

2024 Jon Clements Featured Speaker at the New Jersey State Horticultural Society Summer Meeting and Orchard Tour

Win Cowgill

*Professor Emeritus Rutgers University
Win Enterprises International, LLC*

Jon Clements

Extension Educator, University of Massachusetts Amherst

Wightman Farms, Morris County NJ and owner Adam Costello welcomed the New Jersey State Horticulture Society and other farmers on a summer educational meeting and research tour for commercial fruit growers and industry representatives on June 27, 2024. Twenty five growers participated on a beautiful sunny early summer day, sponsored by the [New Jersey State Horticultural Society](#).

Wightman Farms owner Adam Costello led a farm tour/wagon ride of the orchard. Win Cowgill, Jon Clements and Adam provided demos and instruction of growing tall spindle apples, summer pruning apples, precision apple crop load management, and peach and cherry culture. Jon Clements, Extension Educator, University of Massachusetts was the featured guest speaker. Jon demonstrated and spoke on using a drone and ATV-mounted camera for precision apple crop load management and yield maps. Using Outfield (outfield.xyz) and Vivid Machines (vivid-machines.com) for the drone and ATV-mounted camera respectively, he showed how multiple programs — such as blossom and fruit variability “heat” maps — can be used for better precision apple crop load management using plant growth regulators for thinning thereby improving profitable yield and return bloom. The link below highlights the handout Jon provided on the new Outfield technology.

Jon demonstrated and spoke on using Outfield drones/ Vivid Machines- for apple crop load management and



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yield maps. Jon will also review multiple programs for better predicting crop load management for better precision with plant growth regulators for improved yields and return bloom.

The link below highlights the handout Jon provided on the new Outfield technology.

[Precision Apple Cropload Management \(PAC-MAN\)](#)- Link to the Precision MGT handout from the event.



Jon demos the drone flyover of one of Wightman's apple locks which resulted in the fruit variability map - Photo: Win Cowgill.

University of Massachusetts - Cold Spring Orchard
Wightmans
Fruit Variability, 27 June 2024



VARIABILITY MAP



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Outfield Drone- Photo Jon Clements

Outfield fruit variability map produced post-flyover



DJI drone controller with flyover map displayed on the iPhone - Photo: Win Cowgill



Wightman Farms aerial view - Photo: Wightman Farms



Vivid Machines (vivid-machines.com) camera mounted on the hood of the Kubota ATV.



From left to Right- Adam Costello, Jamie Bourgeois, Kary Broadhecker, Tim VonThun, Tor Andersen



Example of High sample apple tree as seen but the Outfield drone flyover

High sample [DJI_0947.JPG]



Wightmans Drone View of High Crop Load Trees

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