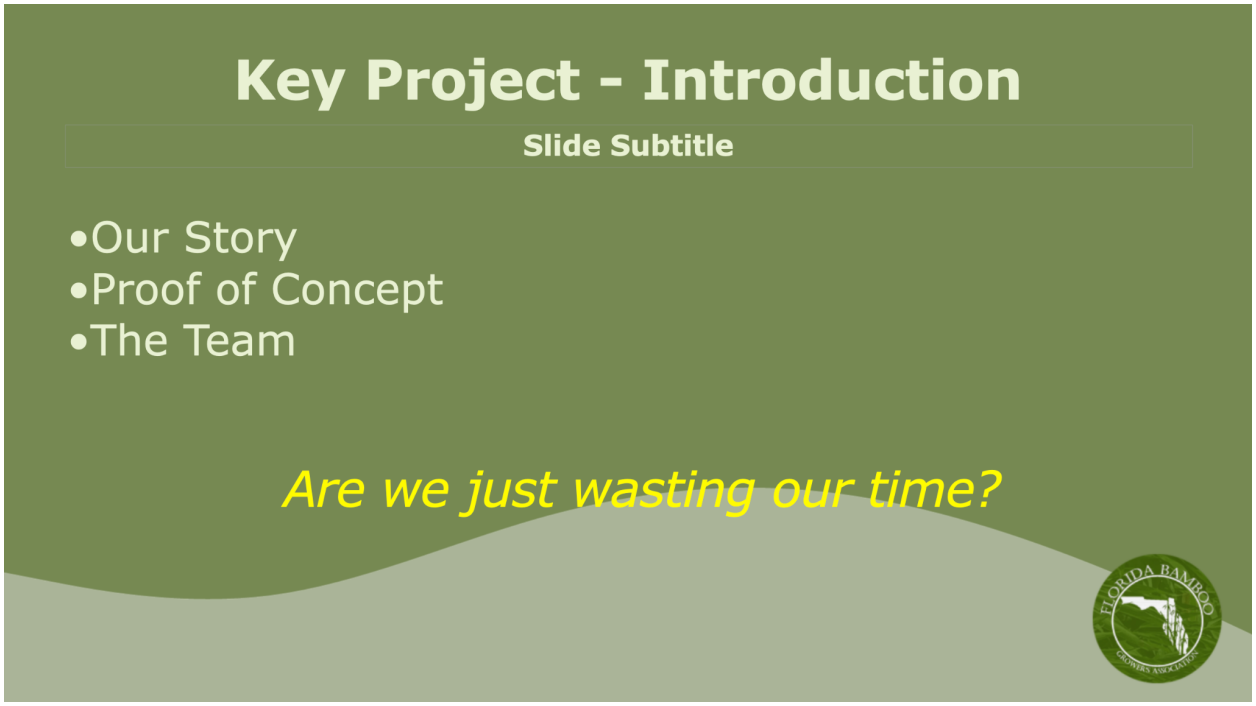
Key Project Introduction

Our Story

Every challenge we face and how we respond is writing our own story, defining who we are. It's not whether we will face challenges. Our story is important. And who we are is important too. My hope, as our Board of Directors, is that who we are represents you well.



It is worth reflecting on what the pioneers of our industry have endured.

- lack of proper farming guidance,
- seemingly too high of expectations,
- concerns about the variation in the robustity of the plants, and
- harvest numbers that don't validate our expectations. And with that the concern that they will never have cash flow.

For many in our industry this has caused them to wonder if they are wasting their time.

That is what our Board of Directors was thinking about early this year when we made it our priority to define how much money could be made in bamboo farming. Most people identify our one objective fact as the Harvest, and it wasn't lining up with expectations.This was a Proof of Concept issue. Farmers wanted proof. We had reasonable confidence in being able to farm bamboo and sell its crops, but we hadn't proven what the production could be.

We looked to our IFAS team as well as Don Rockwood of FFGT to help us.

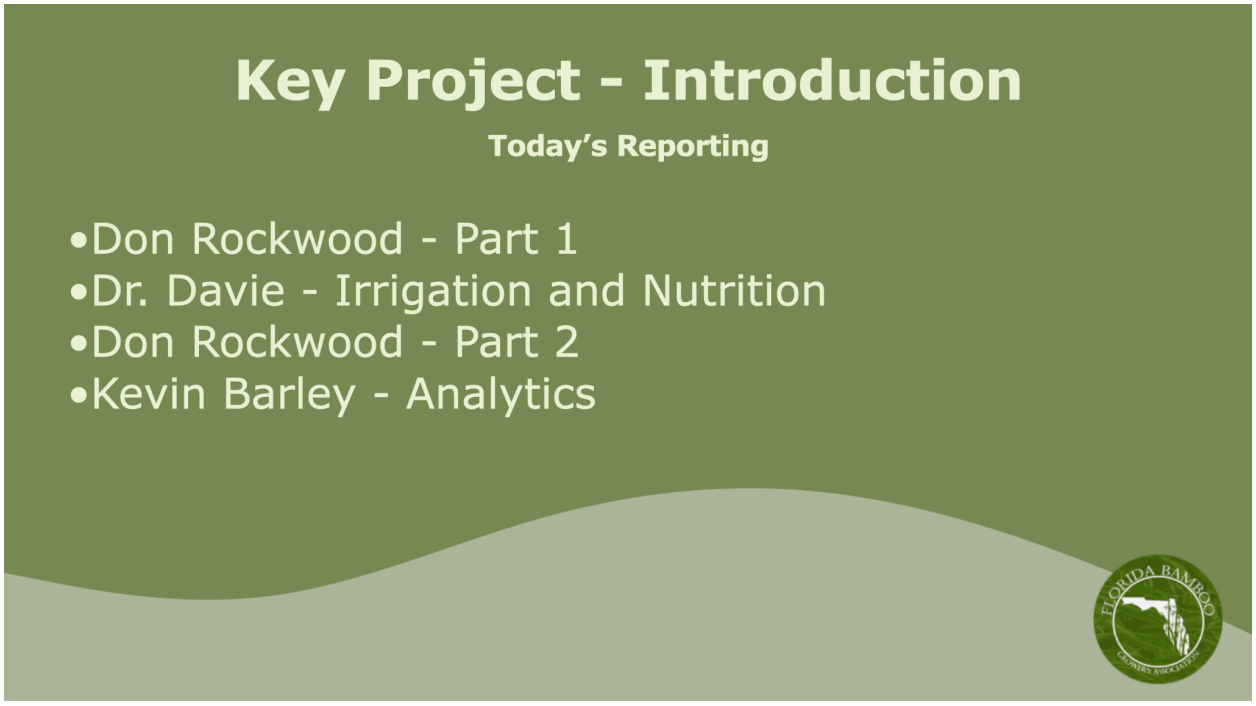
- Don had his own modeling approach that he had developed in forestry.
- IFAS offered to do the field work and
- We used all of our available funds to make this project happen.

