

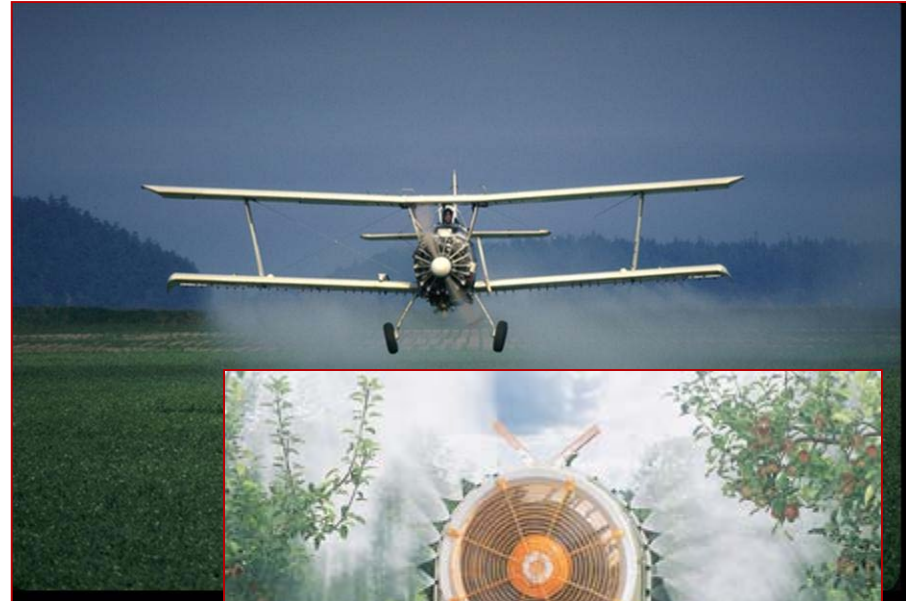
Drift Issues

Topics

- What is drift
- What is not drift
- Why is drift so important
- Important aspects in drift control

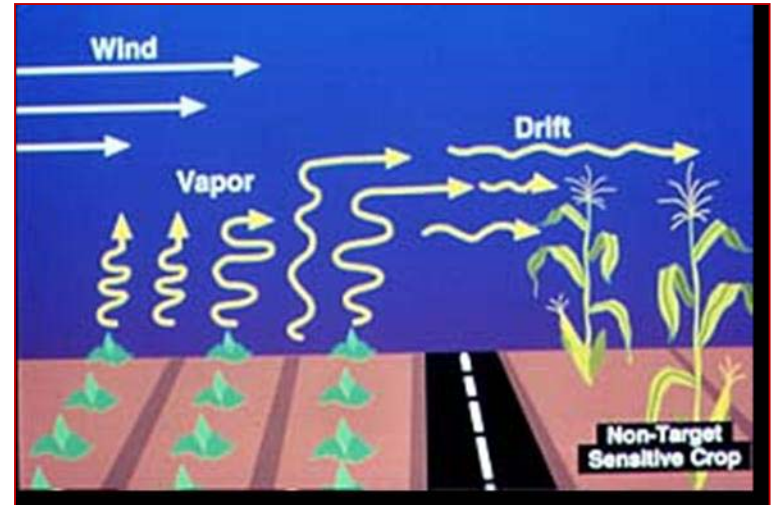
Got Drift?

