea beetle that apparently was successful in Argentina. This beetle is not known to feed on any plant other than alligatorweed and its one close relative, a plant not found in the U. S.

Two other insects: a stem borer, and a species of thrips, are the chief suppressors of alligatorweed in the extreme South, where temperatures may be too high for the flea beetle.

At least two years of work will be needed in South America, scientists from USDA's Agricultural Research Service admit, before any native weed-destroying insects can be brought into the U.S.

This additional research will include: (1) further screening to make sure flea beetles don't hurt beneficial plants or attack stored foodstuffs; (2) isolation of the beetle from two natural parasite enemies — a fungus and a small fly — so it can be sent here free of parasites; and (3) adjustment of the beetle to U.S. seasons, which are of course the opposite of those in South America.

Alligatorweed, a native plant of South America, is potentially one of the most troublesome aquatic weeds of the southern states. Resistance to certain herbicides has complicated control measures.

### Roberts Bulletins Available

Several brochures on Herbisan 5, Thiram, and other weed and turf chemicals manufactured by Roberts Chemicals, Inc., are now available to weed and turfmen. For copies of them, write Roberts at Nitro, W. Va.