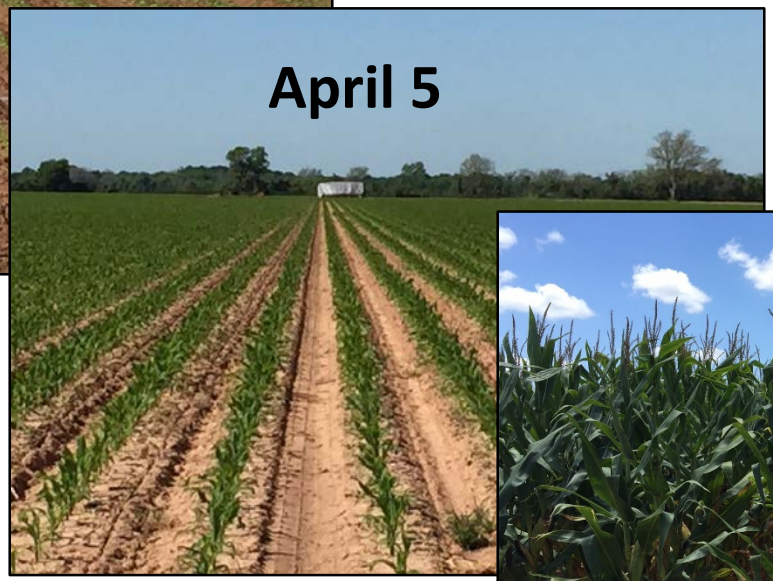
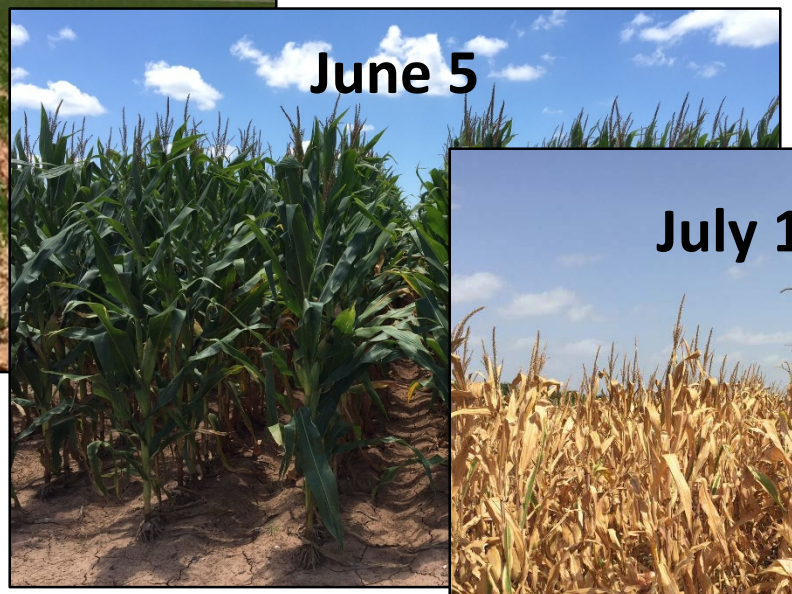
Seasonality





Mark Welch

Grain Marketing Economist

Texas A&M AgriLife Extension Service

TEXAS A&M AGRILIFE EXTENSION

Seasonal Price Patterns

- **Cash Seasonals**
  - **Supply and demand based**
    - **Cash - Weaning, grazing**
    - **Crops - Harvest**
  - **Can you modify production plans to take advantage?**
- **Contract Seasonals**
  - **Eventually tied to cash market**
  - **Tied to events that may affect supply and demand**
  - **Expands marketing opportunities**
- **Seasonal Price Patterns**
  - **Outputs**
  - **Inputs**

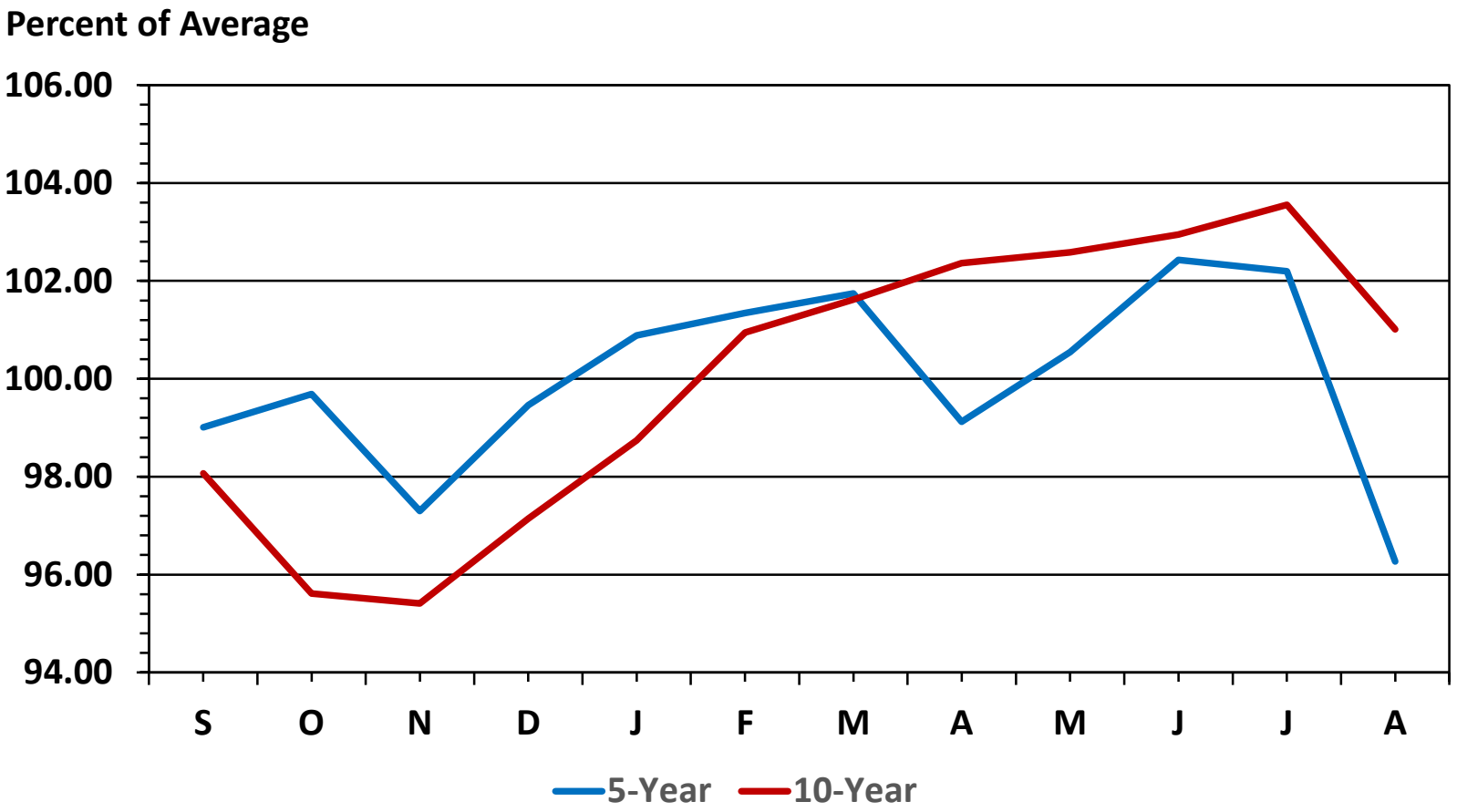
Definitions

- **Seasonality**
  - **Price variation caused by market *uncertainty* associated with normal physiological or fundamental effects such as planting, critical growing stage, harvest, supply and demand conditions, and holidays**
  - **Provides additional information to compliment traditional fundamental and technical analysis**
- **Syndrome or Anomaly**
  - **Price variation caused by market uncertainty associated with an unusual event such as a drought, trade disruption, BSE, etc.**