**All application methods
have some level of drift**



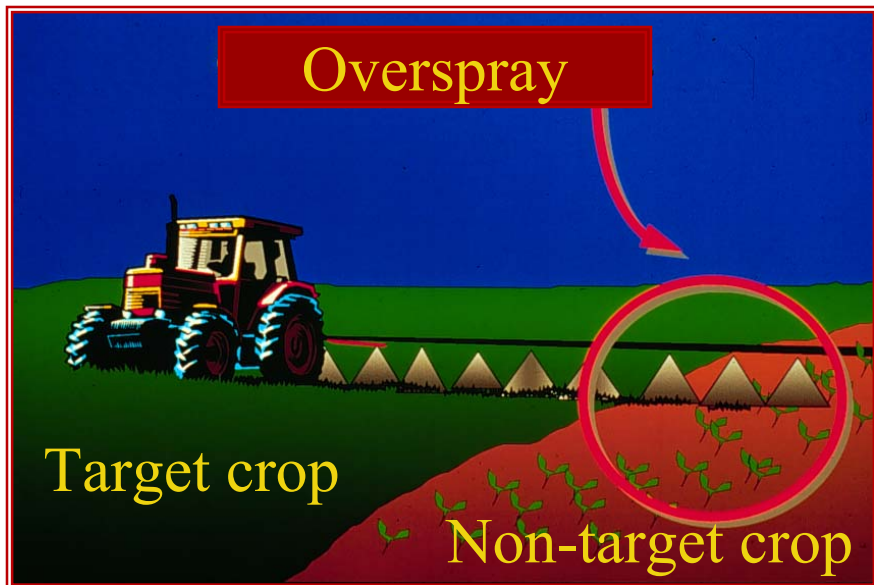
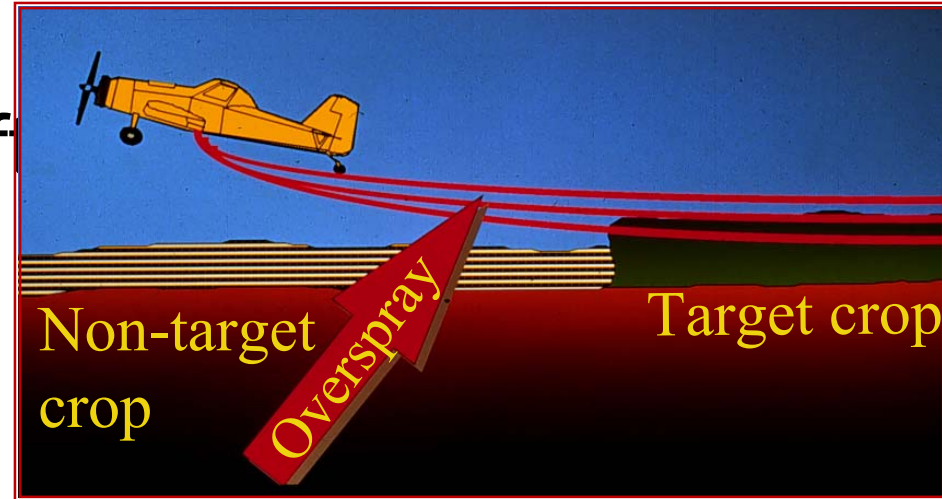
Key Points

- Drift is the movement of spray droplets through the air outside the intended target area
- Drift can be caused by
 - Weather conditions (wind, temperature)
 - Sprayer setup (droplet size, height of application, nozzle selection, pressure)
 - Combination of factors



Key Points

- Overspray is not drift



Key Points

- Drift can be costly to your business and have negative impact in the farming community
- Knowledge is still the best tool against drift.
- Recognize potential for drift-prone situations and always decide against drift.
- Prevention of drift-prone situations is the best remedy

Important Factors in Drift Control

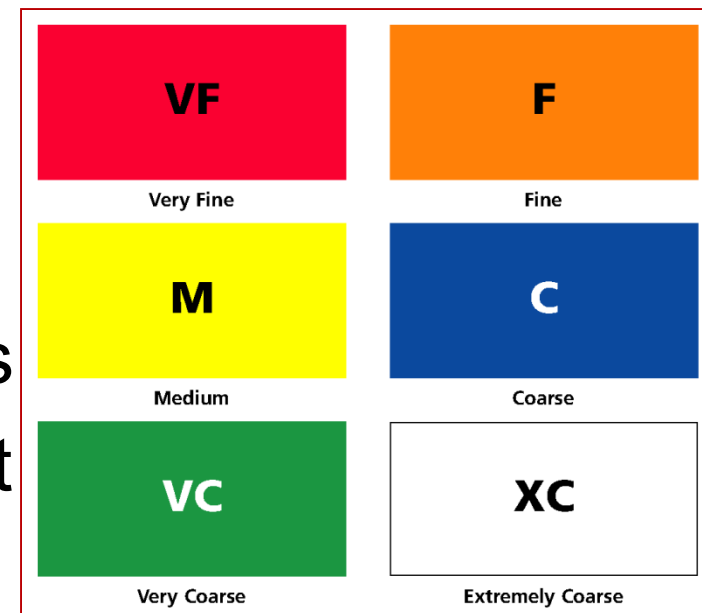
- Droplet Size

- Most important factor for drift

- Measured in microns (μm)


