

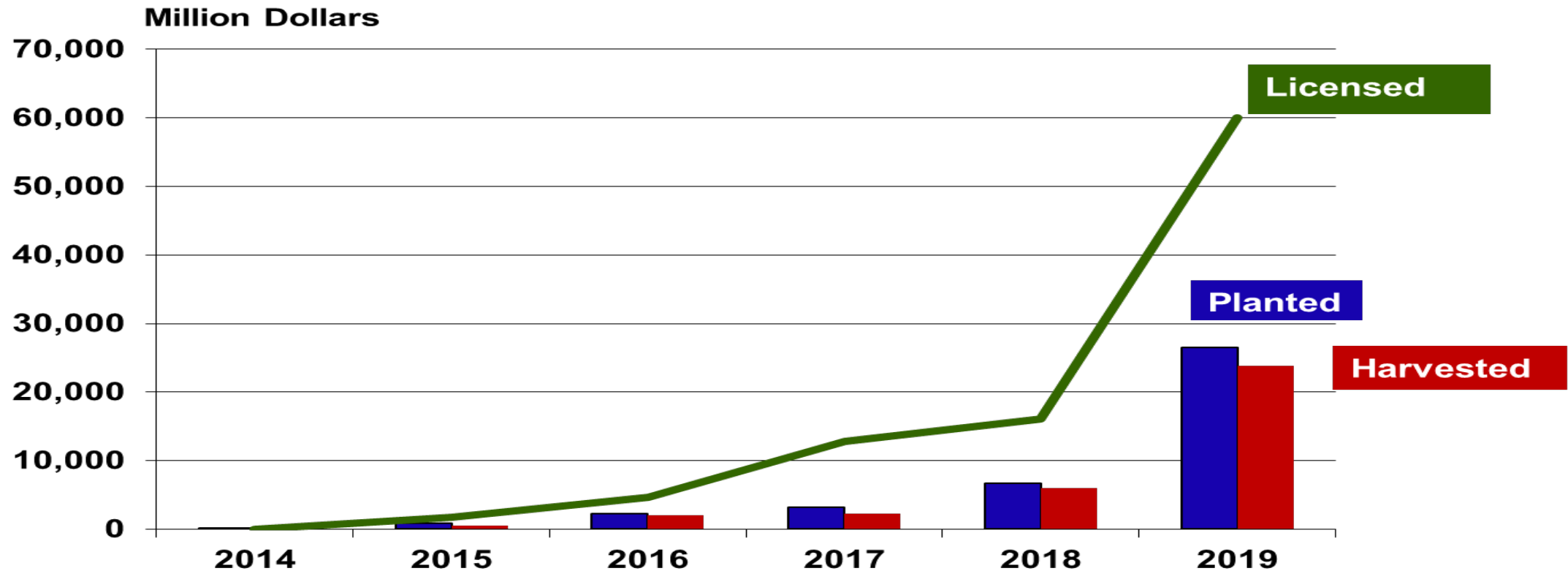


University of Kentucky
College of Agriculture,
Food and Environment
Cooperative Extension Service