As we began field work it became clear that this data was going to unlock real understanding of how bamboo plants grow and their production. I renamed the project the Key Project.

Proof of Concept - what this means to us

This term “Proof of Concept” is the step of proving out the assumptions supporting the idea of bamboo farming. We need facts. This is the remaining piece of the puzzle that we have to know, and we don’t want to wait 10 years to know it.

How would it feel if you came out of this meeting knowing you aren’t wasting your time? That is my aim for this meeting, helping you to know that you are not.



Today our Researchers are here to report back and tell you what they have found:

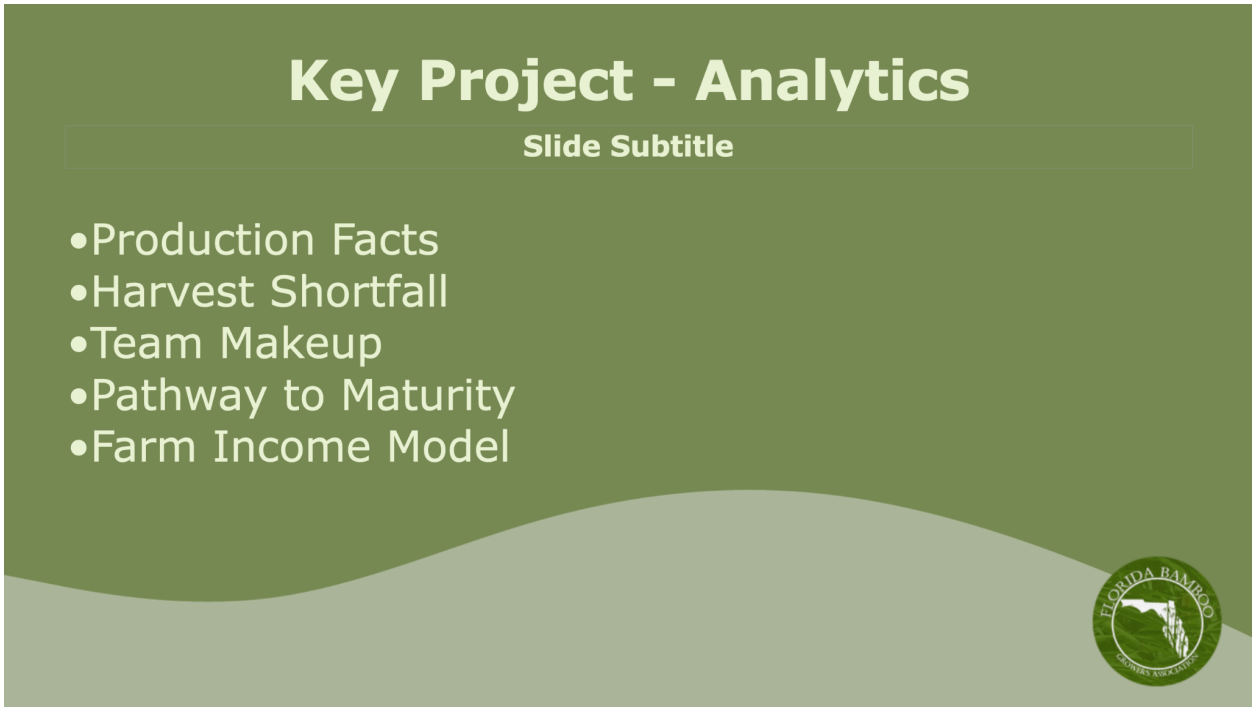
- Don Rockwood - he began and designed the project with a model in mind for predicting crop sizes. He has 2 parts to his presentation and will explain what he is doing and then what he has learned.
- Dr. Davie - represents the IFAS team. Dr. Davie has provided the field team and he is going to the next step. You see, as soon as farmers get confident that their farm has a future, that if taken care of properly it will produce income, then they want to know how to maximize production. Dr. Davie will

tell you what he has done and may learn from his research on our bamboo farms related to irrigation and nutrition programs.

- Kevin Barley - finally, after lunch i'll take the data from the Key Project and provide perspective about what it means.
    - How much production
    - How long to get to maturity
    - The plants are diverse in their robustness - how does this affect path
    - How do we know if we are on track?
    - How much production will we get at maturity - we don't have any mature farms and the data only shows what our farms today produce. But wouldn't that be what we really would like to know?

