

# Build Yourself A Rope-Wick Applicator

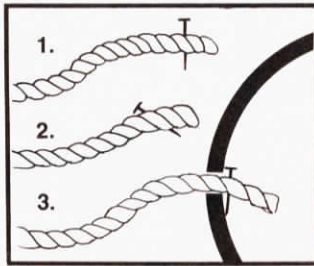
Building your own rope-wick applicator isn't difficult, say the experts, and you should be able to save 1/3 to 1/2 the cost of a commercial rig. But there are a few pitfalls to avoid that will prevent problems later.

• Most wick applicators use solid braided nylon (SBN) rope. Because the rope can shrink over the winter and possibly pull out of the grommets holding it in place, researchers suggest that you wet and dry it several times to pre-shrink it before installation.

• University of Nebraska researchers suggest that, for extra wicking action in fields heavily infested with weeds, "peppermint" rope may work better than regular SBN rope. It provides three times more wicking action and is available from: Gulf Rope and Cordage, Box 5516, Mobile, Ala.

• If you don't want to go to the expense of grommets and compression fittings, Nebraska researchers suggest using 1 in. brass wood screws, or aluminum finishing nails, driven vertically through the rope about 4 in. from the rope ends. The nail is then pushed into the pipe with the rope by pressing it down so its horizontal and in line with the rope as both are inserted into the pipe. Once inside the pipe, the nail will spring back into vertical position and serve as an anchor against the wall of the pipe. A liberal application of 3M Super Weatherstrip yellow adhesive around the rope will seal it in place and prevent leakage.

• The bottom row of ropes has the greatest amount of liquid pressure on it. You may want to use nails or screws to secure the upper two rows of rope, and compression fittings on the bottom row so you can control the rate of flow. Or, you can use smaller rope holes in the lowest row. The rate



A nail or screw inserted in the rope works as well as grommets, say University of Nebraska researchers.

of wicking is reduced about 2/3 when 1/2 in. SBN rope is inserted into a 7/16 in. hole.

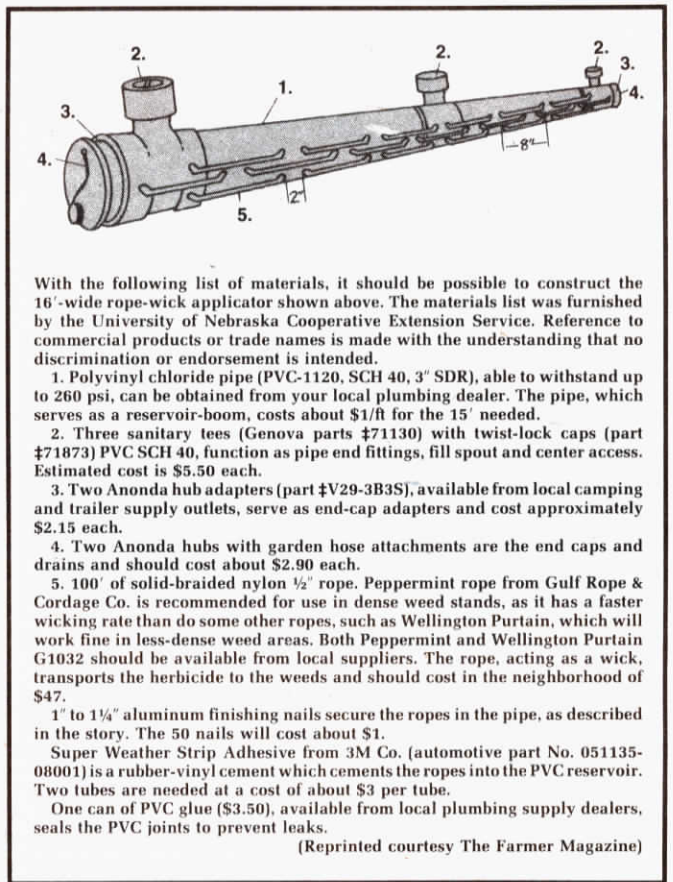
• Holes in the pipe should be 6 to 8 in. apart with 1 1/2 to 2 in. between adjacent ropes. Three rows of ropes, approximately 1 in. apart, with the lowest row on the pipe 30° forward of vertical position when in operation, are recommended.

• Enough rope should be used to allow 4 in. of each end to remain in the pipe. If the holes are about 8 in. apart, the rope should be 18 in. long to allow for approximately 1 1/2 in. of slack in the rope, measured from the center of a tightly-pulled rope to the pipe.

Monsanto Chemical Company offers a set of do-it-yourself plans for building rope-wick applicators. For a free copy, contact: FARM SHOW Followup, Monsanto Ag Products Co., P.O. Box 15010, Little Rock, Ark., 72231 (ph toll-free 800 621-5199, or in Illinois 800 972-5855).

New from Shaw Mfg., Monroe, La., is a special compression fitting, and a new type of rope, for wick applicators.

The fitting is saddle-shaped to fit 3



With the following list of materials, it should be possible to construct the 16'-wide rope-wick applicator shown above. The materials list was furnished by the University of Nebraska Cooperative Extension Service. Reference to commercial products or trade names is made with the understanding that no discrimination or endorsement is intended.

