



Aerobotics

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March 2019



How do farmers currently collect data and monitor their orchards?



What are the problems with the current status quo?



Human
Scout



Low
accuracy



Partial coverage
of the field



Poor
documentation





**What are the challenges that
come with traditional farming
methods?**



What are the challenges that come with traditional farming methods?

Pest and disease damage causes yield losses of **20%-40%** annually

HLB and Phytophthora disease kills **5 million** citrus trees per year

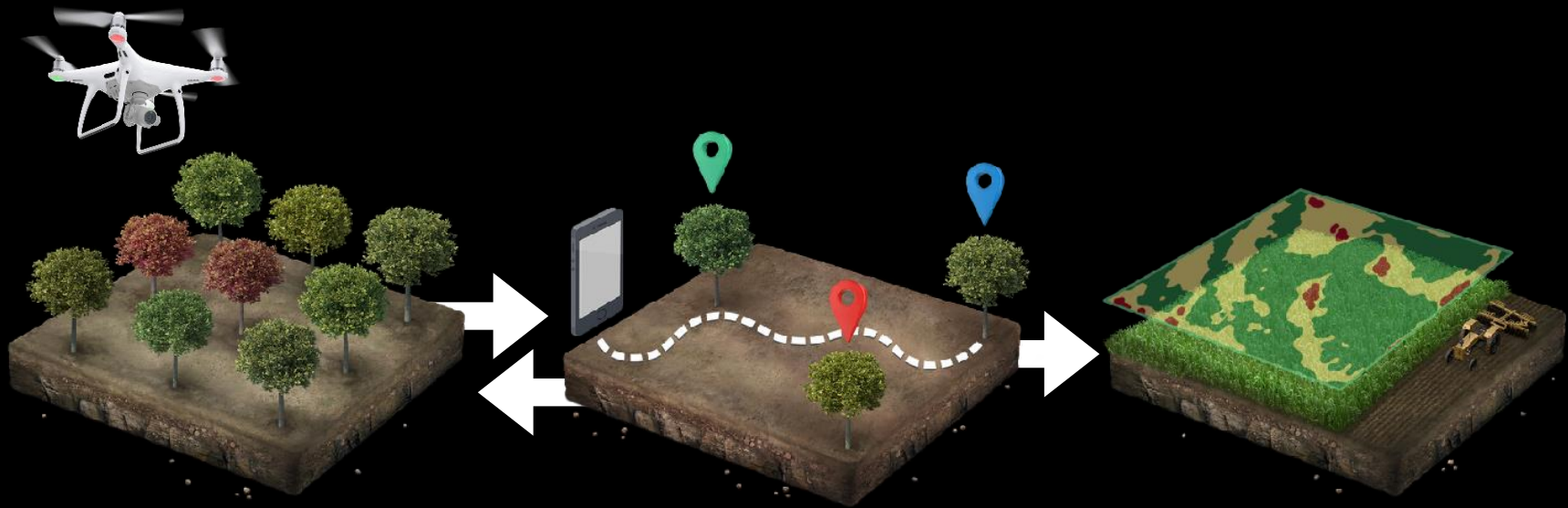
Current yield estimates are **20-40%** out causing losses of **\$2000/acre**