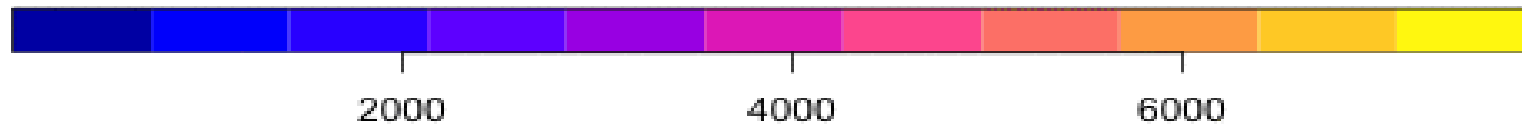
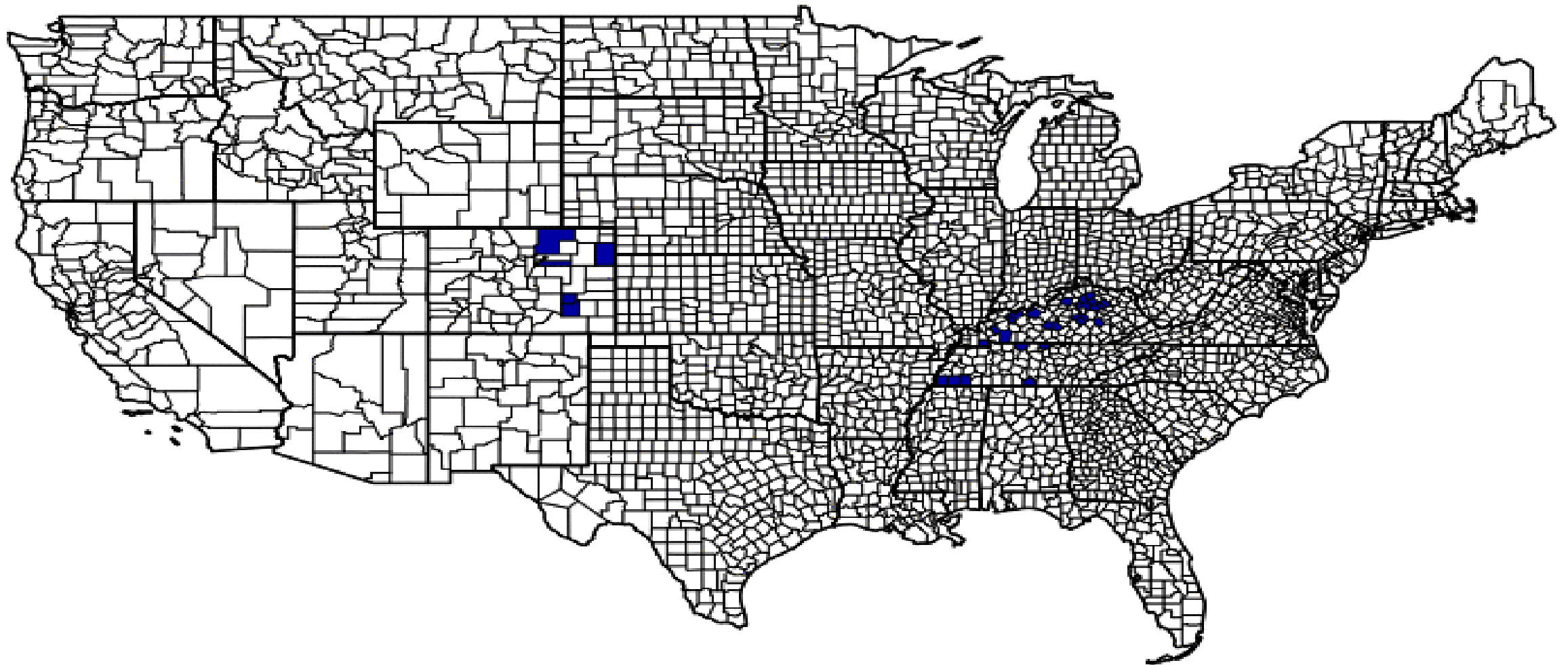
Presented By: Tyler Mark
Associate Professor
UK Agricultural Economics