Monthly Seasonal Index
Average Percentage Method

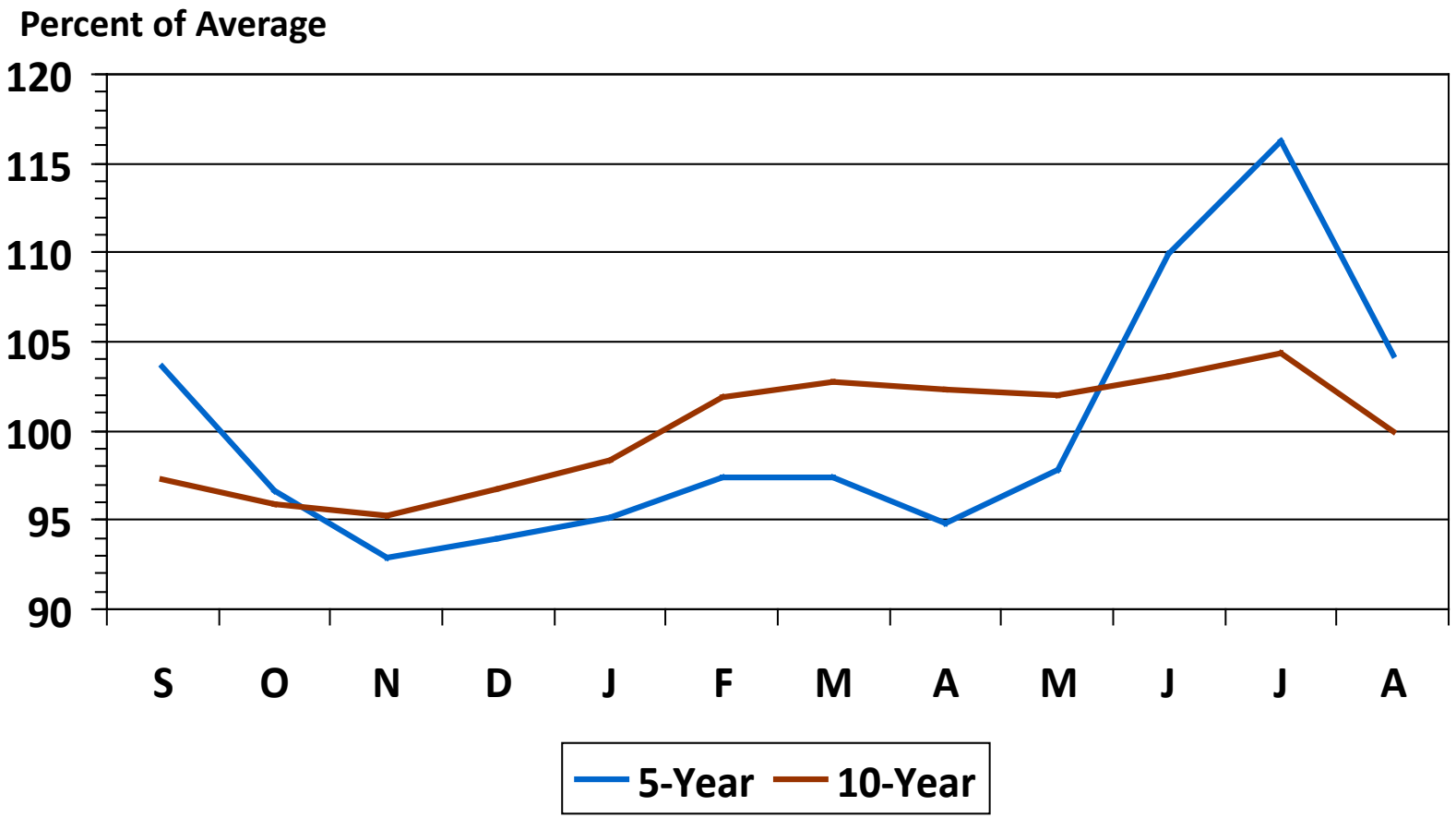
- Calculate the annual average price for each year or season
- Divide the monthly price by that season's average to get the monthly index value
- Average all the monthly price indices for the time period of interest
- The resulting figure is the seasonal index

Seasonal Price Index for U.S. Corn
September 2010/2011 – August 2019/2020
Marketing Year



TEXAS A&M AGRILIFE EXTENSION

Seasonal Price Index for U.S. Sorghum
September 2010/2011 – August 2019/2020 Marketing Year



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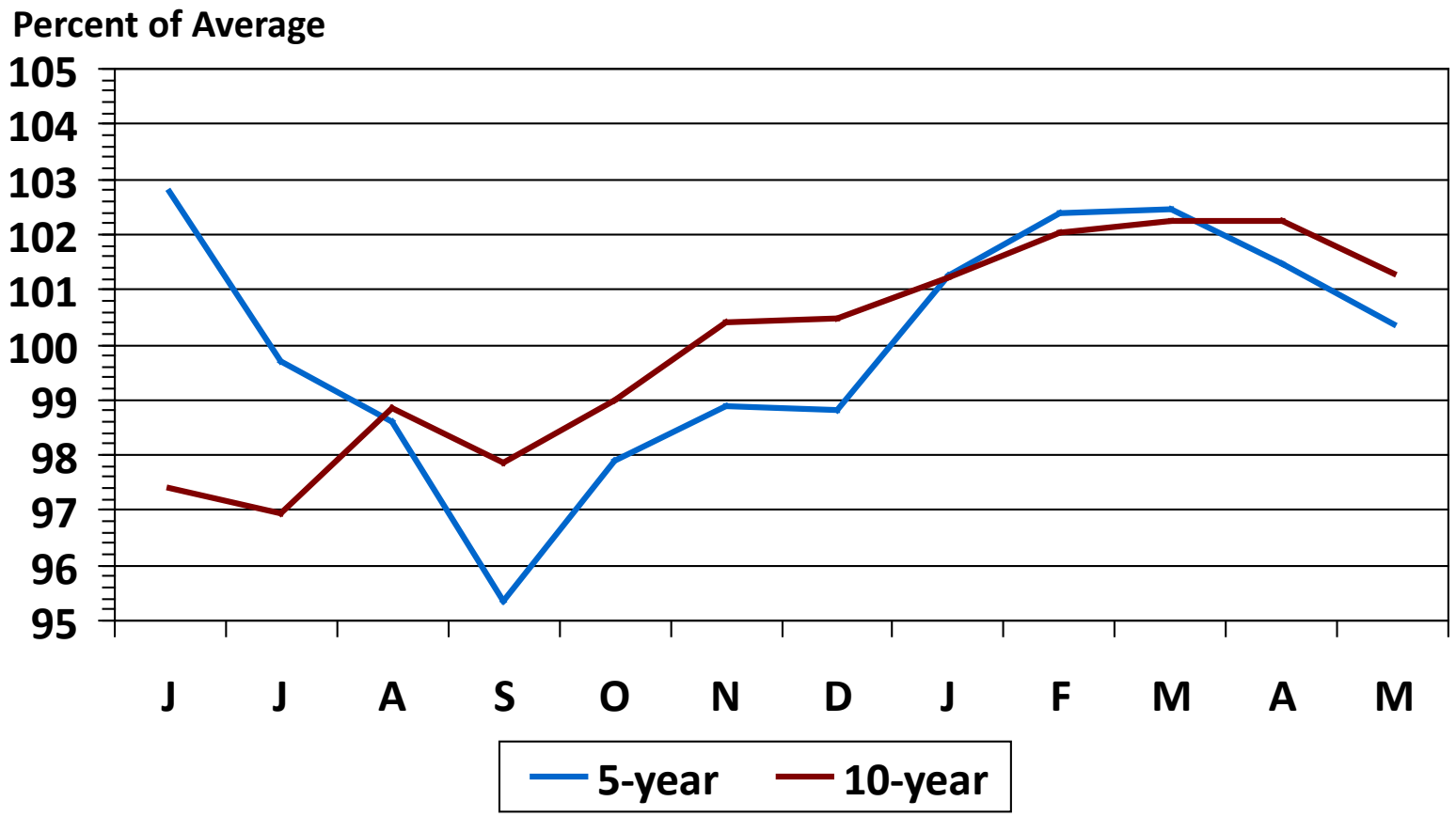
Seasonal Price Index for U.S. Wheat
June 2010/2011 – May 2019/2020 Marketing Year



