

Pesticide Application Technology

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June 30, 2011



What Results in a Successful Application?

- Positive pest ID
- Using the right product
- **Selecting the proper equipment**
- Application timing
- Accuracy and calibration

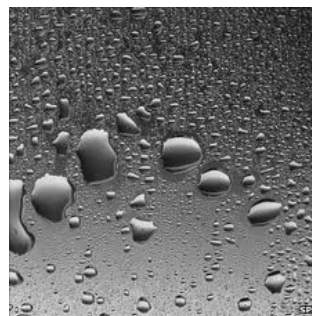
Pest Control Situations

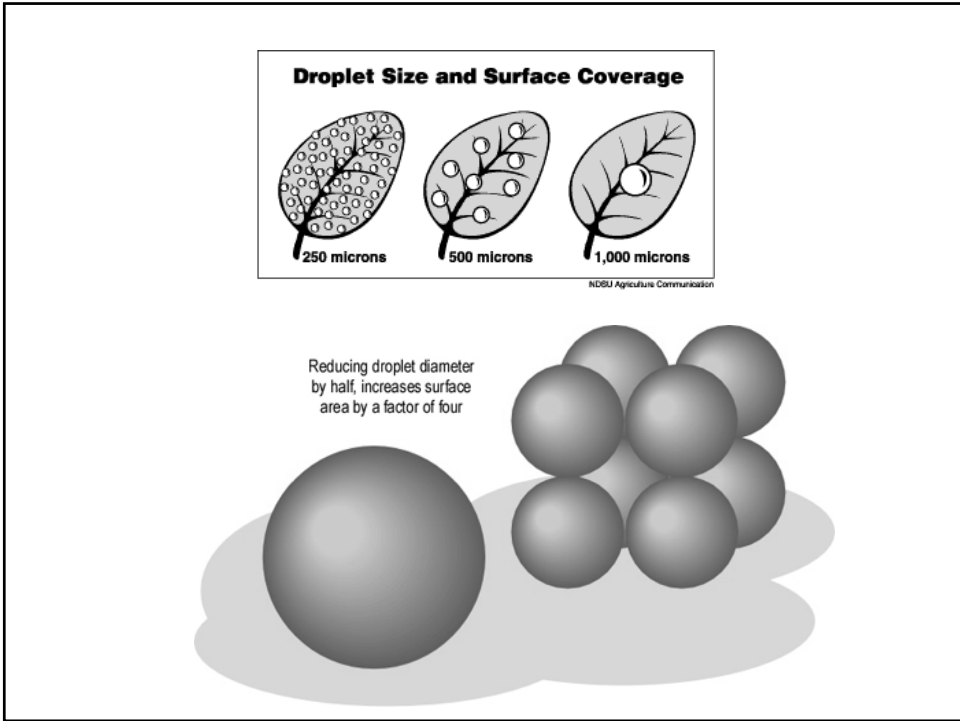
- Weeds
 - Generally systemics
 - Thorough coverage is secondary
- Diseases & Insects
 - Generally contacts
 - Good coverage is essential
- Fertilizers and cultural treatments
 - Volume & uniformity



Coverage

- Increase coverage by reducing droplet size OR increasing volume
BUT...
- Applying the right amount is NOT ALWAYS enough!
 - Uniformity
 - Coverage
 - Canopy penetration





Droplet Energy & Coverage

- Canopy Penetration
- Where does the product need to be?
- Large droplets are heavier and penetrate the canopy better

© 2008, DSI

Drift

- Small droplets increase coverage, but also increase drift potential
- Non-target/site effects
- Wasteful

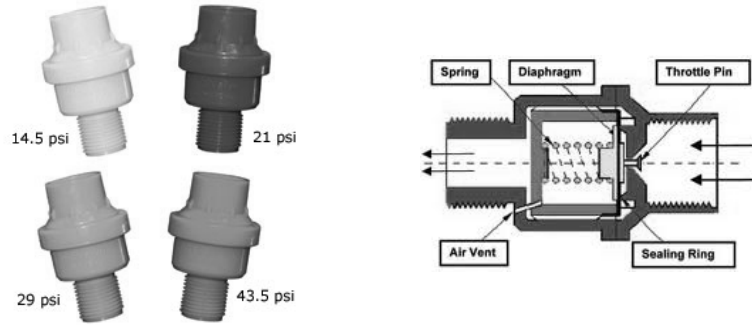


Efficacy is a function of placement and timing!

Sprayer Modifications



Pressure



Constant flow regulators

Inline Strainers & Screens



Must match mesh size with nozzle orifice!