Monitor **Every Tree**



Aerobotics Solution



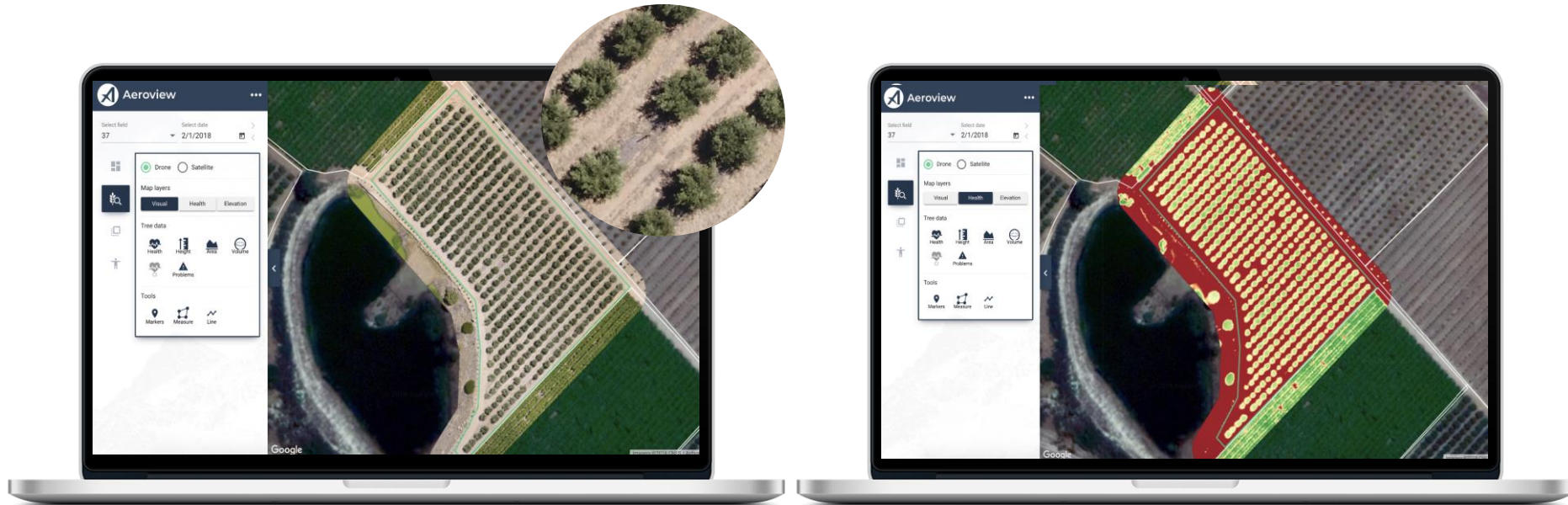
Early problem detection

Smart scouting

Reporting



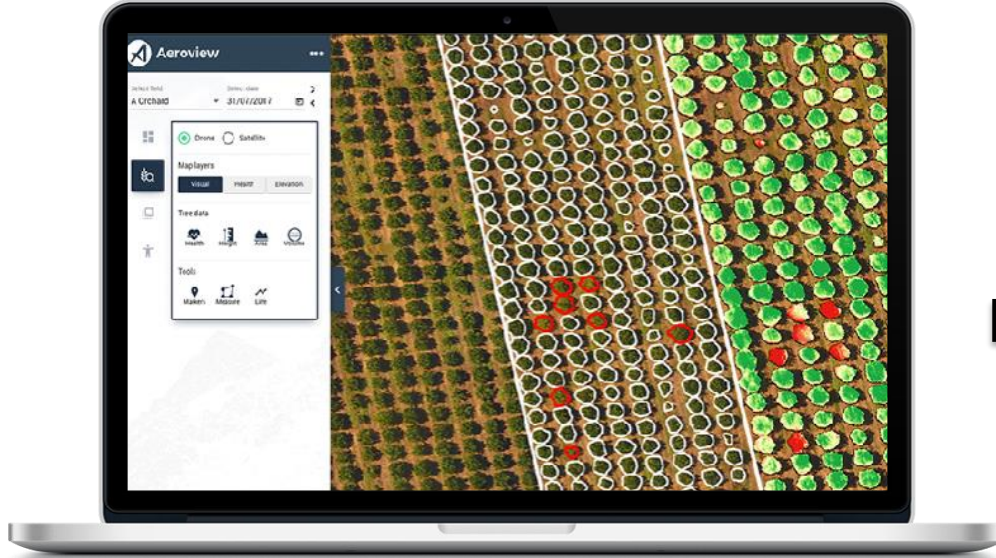
Hi-res Imagery



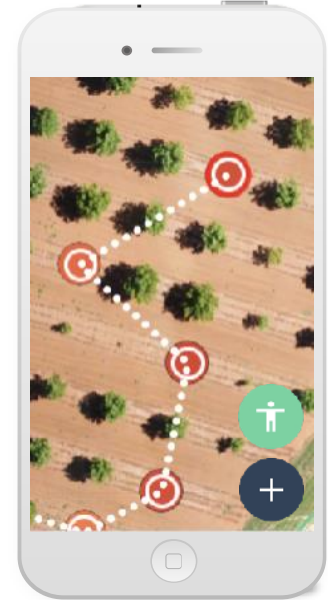
