POTATO EXPO

AUSTIN

TEXAS 2024

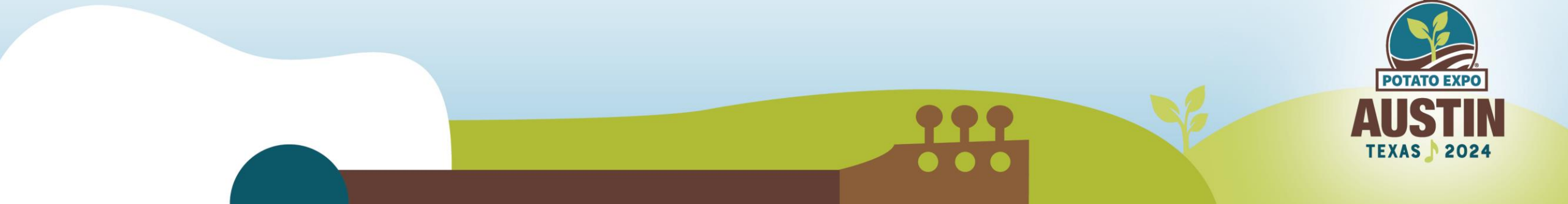
Potato EXPO

JANUARY 10-11, 2024


Bluefield Seeding Solutions
Increase productivity and achieve higher-quality crops with our state-of-the-art agricultural planting technology.

Background

Bluefield Sensing Solutions Inc. (BSSI) was built on the farm value of hard work and the knowledge that time is a precious commodity – especially in the spring during planting season.



The problem

The Solution - Press Wheel

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The Solution - Press Wheel

How it works:

- Captures seed immediately after being released by the planter and holds it against the ground long enough to prevent forward movement

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The Solution - Press Wheel

Benefits:

- Improve seed placement accuracy
- Cover more ground in less time
- Increase profit through higher marketable yield and improved size profile

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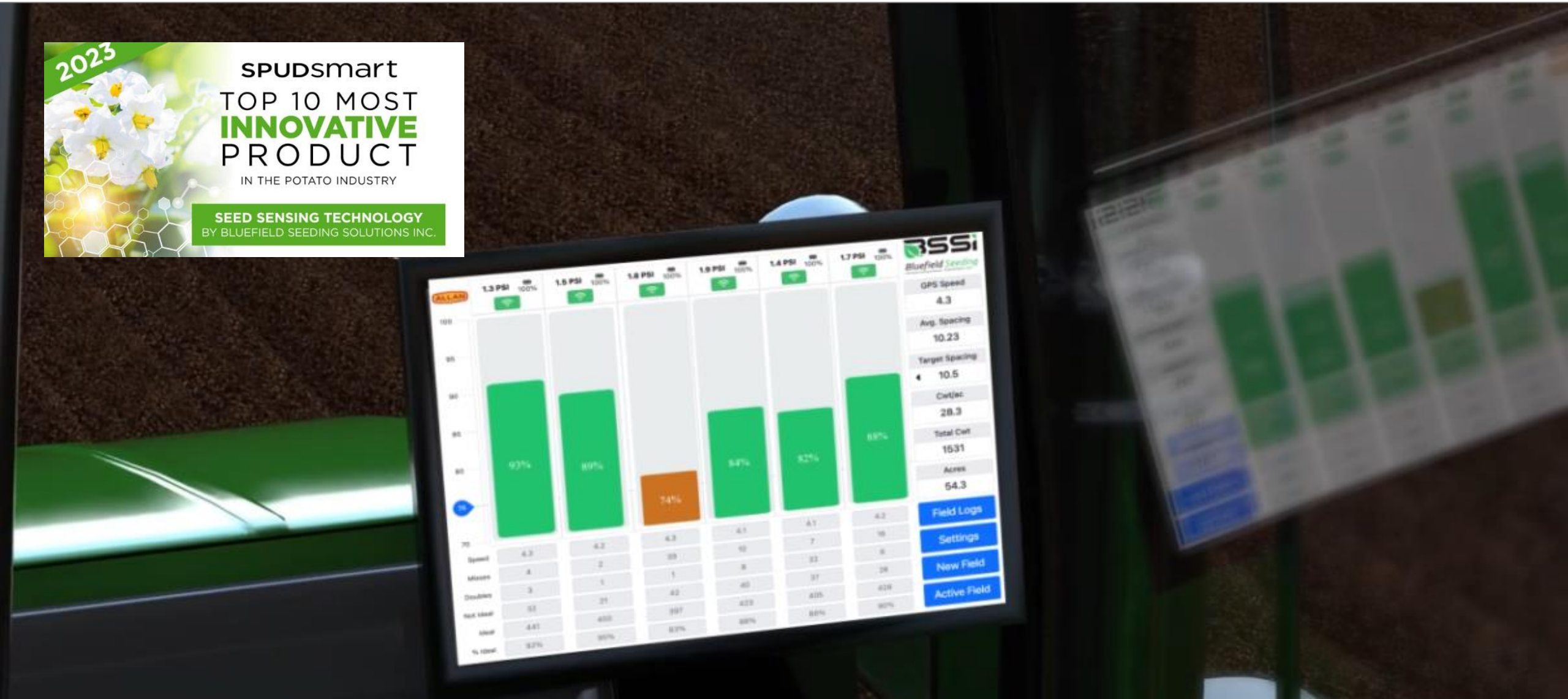
Seed Sensing