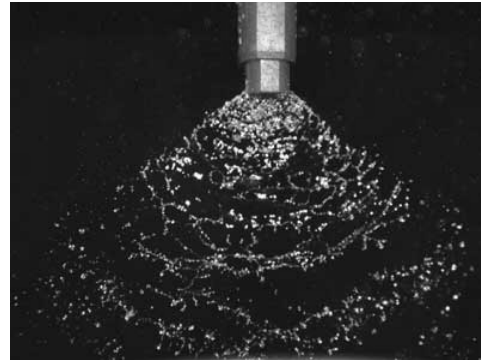
Check Valves



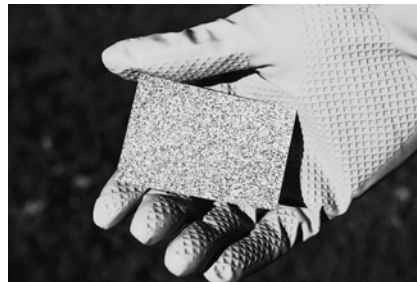
Nozzle Tips **FLAT FAN**

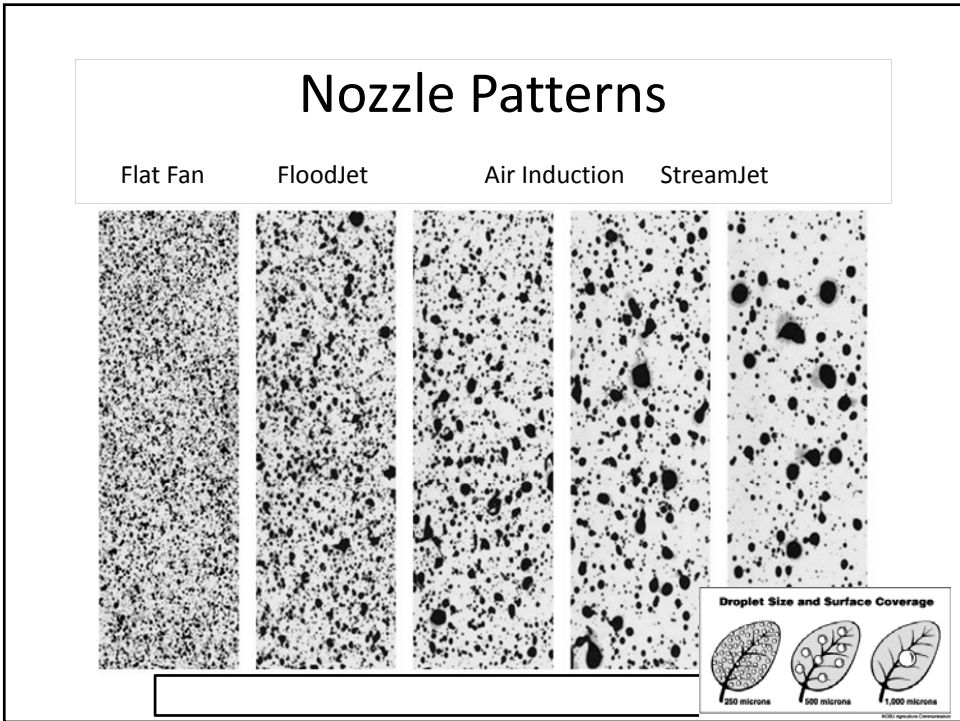


Nozzle Tips
AIR INDUCTION



Nozzle Tips
FLOODJET



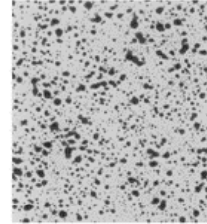
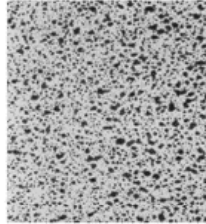
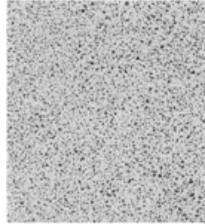


Output & Distribution

Flat Fan
'02'

Air Induction
'02S'

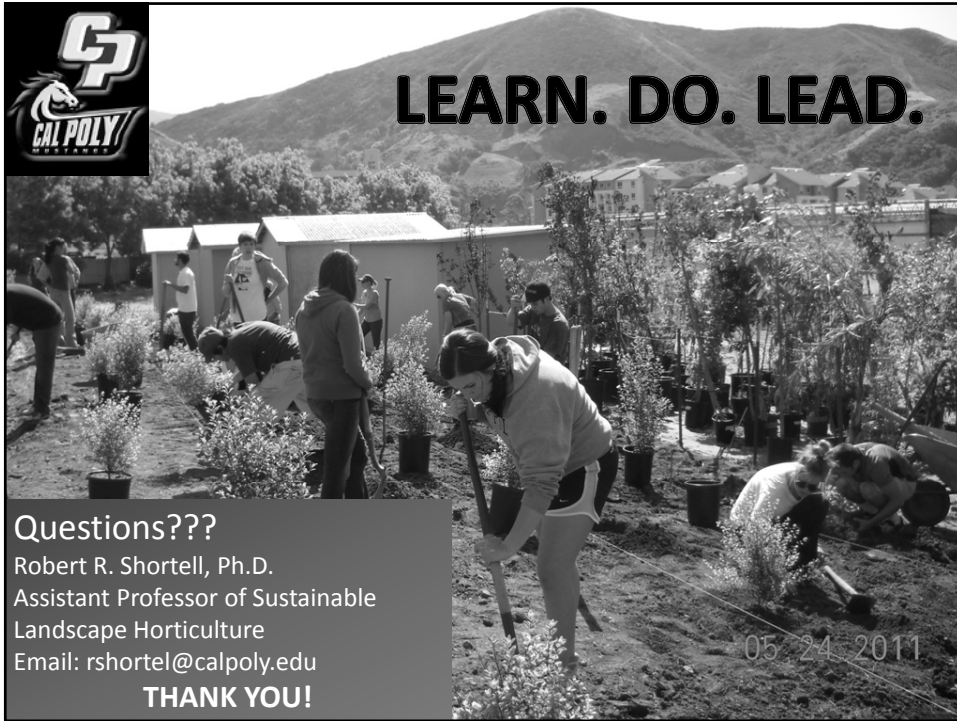
Air Induction
'02L'



0.2 GPM

Take Home

- Droplet distribution effects efficacy
- Having the right equipment and selecting the right nozzle types reduces net input, by using the same volumes more efficiently
- MORE BANG for your BUCK!



CP
CAL POLY
MUSTANGS

LEARN. DO. LEAD.

Questions???

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THANK YOU!

05 24 2011