

Field Crop Scale CBD Production

Maximizing our hemp harvest potential

Dr. Jennifer Gilbert Jenkins

Assistant Professor of Agricultural Science

SUNY Morrisville , Morrisville, NY



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CBD Production Models

- ▶ It takes all kinds in agriculture
- ▶ Think of this like the comparison between large scale beer production and craft breweries
- ▶ There is a market and a place for field crop production models and horticultural production models

CBD Production Models

- ▶ Horticultural model
 - ▶ High input costs, high crop value
 - ▶ Feminized seed or clones started indoors (\$0.75 - \$5.00 per seed/plant)
 - ▶ Plants transplanted
 - ▶ 3'x3' , 4'x4' , 5'x5' - 1000 to 3000 plants/acre
 - ▶ Under plastic or not?
 - ▶ Some mechanized labor with manual labor
 - ▶ Weeding
 - ▶ Watering
 - ▶ Harvest
 - ▶ Post harvest stripping and drying

CBD Production Models

- ▶ Field Crop Model
 - ▶ Low input costs , lower crop value
 - ▶ Not feminized seeds (\$3.50 - \$15.00 per pound of seed - roughly 22,000 to 50,000 seeds)
 - ▶ Direct planting with seed drill, 435,600 - 522,700 plants /acre (grain rate) or 1,000,000 - 1,300,000 plants / acre (fiber rate)
 - ▶ Highly mechanized with little to no manual labor



Dual Purpose Fiber or Grain + CBD

- ▶ Is there a “best time” for CBD harvest?
- ▶ Is one method easier machinery wise?
- ▶ What about the high CBD neighbors? Is one method more friendly to them or not?