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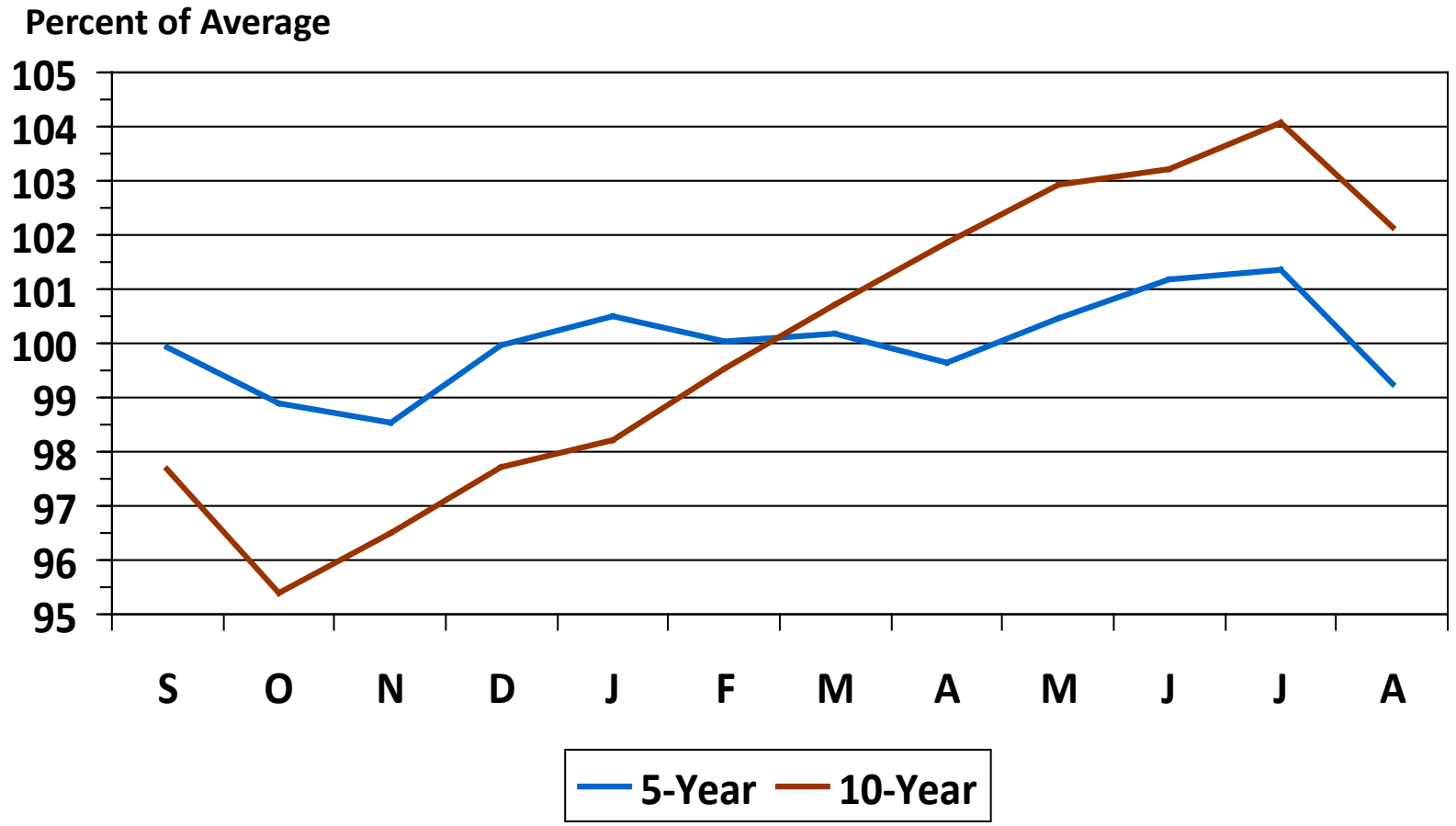
Seasonal Price Index for U.S. Soybeans

September 2010/2011 – August 2019/2020

Marketing Year



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Moore Research Center - Seasonal Price Index

- **Calculate contract high/low/range for time period of interest**
  - **2018 Dec Corn, January 1 through December 14 (exp.)**
    - **High: 426.50**
    - **Low: 343.25**
    - **Range: 83.25**

- **Determine daily index (0 to 1.00)**
  - **Price on June 1 was 411.25. The index for 6/1/18 is (price minus low)/range *(411.25-343.25)/83.25=68/83.25=0.82***

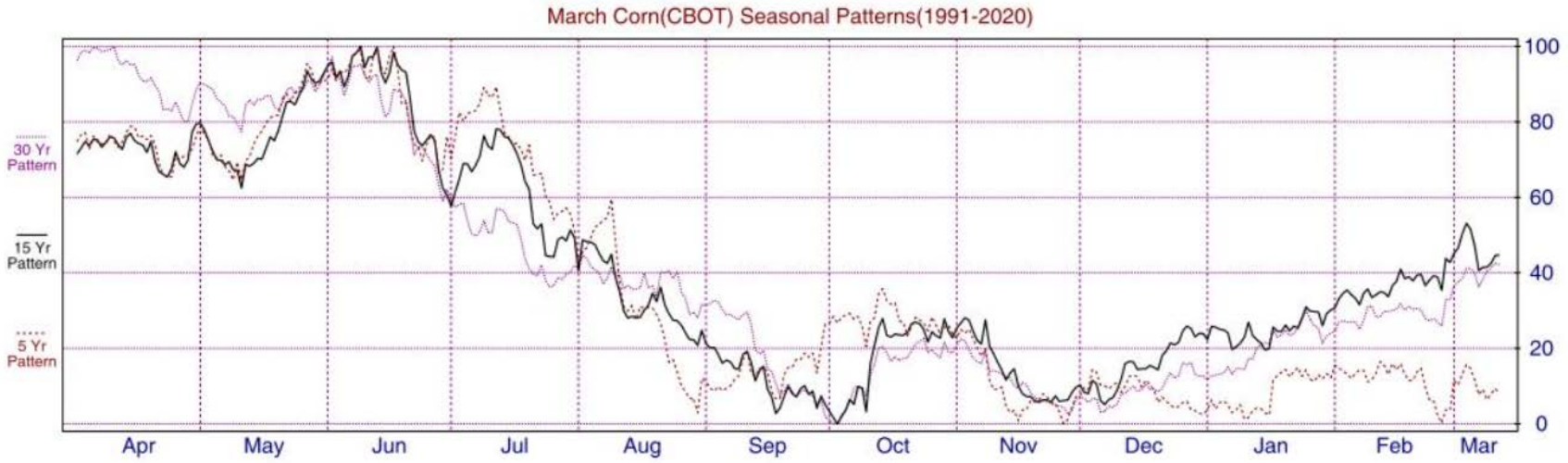
- **Average daily indices over years**
  - **June 1 Index 2014-2018: 0.72, 0.11, 0.76, 0.68, 0.82; 5-yr avg: 0.62**
  - **Fit the average of daily indices to a 0 to 1.00 range as above**
    - **The highest average daily index from 2014 to 2018 (5-yr index) was 0.70**
    - **The lowest average daily index value from 2013-17 was 0.13**
    - **The range of average daily index values for five years was 0.57**
    - **On June 1, the 5-year daily index value was 0.62**
    - **The 5-year Index value is 0.62-0.13/0.57=0.86**

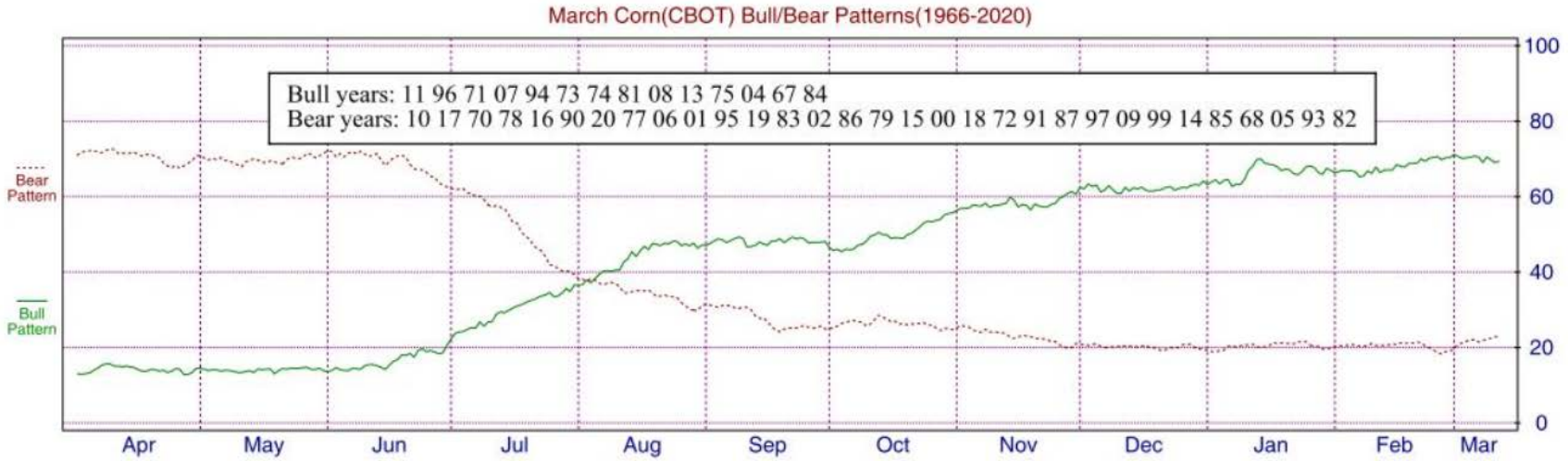
  - *NOTE: Most longer term indices will range from .35 to .65*