- Fine droplets ($<150 \mu\text{m}$) are prone to drift (take longer to reach the ground)







- Choose nozzle that produces largest droplet possible without affecting coverage and penetration



Important Factors in Drift Control

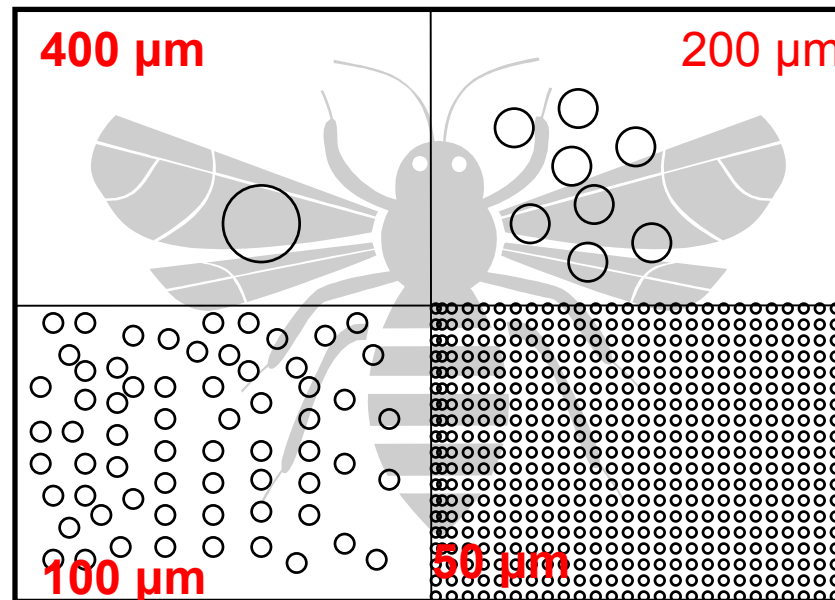
- Be aware that the same nozzle can produce coarse or fine droplets, depending on the pressure

	PSI										
	15	20	25	30	35	40	50	60	70	80	90
TT11001	C	M	M	M	M	M	F	F	F	F	F
TT110015	C	C	M	M	M	M	M	M	F	F	F
TT11002	C	C	C	M	M	M	M	M	M	M	F
TT11003	VC	VC	C	C	C	C	M	M	M	M	M
TT11004	XC	VC	VC	C	C	C	C	C	M	M	M
TT11005	XC	VC	VC	VC	VC	C	C	C	C	M	M
TT11006	XC	XC	VC	VC	VC	C	C	C	C	C	M
TT11008	XC	XC	VC	VC	VC	VC	C	C	C	C	M

					
Very Fine	Fine	Medium	Coarse	Very Coarse	Extremely Coarse

Important Factors in Drift Control

- Drift control vs. Canopy Coverage
 - Systemic vs. contact products



Effects of lower droplet size

Important Factors in Drift Control

- Lower volumes of application can negatively impact drift
 - Reduced volume will reduce droplet size
 - Reduced volume will also increase concentration of active ingredient in the tank
 - Increase canopy penetration/coverage by increasing pressure can make a bad problem even worse

