Weed Control

Part 3

David South
Auburn University

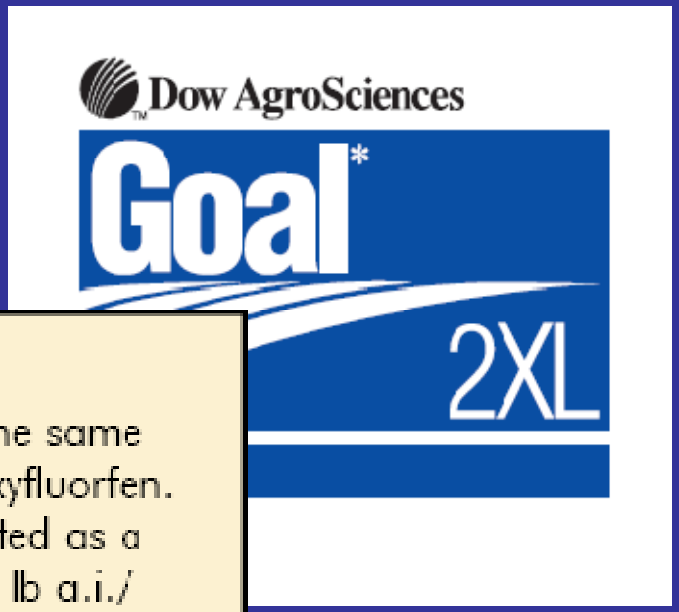

HERBICIDE
INSECTICIDE
Goal
Poast
Basagran
Mobil
Modown
Roundup

Herbicide formulations

- EC – emulsifiable concentrate
- AS – aqueous solution
- WP – wettable powder (EPA does not like)
- WSP – water soluble packet
- F – flowable
- DF- dry flowable
- DG – dispersible granule
- G - granular (often costs much more)

G? OR DG?

Goal



NEW GoalTender herbicide

GoalTender herbicide contains the same active ingredient as Goal 2XL, oxyfluorfen. However, GoalTender is formulated as a water-based flowable and is a 4 lb a.i./ gallon material (Goal 2XL is a 2 lb a.i./ gallon material). The unique formulation of GoalTender reduces the potential for "lift-off" (or co-distillation), increasing the safety to adjacent crops. GoalTender has effectively no odor.

Apply 0.125 pounds a.i. of oxyfluorfen per acre

How many fluid ounces per acre?

Dilution equations

Active ingredient vs. Product

$$\frac{\text{Rate of a.i./acre}}{\text{lbs a.i. Per gallon}} = \text{gallons of product/acre}$$

$$\frac{\text{0.125 lbs/acre}}{\text{2XL/A}} = \text{1/16 gallon of Goal}$$

2 lbs a.i./gallon (or 8 fluid ounces)

Excort XP

(60% a.i.)

We tested 3.4 g a.i. of metsulfuron methyl /acre

How much product to measure out ??

3.4 g a.i. /acre = 5.67 g product/acre

0.6 a.i.

Excort XP

(60% a.i.)