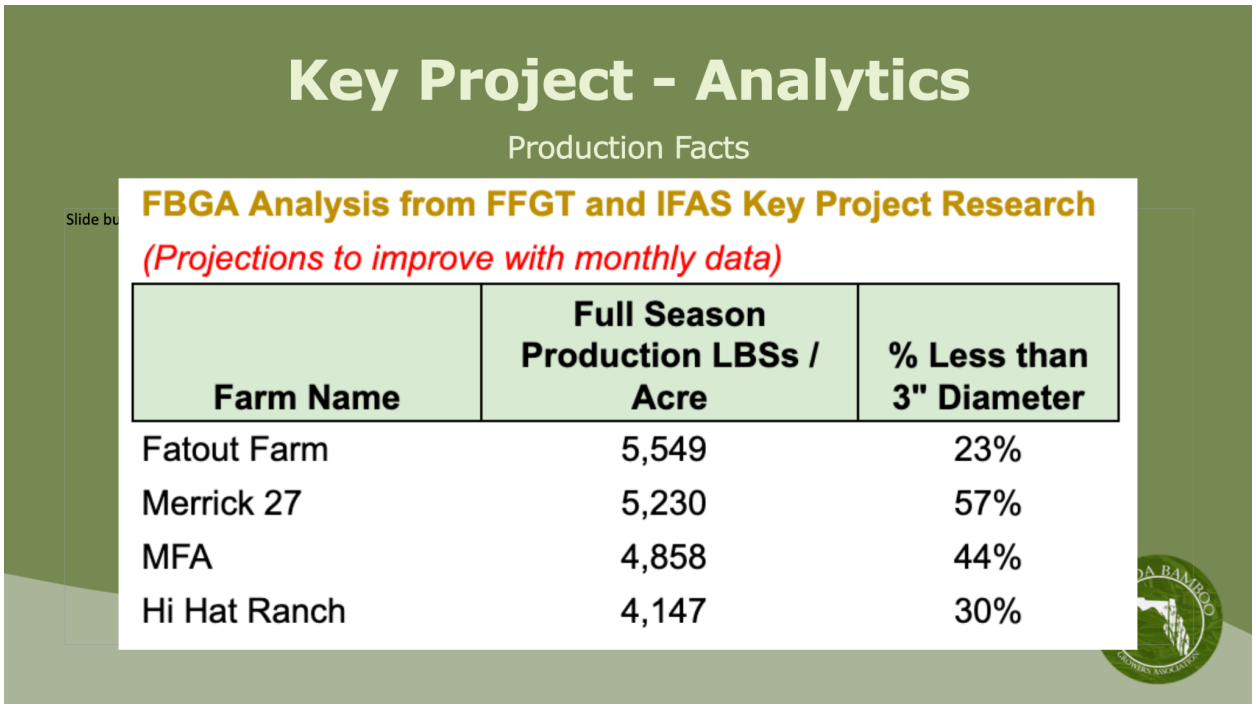
Key Project - Analytics

My goal in the analytics is to help you understand what we can learn from the data and what it means.



You can see on the slide that we will cover information on:

- Production Facts
- Harvest Shortfall
- Team Makeup
- Pathway to Maturity
- Farm Income Model



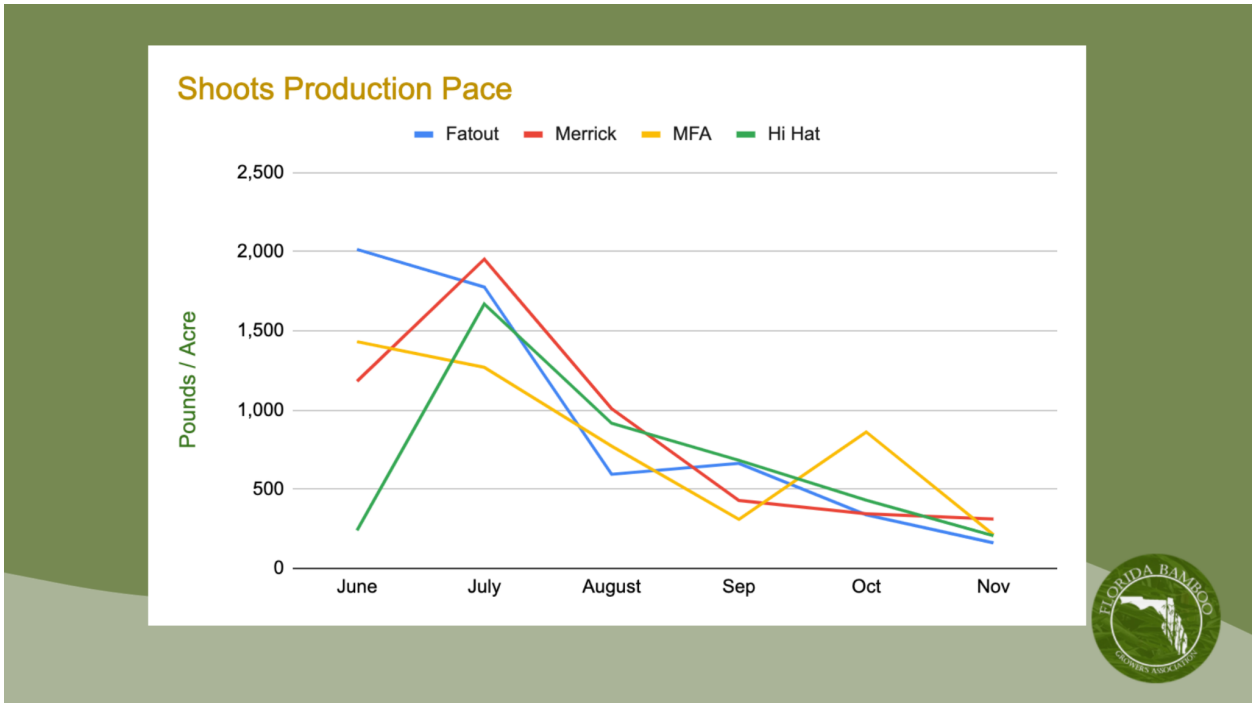
Production Facts

Conceptually, to learn how much we produce we simply count the shoots that grow during the season. Our team visits the plots monthly and accumulates the data.