Fiber Harvest

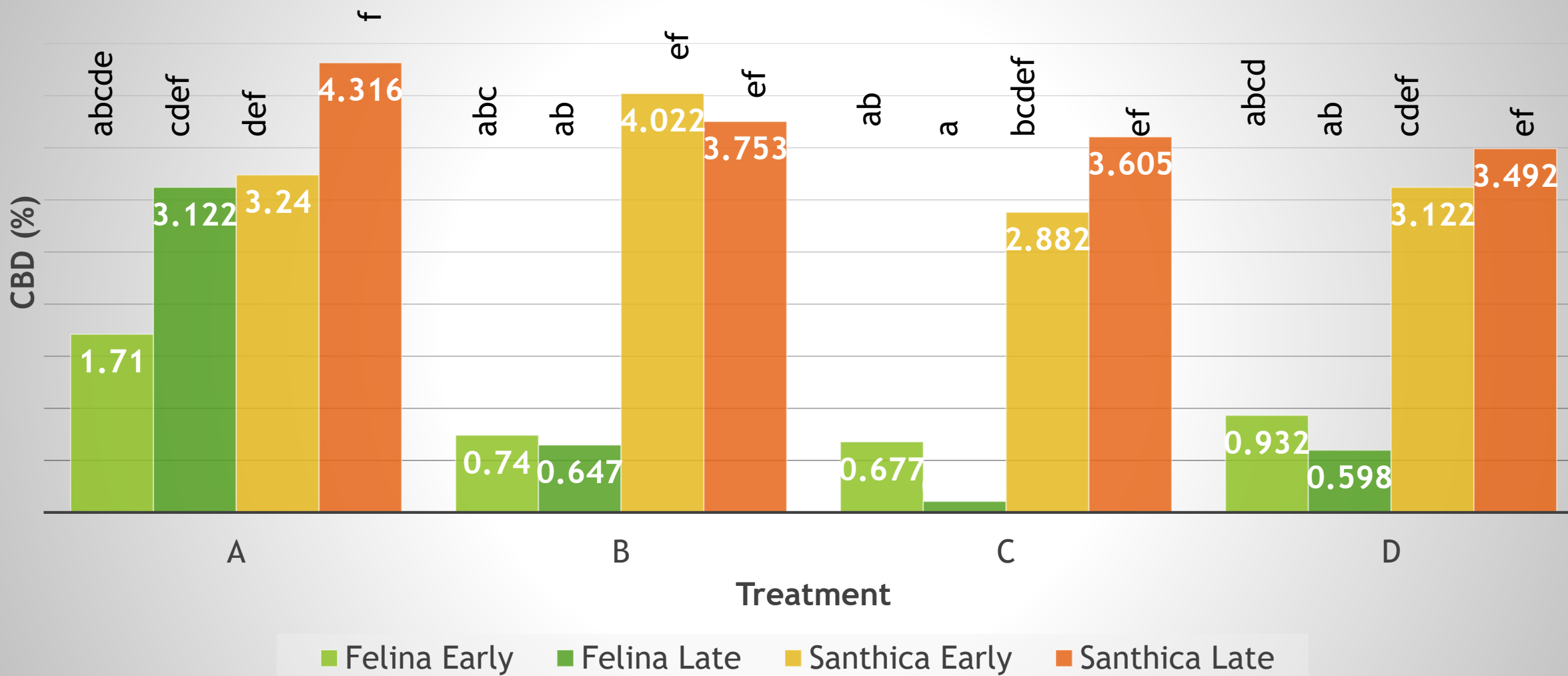


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Dual Purpose Grain/CBD





2019 Growing season wasn't optimal

- ▶ Due to late planting, treatments were not applied at the ideal time
- ▶ Research out of Vermont has shown that planting date impacts total CBD
- ▶ Proper fertility and weed management is still key

Weed Management

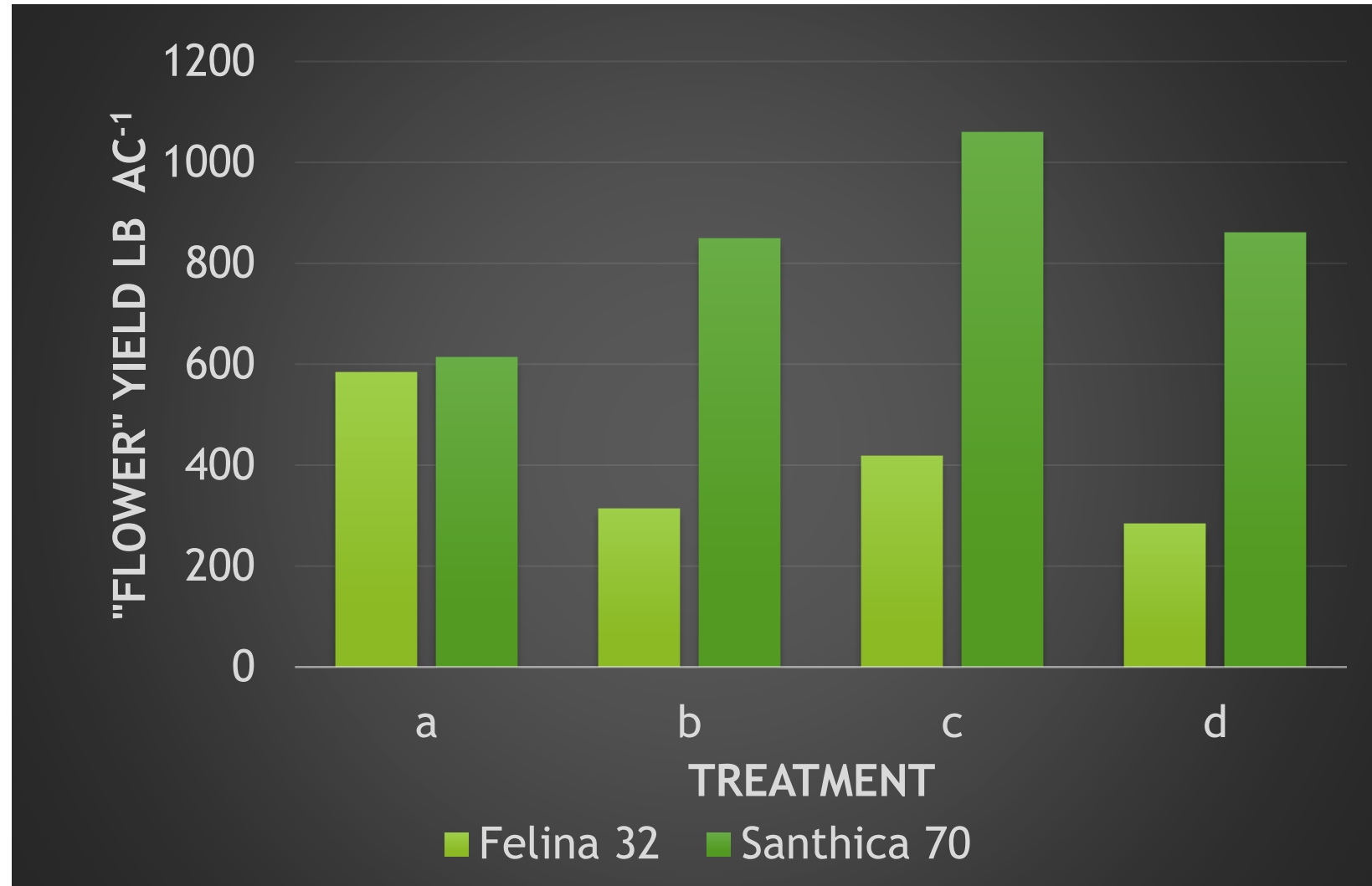
- ▶ Covercrop burndown must be properly timed with planting
- ▶ Total biomass severely depressed
- ▶ CBD concentration may or may not have been impacted