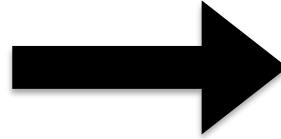
Turning **Imagery** into Data



Automated **Scout Routes**

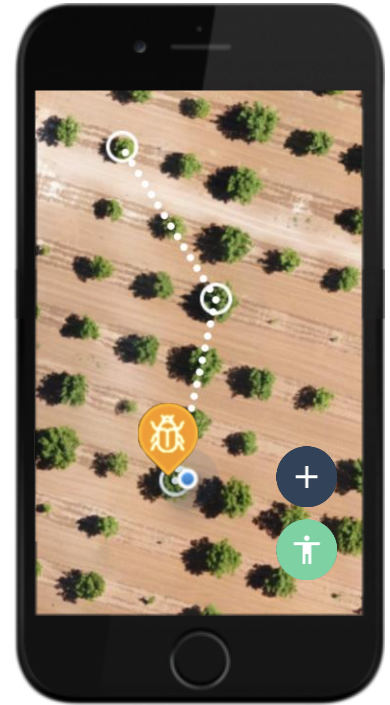
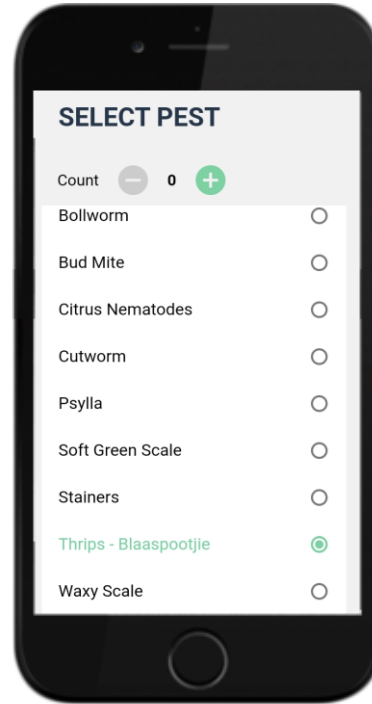
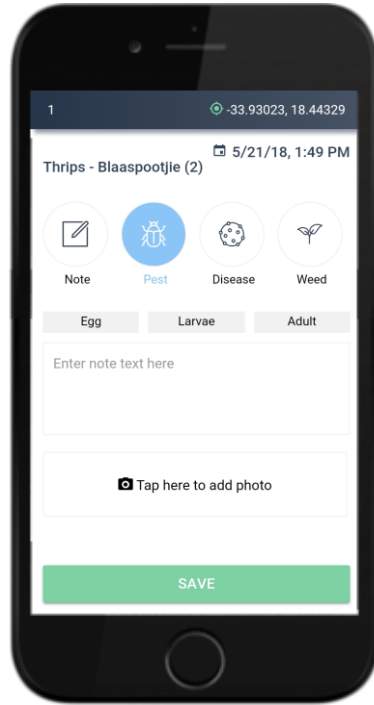
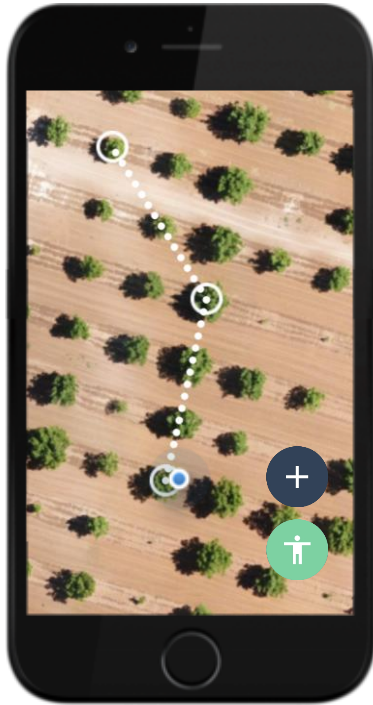


