



PORTLAND PARKS & RECREATION

Healthy Parks, Healthy Portland

Backpack Sprayer Calibration



Timed volume method

Determine the volume of water it takes to deliver a specific amount of chemical to a given area (application rate).



Factors that determine application rate:

Speed (time) of application

Spray pressure

Nozzle orifice size

Number of nozzles

Height of nozzle from ground



Steps to using the timed volume method

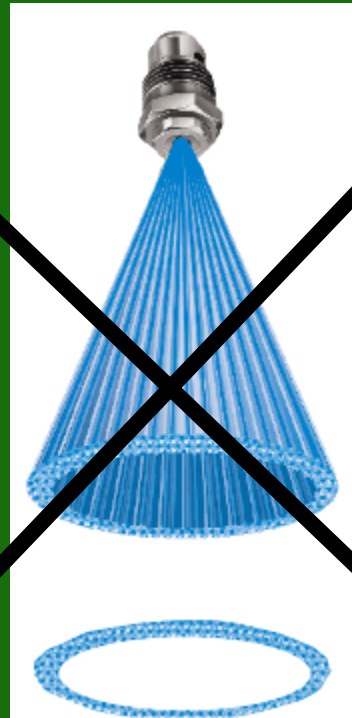
1. Fill a clean sprayer with a known volume of water.



2. Select an appropriate nozzle for the application.



Nozzle selection



3. Adjust the pressure regulator to an appropriate setting.



4. Spray into a measuring cup for 1 minute to determine the output volume at the chosen pressure.



5. Measure and mark out a test area.



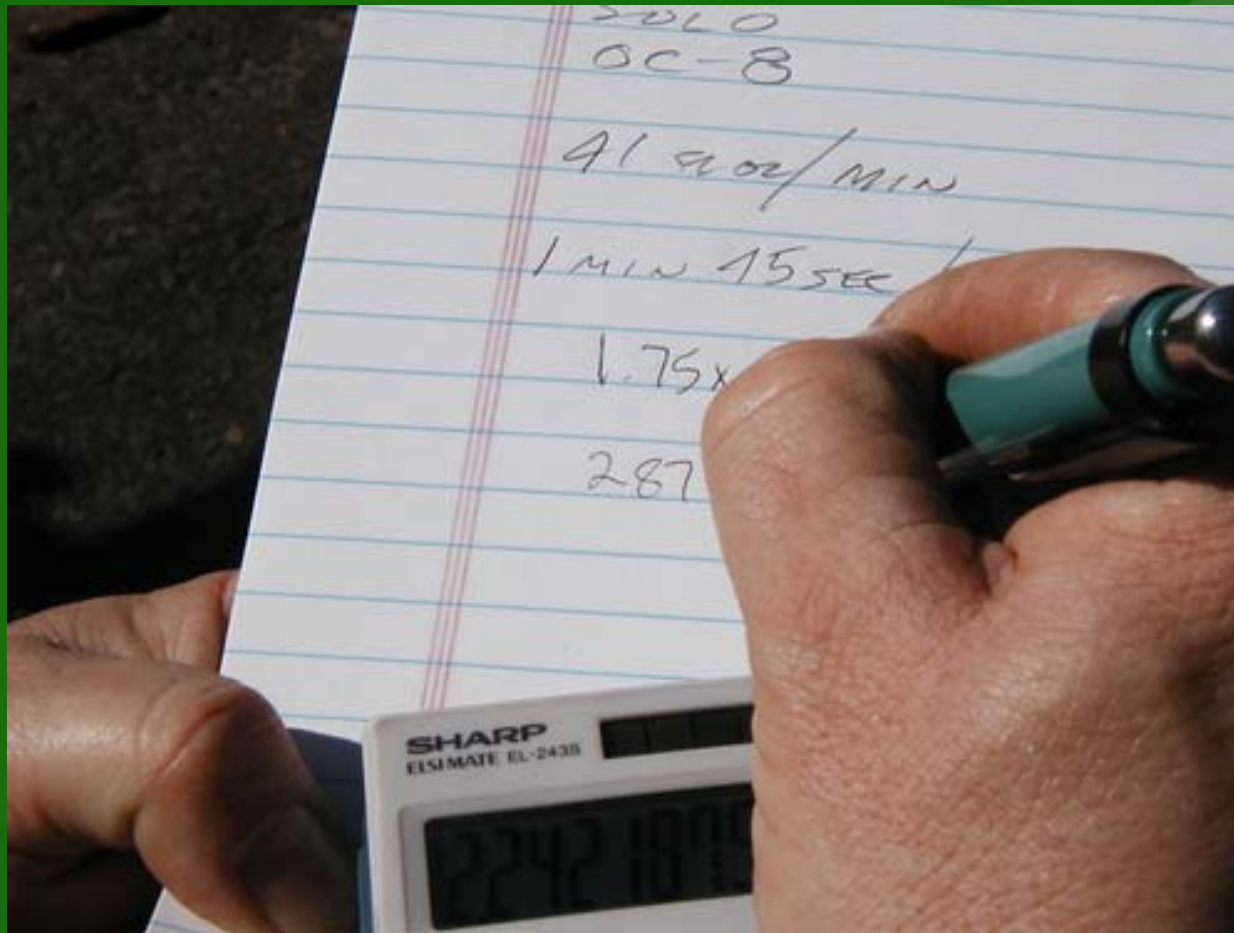
6. Time yourself spraying the test area.



