

# Free Card Helps Calibrate Sprayer

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WASHINGTON, D.C. — Economic and environmental advantages of sprayer calibration are many. But many farmers may not calibrate as often or as accurately as they should, according to the Alliance for a Clean Rural Environment.

The Alliance is an organization to encourage environmental stewardship and protect water quality, supported by the manufacturers of America's crop protection chemicals.

According to the Alliance, many practices we can adopt to help safeguard water quality from contamination by crop protection chemicals are common sense, including protecting wellheads from spills, rinsing containers, use of soil conservation farming methods, etc. But common sense may not be enough for calibrating sprayers.

The Alliance indicates that recent studies in several states have found that as many as one out of every three sprayers is miscalibrated by as much as 30 percent. Wrong pressure, wrong ground speed, and worn or damaged spray tips are common.

According to Fact Sheet Number 11, available from the Alliance, calibration errors add excess chemical costs, reduced yield because of pests if the chemical is underapplied, crop damage if the chemical is overapplied, and increased potential for water contamination.

A way to calibrate the sprayers more accurately is essential.

Farmers can now write for a free sprayer calibration card in order to

help them meet their production and environmental goals, said Patrick B. Haggerty, director of the Alliance. (See address at end of story.) Here's how farmers can calibrate their sprayers accurately and easily, through 10 steps outlined in the Fact Sheet by the Alliance:

1. Fill your sprayer tank with water. Only use clean water to calibrate.

2. Measure the distance between the nozzles on your spray boom.

3. Choose the Test Course Length (in feet) from the chart included here, which corresponds to your nozzle spacing. For directed and band rings, use the row-spacing of the field you plan to spray. Carefully measure the appropriate course distance in the field and mark for easy visibility.

Nozzle Spacing (inches)	Test Course Length (feet)
14	291
16	255
18	227
20	204
22	185
24	170
26	157
28	146
30	136
32	127
34	120
36	113
38	107
40	102

4. Drive the test course at your normal spraying speed. Be sure to operate all equipment. Record the seconds required to drive the measured distance. For greatest accuracy, do the speed check with the spray tank half full. Be sure to take

a "running start" at the starting flag so that your tractor/sprayer reaches the desired spraying speed before you begin timing.

5. Park your tractor/sprayer but keep the engine rpm at the same setting used to drive the test course.

6. Set the desired pressure on your sprayer (this will vary with the type of spray tips you use and the gallons per minute you wish to spray through them. Consult the spray chart for the tips you have chosen).

7. Using a plastic container marked in ounces (a baby bottle or measuring cup works fine), collect the water sprayed from one nozzle during the same amount of time that it took you to drive between the flags on your test course.

8. Measure the flow of each nozzle on the boom to assure uniform distribution. If the flow rate of any tip is 10 percent greater or less than that of the others, replace it. If two or more are faulty, replace all tips on the entire boom. At about \$3 each, the total cost is small compared to the avoided problems and dollars you will be saving by replacing defective tips. Whatever type of spray tip you choose, be sure to use all the same type on your boom.

9. The amount of water col-

lected in ounces per nozzle equals gallons per acre applied. Vary the sprayer pressure slightly to fine-tune your overall sprayer output. 10. Be sure to read the product label for proper application information.

Getting your sprayer ready for spring spraying generally involves three steps: cleaning strainers, examining the pump and valves, and checking for leaks, according to the Alliance. Follow these steps:

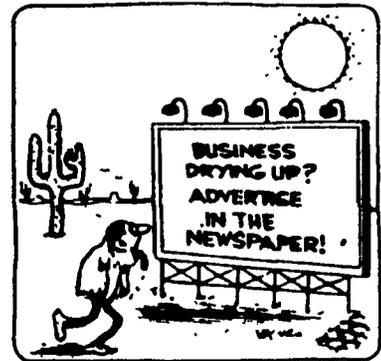
1. Clean the line strainer and all tip strainers, and examine the tips for obvious signs of clogging or damage. Use only a soft bristled toothbrush to clean the tips — a wooden toothpick or paper clip can severely damage the finely machined thin edges around the spray tip orifice. It's a good idea to replace all spray tips about every two years, and more frequently if

you grow crops requiring frequent sprays.

2. Check the casing of the centrifugal pump for cracks caused by freezing of water left in the pump over winter. While the pump is running, check the throttling valves. The pressure gauge should move as you turn the throttling valve if it is working properly.

3. Check the hoses and hose clamps for splits and leaks by running the pump with various combinations of valves closed or partially closed to increase the line pressure.

For more information and to obtain a free sprayer calibration card, send a stamped, self-addressed envelope to Lancaster Farming/Alliance For a Clean Rural Environment, P.O. Box 200, Bowie, MD 20719-0200.



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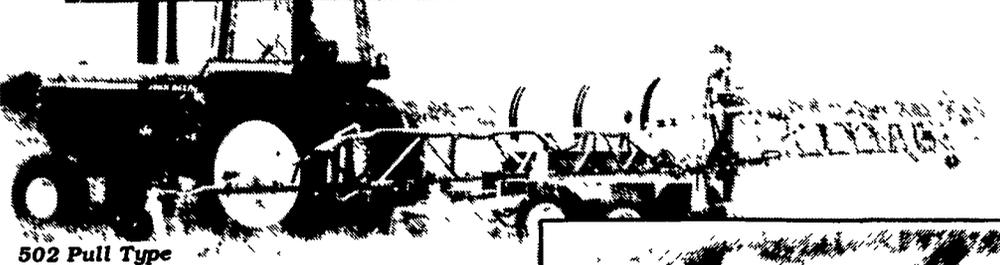
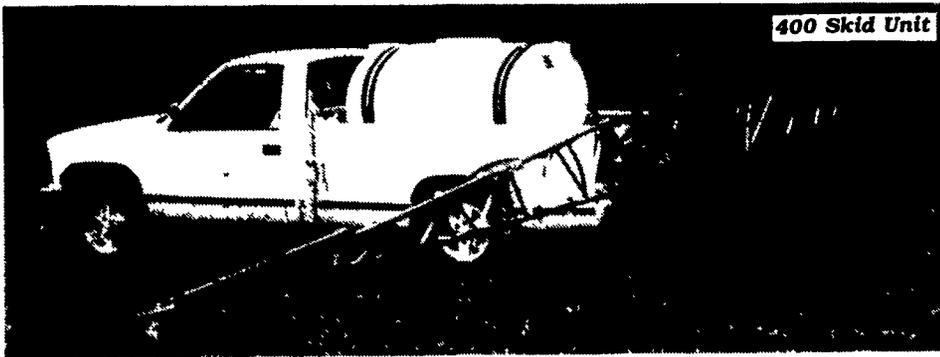
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