Badger Weeds Team - Calibration Problem

A researcher wants to spray two PRE-emergence herbicides on a greenhouse study he is conducting using a single nozzle spray chamber. The spray chamber operates at 2 mph and the nozzle height is set to represent a 20-inch nozzle spacing scenario. The mix size is 500 ml.

Treatment 1: Tricor 75DF at 0.667 lbs/A

Treatment 2: Spartan 4F at 8 fl oz/A

1. How much product will he need (round to the nearest hundredth) in a mix using 10 GPA carrier rate? Round to the nearest hundredth.

Treatment 1: _____ g

Treatment 2: _____ ml

2. What is the amount of active ingredient in each mix? Round to the nearest hundredth.

Treatment 1: _____ g of metribuzin

Treatment 2: _____ g of sulfentrazone

3. He decided to change his carrier rate from 10 GPA to 15 GPA. Does he need to adjust the herbicide amount per mix? If so, what amount of product will be needed in a mix? Round to the nearest hundredth.

Treatment 1: _____ g

Treatment 2: _____ ml

4. What is the amount of active ingredient in each mix (carrier rate = 15 GPA)? Round to the nearest hundredth.

Treatment 1: _____ g of metribuzin

Treatment 2: _____ g of sulfentrazone

5. Spraying at 15 GPA, what nozzle size would be ideal for this application? To assure the sprayer is properly calibrated, what is the solution amount he should catch in 15 seconds?

Nozzle size: _____

ml in 15 sec: _____ (round to the nearest hundredth)