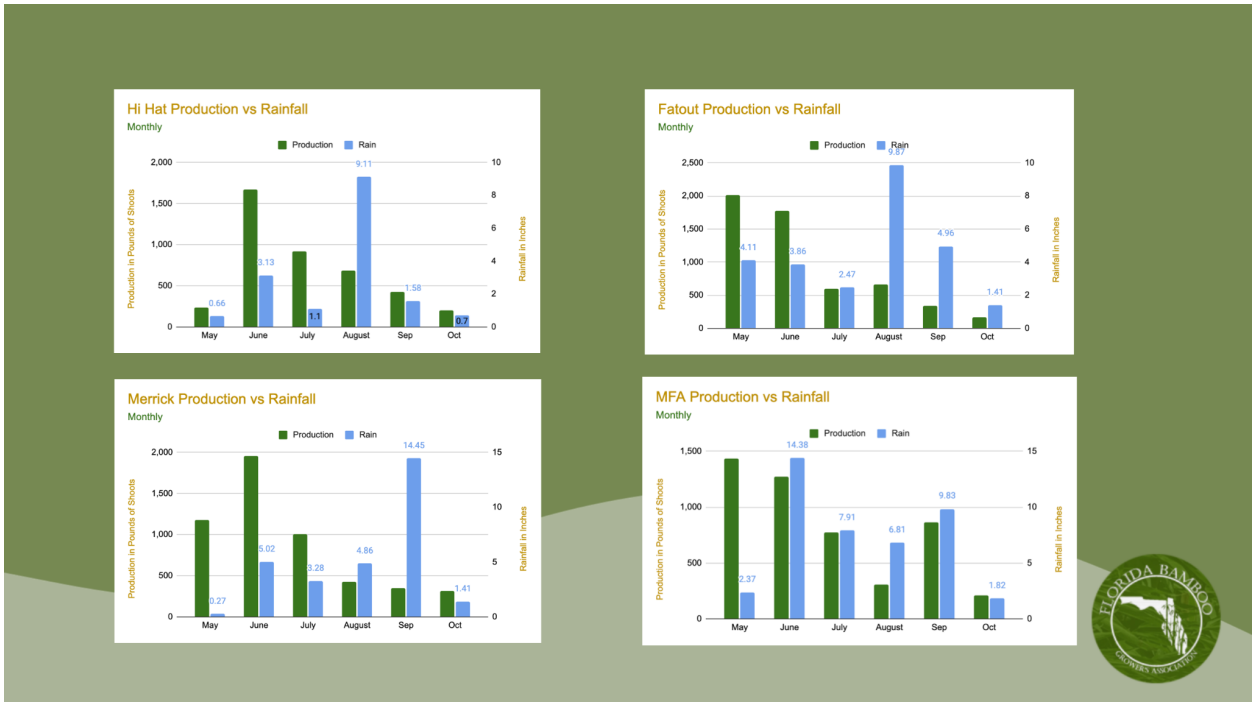
You can see the table that shows 4,000 - 6,000 pounds/acre by farm. We convert Shoots based on their diameter to an estimated weight as a shoot. This we call Production. This analysis is focused on Shoots not Wood.

The Hi Hat Ranch is the oldest and most mature of the farms at Year 6. Then there is Fatout which is Year 5. Both Merrick 27 and MFA are Year 4 and this is their first year of harvest.

We would expect Hi Hat to have the highest production based on its biomass and average size shoots. Rainfall seemed to cause a late start and it never gained real momentum.



Pace - From a pace standpoint this looked like a bad season. It would be reasonable to assume that environmental impacts on crops could create a swing factor of 20%-25% on most crops and certainly including bamboo. Most of the farms peaked in either their first or second month and tailed off materially after that.



Could this have all been driven by rainfall? It seemed obvious that Hi Hat's late start was driven by a lack of rainfall, but subsequent rains didn't correlate well with subsequent production. The charts above show the monthly production and rainfall by farm. Note that Production is colored green while Rainfall is colored blue.

Hurricane Idalia brought rains to the farms, particularly on the west coast in late August. Then in September most of the farms experienced a change in pattern with as much as 18 inches. We use the farms' weather stations at Merrick and MFA but regional airports for Fatout and Hi Hat.

It appears that rainfall was more of a factor influencing the initial shooting at the beginning of the season but not as much of a contributing factor later.

Harvest shortfall:

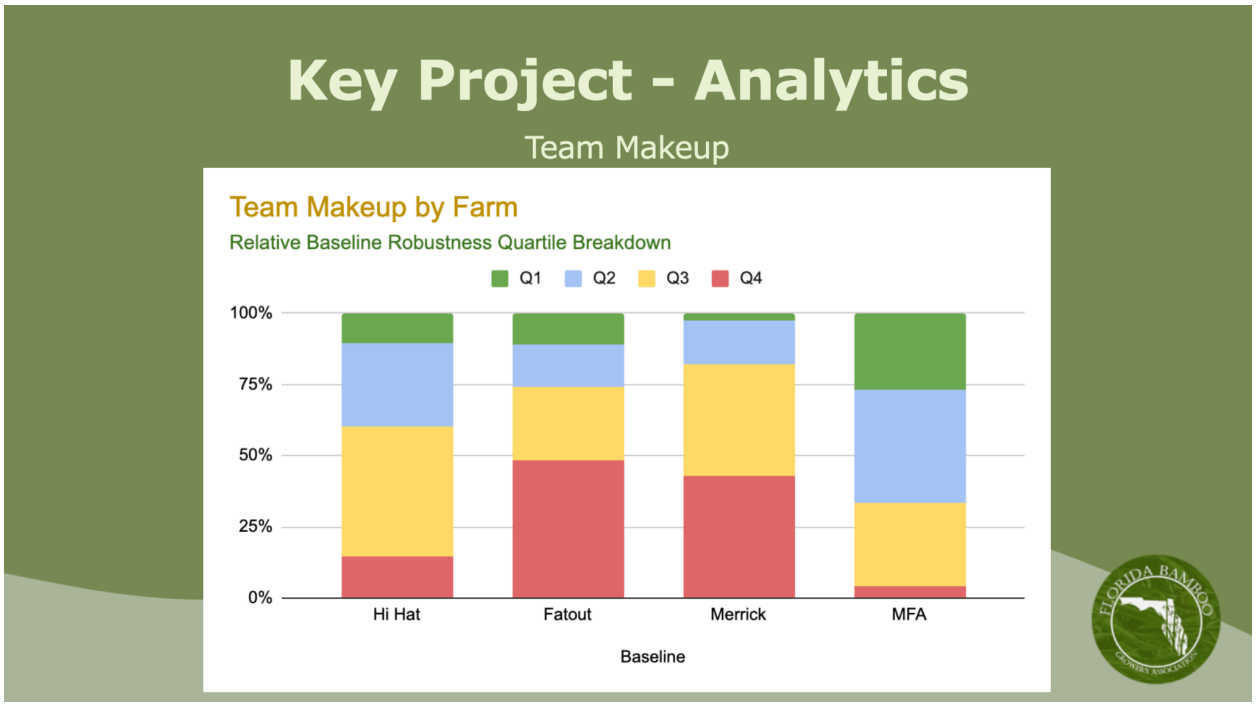
As we had monthly Production data by farm, I realized that we also had available from each of these 4 farms, their monthly harvest data. I was able to create a comparison by first subtracting from the Production the portion that was under 3" in base diameter.

