

MSU Agriculture Innovation Day

Focus on Fruit and Vegetable Technologies

Best Practices for Spray Applications: More Where You Want it and Less Where You Don't

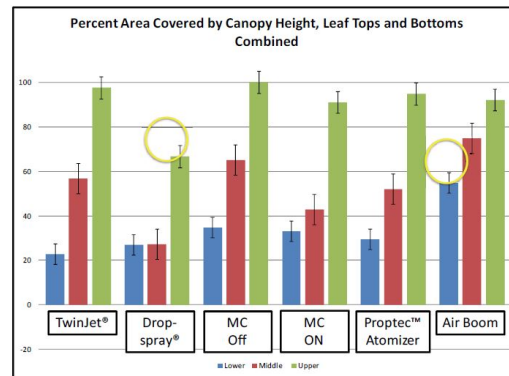
Think about spray application in terms of least coverage

Micrograms per square inch, not pounds per acre. Is every surface getting enough material to do the job?

Disease control with contact based materials happens or fails in your least coverage areas.

Average and maximum coverage usually just “kill dead bugs more dead”.

Overcoverage often accepted as a necessary evil to achieve effective minimum coverage everywhere.



Difference in coverage between best covered and worst covered zone in canopy often as high as 200X different!

Orchards and vineyards can be 6x to 30x or more different between best and worst



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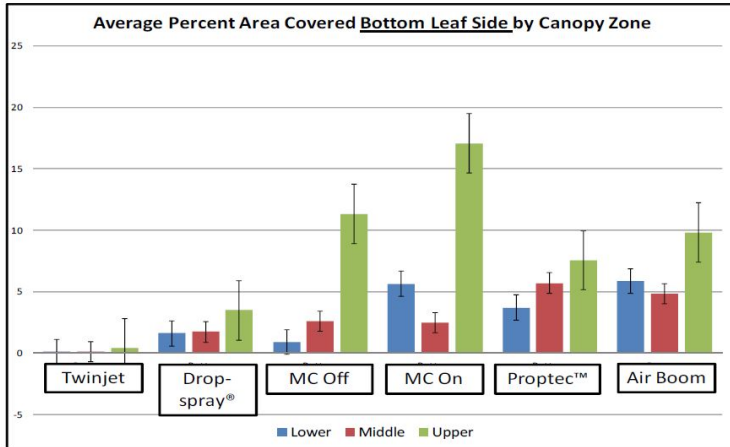
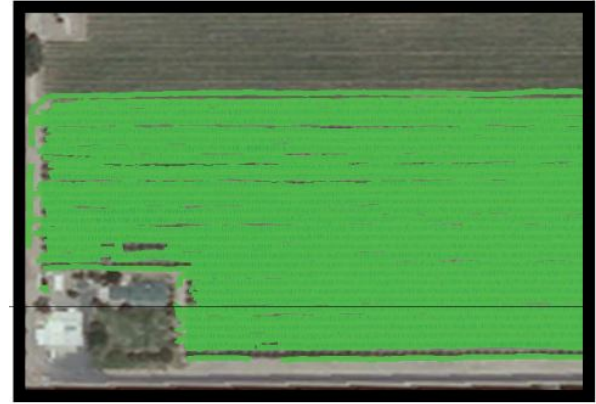
Use technology as a pesticide stewardship best practice that also save you money: Rate controllers, electronic eye sprayers

Rate controllers protect from over and under application, first line of defense against system problems like clogged nozzles and filters.

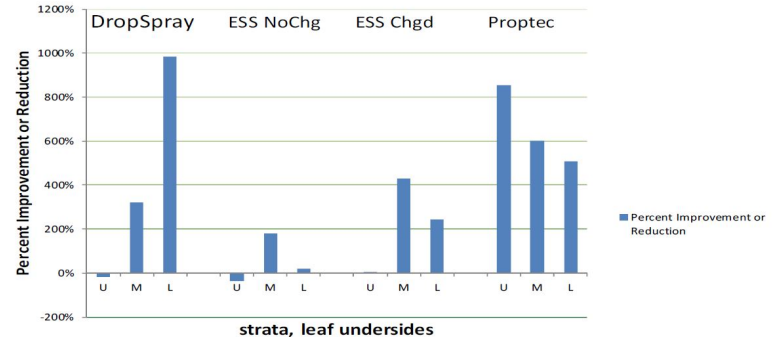
Newer output reporting shows when and where you sprayed; better compliance, better results from lower skilled employees

Electronic eyes: Only spray canopy, 15-85% chemical savings, significantly reduced drift risk.

Photo Credit: Insero Solutions

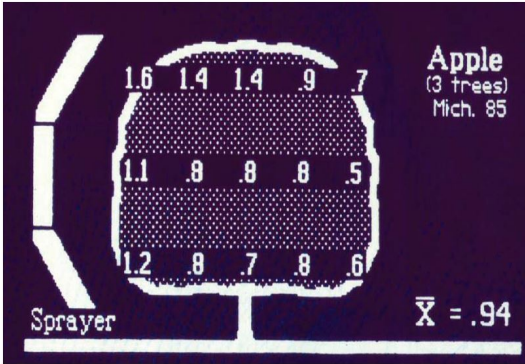


Best Practices for Spray Applications Improvement in Leaf Underside Coverage

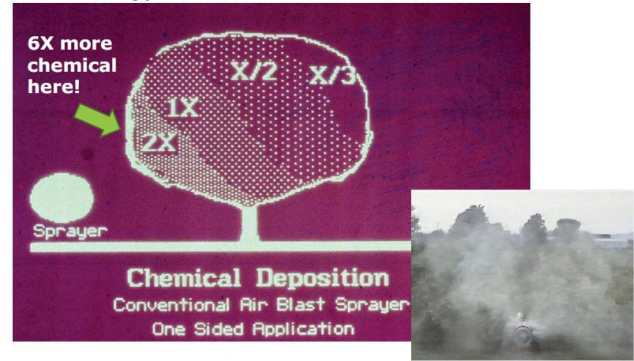


Advanced targeting:

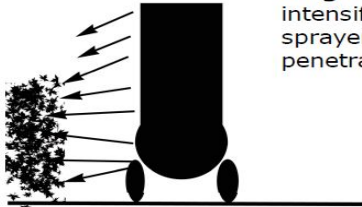
Targeted airflow Small droplets



Non-targeting Sprayers: Expected Coverage Using Conventional Airblast Sprayer Technology



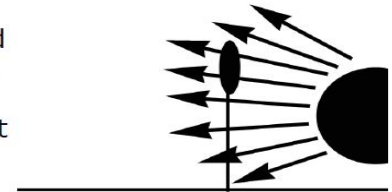
Advanced Targeting: Focus the Air Horizontal & Down on Canopy



Focused, converging Airstreams are like a **magnifying glass**-intensifying the sprayer's ability to penetrate canopy

Canopy targeting: turn off what you don't need

Top: unadjusted airblast sprayer high loss to ground and drift



Bottom: nozzles turned off if not aimed at canopy, total spray and drift reduced