Moore Research Center – Bull/Bear Charts

- **Each bull/bear chart consists of one composite pattern for bull years and one for bear years, years indicated in the box ('72' = 1972).**
- **Contract years are listed in order of the degree of inclination/declination of the line; most bullish of bull years listed first, most bearish of bear years listed last.**
- **To be included in the chart, the contract that year must meet a strict mathematical definition.**
- **Years with a neutral bias are not considered.**
- **Scale is not fitted to 100 to better represent the extent of typical bull or bear move.**
  - *NOTE: Most longer term indices will range from .35 to .65*

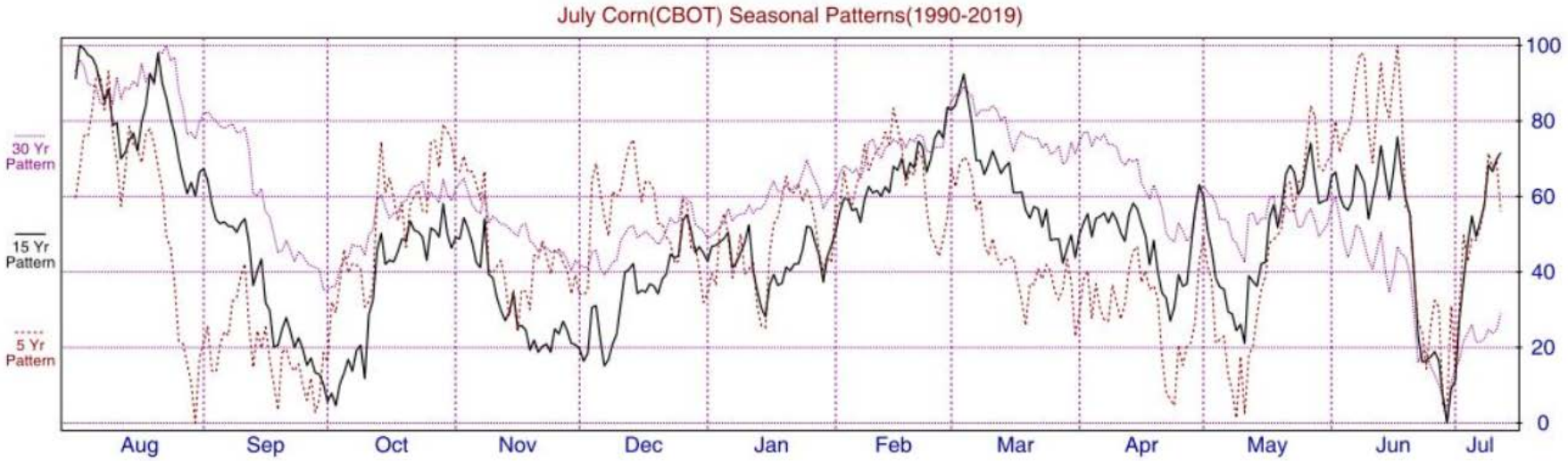
CORN

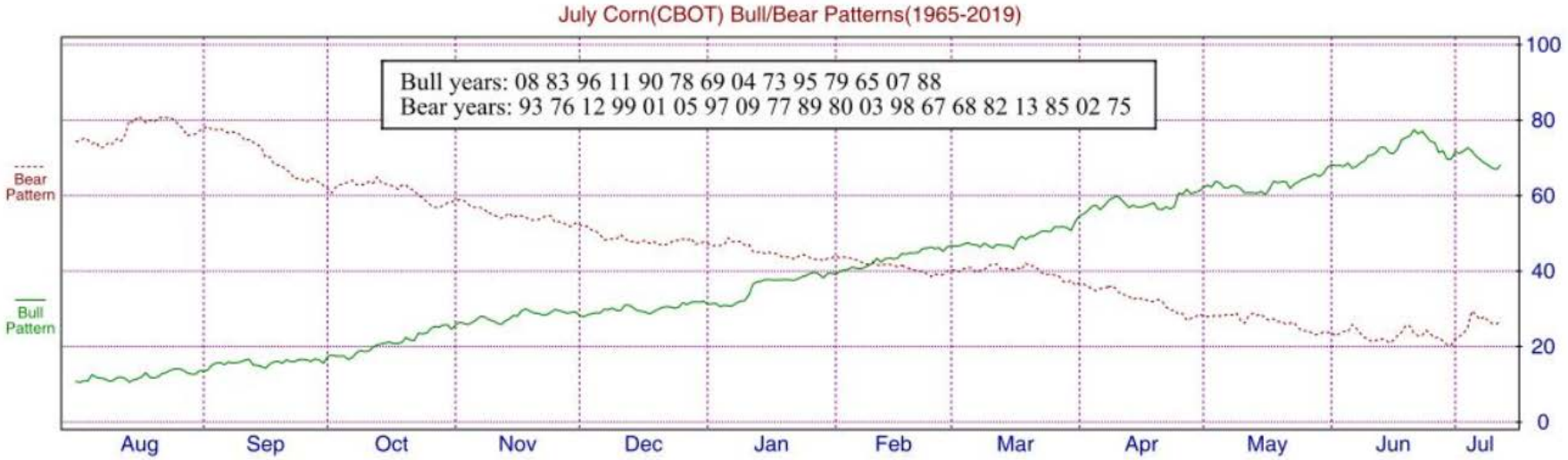




TEXAS A&M AGRILIFE EXTENSION

CORN





TEXAS A&M AGRILIFE EXTENSION

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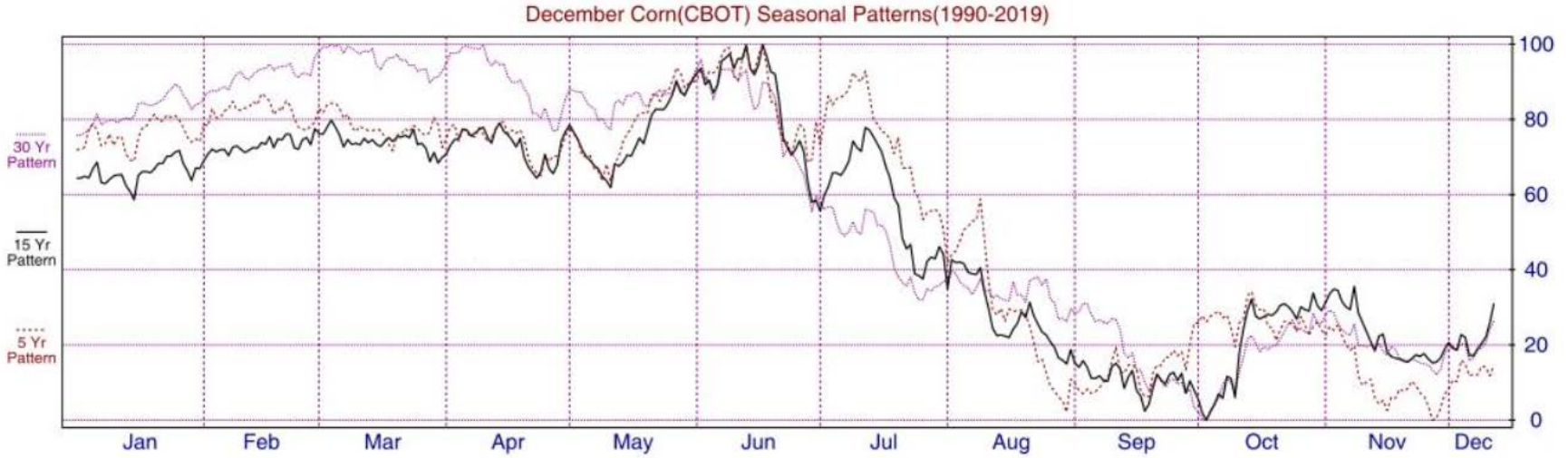
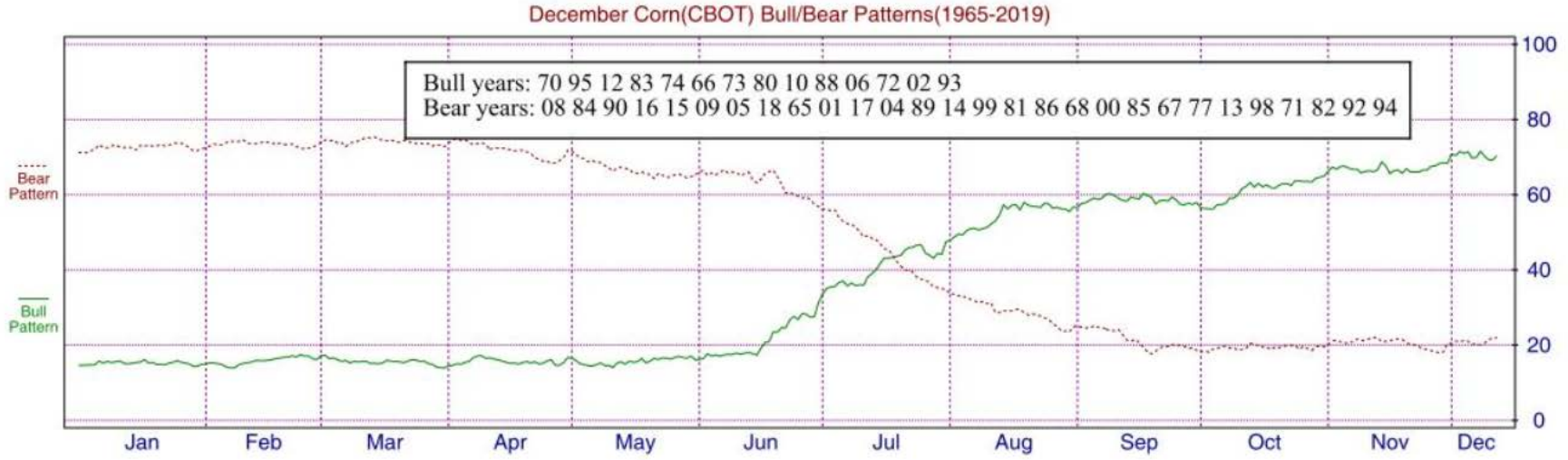