Surprisingly our data showed that we were only harvesting 2% of the Shoots that were Produced. This was startling. Given some time to consider this, my opinion is that this reflects the reality that none of us has appreciated how fast the shoots grow. We have situations we have measured this season where the shoots clearly were growing 1 foot per day. The harvesting team was focused more on protecting against overharvesting.

We are able to draw some conclusions from this. First, the good news is the shoots are there. We don't have to consider Harvest data as any representation of true production. The true fact is the Production.

It is obvious we need to change our emphasis in harvesting to achieve 70% of qualified (3”+ diameter) production. As part of that I envision hiring professional harvesting companies that will incentivise their crews and be thorough. In addition we need to increase the frequency to at least twice weekly. This may be adjusted with experience.

I want to introduce one of the professional harvesting company owners that is attending today, Steve Johnson of Johnson Harvesting. Steve has decades of experience and serves as the Chairman of the Florida Citrus Commission.



Team Makeup - Baseline

Most of the farm owners have noticed that there is significant variability in the robustness of the plants within a farm. We don’t understand this. I decided to measure the variability to see what we could learn.

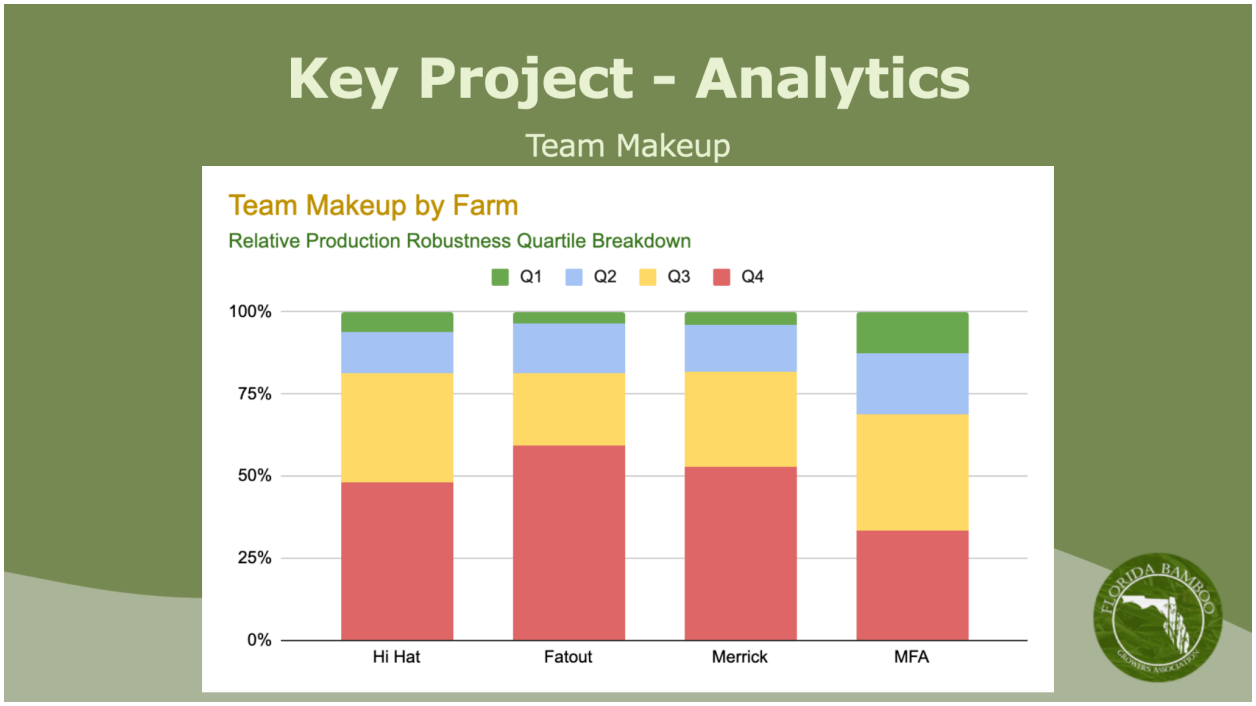
We can measure the difference in one plant versus another by the biomass of each plant. A simple way to approach this for us is to take each culm in the baseline data for a plant and convert it into its shoot weight which we refer to as

Production. Since the farms have their own relative maturity their average plant size (measured in shoot weight) will be greater for the older farms and less on the younger farms. We can use a concept of Relative Quartiles to measure the variability in their robustness. This is done by defining the range of the plant size (shoot weight) within a farm and dividing that into 4 equal segments of the population.

With this analysis we can examine the Team Makeup. Theoretically we would like to see a farm with a large percentage of its plants (team members) in its A-team, those of largest size. And also we would like a small percentage of weak players (D-Team). The chart above illustrates the Team Makeup by farm based on the plant size before this season's new shoots were grown.

Merrick and Fatout have large percentages of weak players while Hi Hat and MFA have small percentages, particularly MFA. We don't know why but it occurs to us that this may be the impact of freeze events. Freezes typically don't kill the plants but it may kill enough of the culms to create a setback for the plant. Theoretically this would not be a long term handicap but one from which a plant could recover given a couple of years. We recall that Merrick has had big impacts from freezes whereas MFA has never had freeze impacts.

In addition, it is important to note that the Fatout Farm has 25% of its plants that are dead. That means they won't get any production or new shoots.