7. Multiply the result of step 4 (volume per minute) by the result of step 6 (time to spray given area).



8. Multiply the result of step 7 (56 fl.oz.) by 4 to arrive at fl.oz. per 1000 sq. ft.



9. Determine the area covered by a full sprayer by dividing the capacity of the sprayer by the result of step 8.



10. Determine how much pre-emergent herbicide to put in the spray tank by multiplying the result of step 9 in units of 1000 sq.ft. x the rate determined from the product label.

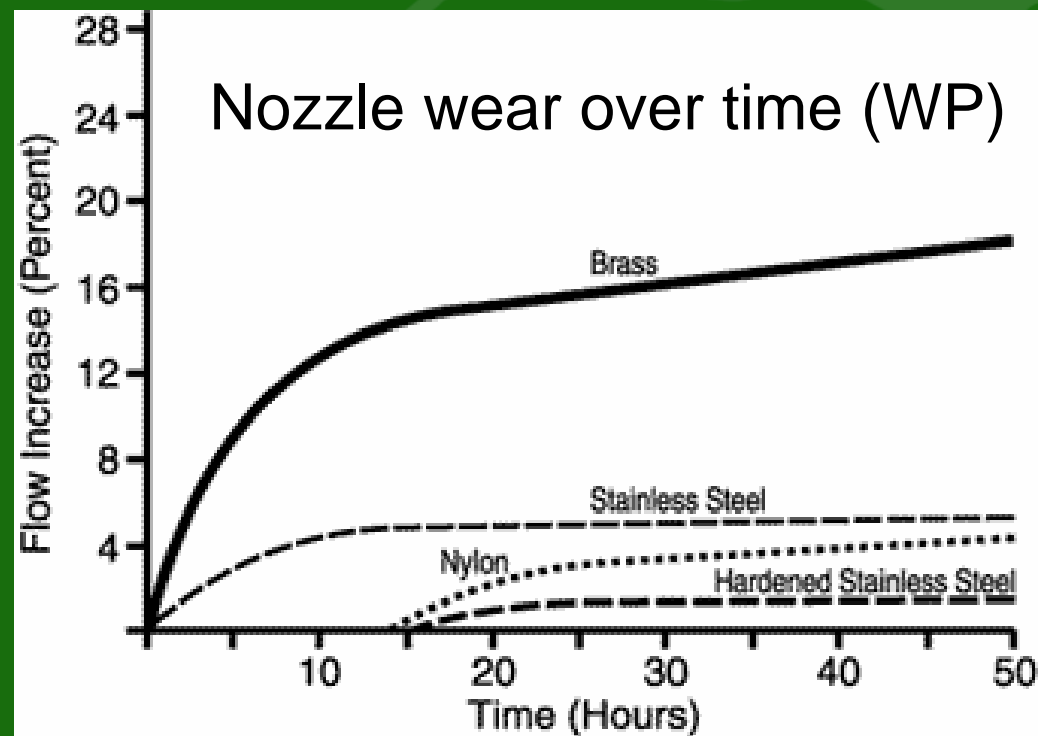


Factors that can affect application rate:

Nozzle wear

Change in applicator walking rate

Pressure
fluctuations



Questions?





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A photograph of a lush green park with trees and a grassy area. The text is overlaid on a dark, semi-transparent rectangular background.

Paul LaCroix
Portland Parks and Recreation