

The background of the image is a blurred, close-up view of green grass, with the blades of grass creating a sense of motion and depth. The colors range from a vibrant green to a darker, almost blackish-green in the shadows.

# TIPS AND TRICKS

# SECURING GROUND CONTROL POINTS FOR GEOREFERENCING DRONE IMAGERY

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## EXTRACTION EFFICIENCY – METHOD CONSIDERATIONS

**Historically, extraction efficiency has not always been demonstrated for pesticide residue methods which may result in the underestimation of sample residues from regulatory studies.**

**To use these studies for Product Registration, extraction efficiency has to be proven. What should we do if we either don't have, or have access to, extraction efficiency data?**

**What is the solution?**

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# AERIAL PLOT – CLOUD SOFTWARE

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## Intuitive Cloud Software

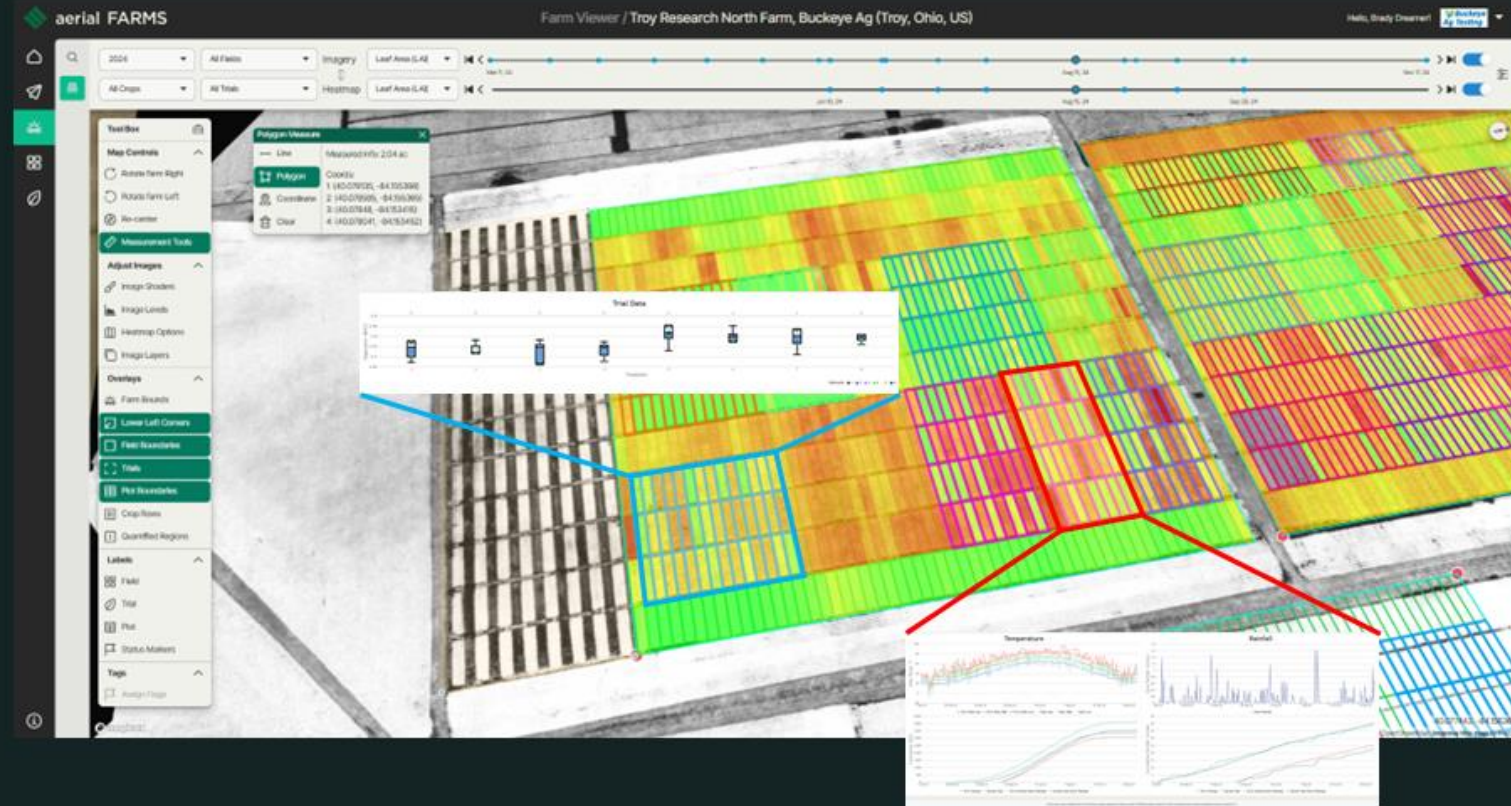


### aerial FARMS Advantages

- Year on year plot quality
- View field spatial variability
- Virtual scouting
- Secure access & sharing