Automated problem
detection

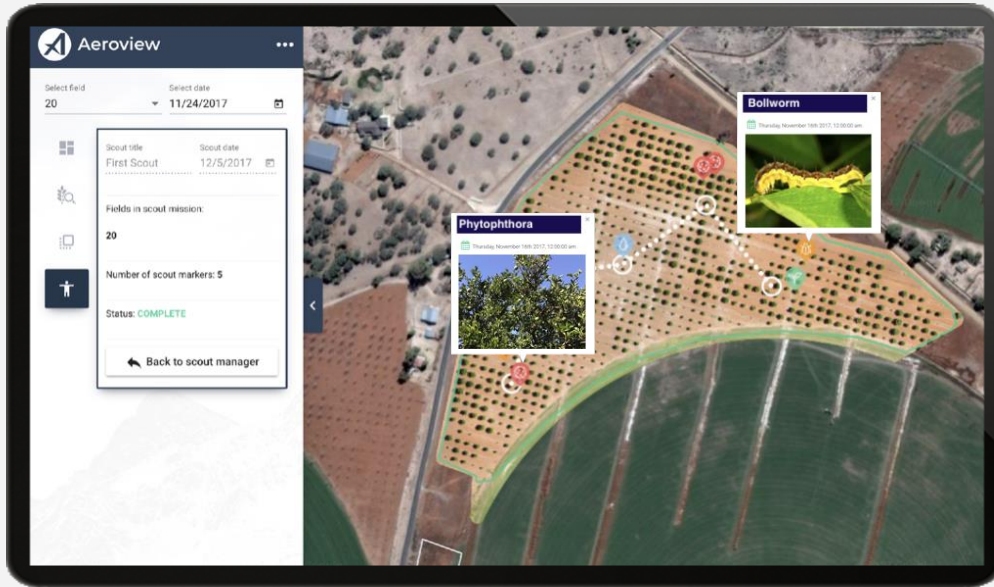


Automated scout
routes

In-field **Scouting** Application



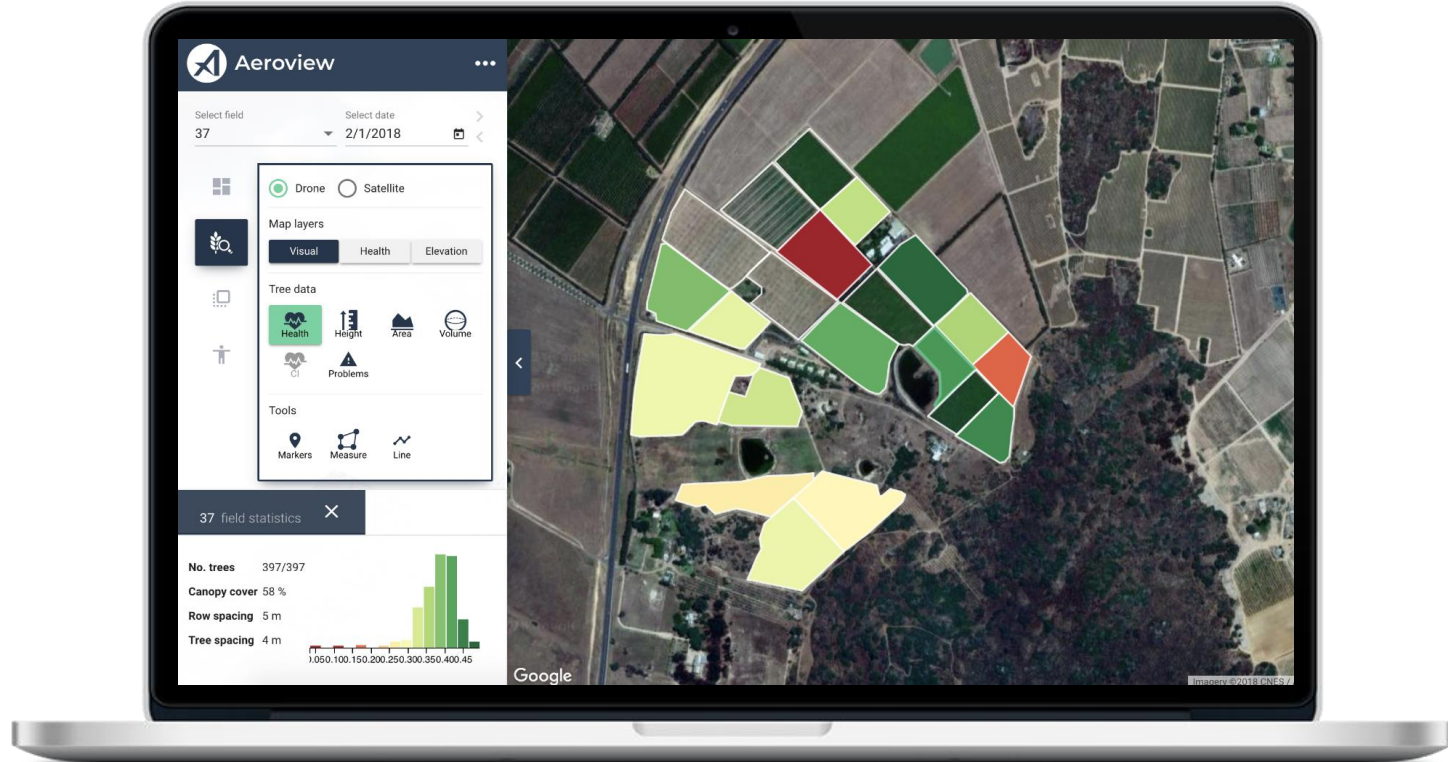
Georeferenced Results



All results from in-field are sent to your computer.

Results are geo-located so you can find the exact spots again!

