

Recertification Training – USEFUL TABLES & APPS CALIBRATION & CONVERSION FACTORS		
Calibration Spreadsheet	\$3 investment for a CD with MS Excel spreadsheets that automatically calculate boom, broadjet, granular, hand wand calibrations.	https://beav.es/55n
Sensor Sprayers	New and ongoing research at OSU for specialty crops, how sprayers can use infrared, sonic, LiDar technology to detect canopy and actuate accordingly.	https://catalog.extension.oregonstate.edu/pnw727/html
TeeJet calculator	Input any known variable and solve for any needed 'wanted'	https://www.sprayersupplies.com/teejet-spray-calculator

NOTE: Short URLs are case-sensitive

Important Formulas:

$$\text{GPM (per nozzle)} = \frac{\text{GPA} \times \text{MPH} \times W}{5,940}$$

$$\text{GPM (per nozzle)} = \frac{\text{Gallons per 1,000 sq ft} \times \text{MPH} \times W}{136}$$

$$\text{GPM (per nozzle)} = \frac{\text{Ounces collected} \times 60}{\text{Collection Time} \times 128}$$

$$\text{GPA} = \frac{\text{GPM (per nozzle)} \times 5,940}{\text{MPH} \times W}$$

$$\text{Gallons per 1,000 sq ft} = \frac{\text{GPM (per nozzle)} \times 136}{\text{MPH} \times W}$$

$$\text{GPM} = \frac{\text{OPM}}{128}$$

GPM = gallons per minute
 GPA = gallons per acre
 OPM = ounces per minute
 MPH = miles per hour
 W = Nozzle spacing (in inches) for broadcast spraying
 = Spray width (in inches) for single nozzle
 = Band width (in inches) divided by the number of nozzles per band
 = Row spacing (in inches) divided by the number of nozzles per row for directed crop foliar spraying



Easy “1/128th” method for boom sprayers

- Use the table provided based on nozzle spacing
- Drive distance and record time (in seconds)
- With tractor / boom running, spray water and collect from one nozzle for the exact time it took to drive the specified distance
- The amount collected (in ounces) equals GPA

Nozzle Spacing (inches)	Distance (feet)
6	681
8	510
10	408
12	340
14	292
16	255
18	227
20	204
22	186
24	170
26	157
28	146
30	136
32	128
34	120
36	113
38	107
40	102
42	97
44	93
46	89
48	85

Common Conversions

- 1 acre = 43,560 square feet, 209 feet x 209 feet
- 1 section = 640 acres or 1 square mile
- 1 hectare = 2.471 acres
- 1 mile = 5,280 feet or 1,760 yards
- 1 pound = 453.6 grams or 16 ounces
- 1 gallon = 128 ounces, 3,785.4 milliliters, 16 cups, 4 quarts, 8.34 pounds or 256 tablespoons
- 1 quart = 0.946 liters, 2 pints or 32 ounces
- 1 pint = 16 ounces or 2 cups