

CALIBRATION PROCEDURES

Two calibration procedures will be shown. Use the one that fits your needs best.

Calibration Procedure Number 1.

This procedure will calibrate your sprayer to apply 1/2 gallon of spray per inch of band width per acre. This is a satisfactory procedure for applying a set gallonage of spray per acre.

Step 1. Select band width from column 1, Calibration Table, below. Note that column 2 is the gallons to be applied per acre on weeds in the band - 1/2 gallon per inch of band width.

Step 2. Measure off distance in the field found in column 3 to the right of your band width. For a 12- inch band, measure off 273 feet.

Step 3. Time the sprayer in seconds as it travels over distance measured in step 2. Record the time carefully. The gear and throttle setting used should be the same as for spraying.

Step 4. Put in correct size nozzle tips. Suggested nozzle sizes are found in column 4 for preemergence and column 5 for postemergence. Use 65- to 80- degree flat fan nozzle tips, properly screened.

Step 5. Adjust pressure to catch 1 pint of liquid per row in the same time as recorded in step 3. Spraying pressure should normally be between 20 and 35 psi. Change nozzle tips if pressure is too low or high.

Step 6. Adjust nozzles to give coverage of weeds in the band area. Final adjustment must be made

Calibration Table

1 Band Width Inches	2 Total Solution in gallons/Acre	3 Distance in Feet to apply one pint to each row	4 Preemergence Nozzle Size* (Range)	5 Postemergence Nozzle Size* (Range)
10	5	327	8001E - 8002E	800067 – 8001
12	6	273	8002E - 8003E	8001 – 80015
14	7	233	8002E - 8003E	8001 – 80015
16	8	204	8002E - 8004E	8001 - 8002
20	10	164	8003E – 8005E	80015-8002
Broadcast	20	82	8003 - 8005	80015 - 8002

*Catch the PINT of spray from all nozzles on the row. Nozzle sizes shown are based on field speeds of 4 to 6 miles per hour. Similar nozzle sizes are available from all manufacturers. Use of the nozzle listing above does not necessarily imply a recommendation of that brand only.

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Calibration Procedure Number 2:

If for some reason you wish to apply a rate of spray other than that shown in Table I, the following procedure will be of interest to you. Tests have shown that broadcast spray rates ranging from 15 to 40 gallons per acre give good results. Smaller rates are more difficult to apply accurately. This procedure determines the volume of spray your sprayer is applying. The 80-degree flat fan nozzles ranging in size from 8002E to 8005E for preemergence and 8002 to 8005 for postemergence application or their equivalent should be used.

Step 1. Measure off the number of feet of row for the respective row spacing:

Row Spacing (Inches)	Row Length Measured (Feet)
30	136
32	127
34	120
36	114
38	108
40	102
42	97
48	85
60	68

Step 2. Time the sprayer in seconds as it travels over the distance measured above and collect the spray from all nozzles on one row in the same length of time. The throttle setting used both for timing the distance traveled and for collecting the spray should be the same as that to be used for spraying. Collect the spray from all nozzles on one row for the row length measured and record in fluid ounces the quantity of spray collected. Each fluid ounce of spray collected is equivalent to 1 gallon per acre of crop. When spraying vegetable transplants, apply 1 gallon of spray volume per inch of band width treated instead of the usual 1/2 gallon per inch rate. To determine the amount of commercial herbicide to apply on a band, regardless of row width, use the following equation:

$$\text{[band width (in) / row width (in)] X rate/A broadcast = amount needed for band treatment}$$

Ex. [12" band / 36" row] X 3.0 pints/A broadcast = 1.0 pint to treat the band on 1 acre of land

Table I. Time required to travel given distances.

Speed (mph)	Travel Time (seconds)		
	100 ft	200 ft	300 ft
3.0	23	45	68
3.5	20	39	58
4.0	17	34	51
4.5	15	30	45
5.0	14	27	41
6.0		23	34
7.0		19	29
8.0		17	26
9.0		15	23
10		14	20
11			19
12			17