Crop Data Analysis

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Summary

1. **"removed" or "dead FP" issues** represents 86% of high severity problems
2. **only 7 crops** are responsible for 70% of the number of plants affected are due to

Hypothesis

1. "Fan Burn" issues might be highly correlated to increase the number of plants with severe problem

2. "Viral Anomaly" might increase in severity if associated with Fan burn issues

Next Steps

1. Implement a faster respond to Fan Burn issues and measure the effect, some ideas includes:
   a. Reduce time to fix (logistics partnerships, increase inventory, more expensive delivery option, hire more mechanics)
   b. Increase maintenance quality(predictive algorithms, higher quality equipments)

2. Double check the "Viral Anomaly" in other plants of the same crop, especially the ones that presented "removed" or "dead FP" issues

We should focus our efforts on the root cause of the problem that generated the major issues (removed and Dead FP), we can also see that the impact in number of plants were highly concentrated in few crops
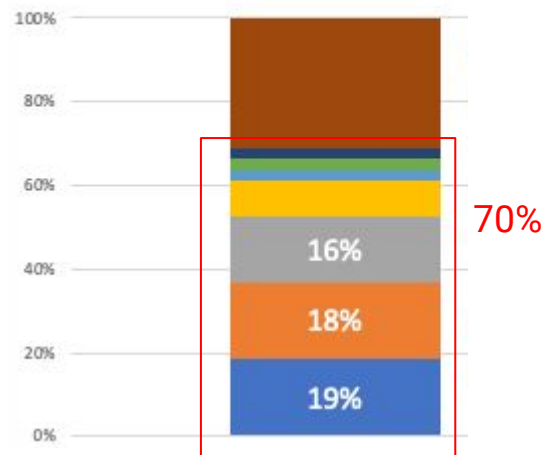
Percentage of Plants By Issue
Red Colored Severity (severe)

Issue
- Others
- Removed
- Dead FP

14%
23%
63%
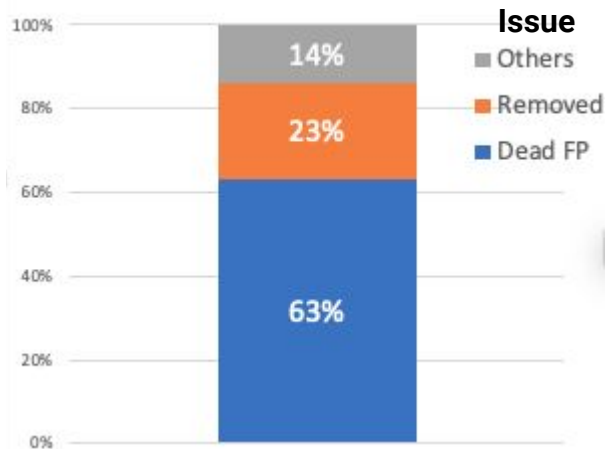
86% of the plants in severed state (red colored severity) were due to "removed" or "Dead FP issue"

Percentage of Plants by Crop
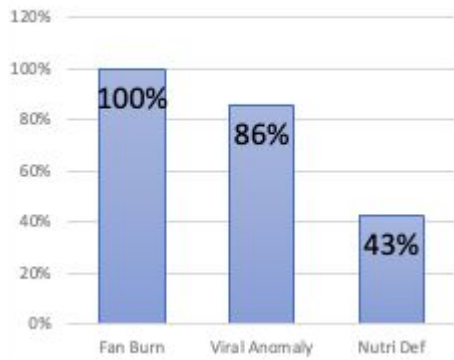### Red Colored Severity (severe)

70%

16%
18%
19%

70% of the plants in severed state (red colored severity) were in the top 7 crops (cultiva and room), while the others 30% were distributed across the other 136 crops

We should focus on the crops that presents Fan Burn and Viral Anomaly faster, since this is highly present on the crops most affecteds
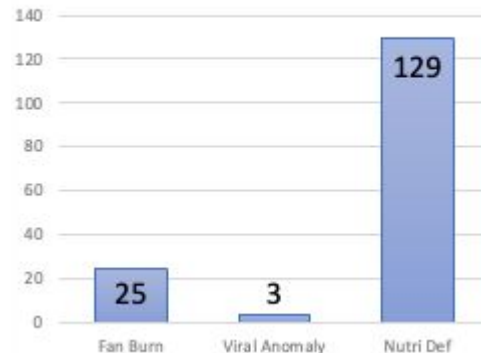
Percentage of Plants By Issue
Top 7 Crops with Red Colored Severity (severe)

From the most critical crops, all of then were affected by Fan burn and 86% with some kind of viral anomaly

Average affected plants[1] per issue
Top 7 Crops with Red Colored Severity (severe)

The most common problems from the most critical crops are not being identified largely in number of plants(25 plants/per crop with "Fan Burn" and 3 plants/per crop with "Viral anomaly")

1.   Average Affected plants = Number of plants sum[issue N] / Number of Crops with [issue N]

Assumptions

1. I'm filtering the last date by each Cultivar and Room that had an high severity ticket (trying to consider that might have different crops in the same room)

2. I'm assuming a plant affected with a low severity problem, might be an indicative of several high several problems for a more plants in the future (spread, not just worsening)

3. Some hypothesis were built that some low severity problems might be difficult/expensive to detect, and therefore, might be underpresented

GLOSSARY

- **Date:** date where the issues were highlighted
- **Week**: week of the year when the issues were highlighted
- **Room**: Room where the issues were found
- **Crop Week**: week of the crop cycle when the issues were found
- **Cultivar**: Type of cultivar were the issues were found
- **Issue**: Type of plant health issue (e.g. botrytis, nutrient deficiency, etc)
- **Colored Severity**: How severe is the highlighted problem (green = not an issue, or issue resolved; yellow = mild; orange = moderate; red = severe)
- **Number of plants**: how many plants were flagged with this problem