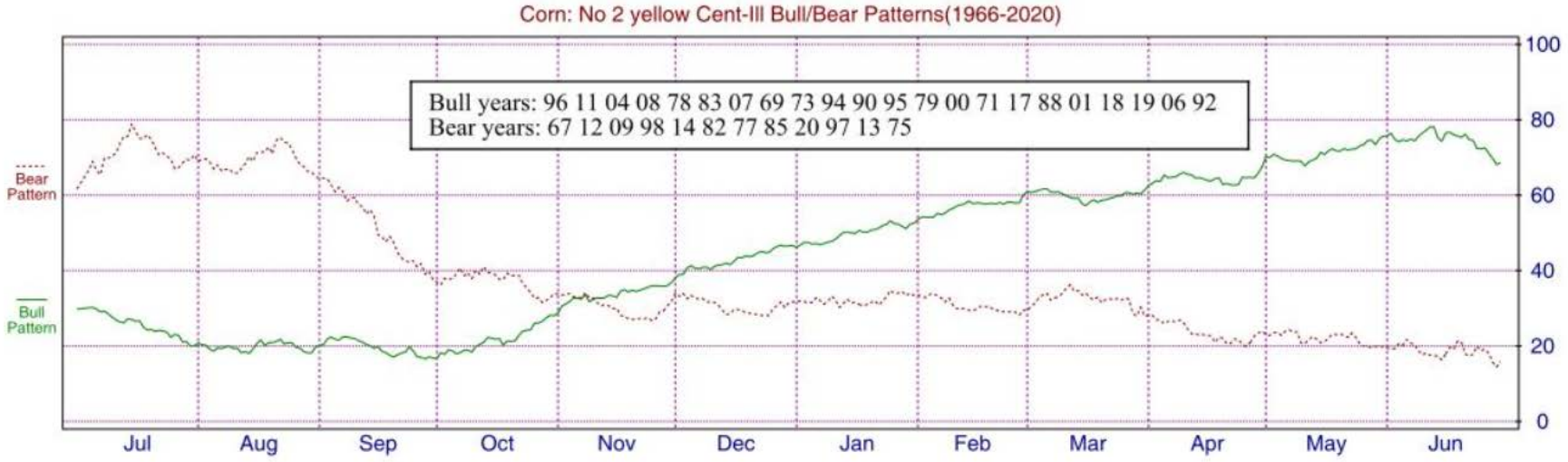


14 out of 55 were bull years: 25%

28 out of 55 were bear years: 51%

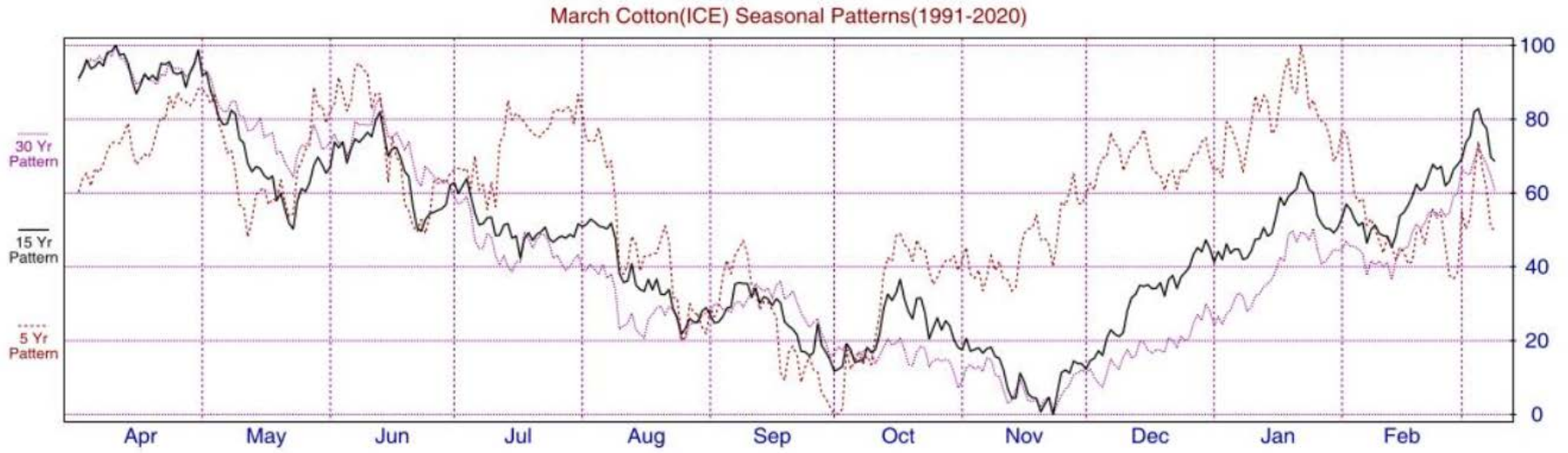
TEXAS A&M AGRILIFE EXTENSION

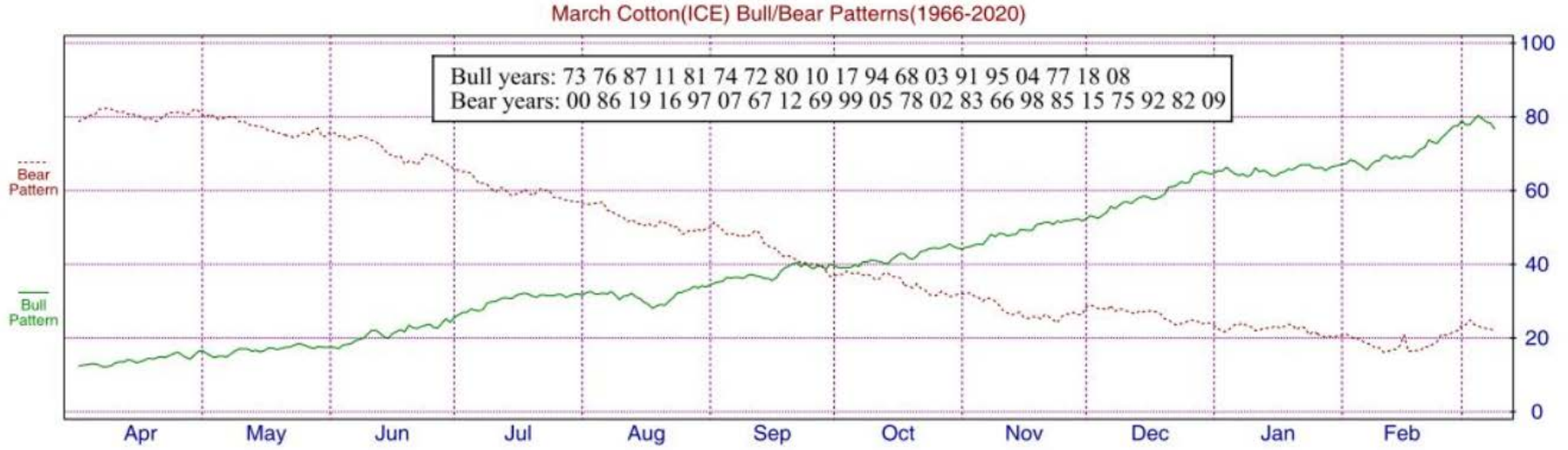
CORN



TEXAS A&M AGRILIFE EXTENSION

COTTON





TEXAS A&M AGRILIFE EXTENSION

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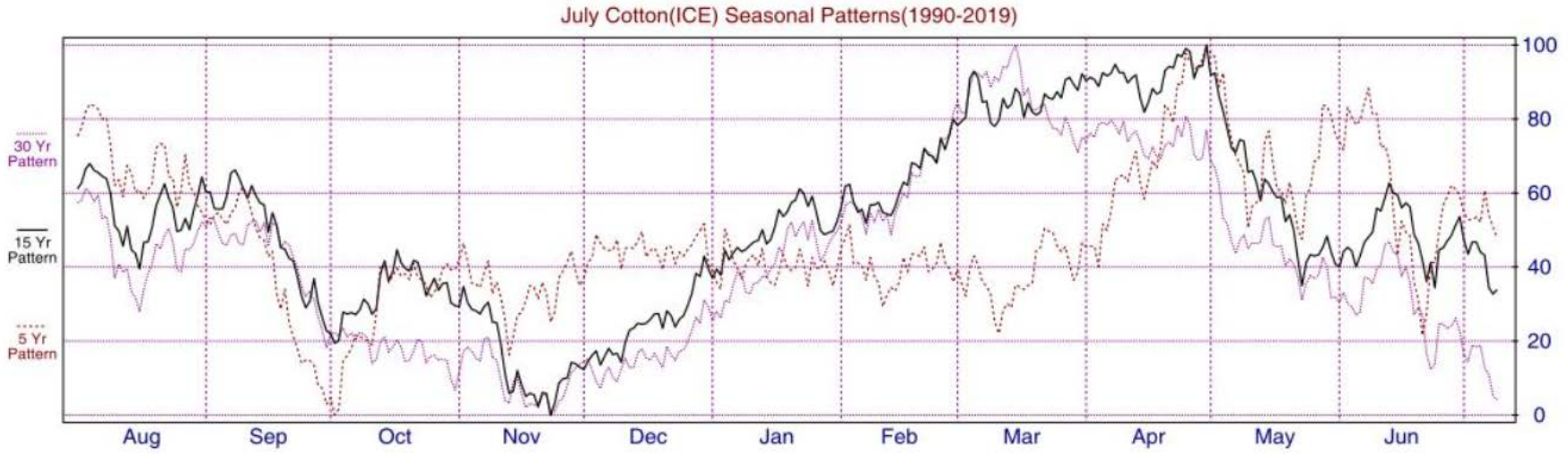

