

Calibrating Your Sprayer

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Calibrating your sprayer is an essential step when controlling weeds with herbicides in pastures and hay fields. Calibration assures you are applying the correct amount of product to control weeds. If you are going to spend the money and take time to make a herbicide application, then don't leave out this essential step.

It might seem difficult to calibrate a boom sprayer, but it is not. Once calibrated, you will know the amount of water the sprayer is applying per acre. Knowing the output of the sprayer is essential to determine how much herbicide to add to the tank.

For example, if you have a 50-gallon spray tank and you determine it is applying 25 gallons/acre, then you know one full tank will cover two acres. When you get ready to spray for weeds add enough chemical to cover two acres. If you calibrate your sprayer and it is putting out less than 18 gallons per acre, consider driving slower or getting larger nozzles. When applying less than 18 gallons of spray volume per acre, just increasing the volume of water will help you get better weed control. If you need help, calibrating your sprayer or controlling weeds, contact your county agent. They can help.

Below is a step by step process that will allow you to calibrate your boom sprayer using a no-math-method calibration.

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



| Nozzle Spacing | Length of Calibration Course |
|----------------|------------------------------|
| 18 | 227 |
| 20 | 204 |
| 22 | 186 |
| 24 | 170 |

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 of seconds it took to drive the calibration course.
7. Ounces caught = gallons per acre. The volume of water caught in step 6 measured in ounces equals the numbers of gallons that will be applied per acre.
8. Last step, check all nozzles to be sure the output does not vary more than 10% among all nozzles. Replace any nozzles that do not fall into this range.

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Cattle Call



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Fence-line Weaning

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Weaning is stressful, for cows, calves, and farmers. Stress is the number one issue that impacts calf performance at weaning including reduced feed consumption and depressed immune systems. Calves are trying to adjust to life without momma, and leaving a herd social structure that they were comfortable with. Reducing stress at weaning by including fence-line weaning will hopefully lead to an easier time on the calves, minimizing the effects.



Fence-line weaning is typically used in pasture situations and is just as it sounds. Cows and calves are sorted into different pastures with a fence between them. This reduces stress so that the calves can physically see their mommas, but not nurse. Research has shown that fence-line weaned calves vocalized less, spent more time eating, and had greater weight gains compared to those who were abruptly and completely separated from their dams.

Ideal fence-line weaning should be in an environment that:

- Allows both cows and calves to spread out along the fence
- Has minimal dust present (both sides will be walking fence line)
- Provides feed and water resources for the calves that are familiar and close to the fence

For fence-line weaning to be effective please consider the following:

- Place pairs in the pasture that the calves will be in, so they can get used to feed/water and fences.
- Remove the cows to the pasture adjacent so they can hear, smell, and see each other but calves cannot nurse. Make sure there is good fence! It could be put to the test.
- After a few days, the cows and calves will move farther from the fences and not be as concerned with each other.

A number of studies have shown that calves that were fence-line weaned have lower incidents of sickness compared with “hard” weaning. Some studies have shown significant increases in average daily gain and total weight gain for calves that were fence-line weaned as compared to their hard-weaned contemporaries