Kentucky Perspective

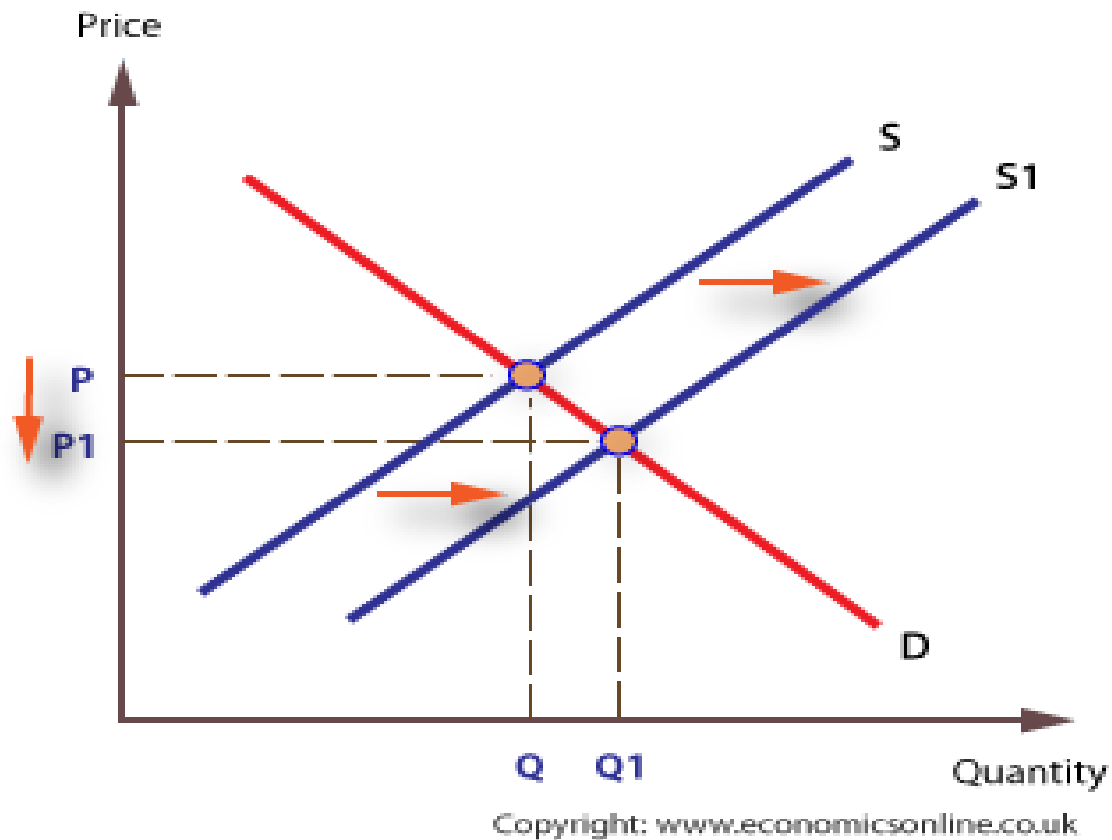
KENTUCKY HEMP ACRES



Total Planted Hemp Acres in 2015



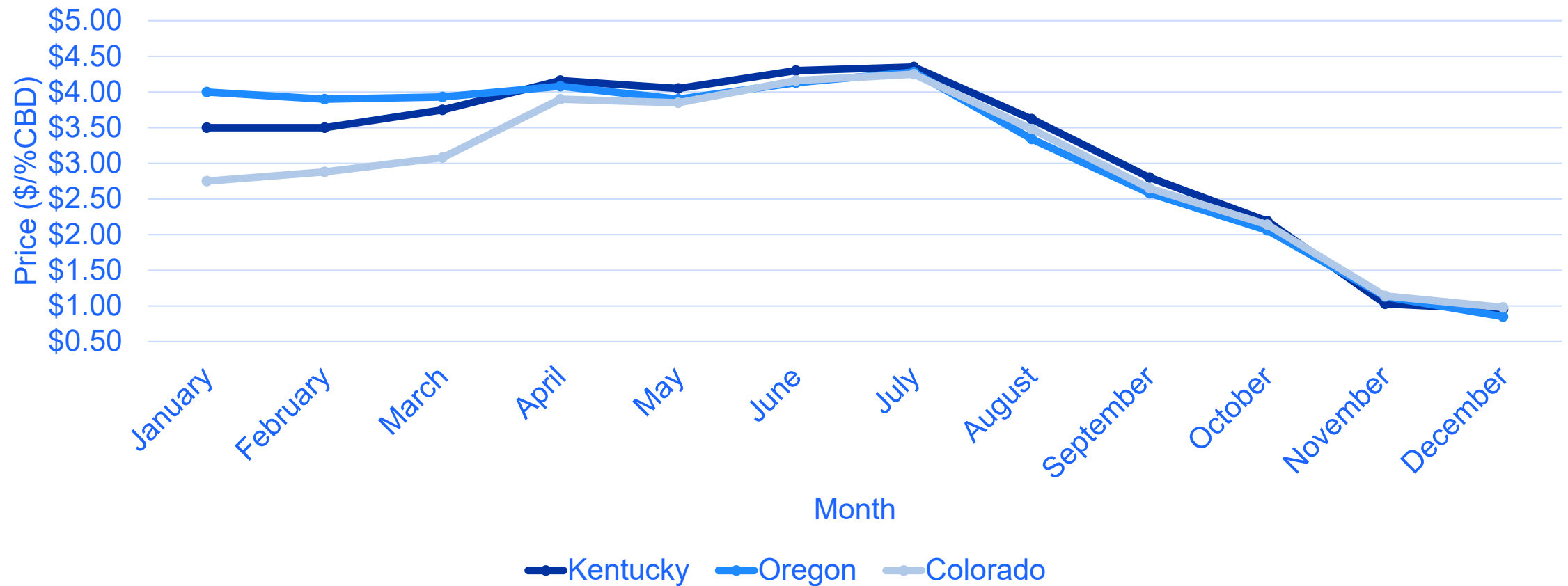
ECONOMICS ARE IMPORTANT!!



