



**Field: Agroproduction**

**TEST**

# **Optimizing and Calibrating Sprayers**



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## Test

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1. The effective substances in a liquid carrier, being conveyed in the form of drops by means of a pressure energy, these types of plant protection machinery are called as;  
a) **Sprayers**  
b) Atomizer  
c) Pollinizer
2. What is the name of the gauge that showing the operating pressure to control the pressure in the system are used during the pulverization  
a) Ragulator  
b) Pump  
c) **Monometer**
3. Which of the following can be said for the nozzles  
a) Worn nozzles can be repair  
b) **Worn nozzles should be replaced with new ones.**  
c) Clogged nozzles should be cleaned with a needle
4. The sprayer part that allows the pesticide to break into drops and reach to target is,  
a) **Nozzle**  
b) Boom  
c) Control unit
5. Whjich of the following is not true  
a) Agitators used in sprayers divided into three group as mechanic, hydraulic and pneumatic.  
b) Agitator keeps the concentrate of the chemical more uniform.  
c) **The most common type of sprayer agitation is pneumatic**

6. What is the movement of pesticides droplets or particles outside the intended target site.
- a) Drift
  - b) Flying
  - c) Mixing
7. The most important factor that affects drift is the size of
- a) Nozzle
  - b) Droplets
  - c) Tank
8. What is a test process modifying or adjusting a sprayer to give the desired application rate under typical operating conditions.
- a) Optimization
  - b) Calibration
  - c) Fixing
9. Nozzle Rate depends on the:
- a) Size of the nozzle and pressure
  - b) Diameters of droplets
  - c) Travel speed
10. In order to make double the application rate, operating pressure must be increased
- a) 2 times.
  - b) 4 times
  - c) 8 times

11. Which of the following is not true?

- a) If the sprayer travel speed increases, the application rate of the sprayer decreases.
- b) If the nozzle spacing increases, application rate of the sprayer decreases.
- c) If the nozzle spacing decreases, application rate of the sprayer decreases.

12. Which of the following can not be said for the sprayer tank

- a) Sprayer tank are manufactured in volume more than 10% of the nominal capacity.
- b) Sprayer tanks should not be resistant to corrosion.
- c) Sprayer tank clean-out is necessary when changing between crops or between products to avoid crop injury due to contamination.

13. Pressure can only be changed to make very small changes in sprayer application rate. Otherwise;

- a) Pump can be forced and worn.
- b) Pressure regulator can be broken down
- c) The droplet size will change and cause drift or runoff problems.

14. The following in various diameters are used in different place from the tank cover to nozzle cap.

- a) Filters
- b) Nozzles
- c) Hoses

15. Change the following to make a large change to sprayer application rate.

- a) Nozzle diameter
- b) Operating pressure
- c) Filters

16. In order to find working width of sprayer simply multiply
- a) the number of nozzles by the distance of sprayer boom
  - b) the number of nozzles by the distance in meter between each nozzle
  - c) the number of booms by the distance in meter between each nozzle
17. In order to ensure continuity of fluid flow and pressure,
- a) A manometer was placed on the pump
  - b) A pressure regulator was placed on the pump
  - c) An air chamber was placed on the pump.
18. Which are the following is not true?
- a) Droplet size directly impacts efficacy and drift.
  - b) Higher pressures create larger droplets. Lower pressures create smaller droplets.
  - c) For a given pressure, a spray tip will produce a range of droplet sizes.
19. Good coverage can be achieved with less chemical,
- a) As the droplet size is much smaller
  - b) As the droplet size is much larger
  - c) As the nozzle diameter is much larger
20. Nozzle flow rate varies depending on the spray pressure.
- a) Flow is decreased when pressure is increased,
  - b) Flow rate is increased when the pressure is reduced.
  - c) Flow is decreases when pressure is decreased
21. For the travel speed
- a) A faster travel speed could increase the spraying application rate
  - b) A faster travel speed could decrease the spraying application rate
  - c) Application rate is not dependent on travel speed

22. Which of the following is not true for the spray plumes?
- a) A pressure lower than recommended will prevent the spray plumes from reaching the designed spray angle.
  - b) If the spray plumes flow intermittently there is not enough pressure in the air chamber. In this case the pressure in the air chamber should be checked.
  - c) Spray plumes angle generally change from 30 degree to 80 degree
23. Which of the following is not the calibration time?
- a) after changes to application equipment or settings (e.g., nozzles, operating pressure, pump, tractor or tractor wheels)
  - b) Before each spraying if the application rate changes as crops grow,
  - c) At the beginning of each month
24. When calibrating a sprayer, you will need
- a) screw wrench
  - b) a stopwatch and a calculator
  - c) a measuring tape of minimum 50 meters
25. Which of the following can be said for the boom height from the target?
- a) Lowering the boom of the sprayer can help to increase drift.
  - b) If boom height decreases, the overlap can also decrease depending on the spray angle and nozzle spacing
  - c) For good coverage, boom height from the target should be at least 1 meter.

Note: Correct answers are in red