



Short: professional applicators use professional equipment.

- Pour in the pesticide first when filling the sprayer, then the water. This will help prevent foaming.

- Don't fill sprayers to the top. If you're using a two-gallon sprayer, make only 1-1/2 gallons of material. The unit needs some air to be pumped up properly.

- Keep your face away from openings or valves when pumping up your sprayer.

- Use either a pressure regulator or a pressure gauge on your compression sprayers when possible. Either accessory gives the user more control over pressure. Pressure and nozzle selection, for the most part, determine flow rate and spray pattern.

- If in doubt, calibrate. A properly calibrated sprayer allows the most efficient and effective applications.

- Keep an extra service kit on hand for each sprayer you use. Keep it in the glove box of your service vehicle. It only takes about 10 minutes to repair a sprayer, even in the field.

- Use a soft brush and soapy water to clean your sprayer periodically.

The heart of Short's message: buy a quality unit. Use and maintain it properly, and it will last many, many years.

"If you go out and buy a new sprayer every year for \$25 or \$30, you're spending a whole lot more money than if you went out and bought one good sprayer that will last for five or 10 years," he says.

—Ron Hall

Calibrating a hand sprayer

■ Here's an accepted way to calibrate a single-nozzle hand sprayer.

Find a walking rate that is comfortable for you. Hold the nozzle tip at a distance above the surface to be sprayed that is both comfortable and within the recommended range of the nozzle, generally about 18 inches. (You might want to tie one end of an 18-inch piece of string to the nozzle and a small weight to the other end.)

Step 1: Measure an area 10 by 25 feet (250 sq. ft.) for the test area.

Step 2: Fill the sprayer to a level that's easily recognized. Be sure there's enough water in the tank to cover the test area.

Step 3: Pump the sprayer up to a sufficient pressure that provides an optimum spray pattern.

Step 4: Spray the pre-measured area. Walk at a constant rate and hold the nozzle tip at the same height over the entire test area. (Do not move the wand back and forth. Hold it in one position.)

Step 5: Refill the tank to the original water level. Note the exact amount of liquid needed to refill the tank. That amount is the volume per 250 sq. ft.

Step 6: Depending on label recommendations; 1) multiply the volume for

250 sq. ft. by 4 to get the volume per 1000 sq. ft., or 2) multiply the volume for 250 sq. ft. by 175 to get the volume per acre.

Step 7: Check the label for restrictions on minimum volume applied per 1000 sq. ft. or per acre. Frequently, pesticide labels explicitly state that the pesticide must be applied with a given number of gallons of water. If the sprayer delivers more water per area than needed, walk at faster rate or change to a nozzle tip with a smaller orifice. If the sprayer delivers less water than needed, walk at a slower rate or change to a nozzle tip with a larger orifice. In either case, repeat Steps 2 through 6.

Step 8: Determine the amount of pesticide needed for each gallon of spray and the amount needed per tankful. Add this amount to the spray tank and then fill with water. Begin application.

Step 9: Frequently stop and pump up your sprayer to insure uniform discharge.

This information was supplied by the Pesticide Applicator Training Office at Purdue University, West Lafayette, Ind.

—R.H.

Recruiting, hiring, tricks of the trade

'If you've got people, you can do just about anything,' says an expert on personnel.

■ What does a bad employee "cost" your business? \$10,000? \$30,000? \$100,000?

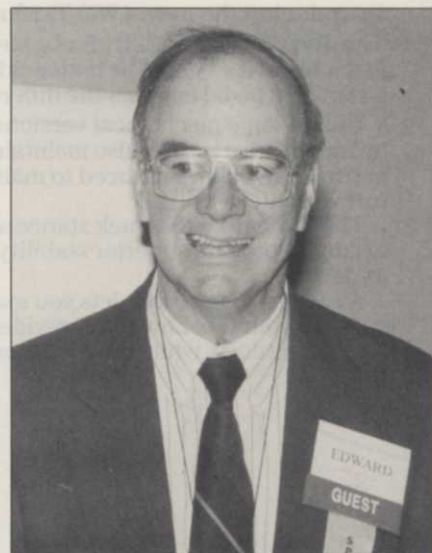
Edward Ryan of MPR Inc., Chicago, Ill., claims a bad employee costs a business three times his or her annual salary. These costs include salary, benefits, recruitment,

training, loss of productivity, loss of company morale, loss of business, his or her manager's time and energy, and damaged equipment.

"The rule of thumb should be: hire slowly, fire quickly. We more often do it the other way around," Ryan contends.

The most important element of the equation is to take your time and hire the right people. "The Japanese gather information on their employee prospects for 150 hours before hiring them," Ryan points out. "That's a courtship. It's a marriage.

"We have to spend more time up front.



Edward Ryan: start a talent file.