

SPRAY COVERAGE STUDY

The fact is, a pesticide works only as well as its spray coverage permits. So the question is, "What are the optimum spray methods growers should consider to improve pesticide coverage and performance?" To answer that question we conducted spray shadow and water mobility field experiments.

THE GOALS WERE TO COMPARE:

1. Coverage of water in a one-direction spray versus a two-direction spray
2. Coverage of a water-only spray versus a water spray plus VINTRE at 0.2%

METHOD: Field trials were done to illustrate the optimum performance capable with standard high volume atomizer application on dormant apple trees.

LOCATION: Grabouw, South Africa

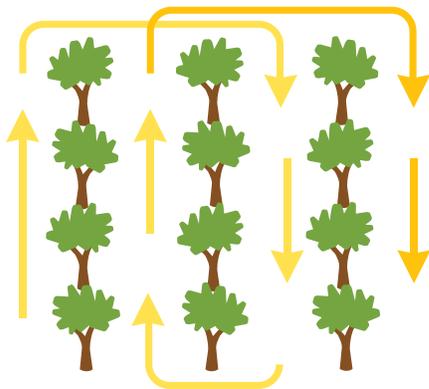
TANK CHEMISTRIES: Fluorescent dye was added and coverage observed in UV light



GOAL 1 - SPRAY SHADOW EVALUATION

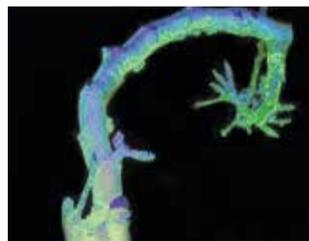
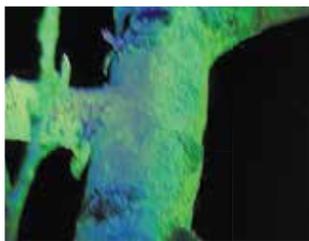
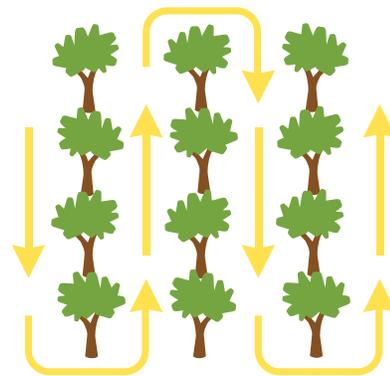
Compare coverage of a one-direction spray versus a two-direction spray

STANDARD APPLICATION
(every second row is sprayed from one direction)

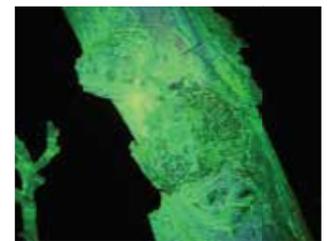
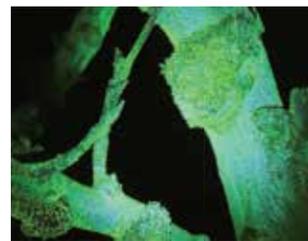


VS

DOUBLE APPLICATION
(every row sprayed from both directions)



On the traditional one-direction spray, spray shadows on untreated areas were observed on the side of upright branches and on the top of horizontal branches high in the tree.



On the two-direction spray (with VINTRE), NO spray shadows were observed on the side of upright branches and on the top of horizontal branches high in the tree.

CONCLUSION

To minimize spray shadows and improve pesticide coverage growers should consider a two-direction spray using VINTRE adjuvant.

GOAL 2 - SPRAY WATER MOBILITY

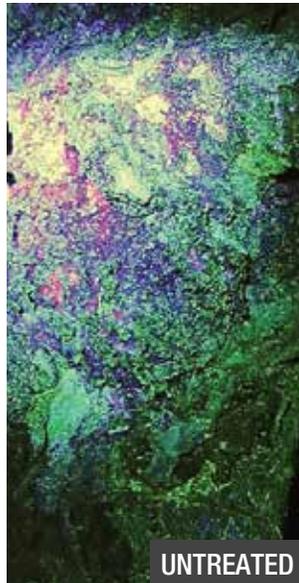
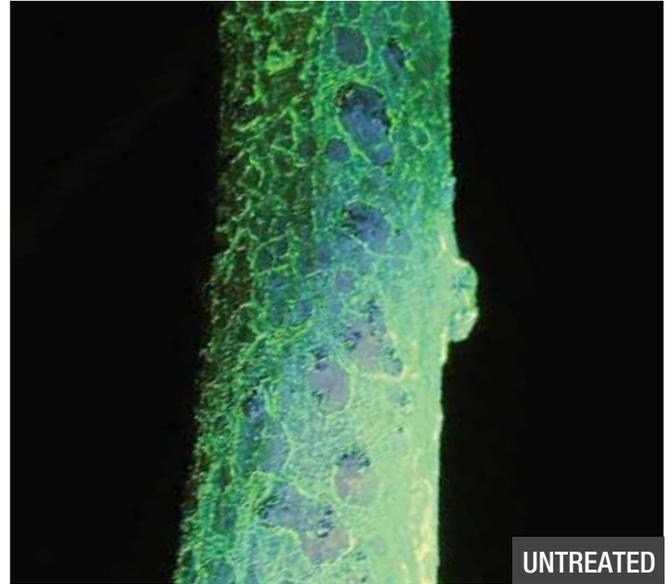
Compare coverage of a standard water only spray versus a water spray plus VINTRE at 0.2% v/v

OBSERVATIONS

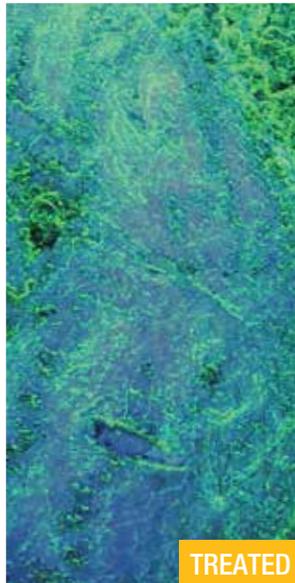
Coarse bark is hydrophobic and spraying with water results in uneven and blotchy wetting. Untreated water does not penetrate easily into cracks. VINTRE improved the wetting and spray penetration of coarse areas, cracks and forks of branches including the wetting on smooth bark.



Uniformity of coverage throughout the tree



Wetting and penetration of coarse areas, cracks and forks of branches



Even wetting on smooth bark

CONCLUSION

For peak pesticide performance growers should add VINTRE to tank mixes and spray in two-directions to eliminate spray shadows.