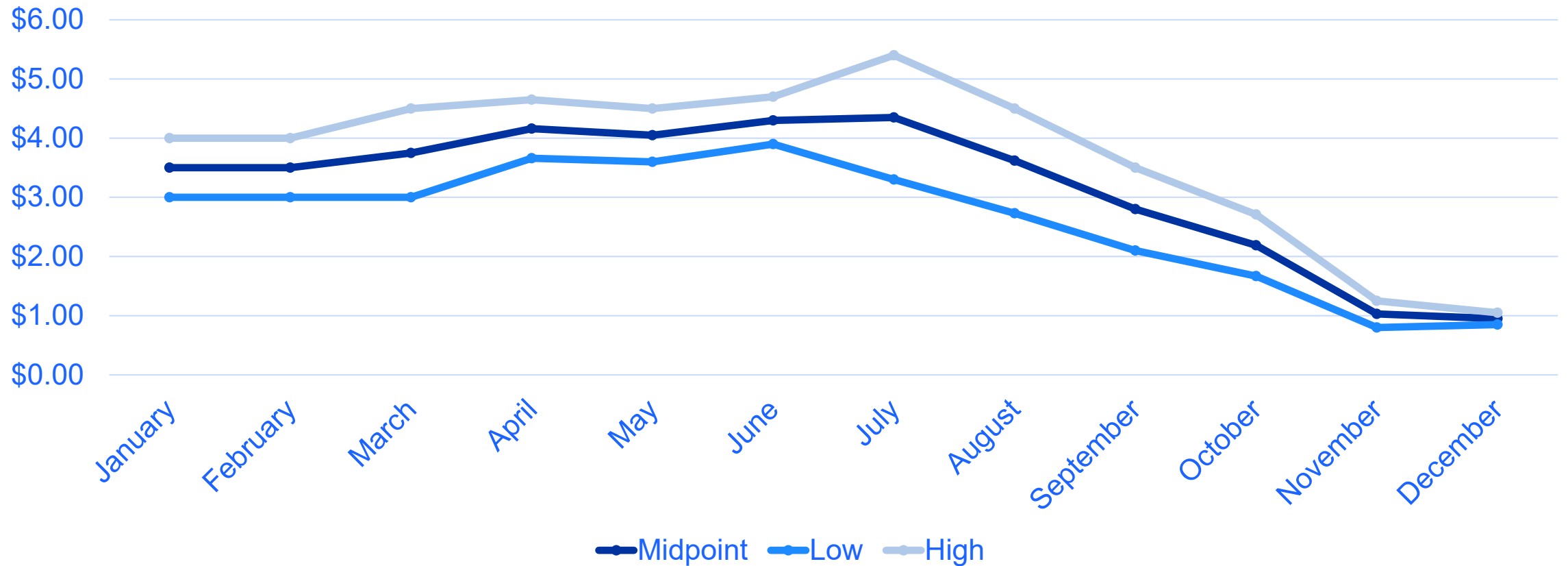


HEMP PRICING AND BUDGETS

MIDPOINT BIOMASS PRICE FOR 3 KEY STATES



KENTUCKY SPECIFIC



2020 PRELIMINARY BUDGET FOR CBD PRODUCTION



	CBD Tobacco Model			CBD Plasticulture		
	Quant	Price	Total	Quant	Price	Total
Gross Returns Per Acre						
CBD%	6.00%	-	-	6.00%	-	-
Price Per %	\$1.50	-	-	\$1.50	-	-
Plants Per Acre	3,000	-	-	1,500	-	-
DFM per Plant (lbs)	0.8	-	-	1.0	-	-
Harvest Index (1=100%)	0.95	-	-	0.95	-	-
Total Marketable DFM	2,137.50	-	-	1,425.00	-	-
Crop Insurance	-	-	-	-	-	-
Hemp Grain (lbs)	-	-	-	-	-	-
Hemp Fiber (lbs)	-	-	-	-	-	-
Total Revenue			\$19,238			\$12,825
Total Variable Costs Per Acre			\$17,175			\$10,402
Total Specified Fixed Costs			\$367			\$371
Return Above All Specified Costs			\$1,695			\$2,052

TOBACCO MODEL SENSITIVITY (\$/%/LB & %CBD)

Sensitivity Analysis

Returns Above All Specified Costs (%/lb DFM)

\$/%/LB		3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
	\$1.00	(\$11,130)	(\$8,992)	(\$6,855)	(\$4,717)	(\$2,580)	(\$442)	\$1,695	\$3,833
	\$2.00	(\$4,717)	(\$442)	\$3,833	\$8,108	\$12,383	\$16,658	\$20,933	\$25,208
	\$3.00	\$1,695	\$8,108	\$14,520	\$20,933	\$27,345	\$33,758	\$40,170	\$46,583
	\$4.00	\$8,108	\$16,658	\$25,208	\$33,758	\$42,308	\$50,858	\$59,408	\$67,958
	\$5.00	\$14,520	\$25,208	\$35,895	\$46,583	\$57,270	\$67,958	\$78,645	\$89,333
	\$6.00	\$20,933	\$33,758	\$46,583	\$59,408	\$72,233	\$85,058	\$97,883	\$110,708