Dual Purpose Grain/CBD



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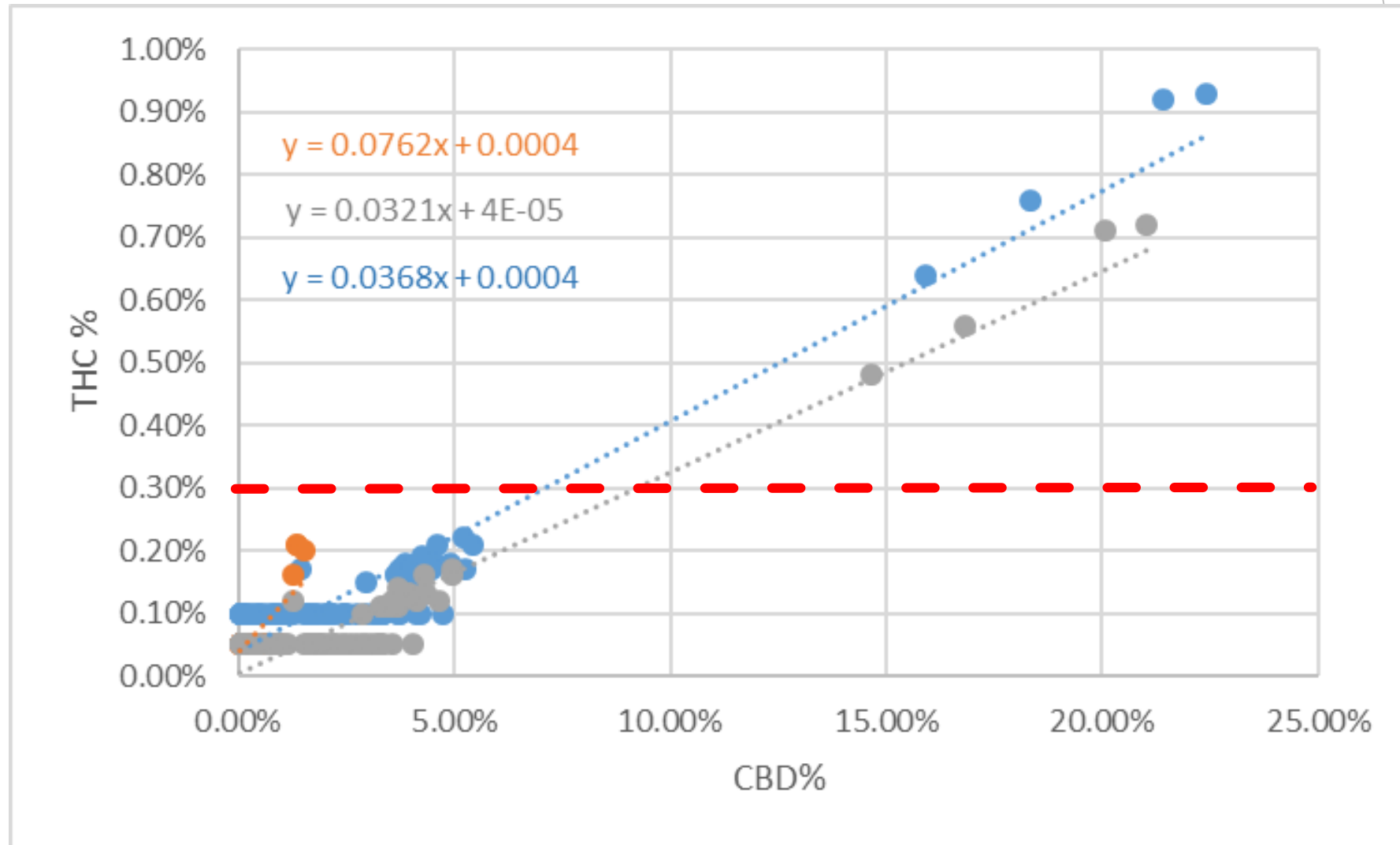




A quick economic “what if”

- ▶ So say you can get \$0.20 per pound / per %CBD
- ▶ If the crop averages 5% CBD
- ▶ And the collected biomass is 600 lbs / acre
- ▶ That is an extra \$600 an acre to add to grain yield
- ▶ Nobody is retiring on that but the goal should be farm stability not diamonds and rubies

The total THC versus Delta-9 Argument



Thank you

- ▶ This research is made possible by the blood sweat and tears of the summer student hemp interns and by funding from the New York Farm Viability Institute and Empire State Development