1. Polyvinyl chloride pipe (PVC-1120, SCH 40, 3" SDR), able to withstand up to 260 psi, can be obtained from your local plumbing dealer. The pipe, which serves as a reservoir-boom, costs about \$1/ft for the 15' needed.

2. Three sanitary tees (Genova parts #71130) with twist-lock caps (part #71873) PVC SCH 40, function as pipe end fittings, fill spout and center access. Estimated cost is \$5.50 each.

3. Two Anonada hub adapters (part #V29-3B3S), available from local camping and trailer supply outlets, serve as end-cap adapters and cost approximately \$2.15 each.

4. Two Anonada hubs with garden hose attachments are the end caps and drains and should cost about \$2.90 each.

5. 100' of solid-braided nylon 1/2" rope, Peppermint rope from Gulf Rope & Cordage Co. is recommended for use in dense weed stands, as it has a faster wicking rate than do some other ropes, such as Wellington Purtain, which will work fine in less-dense weed areas. Both Peppermint and Wellington Purtain G1032 should be available from local suppliers. The rope, acting as a wick, transports the herbicide to the weeds and should cost in the neighborhood of \$47.

1" to 1 1/4" aluminum finishing nails secure the ropes in the pipe, as described in the story. The 50 nails will cost about \$1.

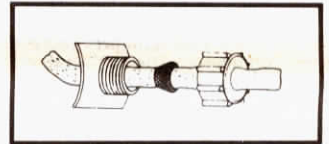
Super Weather Strip Adhesive from 3M Co. (automotive part No. 051135-08001) is a rubber-vinyl cement which cements the ropes into the PVC reservoir. Two tubes are needed at a cost of about \$3 per tube.

One can of PVC glue (\$3.50), available from local plumbing supply dealers, seals the PVC joints to prevent leaks.

(Reprinted courtesy The Farmer Magazine)

in. PVC pipe and will accommodate 1/2 in. rope wick. The saddle is glued to the PVC pipe with the same 3M Company cement used in most other rope-wick units. But, because no glue is applied to the rope, there is no restriction of herbicide flow.

Shaw also sells special 1/2 in. nylon-polyester rope which has been developed especially for rope wick applicators for better herbicide flow. The rope is sold by the foot, with no minimum or maximum length to order. "We sell rope and fittings to farmers wanting to assemble their own rope-wick applicator but we don't offer a set of do-it-yourself plans, nor do we sell the glue for attaching fittings to PVC pipe," a



Shaw Manufacturing's new PVC fitting holds the rope in place without glue.

spokesman points out.

Shaw lists prices of \$1.10 each for the compression fittings, and 47¢ per ft. for the rope.

For more information, contact: FARM SHOW Followup, Shaw Manufacturing & Sales, Box 5089, Monroe, La. 71203 (ph 318 387-9199).

# Solar Wall Panels

Add-on Solar wall panels, designed to replace the south-facing sidewall of metal buildings to create a solar heating system, are new from Gulf States Mfg., Starkville, Miss.

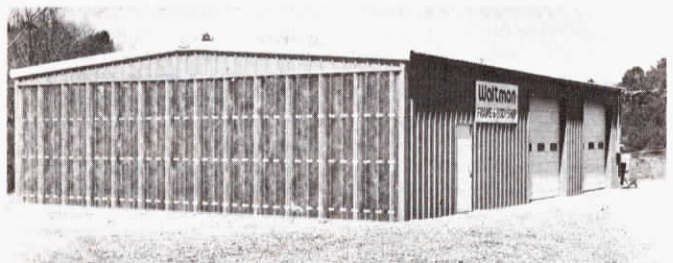
The company says its sandwich wall panels can supply 40 to 60% of winter heating needs during daylight hours. The system can be tied into a heat storage system involving rock or some other heat storage medium.

"The vertical south wall concept of solar heat collection," says a Gulf States spokesman, "is better than a roof collector. In winter, when the sun is low in the sky, its rays strike a vertical wall more directly than a roof. Then, in summer, with the sun high in the sky, there isn't as much

unwanted heat buildup in the sidewall collector because of the sun's glancing angle."

The solar wall is a sandwich with three components. The outer glazing is translucent fiberglass reinforced plastic Lascolite panels, manufactured by Lasco Industries of Anaheim, Calif. The panels provide optimum solar energy transmission, have exceptional weathering characteristics, and will not break or shatter like glass, according to the manufacturer.

Solar energy passes through the outer panels and strikes an inner flat black absorber panel. Trapped heat is "wiped away" by air flowing between the outer panel and the black



New solar wall panels install like regular sheet metal.

absorber. The third component of the sandwich wall is an insulating liner sheet behind the absorber.

The solar panels install like conventional metal sheets. The heated air is pumped into the building's interior, or it can be integrated into the building's heating system.

The panels can be installed on most

metal buildings, and can be adapted to fit other types of structures with vertical south-facing walls, according to Gulf States Mfg.

For more information, contact: FARM SHOW Followup, Gulf States Mfg., P.O. Box 1128, Starkville, Miss. 39759 (ph 601 323-8021).