Seed Sensing

Benefits:

- Monitor seeding rate and average spacing in real time
- Eliminate manual digging behind the planter
- All data is automatically uploaded to secure cloud storage and can be viewed remotely

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ALLAN
1.3 PSI 100%
1.5 PSI 100%
1.8 PSI 100%
1.9 PSI 100%
1.4 PSI 100%
1.7 PSI 100%
BSSI
Bluefield Seeding Solutions Inc.
100
95
90
85
80
75
70
92%
95%
83%
88%
86%
90%
GPS Speed
4.3
Avg. Spacing
10.23
Target Spacing
10.5
Cwt/ac
28.3
Total Cwt
1531
Acres
54.3
Speed 4.3 4.2 4.3 4.1 4.1 4.2
Misses 4 2 39 10 7 16
Doubles 3 1 1 8 22 6
Not Ideal 32 21 42 40 37 26
Ideal 441 450 397 423 405 428
% Ideal 92% 95% 83% 88% 86% 90%
Field Logs
Settings
New Field
Active Field

Trial results (2022/2023)

When evaluating a product or management practice we need to determine whether it does one of three things:

- Save money
- Make money
- Save time

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Trial results (2022/2023)

- Trials were carried out in 15 sites in 2022 and 2023 by Genesis Crop Systems and Contour Consulting

- PW was compared with conventional planters to assess plant spacing accuracy, consistency, early season canopy growth, and marketable yield

- PW also tested against itself (multiple speeds)

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Trial results (2022/2023)

Like many AgTech products and services, how do we measure results?

How do we compare “apples to apples” and generate a large enough sample size to base decisions on?