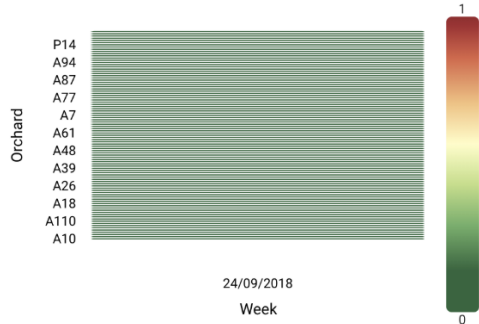
Farm Performance Overview



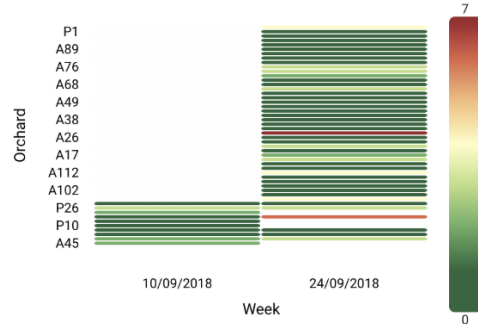
Intuitive Reporting



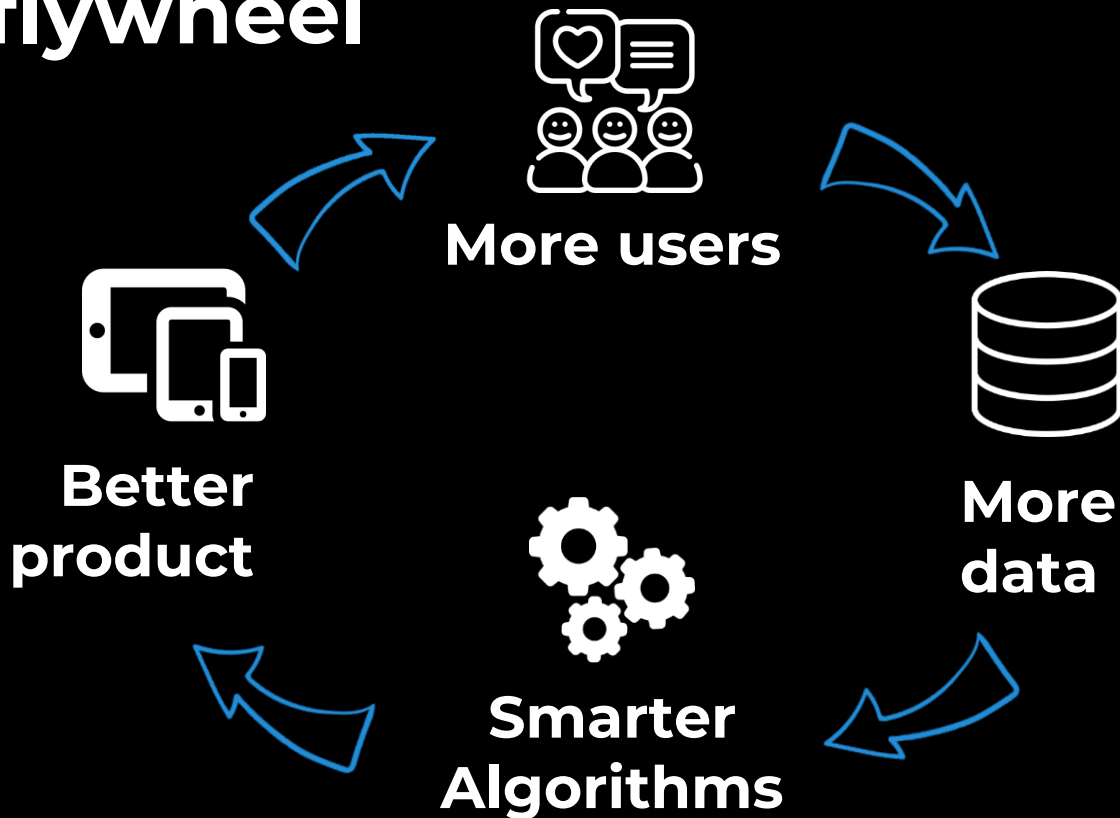
Codling Moth



Bollworm



Building a data flywheel



And the data is starting to fly in...

Aerobotics Cumulative Trees Found



Drone Scouting **Trees**



What can we see?



Deficiencies



Bud Mite



Thrips



Toxicity



**Flowers
and Fruit**

Near-future | **Fruit counts**



Aggregated Dashboard

ANALYSIS | Data for Bank Case Study

NBI ONLY ADJUST YELLOW CELLS

JULY 2018 [VERSION 1.0]

