

Adjustment of the quantity of PPP according to the leaves density and the sprayer parameters in orchards

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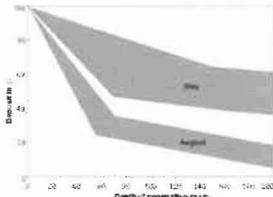


Introduction

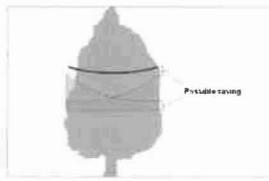
Variability in leaf density leads to differences in the penetration of canopies.



Leaf density of apple trees varying considerably



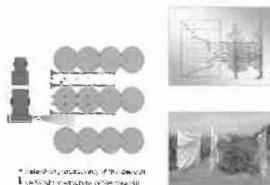
The existing differences in leaf density causing disparities in deposits



Deposit on the backside of the tree - seen from the sprayer - is additional and can be saved

Method and results

Measuring all parameters which influence the penetration and measurement of the deposit in front, middle and on the backside of the tree will lead to a data pool.



Any arrangement for measuring the deposit inside and outside trees. (about 300 experiments)

Parameter-specific publications for		
Parameter	Aglyptor	the machine and other factors
Density of leaves	Depend on density	Dependent
Depth of the tree at the start of application	Depend on density	Depend on density
Parameter-specific mean	100%	100%
Unknown parameter model	100%	Penetration Glossiness Wetness
Age of the sprayed trees	Age of the sprayed trees	Age of the tree
Volume of the deposit	Volume	Volume

Selected parameters influencing deposits within trees.

Measure specific publications for	
tree	sprayer
Density of leaves	40% spray of the sprayed
Volume of the tree at the start of application	100%
Unknown parameter model	Depend on density

Penetration of the tree - formation of a spray

Results of the multiple regression analysis between the parameters possibly taking an influence and parameters and deposit measured:

1. Parameters actually taking an influence
2. An equation to describe the deposit on the backside of the tree.

Usage

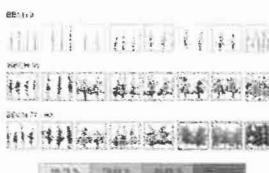
Multiple regression analysis of the data pool delivers a model to calculate PPP saved.



Examples for calculating the reduction of PPP.



Two possible ways of how to use results.



An example of a handout specific for the sprayer used. The colors of the frames show the reduction of PPP