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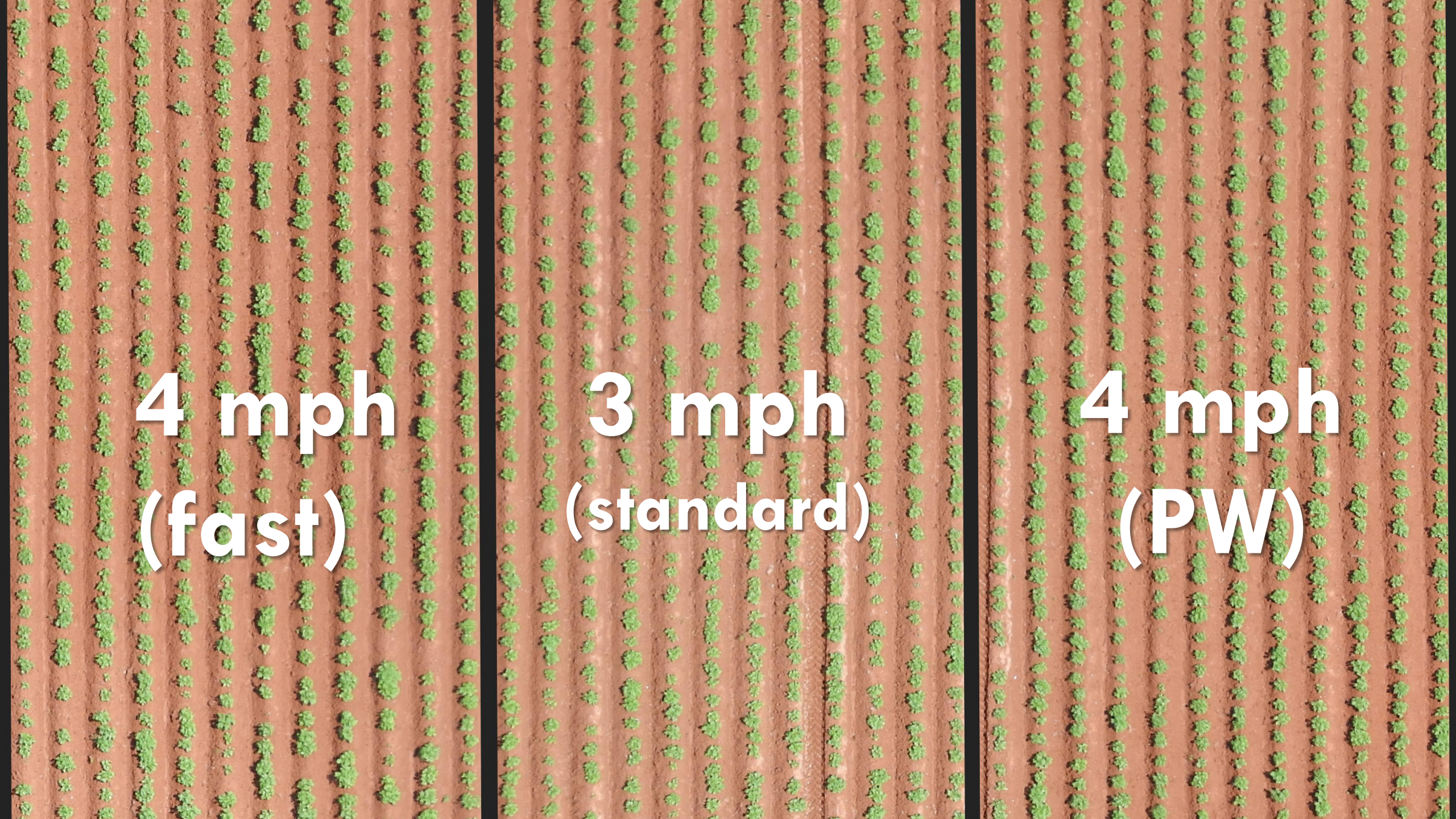
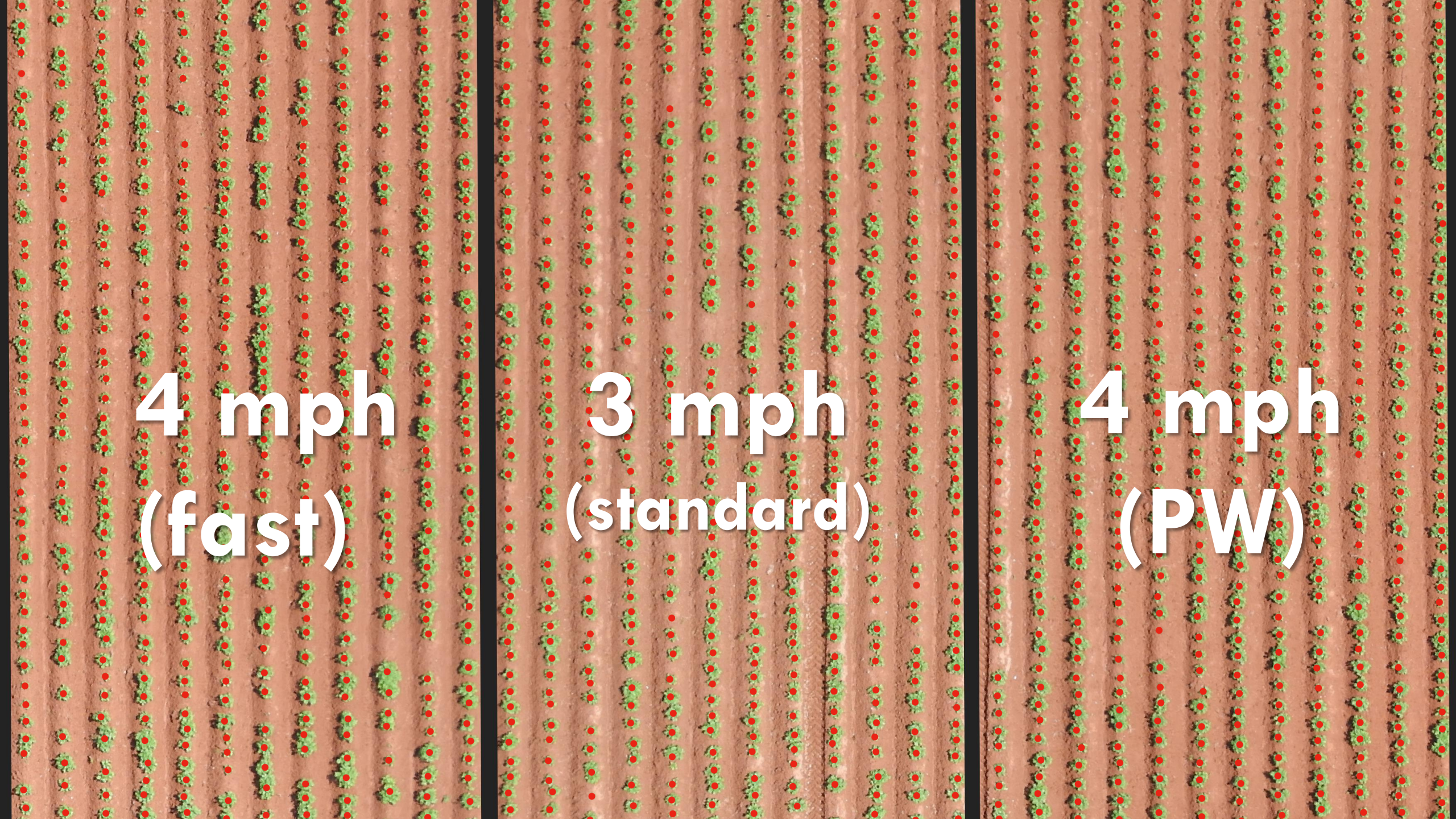