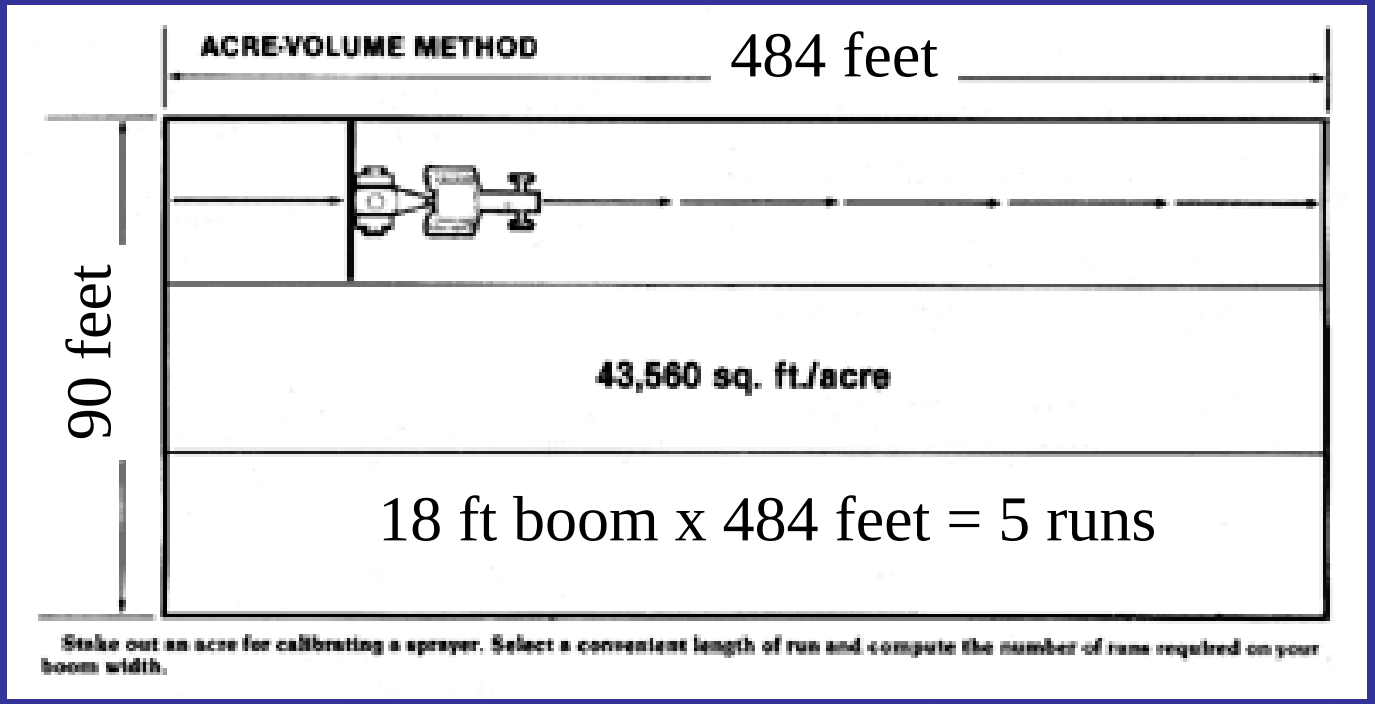
Tommy says apply 0.2 ounce product/acre

How much product to measure out???

