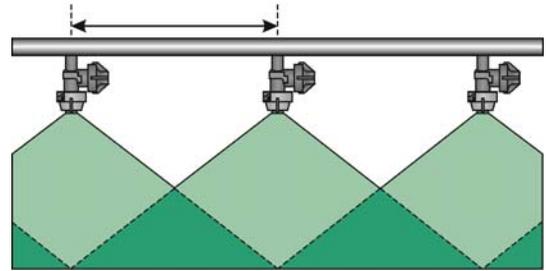


“Nearly No Math” Calibration and Pesticide Mixing

Boom Sprayer Worksheet for Broadcast Spraying
 NC Private Applicator Recertification 2012-2014
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Step 1. Fill the sprayer half full with water (no pesticide).

Step 2. From the table below, use nozzle spacing (distance between nozzles on your spray boom) to determine the distance that the sprayer must travel for each nozzle to spray 1/128th of an acre.

Step 3. Measure the course distance in the field and flag it for easy visibility.

Step 4. Record the seconds it takes to drive the measured distance at the desired spraying speed without spraying. Be sure to take a “running start” at the starting flag so your tractor/sprayer reaches the desired speed before you begin timing. For best results, repeat this step at least twice and use the avg. number of seconds it took to drive the course.

Step 5. Park the tractor/sprayer, set the brakes, but keep the engine rpm at the same setting used to drive the course.

Step 6. Catch spray from each nozzle, one at a time, in a container marked in ounces for the time noted in step 4. The amount of water collected in ounces from one nozzle equals gallons per acre (GPA) applied for the entire sprayer. If the output from any nozzle is more than 10% above or below the avg. from all nozzles, clean or replace that nozzle.

Step 7. Divide the amount of pesticide per acre (based on the labeled rate in oz., pts., or qts. of pesticide concentrate per acre) by the GPA (from Step 6), to determine the amount of pesticide to mix into each gallon of finished spray solution.

Step 8. To calculate the amount of pesticide concentrate to add to each tank, multiply the amount of pesticide/gallon (from Step 7) by the tank capacity (or amount needed for the treatment site) = total amount of pesticide to add to each tank load.

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

Example: Broadcast pesticide application on a 30 acre-field at a rate of 2 pts/ acre.

- Nozzle spacing is 22 in.
- Based on a 22-inch nozzle spacing, you need to drive 186 ft. (see table below).
- It took 32 seconds to drive 186 ft.
- Output per nozzle for 32 seconds is 13 ounces. This means the sprayer is applying 13 GPA
- 32 fl.oz. (=2 pts.) of pesticide per acre divided by 13 GPA = 2.46 fl.oz. Each gallon of solution in the sprayer must include 2.46 fl.oz. of the concentrate
- Multiply 2.46 fl.oz. per gallon by the 200 gal. capacity of the tank = 492 fl.oz. of product per tank load.
- You will need 390 gal. of finished spray to treat the entire field (30 acres X 13 GPA)

To calculate **how much area a full tank will cover**, divide the capacity of the tank by the GPA output. **Example:** 200 gal. tank divided by 13 GPA = 15.38 acres per tank load.