

# Easy, No Math, 128<sup>th</sup> Acre Broadcast Sprayer Calibration

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<http://groups.ucanr.org/socalinvasives/>

Herbicide sprayer calibration	
Step 1	Measure out the 128 <sup>th</sup> acre calibration area: two suggested sizes are 10' by 34' or 18.5' by 18.5'
Step 2	Spray the calibration area evenly while recording the amount of time to complete the spray; Time _____
Step 3	Spray water into a bucket for the same amount of time. Measure the amount of water in the bucket in ounces; this will equal the gallons per acre (GPA) that the sprayer is applying. Put this value in Step 3 in the formula below.
Herbicide Rate Calculation	
Step 4	Total volume of herbicide spray tank in gallons. Put this value in Step 4 below.
Step 5	From the herbicide label, determine the amount of herbicide product to be applied per acre in ounces. Put this value in Step 5 below.
Step 6	Divide Step 4 by Step 3, this will determine the amount of acres sprayed per tank load. Put this value in the box labeled Step 6 below.
Step 7	Multiply Step 5 times Step 6, this will determine the amount of herbicide to be added to each tank load.

$$\text{Step 4} \frac{\text{_____}}{\text{(spray tank volume)}} \div \text{Step 3} \frac{\text{_____}}{\text{(GPA)}} = \text{Step 6} \frac{\text{_____}}{\text{(acres per tank load)}}$$

$$\text{Step 5} \frac{\text{_____}}{\text{(oz herbicide per acre)}} \times \text{Step 6} \frac{\text{_____}}{\text{(acres per tank load)}} = \text{Step 7} \frac{\text{_____}}{\text{(herbicide per tank load in oz.)}}$$

## Notes:

1. This works for both liquid and dry herbicides measured in ounces. (1 gallon = 128 oz, 1 quart = 32 oz, 1 pint = 16 oz.)
2. If the area to be sprayed is less than the area that a full tank load will spray, reduce the amount of water and herbicide by the same proportion as the reduction in area to be sprayed. (1 acre = 43,560 square feet.)
3. Each person spraying should do their own calibration and spray mixing.
4. Surfactants are added to the spray mix on a percent volume basis. Multiply the recommended percentage by 128 to determine ounces per gallon of mix. For example, 0.5% surfactant X 128 = 0.64 oz (its OK to round up to the nearest ounce, so 1 oz per gallon of mix).