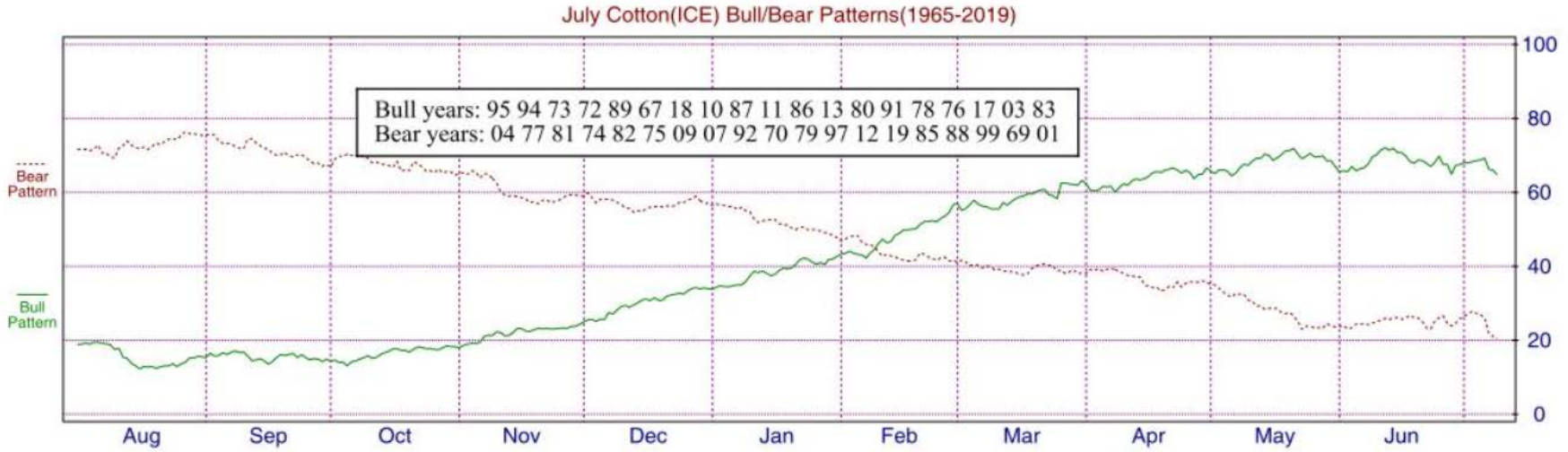

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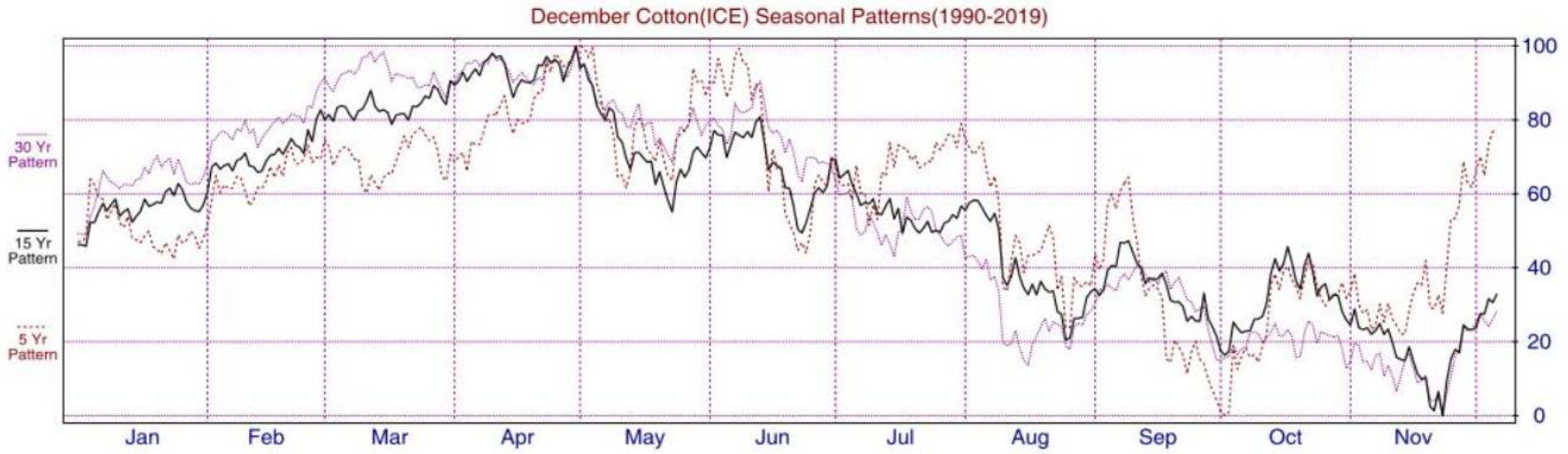
