# Backpack / Hand Sprayer Calibration

This is an easy method of calibration that involves very little math or formulas. It is based on the following principal: Because 1 gallon = 128 ounces and the test area to be sprayed is 1/128th of an acre, therefore ounces collected = gallons per acre.

STEP 1. **Make sure your sprayer is clean and rinsed out**. Use straight water – NO herbicide for this procedure. Make sure your sprayer is working properly – Good pressure, a clean spray tip and good spray pattern

STEP 2. Measure out an area equal to 1/128th of an acre, which equals 340 square feet. An area 18.5 ft by 18.5 ft, 10ft by 34ft or 1.5 ft by 228 ft.

STEP 3. Record the time it takes to spray the measured area. Repeat several times and take the average time. Try to maintain constant pressure in the sprayer.

STEP 4. Spray into a container for the average time it took to spray the measured area. Measure the water collected in ounces. The amount collected in ounces equals gallons applied per acre.

EXAMPLE: Backpack / Hand Sprayer

STEP 1. **Make sure your sprayer is clean and rinsed out.**

STEP 2 Measure the area. 18.5 ft by 18.5 ft = 340 square feet

STEP 3. Average time to spray 18.5 x 18.5 area = 51 seconds

STEP 4. Amount collected in container in 51 seconds = 40 ounces.
Therefore; **40 ounces = 40 gallons per acre**
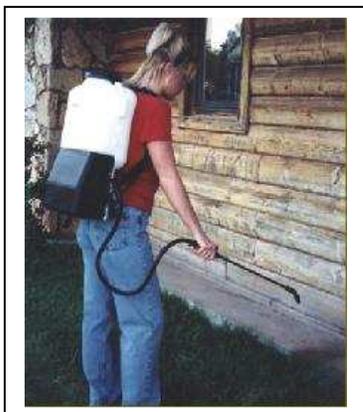
ATV Boom Sprayer Calibration

STEP 1. Make sure your sprayer is clean and rinsed out.
Use straight water – NO herbicide for this procedure.
Adjust the sprayer pressure and check nozzles for uniformity.

STEP 2. Measure the spray band width of one nozzle in feet, or nozzle spacing on the boom in feet, to determine the distance to travel. The area **MUST** equal 1/128th of an acre or 340 square feet.

Spray width of one nozzle, or nozzle spacing in feet	Distance to travel in feet
1.67 ft (20 inches)	204
2 ft (24 inches)	170
2.17 ft (26 inches)	157
2.33 ft (28 inches)	146
2.5 ft (30 inches)	136

STEP 3. Drive the ATV the distance to make 1 / 128th of an acre and time yourself. Drive at the speed you will be spraying at. Keep the speed of the ATV constan**t.** Repeat a few times to get an average time.

STEP 4. Catch the spray from **ONE** nozzle for the average time required to travel the needed distance at a desired speed. Measure the spray collected in ounces. The number of ounces collected is the same as the number of gallons per acre.

EXAMPLE: ATV Boom Sprayer

STEP 1. Rinse and clean the sprayer..
Adjust the sprayer pressure and check nozzles for uniformity.

STEP 2. Determine the distance to travel to make 128th of an acre.
If your nozzle spacing is 2.5 ft (30 inches) you need to travel 136 feet on the ATV to make 128th of an acre (340 square feet).

STEP 3. Time how long it takes to travel the 136 ft at a desired speed. Travel this distance several times and get an average time. Say it takes an average of 31 seconds to travel the 136 feet.

STEP 4. Collect the spray from ONE nozzle in a container for 31 seconds. Measure the water collected in ounces. The amount collected in ounces equals gallons per acre. If in 31 seconds you collected 20 ounces your sprayer output would be 20 gallons per acre.