FARM PERFORMANCE DASHBOARD

SORT RANGE BY	Average NDVI per Tree
MEAN	0.54
MEDIAN	0.55
STANDARD DEVIATION	0.17
VARIANCE	0.03

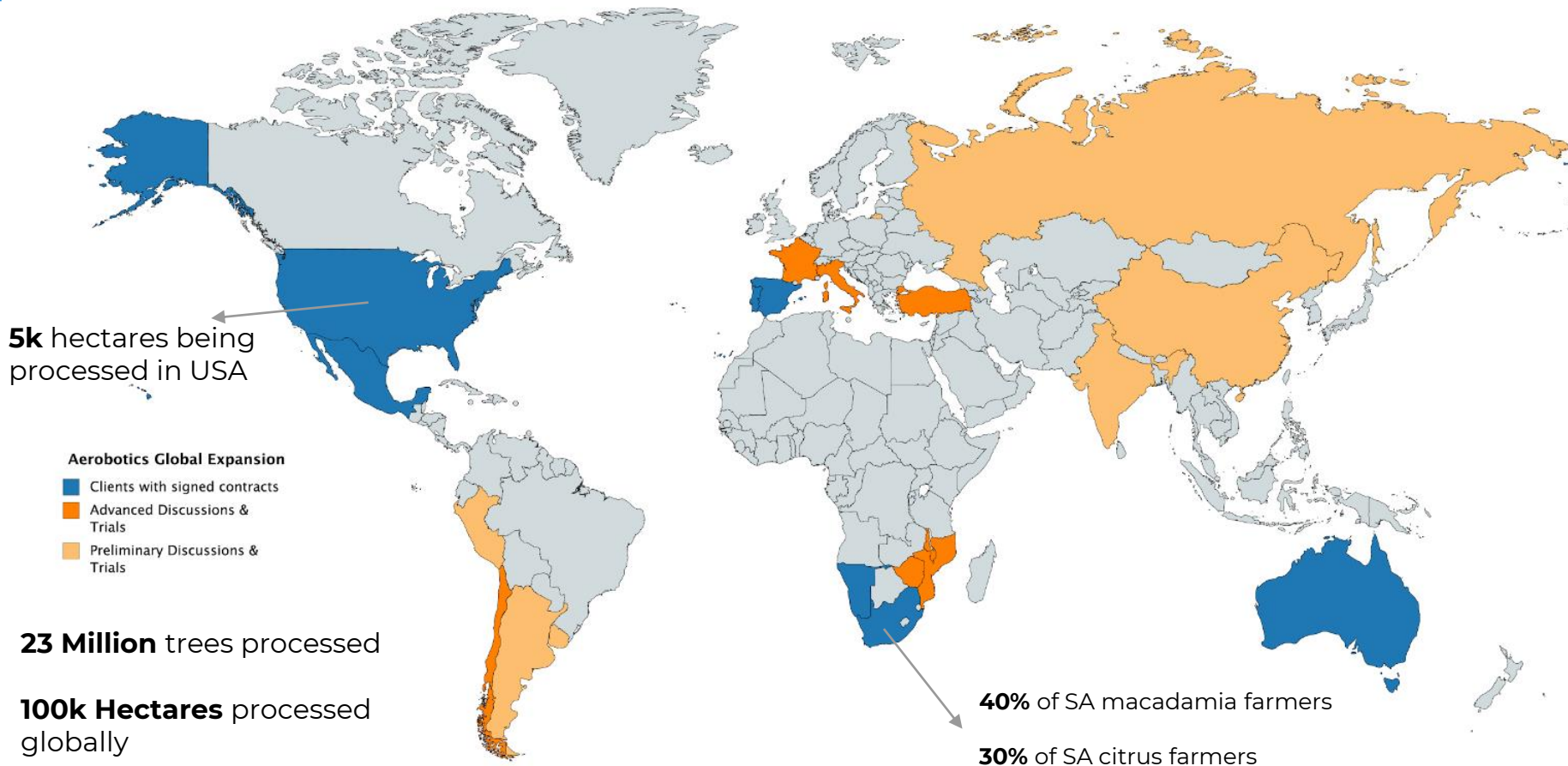
#	Farm Name	Size In Hectares	Number of Trees	Average NDVI per Tree	Average Area per Tree	Average % of Tree Canopy Cover	Average Tree Density	Aerobatics Performance Score
1	Farm 122	14.74	3,370	0.88	19.20	42.92	228.71	0.79
2	Farm 100	32.56	7,094	0.85	15.49	34.70	217.89	0.71
3	Farm 81	8.16	2,907	0.84	13.45	45.47	356.12	0.75
4	Farm 82	12.36	3,337	0.82	18.47	49.52	270.01	0.71
5	Farm 75	14.59	4,171	0.80	15.34	36.89	285.82	0.64
6	Farm 98	60.99	11,473	0.79	8.65	16.25	188.10	0.64
7	Farm 118	11.66	2,562	0.79	7.68	17.10	219.65	0.64
8	Farm 8	4.90	1,812	0.78	9.00	29.00	370.14	0.64
9	Farm 21	5.73	1,406	0.76	18.93	50.24	245.34	0.75
10	Farm 74	18.64	3,800	0.75	14.22	31.01	203.86	0.64
11	Farm 89	6.89	1,043	0.74	19.28	46.72	151.27	0.57
12	Farm 66	97.38	20,600	0.73	15.70	34.60	211.54	0.57
13	Farm 93	12.33	3,059	0.72	27.15	61.90	248.08	0.75
14	Farm 52	28.23	7,165	0.72	11.34	28.78	253.79	0.71
15	Farm 20	7.79	2,201	0.71	22.07	61.73	282.51	0.79
16	Farm 54	7.76	1,850	0.71	20.98	50.50	238.26	0.68
17	Farm 39	16.62	2,805	0.70	20.13	34.87	168.78	0.57
18	Farm 99	2.88	584	0.69	0.00	0.00	202.75	0.68
19	Farm 116	9.66	1,931	0.69	22.77	50.43	199.83	0.79
20	Farm 15	37.57	10,874	0.69	11.57	33.95	289.43	0.71
21	Farm 108	8.80	3,916	0.68	13.79	61.36	445.11	0.94