Important Factors in Drift Control

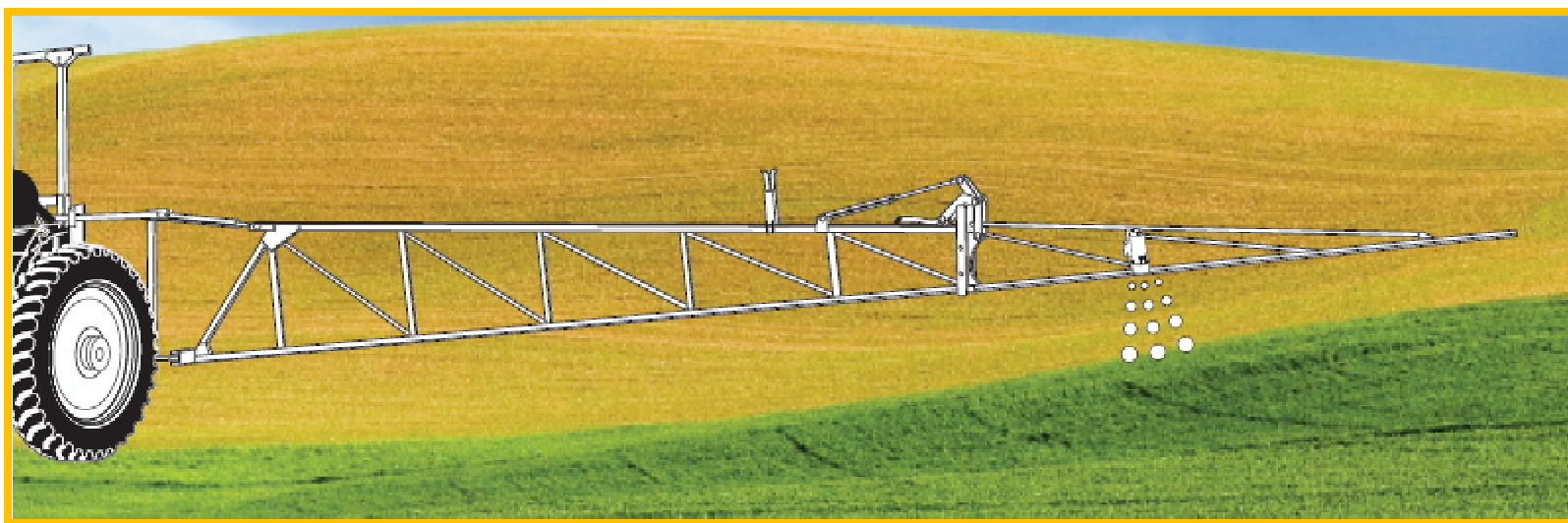
- Wind Speed and Direction
 - Very important for drift control
- Higher wind speeds increase chances of drift
- Low winds (< 3mph) are very erratic
- No wind situations can cause droplets to drift long distances
- Best spray scenario:
 - winds between 3 and 10 mph

Important Factors in Drift Control

- Temperature inversions can trap small droplets and deposit them off target
- What you can control:
 - Equipment setup, nozzle selection
 - Application technique
 - Field conditions
- What you cannot control:
 - Field location
 - weather

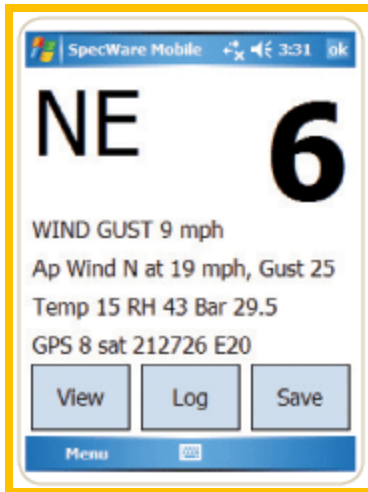
Equipment innovations

- Boom height control: keep constant height above the crop. Increase penetration, decrease drift potential



Equipment innovations

- Sprayer mounted weather station



WatchDog Sprayer Station *Your Drift Management Solution!*

WatchDog Sprayer System Sensors:

- Apparent Wind Speed and Direction
- GPS: Course and Speed
- True Wind Speed and Direction (computed)
- Air Temperature
- Relative Humidity
- Dew Point (computed)
- Barometric Pressure

On-The-Go-Weather

The advertisement features a background image of a red tractor with a sprayer attachment in a field. On the right side, there is a close-up image of the white and blue WatchDog Sprayer Station sensor unit, which is mounted on a tractor. The sensor unit has the 'WatchDog Sprayer Station' logo on top.

Equipment innovations

- Pulsating nozzles (Capstan):
 - Increase the ability to spray at various speeds and still maintain constant pressure and rate



Thank you!

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