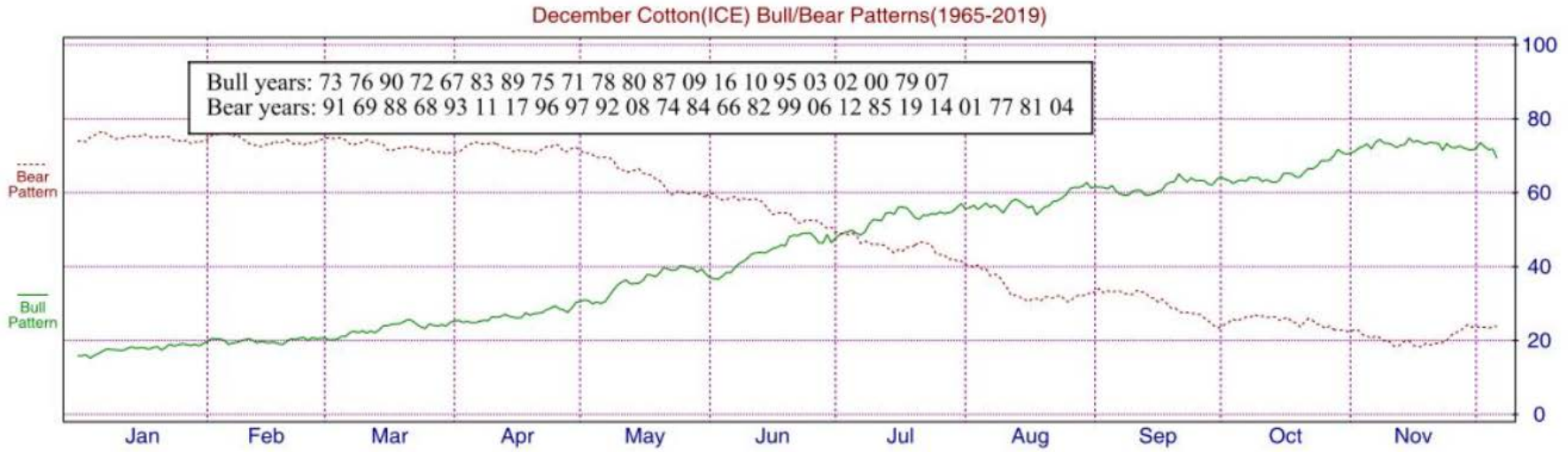
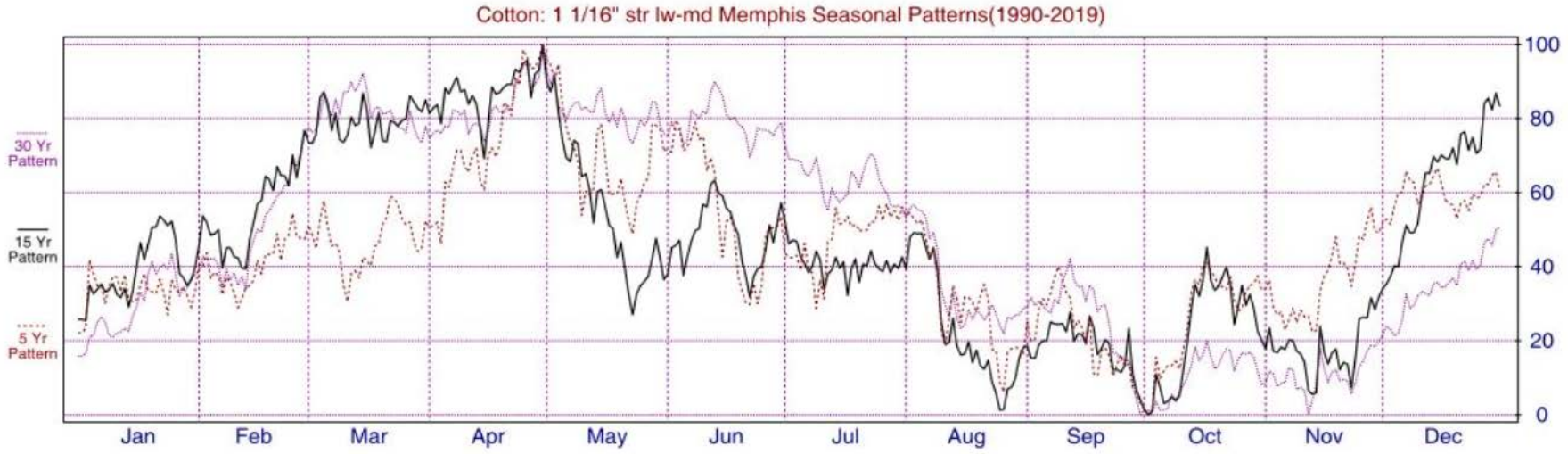
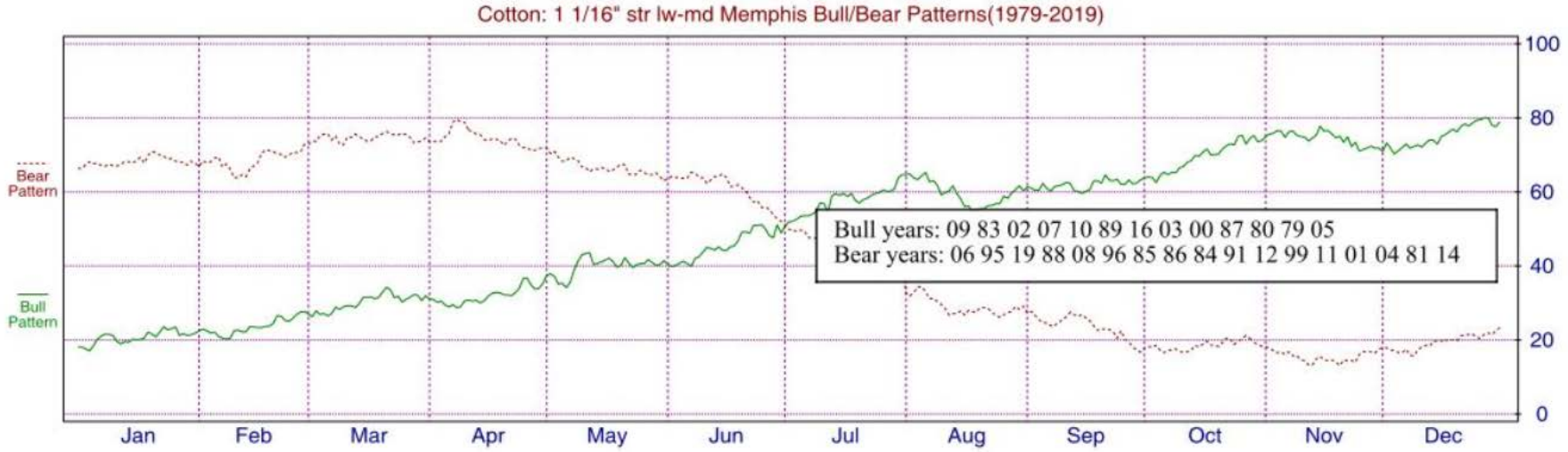