Team Makeup - New Shoots

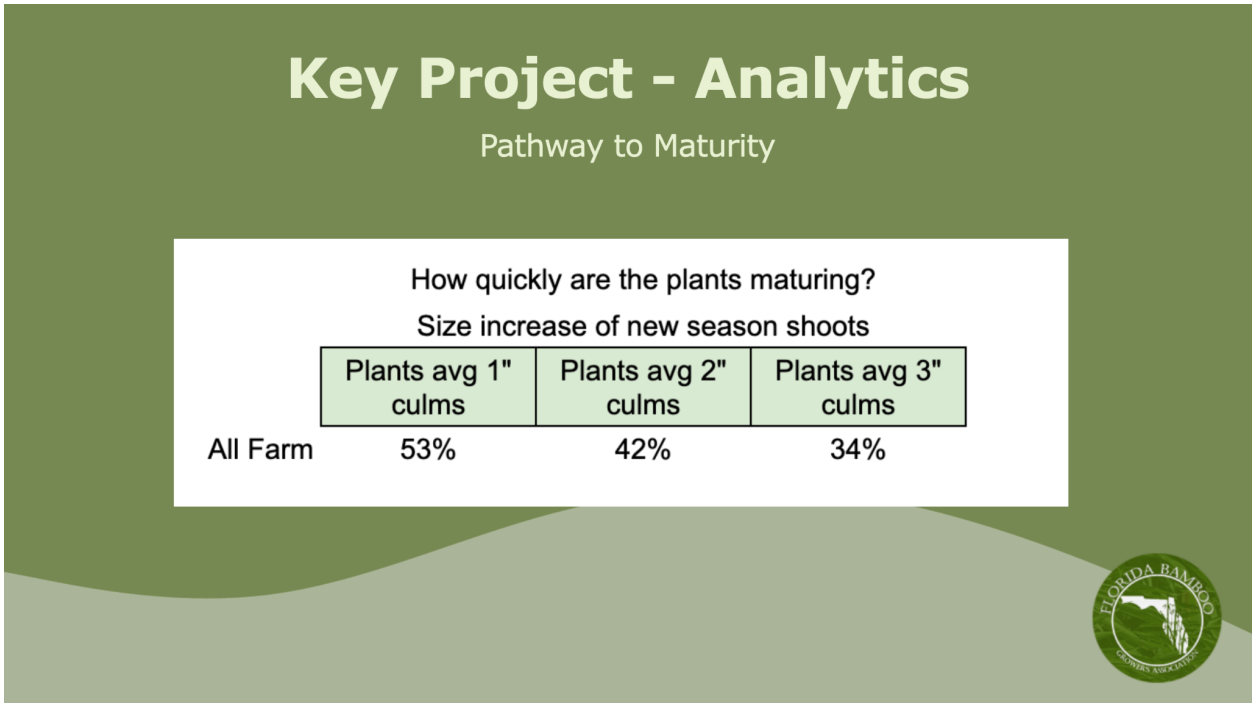
Next, it seemed logical that new shoot production measurements with the same type of relative quartiles would mirror the baseline plant size, a type of productive capacity. In other words, the charts should look the same. We didn't find what we expected. All of the farms had a larger number of weak players (Q4). The question is, Why?

One consideration is that to see the full correlation the plants must produce new shoots. If the season is disrupted or slowed down, the lower quantity of shoots could be less likely to reflect the capacity for production we see in the baseline. This is consistent with the idea that we didn't have a good full season.

Pathway to Maturity

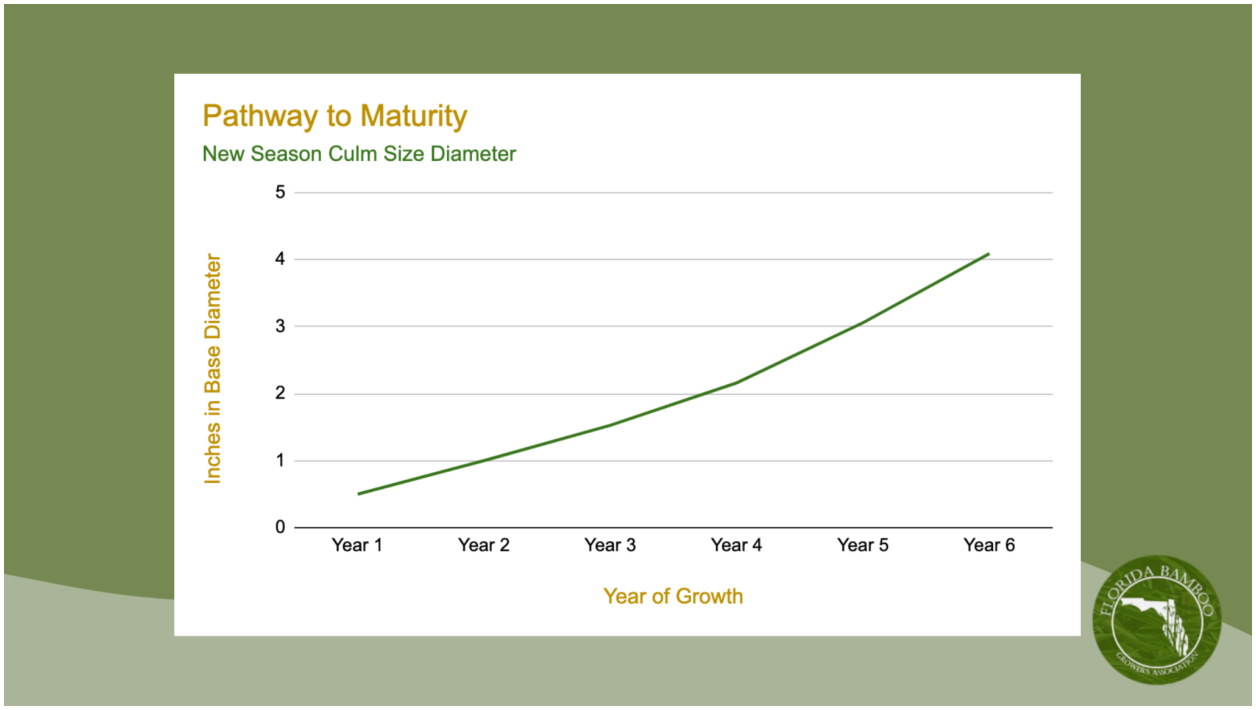
An important question is how long a farm takes to become mature. We realized that it is the plants that are maturing, not individual culms. Plants have relatively consistent size with each new season of culms, but each season's next generation of culms are a larger diameter.

