Calculations for speed and distance:

You wish to make an application at a speed of 3.0 MPH. What would be the time required to cover a distance of 60 FT to obtain this speed? 13.63 Seconds

The amount of time required to travel 100’ at 3.15 mph is 21.65 seconds.

During calibration, you cover walk a 60 ft in 13.8 seconds. What is your walking speed?

 2.96 MPH

While calibrating your sprayer, you travel a distance of 120 feet in 42 seconds. What is your ground speed? 1.95 MPH

You wish to make an application at a speed of 3.2 MPH. What would be the time required to cover a distance of 75 FT to obtain this speed? 15.99 seconds

Using the GPM formula:

You are calibrating a sprayer. Your output/nozzle is 950 ml/min. Your nozzle spacing is 20 inches and you have a 9 nozzle boom with 11003 tips. Your pressure is set at 30psi. What is the GPA if you are spraying at 5mph? 14.9 GPA

Your neighbor wants to calibrate his sprayer. He drove the rig 150 ft and it took him 20 seconds. Back at the shop, he caught 25 oz/nozzle in 20 seconds. If the sprayer has 20 nozzles on 20 inch spacing. What is the output of the sprayer? 34.86 GPA

A producer’s application volume is 15 GPA, and nozzle spacing is 20”. He always makes his applications at 4.5 MPH. What is his output in mL/15 sec? 215 mL/15 sec

If your nozzle delivery rate is 16 oz /minute and you are applying 12 GPA using a boom with 13 nozzles travelling 4.5 mph, what is your nozzle spacing? 13.75 inches

Calculating Rate of active ingredient or product:

You have a 20 acre wheat field that has common chickweed (1-3 inches tall) and hairy buttercup (3-6 inches tall). Based on the available label, what is the recommended rate per acre and how much Peak would be needed to treat the field?

 0.5 oz/acre 10 ounces to treat the field

You wish to apply a 25WP herbicide at a rate of 1.5 lbs. ai/Acre to a 60,000 square foot area. How much herbicide would be needed to treat this area? 8.26 Pounds

A producer puts MSMA 6EC out broadcast over-the-top at a rate of 2.0 lb. ai/A. What is the MSMA rate in pints/A? 2.64 pints

At an application rate of 3 lb a.i./Acre how many gallons of Lasso 4L will be needed to treat 25 acres?

18.75 gallons of Lasso

You applied Classic (chlorimuron-ethyl) early POST to 400 acres of soybeans at the rate of 0.5 oz. ai/ac. Classic is a 75% WDG.

1. How many pounds of chlorimuron-ethyl were applied to all 400 acres? 12.5 pounds

How many pounds of Classic were applied to all 400 acres? 16.67 pounds

You plan to apply Eptam 10G to 320 acres of alfalfa at a rate of 3 lb. ai/acre. How much Eptam 10G must be purchased to treat all 320 acres? 9,600 pounds

Calculating number of loads:

You are a farmer and plan to buy Treflan 4EC to apply PPI at the rate of 0.75 lb. ai/ac to 600 acres of land that will be planted to cotton. Your sprayer has a 300 gallon tank and has been calibrated to deliver 25 gpa.

How many acres can be treated with one tank load of spray mix? 12 acres

How many tank loads will it take to treat the 600 acres? 50 loads

Define in terms of active ingredient:

1. 70 WP : 0.7 pounds of active ingredient per pound of product or 70% active ingredient by wieght
2. 2 EC : 2 pounds of active ingredient per gallon of product
3. 2 L : 2 pounds of active ingredient per gallon of product
4. 4 G : 0.04 pounds of active ingredient in one pound or product or 4% active ingredient by weight
5. 80 DF : 0.8 pounds of active ingredient in one pound of product or 80% active ingredient by weight