



Do Label Restrictions and State Regulations Deter Innovation/Ingenuity?

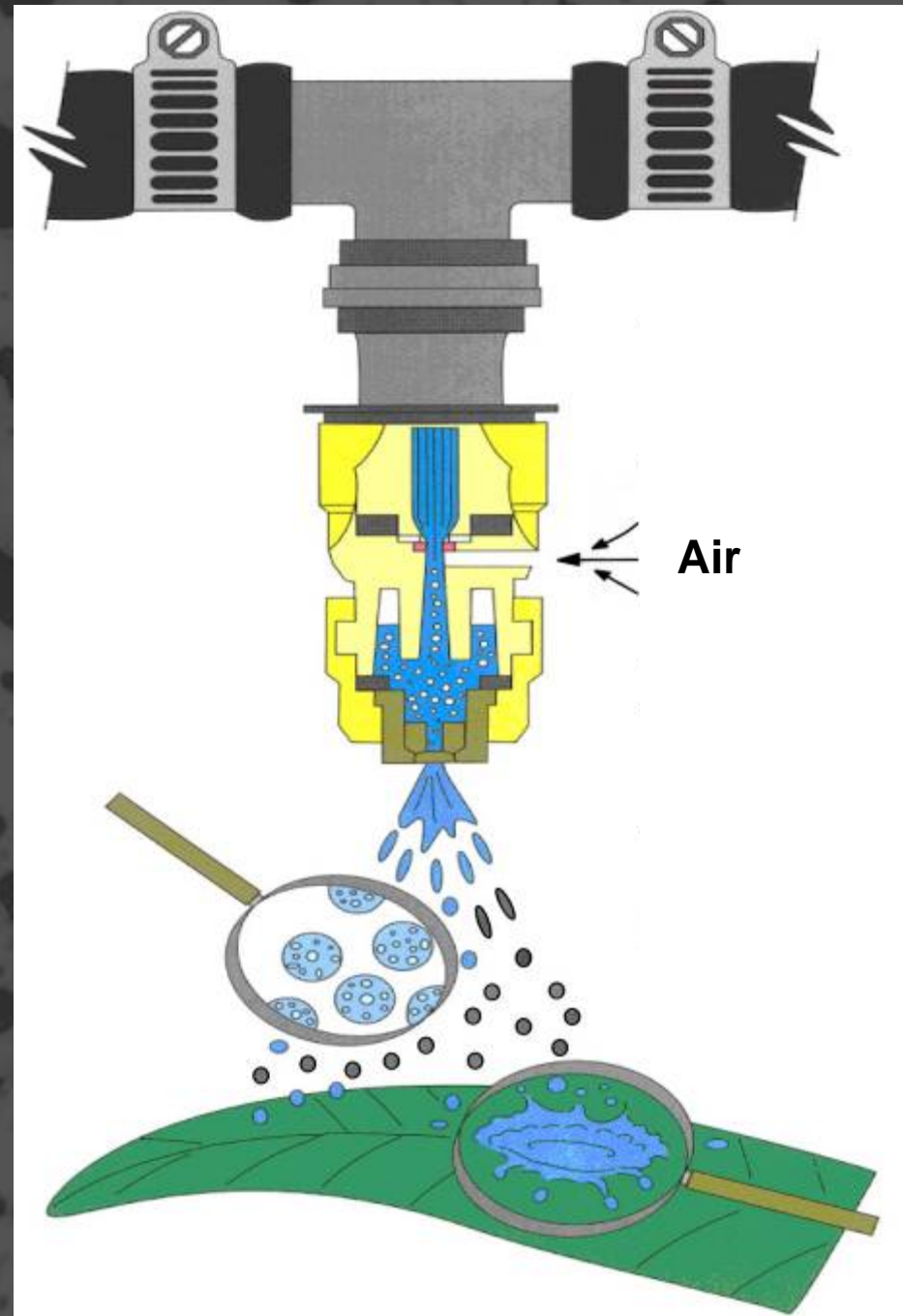
(and how do we as an industry encourage the use of Drift Reduction Technologies?)