What is the growth rate each year? We could measure plants based on the average diameter of its baseline culms and determine how much a plant with 1” average culms would increase in diameter with its new shoots. We could do the same with 2” culms and other size plants.



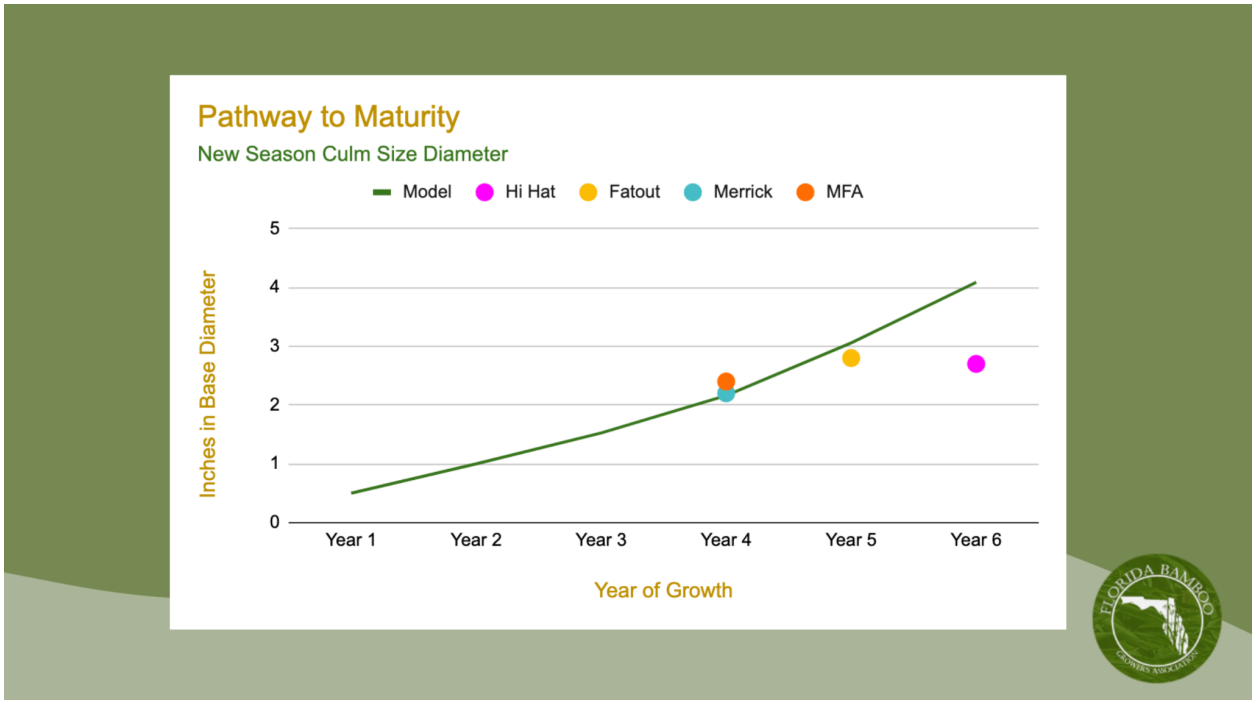
You can see above that plants with 1” average diameter culms produced new shoots that were 53% larger, 2” produced 42% larger culms, etc. To make these calculations we used all of the plants in the various farm plots.

How does pace of growth at plant level translate to culm sizes each year and how could this information project a path for a healthy plant towards maturity?



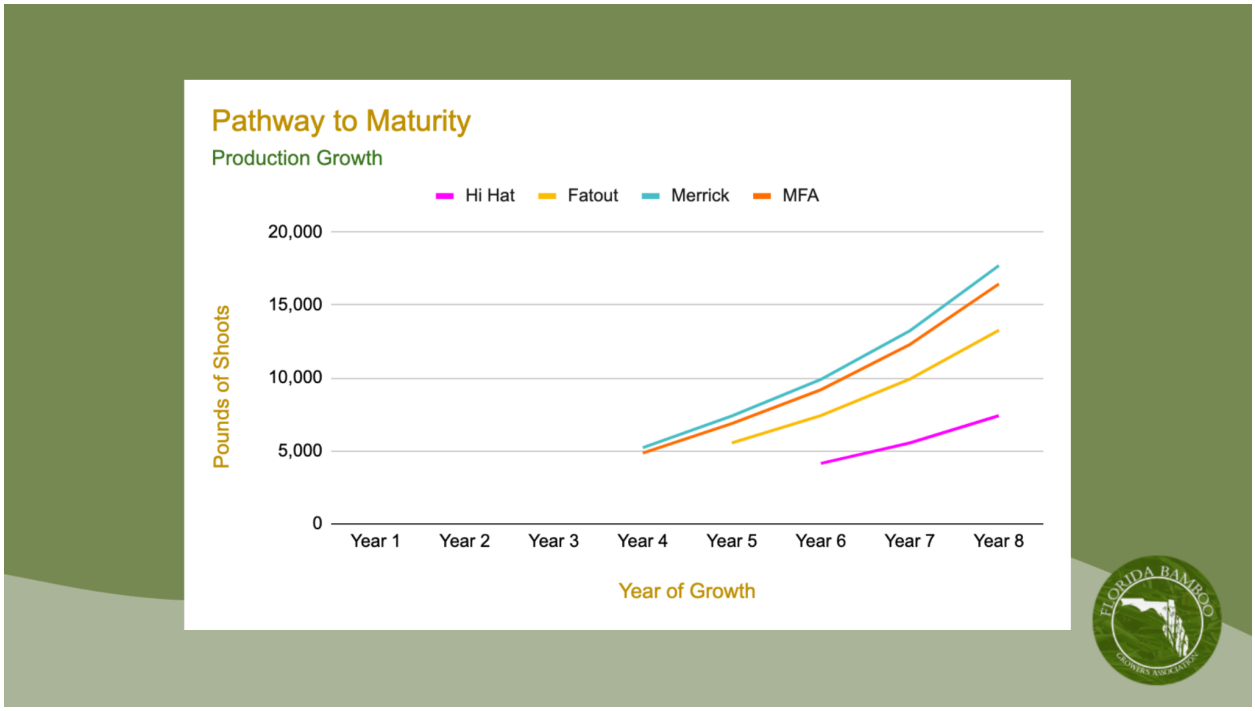
The chart above shows how a new plant would increase in its size and produce on average 4”+ diameter culms at Year 6.