### Useful Features

- Measurement tool
- Heatmap shading
- Visualize box plots
- Download weather data (NASA POWER)
- Advanced plot metrics available (please inquire)



Dashboards and geospatial viewers focused on collaboration & driving business decisions

# DRONE IMAGERY FOR PEST DEFOLIATION ASSESSMENTS

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- Colorado Potato Beetle trials involve counting egg masses, larvae by stage, adults, and providing a % defoliation estimate per plot.
- Tested the use a combination of drone imagery and software to count the number of flowers remaining per plot following CPB feeding.
- Drone flight ~40 ft above plots, processed the imagery in Solvi. Trained a few images in detecting flowers using Solvi's built in AI tools.
- Zonal statistics tools within Solvi calculated number of flowers per plot, import to ARM for statistical differences.



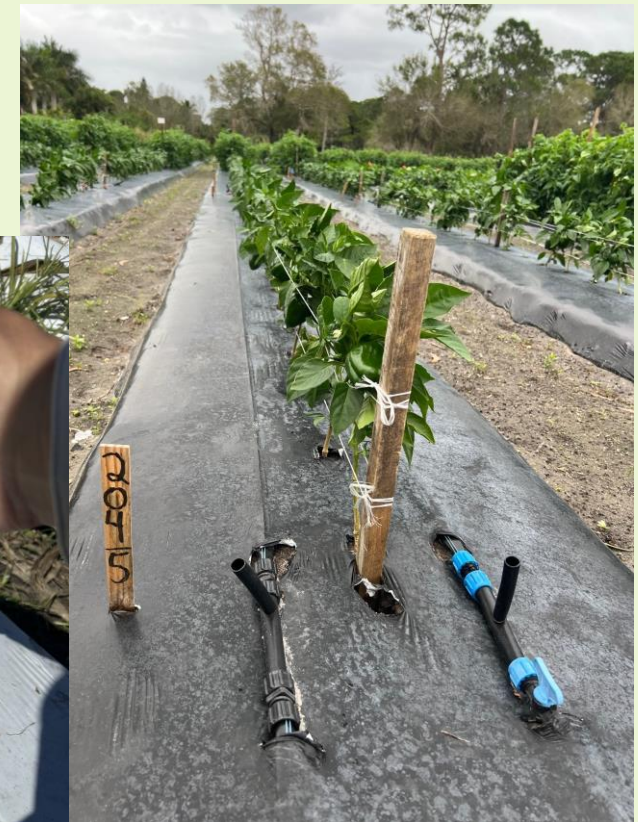
## USING MICROSOFT TOOLS

- Using the Microsoft “To Do” app to schedule and stay on track with daily events
- Using Teams to keep ARM files and other data files centrally located for all employees to access

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# INJECTION APPLICATIONS

- Injection applications – usually require CO<sub>2</sub>, plastic bottles, and connectors for each plot. Now, we only use syringe, mixing rates are calculated by plot area.
- Use a multi-crop trial system allows us to generate data on multiple crops simultaneously when same rate and applications are required.



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# IN-HOUSE APPS FOR CALIBRATION

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8:57

Pesticide Calibration

MPH (From calibrated pass time)  
3.22 3.22

Calibrated pass time (sec per calibration distance)  
10.60 10.60

GPA  
20

GPA Desired  
20

ML - caught per min  
820

Feet - Calibration Distance  
50

Nozzle Spacing - Inch  
20

Activity Log Weekly List Trial List Efficacy Test Su...

Liquid Calibration

8:58

Pesticide Calibration

Calibrated pass time (sec per calibration distance)  
19.44 19.44

GPA  
19.44 19.44

GPA Desired  
Enter GPA if calculating pass time

ML - caught per min  
820

Sec - pass time  
10.3

Feet - Calibration Distance  
50

Nozzle Spacing - Inch  
20

Activity Log Weekly List Trial List Efficacy Test Su...

Granular Calibration

8:59

Granular Calibration

Clear Form After Every Use!

Calculates Required Speed

Speed (MPH)  
2.35 2.35

Pass time (sec/50 ft)  
14.48 14.48

Catch (lb per min)  
4.28

Target rate (lb/ac)  
150

Catch Width (ft)  
6

Activity Log Weekly List Trial List Efficacy Test Su...

9:01

Mixing Info

GPA  
20

Mix Size  
13

Acres per Mix  
0.65

Liquid Product Rate  
1.5

Amount of Liquid Product to Add

Gallons	0.12
Quarts	0.49
Pints	0.98
Fl oz	15.6
ml	461.3

Activity Log Weekly List Trial List Efficacy Test Su...

Mixing

Created with Glide (no-code app builder)