



Sprayer Calibration

Boom Sprayer Calibration:

1. Determine nozzle spacing.
2. Refer to the following chart to determine calibration course:

Nozzle Spacing	Length of Calibration Course *
15"	272'
18"	227'
20"	204'
22"	186'
24"	170'
28"	146'
32"	127'
36"	113'
40"	102'

3. Measure and stake off the appropriate calibration course based on nozzle spacing. The course should be on the same type of ground that will be sprayed. (Speeds may be faster on roads than on sod, changing the application rate.)
4. Drive the course in the gear and rpm you will use when actually spraying. Record the time in seconds. Do this twice and average the time.
5. Park the tractor and maintain the same rpm.
6. Turn on the sprayer and catch the water from one nozzle for exactly the same number as seconds that took to drive the calibration course.
7. Ounces caught = gallons per acre.
8. Check all nozzles. Flow rate should not vary more than 10% among all nozzles. Replace any nozzles that do not fall into this range.

* To determine calibration course for a nozzle spacing not listed, divide 340 by the spacing expressed in feet. Example Calibration distance for 19-inch nozzle spacing = 340 divided by (19/12) = 215 feet.

Boomless Sprayer Calibration:

1. Measure effective swath width (reduce total swath sprayed by 10%)
2. Refer to the following chart to determine calibration course:

Swath Width	Length of Calibration Course *
35'	157'
40'	136'
45'	121'
50'	109'

3. Measure and stake off the appropriate calibration course based on swath width. The course should be on the same type of ground that will be sprayed. (Speeds may be faster on roads than on sod, changing the application rate.)
4. Drive the course in the gear and rpm you will use when actually spraying. Record the time in seconds. Do this twice and average the time.
5. Park the tractor and maintain the same rpm.
6. Turn on the sprayer and use a trash bag and bucket to catch the water for exactly the same number of seconds that it took to drive the calibration course. (Note: You can also use a 2-liter soda bottle, cut a hole in the side of the bottle, big enough to fit over the cluster nozzle, in place of a trash bag.)
7. Pints caught = gallons per acre.
8. To determine effective swath-width, subtract 10% of the total width wetted by the boomless nozzle.

* To determine calibration course for a swath width not listed, divide 5460 square feet (1/8 acre) by the swath width in feet. Example Calibration distance for 32-foot swath width = 5460 divided by 32 = 171 feet.

ATV Sprayer Calibration:

1. Measure effective swath width (reduce total swath sprayed by 10%)
2. Fill spray-tank (marked in gallons) with desired amount of gallons for calibration (5 or so)
3. Use a stop watch to determine the number of minutes it takes to spray the entire amount (divide seconds by 60 and add as a decimal to whole minutes counted)
4. Create the following spreadsheet by using the numbers from steps 1-3. The number calculated from row J will be the mph you should drive while spraying.

A	Enter desired spray volume, gal/acre	10-20 gals/ac	
B	Enter gals in spray tank for calibration	~5 gals	
C	Enter time to empty calibration gals	recorded mins	
D	Spraying system output	gals/min	$B \div C$
E	Time to spray an acre	mins/acre	$A \div D$
F	Enter effective swath width	feet	
G	Distance to spray one acre	feet	$43560 \div F$
H	Speed to spray an acre	feet/minute	$G \div E$
I	Distance/hour	feet/hour	$H \div 60$
J	Speed required/acre	miles/hour	$I \div 5280$

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