4 mph
(fast)
3 mph
(standard)
4 mph
(PW)


4 mph
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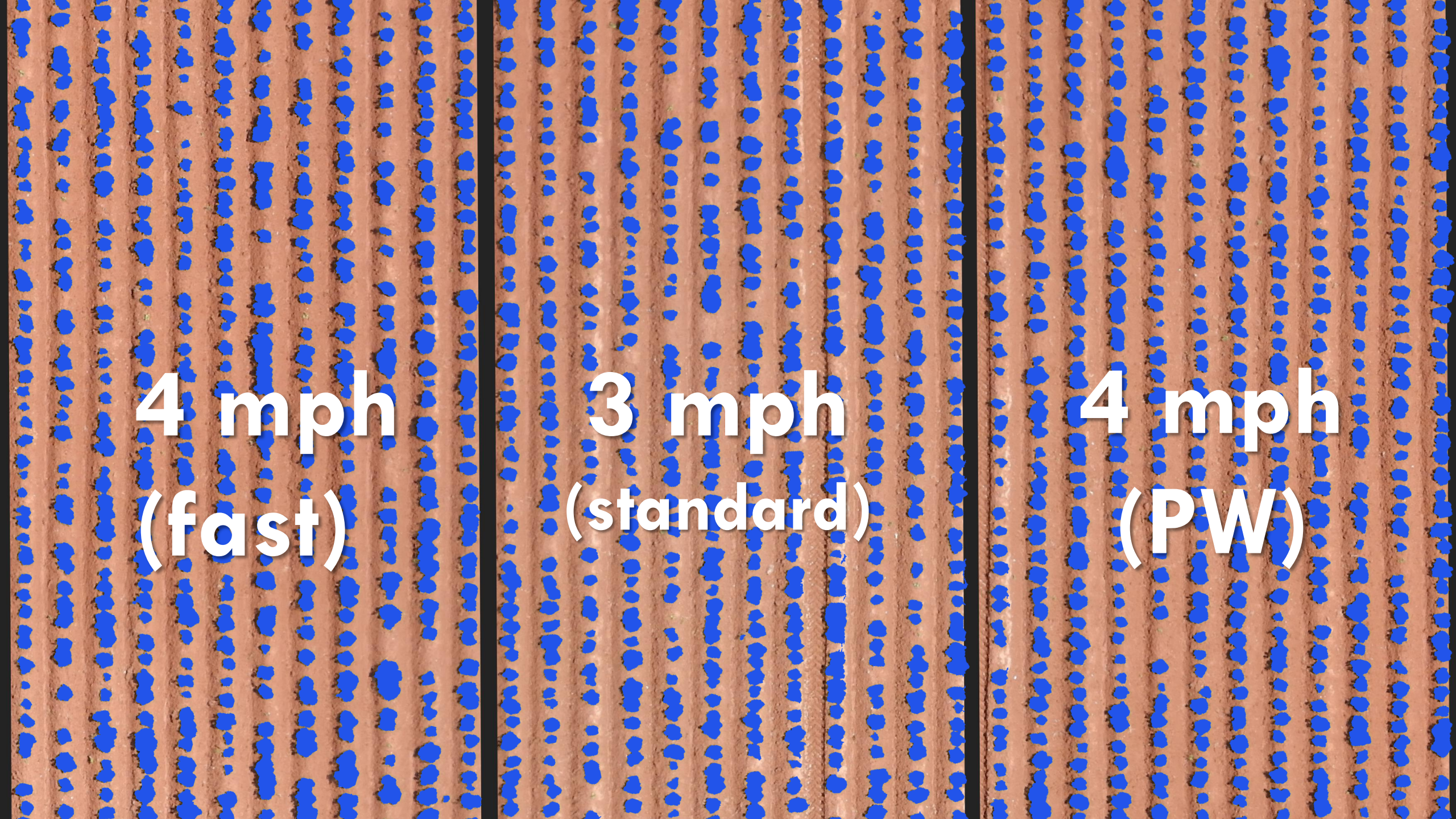
(standard)
4 mph
(PW)


4 mph
(fast)
3 mph
(standard)
4 mph
(PW)


18.1
13.8
14.3
18.7
14
16.2
16.9
16.3
15.2
14.3
19
18.1
14.7
15.8
19.1
15.2
14.8
15.4
17.7
14.9
12.7
27.6


0.098
0.084
0.203
0.397
0.064
0.189
0.111
0.254
0.073
0.295
0.031
0.159
0.356

Trial results (2022/2023)

- Approx. 400,000 plants assessed in all trials
- Drone measurements verified with ground targets > 96% accuracy

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Spacing

- PW resulted in more accurate and consistent spacing in **10 out of 10 sites** when compared with conventional planters traveling the same speed

- It outperformed conventional planters traveling slower at **7 out of 8 sites**

Gaps

- Spacing between plants > 20” was flagged as a “gap”
- PW had less “gaps” than either fast or slow conventional planters at **8 out of 10 sites**

Canopy Cover

- PW showed larger mean plant size (statistically significant) at time of survey in **7 out of 10** treatments

Yield

- Over 120 10’ strips there were no statistically significant differences in yield between treatments (small sample sizes)
- PW yielded, on average, **$135/ac** more marketable yield than conventional planters traveling the same speed over both years
- PW marketable yield was **> in 2022**, **< 2023** vs slower speeds
- Farm 3 seen an average profitability increase of **$538/ac** (5 sites, n = 60) traveling 18% faster with PW than their typical speed

Trial results (2022/2023)

Summary

- PW resulted in more accurate and more consistent spacing 10 out 10 times
- PW resulted in better emergence 7 out of 10 times
- PW allowed farms to plant faster (avg. 18%) without sacrificing accuracy and increased yield by 30 cwt/ac