Will Smart

TurboDrop[®]

Air injection, air inclusion, venturi, air induction nozzles are nozzles in which an internal venturi creates negative pressure inside the nozzle. Air is drawn into the nozzle through two holes in the nozzle side and mixes with the spray liquid. At proper pressures, the emitted spray contains larger, more uniform droplets filled with air bubbles and very few drift-prone droplets.



Spray Nozzle Suppliers

- CP Products
- Hypro Corp.
- Spraying Systems
- Wilger Inc.

Carolyn Baecker

Mark Mohr

Steve Pearson

Mark Bartel

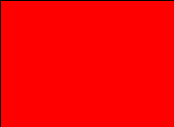


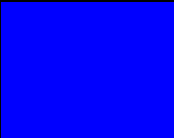


Education



ASAE S-572 Nozzles Classification Scheme

	PSI									
	15	30	45	60	75	90	105	120	135	150
Low Pressure AirMix										
AM11001	24	42								
AM110015	29	48								
AM11002	32	55								
AM110025	20					81				
AM11003	19	32	52							
AM11004	19	33	55							
AM11005	20	35	57							
Medium Pressure TurboDrop XL										
TDXL11001	20	44			73					
TDXL110015	29	46			80					
TDXL11002		48			86					
TDXL110025	29	44	57				100			
TDXL11003				64						
TDXL11004		32	46	65						
TDXL11005			46	62	86					
TDXL11006			52			96				
TDXL11008				68		94				
TDXL11010					77					

ASAE Droplet Size Characteristics

Classification Category (VMD)*	Symbol	Color Code	Approximate Droplet Size (microns)		
			Ohio State	North Dakota State	Pump Mfg. Catalog
Very Fine	VF		< 150	> 182	<100
Fine	F		150 - 250	> 183 - 280	100 - 175
Medium	M		250 - 350	281 - 429	175 - 250
Coarse	C		350 - 425	430 - 531	250 - 375
Very Coarse	VC		425 - 500	532 - 655	375 - 450
Extremely Coarse	EC		> 500	> 655	> 450

Chemical Labels

Apply the product in the coarsest possible spray that will maintain chemical efficacy.

Bayer's Liberty[®] Herbicide

- Use Medium droplets
- 300 micron
- 40-60 psi
- Flat fan
- Wind speed < 12 mph



Monsanto's RoundUp WeatherMAX™

- **How can I minimize potential spray drift?**
Avoid spraying in windy or gusty conditions when winds are above 8 km/hr. Choose spray nozzle and sprayer pressure settings in combinations which avoid very fine spray particles.
- Responsible herbicide use is everyone's job. By using Roundup WeatherMAX within its recommended use patterns and guidelines, you will help ensure that Roundup WeatherMAX remains a useful crop protection management tool.

<http://www.monsanto.ca/monsanto/layout/weedcontrol/preplant.asp#application>

Drift Control \neq Number 1 Goal

Efficacy = Number 1 Goal

- The chemical must work
- The equipment must perform
- The target pest must be controlled

Dr. Tom Wolf

I see no need to use a conventional flat fan nozzle ever again!



Canada Farm Stewardship Program
Supporting the Implementation of
Beneficial Management Practices

“...minimize the potentially harmful effects of pesticide application through the use of new sprayer technology, improved pesticide monitoring, selective use of cultural control practices, and the promotion of biological control methods.”

Practices Eligible for Funding

- Installation of application equipment components to provide more efficient pesticide application (examples include spray curtains, air induction tips, low drift nozzles, pesticide injection systems)
- Information collection and monitoring (includes equipment, materials, and services). Examples include weather monitoring/reporting/prediction equipment, trapping devices, insect sampling equipment
- Etc.

Encouraging the Use of DRTs

Education (Not more testing)

Short Term

- Educational website on drift management
- Promote ASAE Classification Scheme
- Chemical company brochures (match droplet size to product)

Long Term

- Label changes
- Buffer zones with reductions for DRTs (using existing test data)