FARM ENGAGEMENT DASHBOARD

SORT RANGE BY	Number of Logins
MEAN	2.19
MEDIAN	1.00
STANDARD DEVIATION	3.02
VARIANCE	9.11

#	Farm Name	Number of Scout Markers	Number of Planned Scout Missions	Number of Comp. Scout Missions	% of Comp. Scout Missions	Number of Logins	Aerobatics Engagement Score
1	Farm 69	11.00	1	0.00	0.00%	16.00	0.94
2	Farm 38	0.00	0	0.00	0.00%	11.00	0.81
3	Farm 110	0.00	0	0.00	0.00%	11.00	0.81
4	Farm 11	19.50	1	0.50	50.00%	10.00	1.00
5	Farm 43	5.00	1	0.00	0.00%	9.00	0.94
6	Farm 54	13.00	1	0.00	0.00%	6.00	0.94
7	Farm 55	0.00	0	0.00	0.00%	6.00	0.81
8	Farm 56	0.00	0	0.00	0.00%	6.00	0.81
9	Farm 88	0.00	0	0.00	0.00%	6.00	0.81
10	Farm 111	1.00	1	0.00	0.00%	6.00	0.88
11	Farm 23	0.00	0	0.00	0.00%	5.00	0.81
12	Farm 49	0.00	0	0.00	0.00%	5.00	0.81
13	Farm 51	0.00	0	0.00	0.00%	5.00	0.81
14	Farm 93	5.00	1	0.00	0.00%	5.00	0.94
15	Farm 96	0.00	0	0.00	0.00%	5.00	0.81
16	Farm 98	0.00	0	0.00	0.00%	5.00	0.81
17	Farm 99	0.00	0	0.00	0.00%	5.00	0.81
18	Farm 100	2.00	1	1.00	100.00%	5.00	0.88
19	Farm 101	0.00	0	0.00	0.00%	5.00	0.81
20	Farm 104	0.00	0	0.00	0.00%	5.00	0.81
21	Farm 105	0.00	0	0.00	0.00%	5.00	0.81

Expanding around the globe...





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