Integration of Spray Quality Information

by
Tim Stuenkel
Applications Engineer,
Spraying Systems Co.

www.teejet.com

Why Measure Drop Size?

- Drift vs. Efficacy
- Pesticide labeling regulations
- Provide basic spray quality information to the end user

www.teejet.com

Drop Size Measurements

- Reference tips are acquired and tested periodically
- In house laser equipment is used for measurements (Malvern, PMS, PDPA)
- Tips are analyzed at various pressures and locations in the spray pattern

www.teejet.com

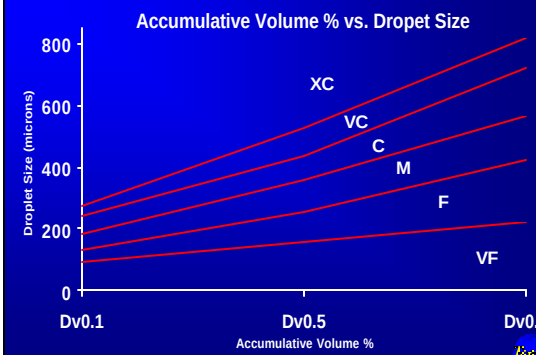
PDPA Laser

www.teejet.com

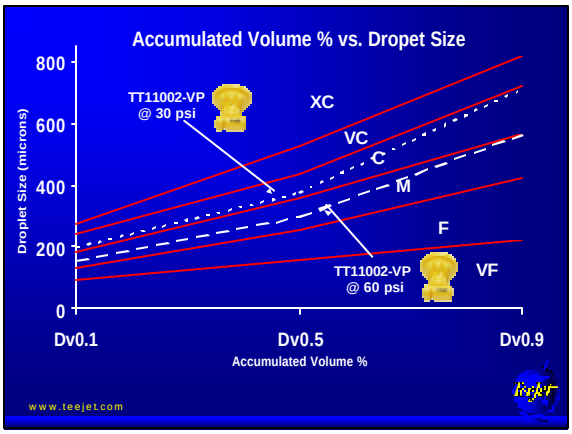
Droplet Size Calculations

- Raw droplet size data is curve fitted
- Curve fit data is used to create graphs for each individual tip
- Graphs are overlaid on reference template to assign droplet size categories

www.teejet.com



www.teejet.com



Droplet Size Categories

Category	Symbol	Color Code	Approximate VMD Range
Very Fine	VF	Red	< 150
Fine	F	Orange	150 – 250
Medium	M	Yellow	250 – 350
Coarse	C	Blue	350 – 450
Very Coarse	VC	Green	450 – 550
Extremely Coarse	XC	White	> 550

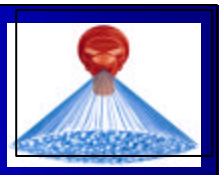
www.teejet.com

XR TeeJet®

	Pressure (psi)										
	15	22	29	36	44	51	58	65	73	80	87
XR 8001	M	F	F	F	F	F	F	F	VF	VF	VF
XR 80015	M	M	M	F	F	F	F	F	F	F	VF
XR 8002	M	M	M	M	M	F	F	F	F	F	F
XR 8003	M	M	M	M	M	M	M	F	F	F	F
XR 8004	C	C	C	M	M	M	M	M	M	M	M
XR 8005	C	C	C	C	C	M	M	M	M	M	M
XR 8006	C	C	C	C	C	C	C	M	M	M	M
XR 8008	VC	C	C	C	C	C	C	C	M	M	M

www.teejet.com

Turbo TeeJet®



	Pressure (psi)												
	15	22	29	36	44	51	58	65	73	80	87	94	102
TT 11001	C	M	M	M	M	F	F	F	F	F	F	F	F
TT 110015	C	C	M	M	M	M	M	M	F	F	F	F	F
TT 11002	VC	C	C	C	M	M	M	M	M	M	F	F	F
TT 11003	VC	C	C	C	C	M	M	M	M	M	M	M	M
TT 11004	XC	VC	C	C	C	C	C	C	M	M	M	M	M
TT 11005	XC	XC	VC	C	C	C	C	C	C	C	C	C	M

www.teejet.com

AI TeeJet®

	Pressure (psi)											
	29	36	44	51	58	65	73	80	87	94	102	116
AI 110015	VC	VC	VC	VC	VC	C	C	C	C	M	M	M
AI 11002	XC	VC	VC	VC	VC	VC	C	C	C	C	M	M
AI 110025	XC	XC	VC	VC	VC	VC	VC	C	C	C	C	M
AI 11003	XC	XC	XC	XC	VC	VC	VC	C	C	C	C	M
AI 11004	XC	XC	XC	XC	VC	VC	VC	C	C	C	C	C
AI 11005	XC	XC	XC	XC	XC	VC	VC	VC	C	C	C	C

www.teejet.com

How is Data Published?

- Tabular Drop Size Charts
- Graphical Drop Size Charts
- Droplet Size Category Charts

www.teejet.com

Where is Data Published?

- Hard copies available
- Catalogs and Buyer's Guides
- Websites

www.teejet.com

Conclusion

- Data is necessary to educate the end user
- Droplet size charts are becoming the accepted standard
- Drop size data is available in various formats

www.teejet.com