PLASTICULTURE SENSITIVITY (\$/%/LB & %CBD)

Sensitivity Analysis

Returns Above All Specified Costs (%/lb DFM)

\$/%/LB		3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
	\$1.00	(\$6,499)	(\$5,074)	(\$3,649)	(\$2,224)	(\$799)	\$626	\$2,051	\$3,476
	\$2.00	(\$2,224)	\$626	\$3,476	\$6,326	\$9,176	\$12,026	\$14,876	\$17,726
	\$3.00	\$2,051	\$6,326	\$10,601	\$14,876	\$19,151	\$23,426	\$27,701	\$31,976
	\$4.00	\$6,326	\$12,026	\$17,726	\$23,426	\$29,126	\$34,826	\$40,526	\$46,226
	\$5.00	\$10,601	\$17,726	\$24,851	\$31,976	\$39,101	\$46,226	\$53,351	\$60,476
	\$6.00	\$14,876	\$23,426	\$31,976	\$40,526	\$49,076	\$57,626	\$66,176	\$74,726

Where might we go?



	CBD Row Crop W/Grain Harvested			CBD Row Crop Ensiel No Grain Harvested		
	Quant	Price	Total	Quant	Price	Total
Gross Returns Per Acre						
CBD%	3.00%	-	-	3.50%	-	-
Price Per %	\$1.00	-	-	\$1.00	-	-
Total Yield (lbs)	1,500	-	-	-	-	-
Dry Matter Yield (lbs)	1,300	\$3.00	\$3,900	1,500	\$3.50	\$5,250
Hemp Grain (lbs)	1,000	\$0.70	\$700	-	-	-
Hemp Fiber (lbs)	-	-	-	-	-	-
Total Revenue			\$4,600			\$5,250
Total Variable Costs Per Acre			\$1,522			\$1,396
Return Above Variable Cost Per Acre			\$3,078			\$3,854

HEMP THE GOOD, BAD, AND UGLY

WSJ The Wall Street Journal
@WSJ
Hemp offers growers a shot at big profits (one farmer expects to make \$75k an acre) as they attempt to cash in on the craze for CBD oil



Farmers Start to Get High on Hemp
Amid growing consumer demand for CBD and changes in legislation, growers are devoting more acreage to planting hemp.



Christopher Wolf
@WolfCA3

Replying to @TreyMalone3

I had a guy at World Dairy Expo last week take the microphone at the end of my seminar to announce that he could *guarantee profits* to dairy farms that grew hemp.

8:28 PM · Oct 9, 2019 · Twitter Web App

I've got 99 problems
and CBD oil solved
like 86 of them.



After hemp crop tanks, CBD producer sues Oregon hemp seed seller for \$44 million, lawsuit says

Kentucky farmers sue hemp company

Cash-flow, legal issues giving Kentucky hemp 'growing pains'



Lawsuits, delays and an explosion: Troubles mount for Kentucky hemp pioneer GenCanna

Hunter Heights files \$1.1 million lawsuit against SunStrand, LLC

In Montana, Hemp Is Still A Risky Bet For Farmers

Hemp Fraud Hits Farmer With Clone Scam



GOING FORWARD IN 2020

2020 CRYSTAL BALL

- 47+ states looking to get into the market
- New Regulations at State and Federal Level
 - Standardization of Regulations....PLEASE
- Hype Machine Continues
- # of producers with little to no ag background
- International Markets
- Concentration
- Contracts
- Crop Insurance Clarification
- Oversupply Issues
- Financing
- Prices are going, going,

CONSIDERATIONS FOR PRODUCERS AND PROCESSORS

Producers

- How many acres can I effectively manage?
- Do I have access to the market I am producing?
- How much do I have to invest?
- Financing method
- Do I have a contract and understand?
- Have I done my homework on the company I am contracting?
- How can I mitigate risk?
- What is my Plan B?
- What happens if crop has to be destroyed?

Processors

- How much can I effectively process?
- Do I have a market for your product and how big is it?
- Who has the liability on the crop?
- Will my contract and terms attract the number of acres needed?
- What is my Plan B if venture capital is pulled?
- How long can I store?
- How am I going to finance the operation?
- Understanding of Rules and Regs

Contact Information



Will Snell

Extension Professor

Phone: 859.257.7288

Email: wsnell@uky.edu



Jonathan D Shepherd

Farm Management Specialist

Phone: 859.218.4395

Email: jdshepherd@uky.edu



Tyler Mark

Production Economist

Phone: 859.257.7283

Email: tyler.mark@uky.edu



@kytweeter55