Are the farms on track? The chart below shows our 4 farms using their average size culms in the farms and is plotted by their age. It is interesting how well the farms line up with the projected track. The track is developed from the average growth rates of all the plants based on their size. Hi Hat’s reduced production causes it to look a bit off track, but this may simply mean that it had a bad season of production.



How could we relate this track to future Production?

The diameter growth each year is very well aligned with the Production (weight of shoots). Knowing our current production we can grow it over future years, consistent with the growth rates we measured, and identify future production.



How can we relate this to the Farm's Income Model?

Here we used MFA and its current age and production as the basis for understanding future farm income. You can follow along with the Income Model, column by column:

- We run 8 years to allow for the farm to achieve Maturity.
- Our production in pounds each year is the same information we show on that previous chart for MFA.
- We factor out shoots that are not harvestable based on size
- We assume that our goal is 70% harvested (not 100%), leaving the balance for Wood.

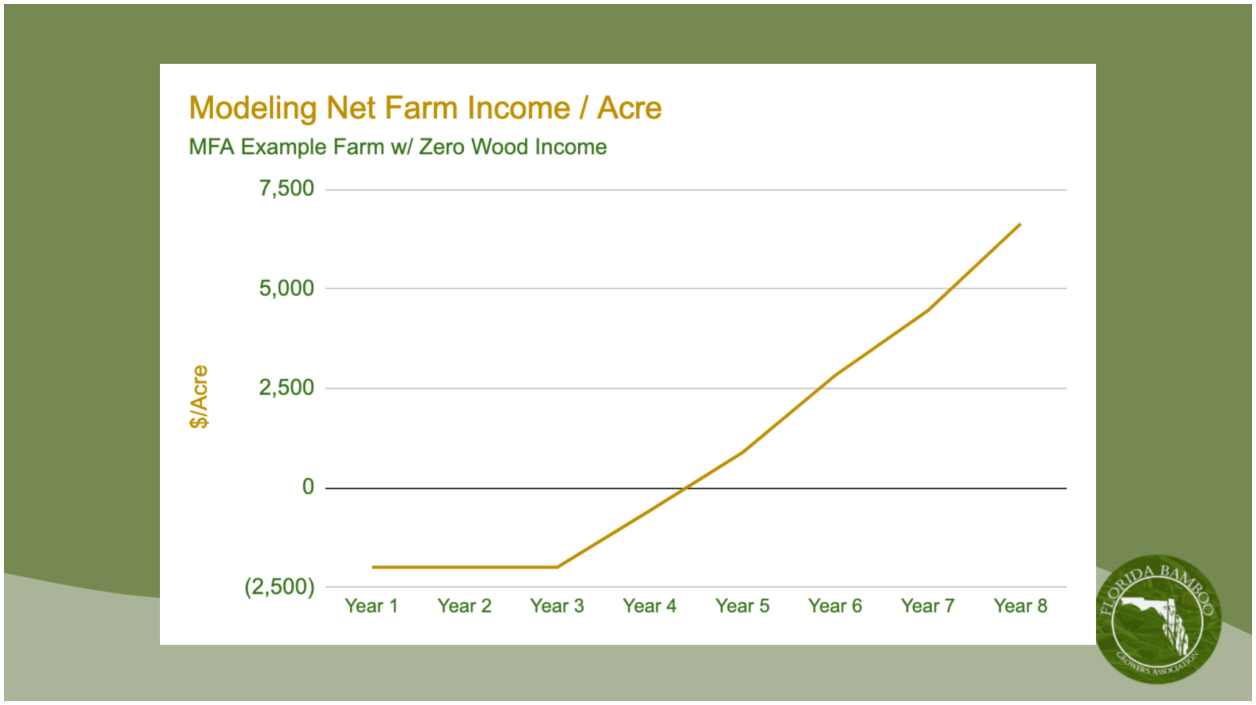
Key Project - Analytics

Farm Income Model

Farm Income Model	MFA Example Farm w/ Zero Wood Income						
Year	LBS Produced	% Harvestable	70% Harvested	Income at $1/lb	Harvesting Cost	Caretaking +FM Costs	Net Income/Acre
Year 1	0	0%	0	0	0	2,000	(2,000)
Year 2	0	0%	0	0	0	2,000	(2,000)
Year 3	0	0%	0	0	0	2,000	(2,000)
Year 4	4,858	56%	1,904	1,904	476	2,000	(572)
Year 5	6,876	80%	3,850	3,850	963	2,000	888
Year 6	9,196	100%	6,437	6,437	1,609	2,000	2,828
Year 7	12,298	100%	8,609	8,609	2,152	2,000	4,457
Year 8	16,448	100%	11,514	11,514	2,878	2,000	6,635

- We assume the Shoots value is $1/lb.
- Harvesting cost is $.25/lb.
- Caretaking and Farm Management costs are $2,000/acre/year on average.
- This results in a proforma of net income per acre up to the time the farm reaches maturity.
    - MFA theoretically would reach $6,600/acre before any Wood Income.
    - If 2023 was a poor season then the future years could be better than we predicted here.

Farm Income over time as it approaches maturity



How do you evaluate the income suggested in this analysis?

We don't have a mature farm to evaluate. But this analysis is based on facts about how the plants grow, using their actual production and growth rates over time. Production could be larger given that 2023 has indications that it was a poor season. And after adding in room for income from the 30% of unharvested shoots that are reserved for a wood harvest, in total it seems reasonable that the farms could realize $8,000 - $10,000 per acre per year.

By any standard (relative to any other Florida crops, return on investment, etc) these numbers are outstanding! Most importantly we are advancing our Proof of Concept, proving out what farmers can reasonably expect, and what they can expect in income is good. Let me end with this:

You aren't wasting your time!

Key Project - Analytics

Farm Income Model

You aren't wasting your time!