$$\frac{454 \text{ g/lb}}{16 \text{ ounces/lb}} = 28.375 \text{ g/oz}$$

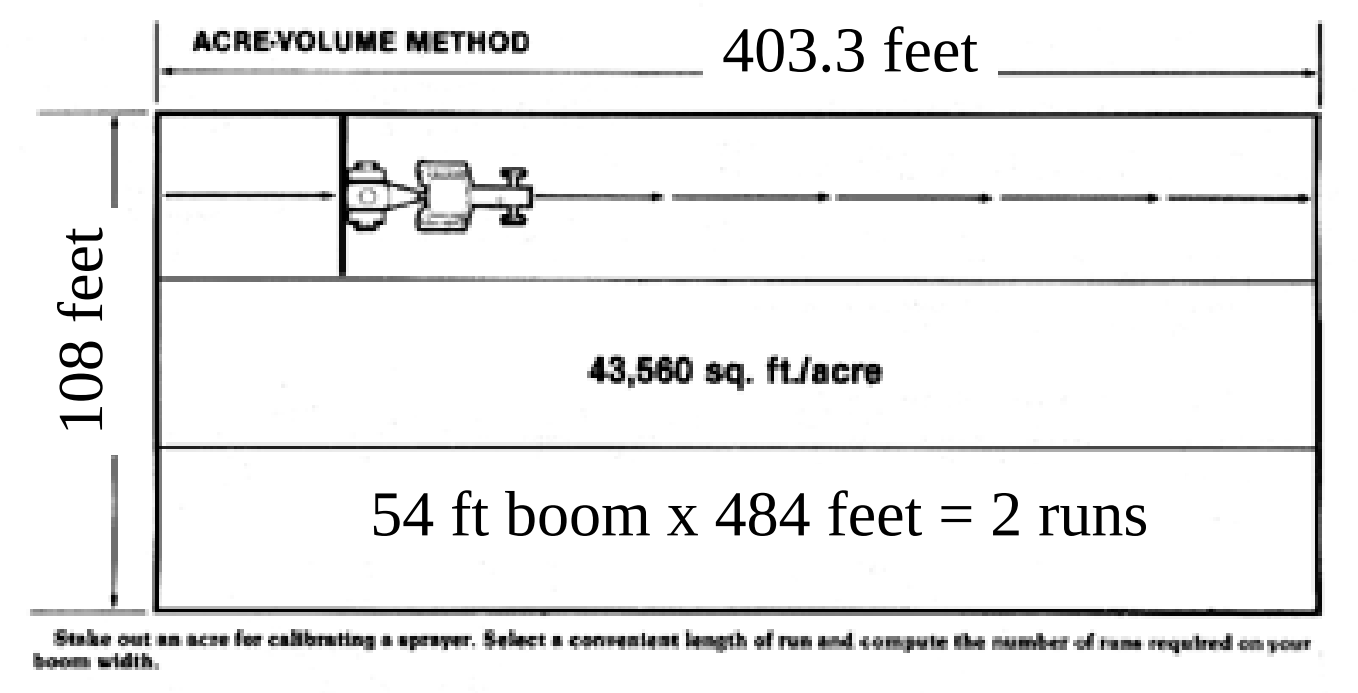
28.375*0.2 = 5.675 g product per acre

Calibration – 18’ boom



11 nozzles per boom…. 32 gallons per acre = 2.9 gallons/nozzle

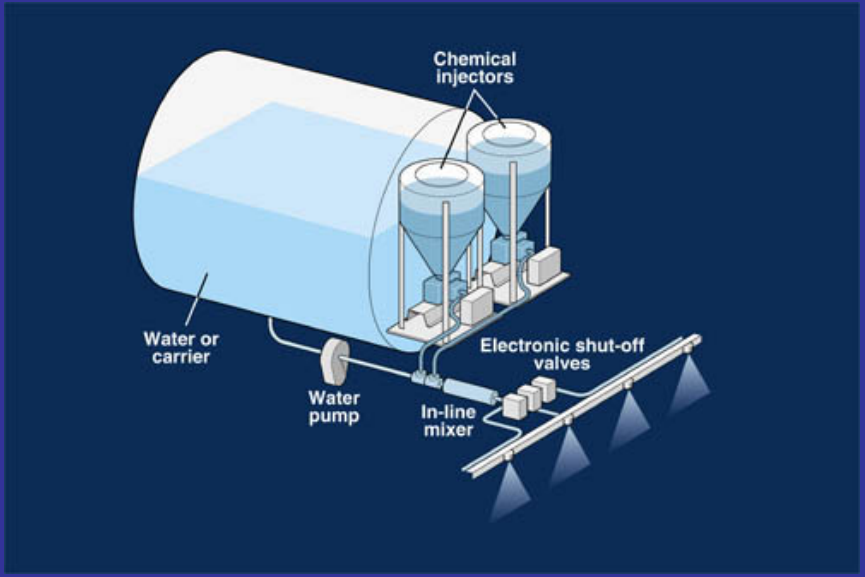
Calibration – 54’ boom



32 nozzles per boom…. 32 gallons per acre = 1 gallon/nozzle

Why is what I just said out of date?

Automatic sprayer calibration



Proper storage of pesticides