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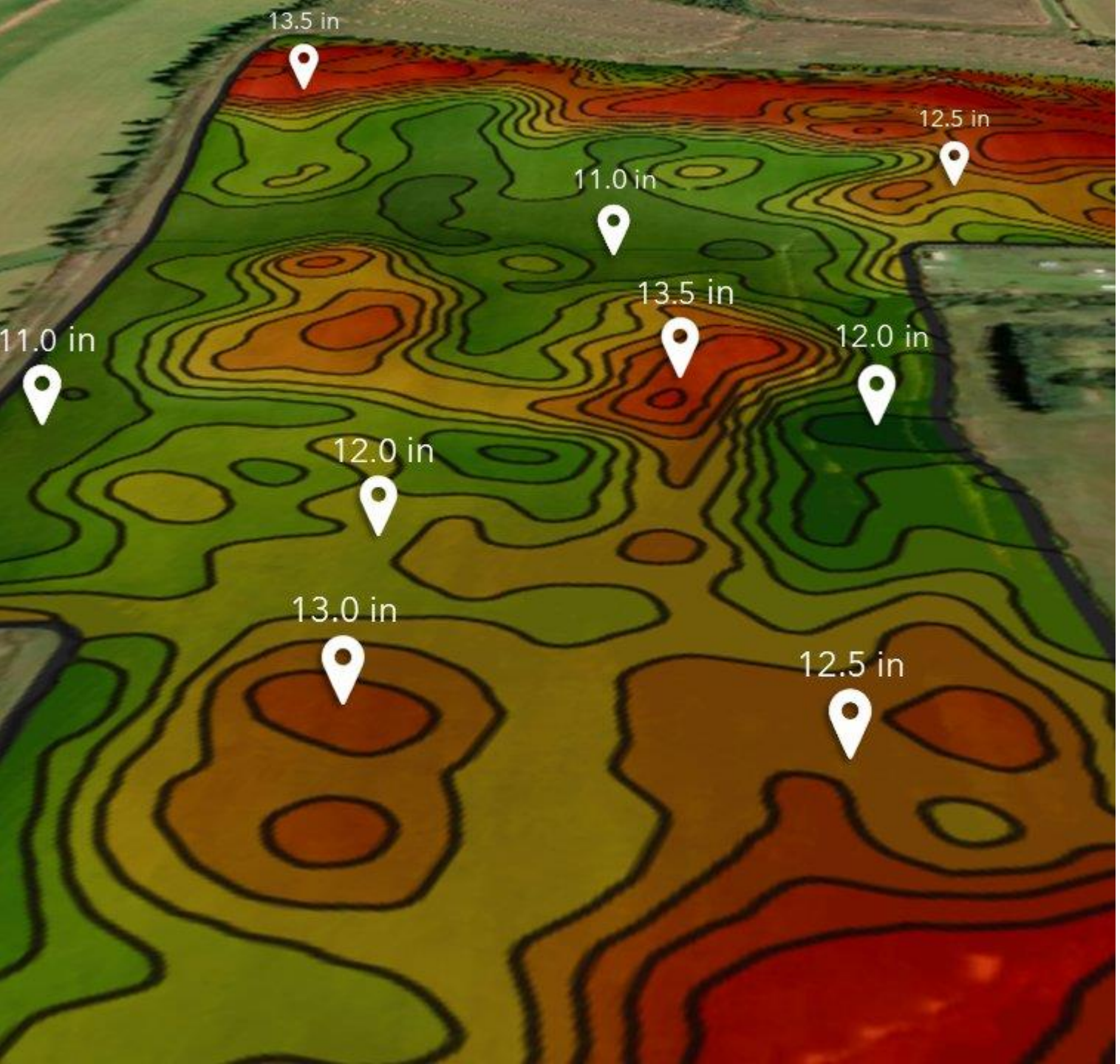

VR Potential

- Has shown average profitability increase of $111/ac over 3 years
- We should make sure our spacing is accurate before pursuing VR!

- Save money ☑
- Make money ☑
- Save time ☑

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Final thoughts

Thank you!

Come see us at booth 724