



Zig-zag rope wick applicator built by Howard and Brian Mogler.

## WIPE OUT TALL GROWING WEEDS

# Make Your Own Rope Wick Applicator

Rope wick applicators provide convenient, economical control of weeds that are taller than the crop, such as soybeans. Volunteer corn, hemp dogbane, milkweeds and many others can be knocked out with a swipe of Roundup herbicide over the top.

Several manufacturers make rope wick applicators, and many farmers have assembled their own units. Mike Culp, Dorchester County Extension Agent headquartered at St. George, S.C., helped brothers, Doug and J.C. Reeves make a simple, straight line applicator that mounts on a tractor 3-pt. hitch. Neighbors liked it so well that they've kept the Reeves brothers busy with orders for similar custom-built units.

In Lyons County, Iowa, Howard Mogler and his son Brian built a zig-zag type and mounted it on the front of their tractor for easier viewing.

### Culp-Reeves Applicator

Culp and the Reeves used straight 3-in. PVC pipe (13 ft. for a 4-row unit; 19 ft. for 6 rows) and marked two chalk lines 1½ in. apart the length of the pipe. Holes (49/64 in. dia.) for inserting the rope were drilled along each chalk line. Individual rope sections are 12 in. long with a 3 in. spacing between sections. A key design feature is that the rope sections overlap in the two rows so there are no skips for weeds to slip through without exposure to the chemical.

The Reeves brothers screwed ½ x ½ in. brass compression fittings into each hole and made sure the fittings were straight before tightening. Half-inch soft braided nylon rope was cut into 20 in. lengths (20 pieces for a 13-ft. wide applicator) and the ends seared with a butane torch to prevent unraveling. Two ½ in. brass compression nuts were slipped onto each rope and a ½ in. rubber O-ring washer was placed 3 in. from each end. Rope

ends were inserted into the applicator compression fittings and the nuts tightened over the O-rings. (Avoid overtightening).

A 3-in. PVC pipe plug was cemented to one end of the pipe and a 3-in. PVC elbow with removable plug (to fill and drain the applicator) was attached to the other end. The applicator was clamped to a 3-point hitch A-frame and tool bar and filled with spray solution (1 gal. Roundup per 2 gal. water). Travel speed is 2 to 4 mph, depending on severity of the weed problem.

### Mogler Applicator

Some users complain that "straight" wick applicators tend to whip tall weeds, and on sloping terrain permit chemical to run to one end where it drips while the other end dries up.

Howard and Brian Mogler designed their applicator to avoid both problems. Instead of using straight pipe, they built a "V-shape" for each row, then plugged the pipe between row units. Howard says the V-shape provides about one-third more total applicator length compared to a straight pipe.

The Moglers used 2½-in. PVC pipe with 90° elbows at each point of the "V's". To provide separate compartments for each row, they carefully cut circles from the bottoms or lids of sturdy plastic buckets and pushed them against a shoulder inside the elbows located at the forward points of the "V's" (between crop rows). The back side of these disks was sealed with caulking compound, and a ½-in. ring of 2½-in. PVC pipe was cemented in on the other side to keep disks from moving during applicator assembly.

The Moglers used 20-in. pieces of nylon rope, but holes for each rope piece were drilled only 7/8-in. apart. So, more rope is required for their applicator than the Culp-Reeves model. Rows of holes were placed 1

## SIMPLE SOLUTION TO AN OLD PROBLEM

# Build Yourself A Stump Burner

"We just throw in a match. Three or four days later, the stump is gone," explains Donald Tellers, Minnesota farmer who devised one of the slickest stump removers you ever saw.

Because of killer elm and oak tree diseases now criss-crossing the country, many farmers have more than the usual number of stumps around, and Tellers is no exception. The remains of giant elms, especially, dot the rolling farmland surrounding his farm near Chaska.

Tellers used a rusted 300-gal. storage tank as the main chamber of his home-built stump burner. He attached a chimney stack to one end, cut off the other and cut a stoker hole in the side. He sets the rough-looking stove over the top of a stump and throws in a few wads of paper to get the stump started burning, or smoldering. According to Tellers, he doesn't have to add fuel to the fire to keep it going. Although it burns slow, he says it eventually burns right down below ground level into the roots.

"The key to it is the stack and the space left at the bottom of the burner, which provide a steady burning draft. Old timers used to place barrels over stumps but they never worked as good as this," explains Tellers.

He has no commercial plans for his



Michael Tellers and his father's home-built stump burner.

stump burner, other than to build a bigger one for the biggest stumps, and then to finish clearing his farm.

in. apart on the pipe. Also, instead of using brass compression fittings, the Moglers drilled ¾-in. holes and installed rubber grommets with ½-in. holes. Grommets were sealed with 3M weather-stripping cement which Mogler says appears to be unaffected by the chemical.

He acknowledges that brass compression fittings may provide a better seal and greater durability than the rubber grommets which he and his son used. However, their lower-cost design "worked great" on 1,800 to 2,000 acres of use this past summer.

Removable fill and drain plugs were installed in each row section, but fill plugs were not vented as they are on some applicators. Mogler says venting the caps causes too much dripping. So, he simply loosens the plugs about every half hour to let air replace the chemical used. Mogler says the applicator may drip some when it's first filled, or stopped for an extended period. But, there's no dripping after field operation starts.

Culp reports that most people contacting him with problems about rope applicators have taken shortcuts in sealing the fittings into the pipe and ended up with excessive dripping.

Mogler wanted his applicator in front of the tractor for easier viewing. But, he points out, mounting on a manure loader pitches the pipe at

different angles as the loader raises and lowers in an arc. So, he designed and built a frame for the tractor front end and used a hydraulic cylinder to move the applicator straight up and down.

The Moglers mix one part Roundup with one part water, but more water could be used if the weed problem is primarily volunteer corn. A stronger solution is needed for hemp dogbane, milkweeds and other weeds.

Cautions Mogler: "Don't get the ropes pulled too tight. We discovered that when rope from inside the pipe is bent sharply at the grommet, wick action is much slower than when more slack is provided." The Moglers are using 40-in. rows so each leg of the "V" on their applicator is about 28½-in. long, including the elbows. Pipe length (and possibly distance between holes for the rope) would need to be adjusted for different row spacings. Each row unit of Mogler's applicator holds about 1 gal. of liquid.