

Reverse 1/128th Calibration Method (Single Nozzle)

This method eliminates the variable between different applicators when spraying the 18.5 x 18.5 ft area.

1. The applicator will first select a gal/acre number (calibration) that aligns with both the label on pesticides to be applied (min or max volumes), as well as being easily divisible by the sprayer tank volume..
2. Once the applicator selects an ideal gal/acre target, the applicator simply sprays that same number of oz's into a container. To do this, simply measure the desired volume in a measure cup and pour it into the container, then mark the container, dump out the water, and time how long it takes for the selected spray equipment to fill the container back to the mark.
3. Once the applicator has identified how many seconds it took to fill the container to the mark, the applicator knows how many seconds he or she has to uniformly spray an area that is 18.5 x 18.5 ft.

This method not only creates a calibration that makes tank mixing easier, it also brings consistency when calibrating backpacks or other single-nozzle spray equipment for multiple people to use. Everyone will practice spraying the measured area in the same amount of time, bringing a consistent calibration for the entire crew.

Example:

Joe has a 14 gallon ATV sprayer and needs to calibrate the handgun.

The herbicide he wants to use requires at least 10 gal/acre and no more than 50 gal/acre of water.

Because Joe's tank is 14 gallons, he wants to pick a gal/acre that is evenly divisible by 14. This makes mixing his herbicide much simpler.

Joe decides **that 28 gallons/acre** is in the middle of the labeled application rate, and is **divisible by 14**, so that will be his target.

Since we already know that we are using a version of the 1/128th method of calibration, we know that 28 gal/acre is going to require 28 oz's of water to be sprayed uniformly over our entire 18.5 x 18.5 ft area. (oz's applied per 18.5ft² = gal's applied per acre)

So, Joe pours 28 oz's into a measure cup, and then pours that water into a bucket. He marks the bucket at the water line. Now Joe knows how much water to spray into the bucket with his weed sprayer, and can dump that water out.

Using his handgun, Joe begins timing, in seconds, how long it takes to spray into the bucket until the mark is reached.

He finds that it took 25 seconds to reach his 28oz mark, so he knows that if he sprays a measured area of 18.5 x 18.5 feet for 25 seconds, he will have applied the equivalent of 28 gallons per acre. 28 gal/acre is Joe's sprayer calibration. Since Joe's tank only holds 14 gallons, he knows that every full tank will treat ½ of an acre of weeds. Since most herbicides list a "rate per acre", he knows he will mix half of any listed "rate per acre" amount in each full ATV tank.

Knowing the target time (25 seconds) allows Joe to practice spraying is 18.5 ft² area to get uniform coverage over the entire area. He can also train anyone spraying with his equipment to spray with the same consistent calibration. Everyone that uses Joe's sprayer will practice spraying the entire 18.5 x 18.5 ft area in 25 seconds, and will use that "spray pattern" when out in pastures actually treating weeds.