Texas A&M AgriLife Extension

COTTON





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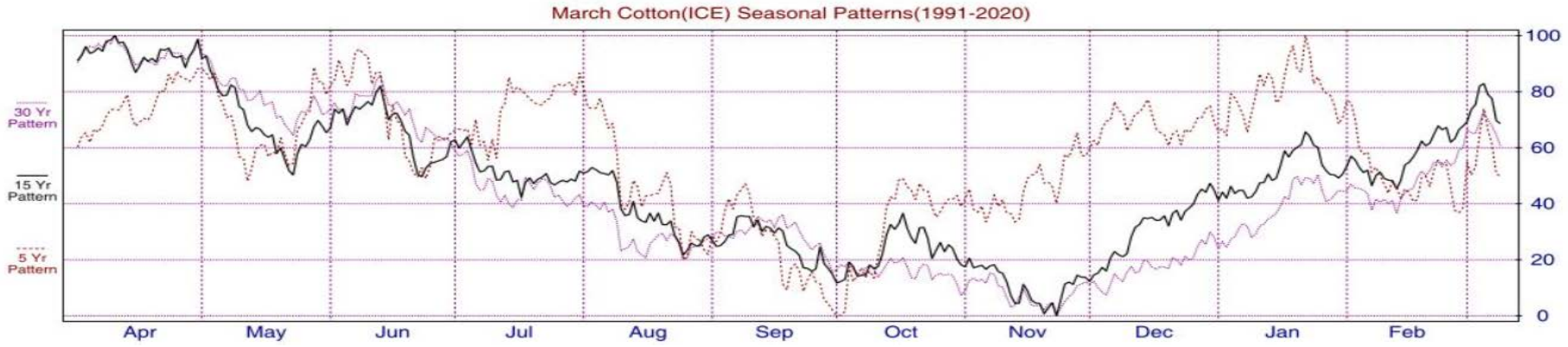
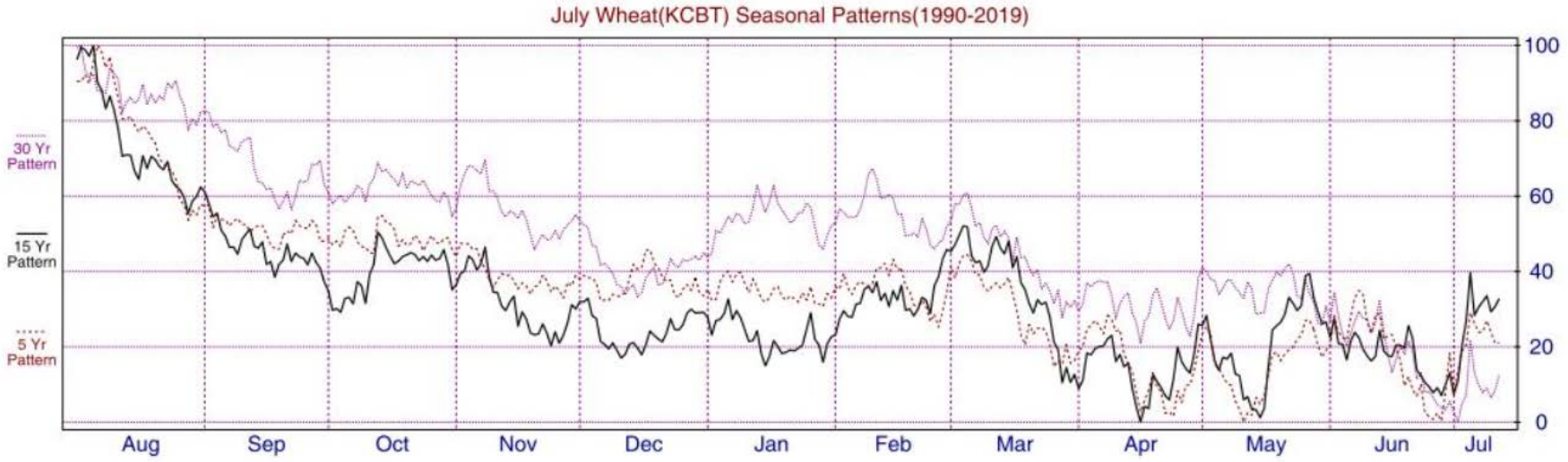
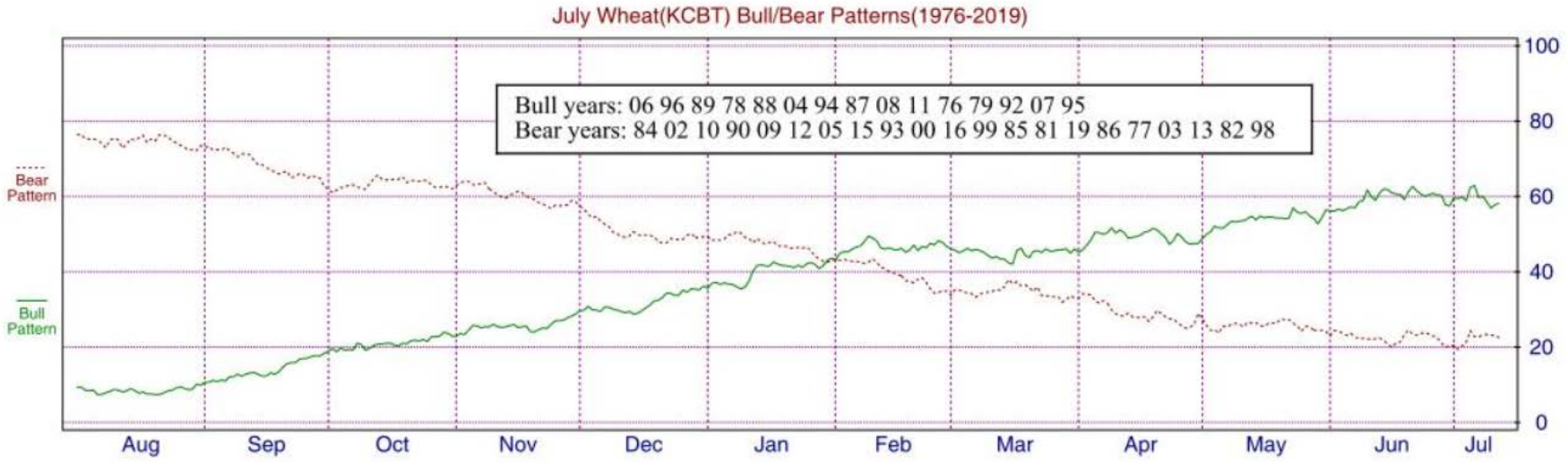


TEXAS A&M AGRILIFE EXTENSION

KC WHEAT





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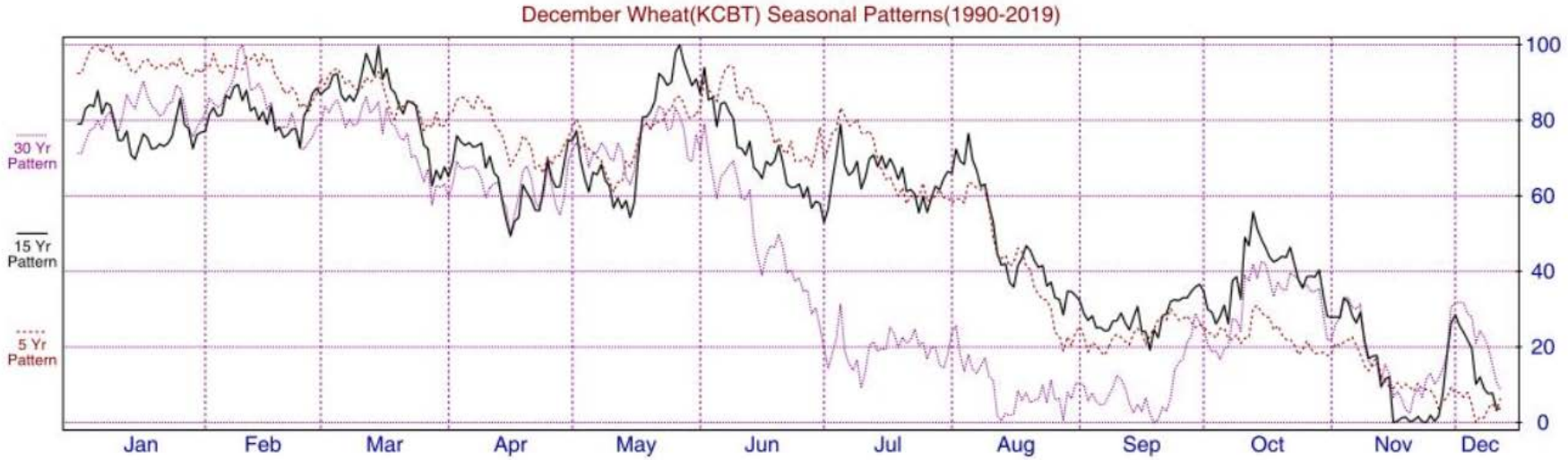

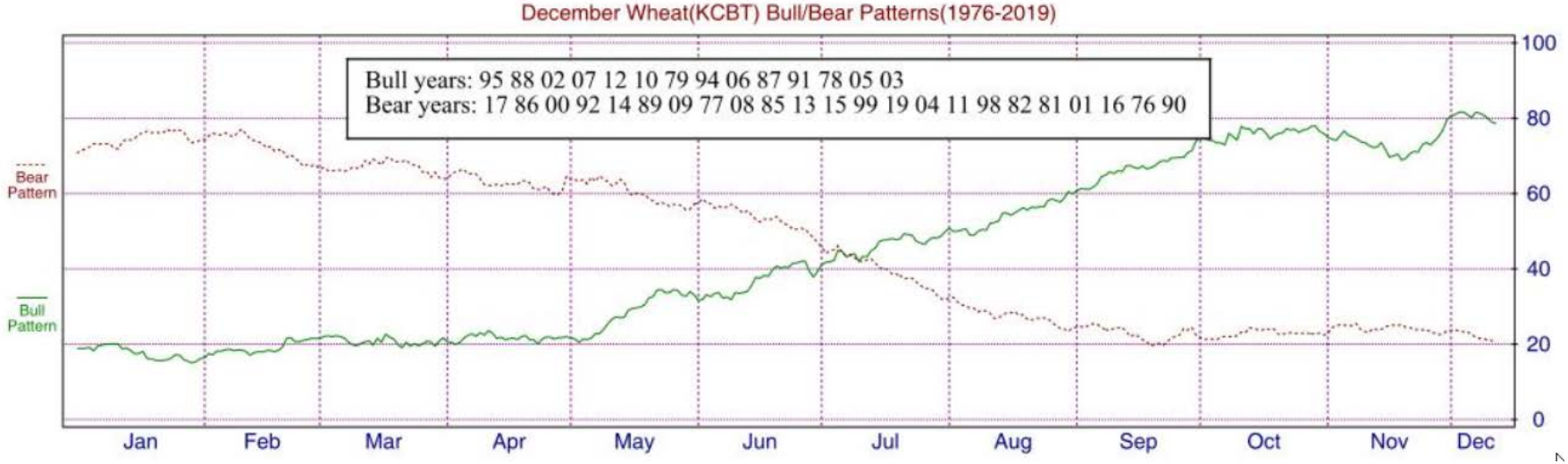

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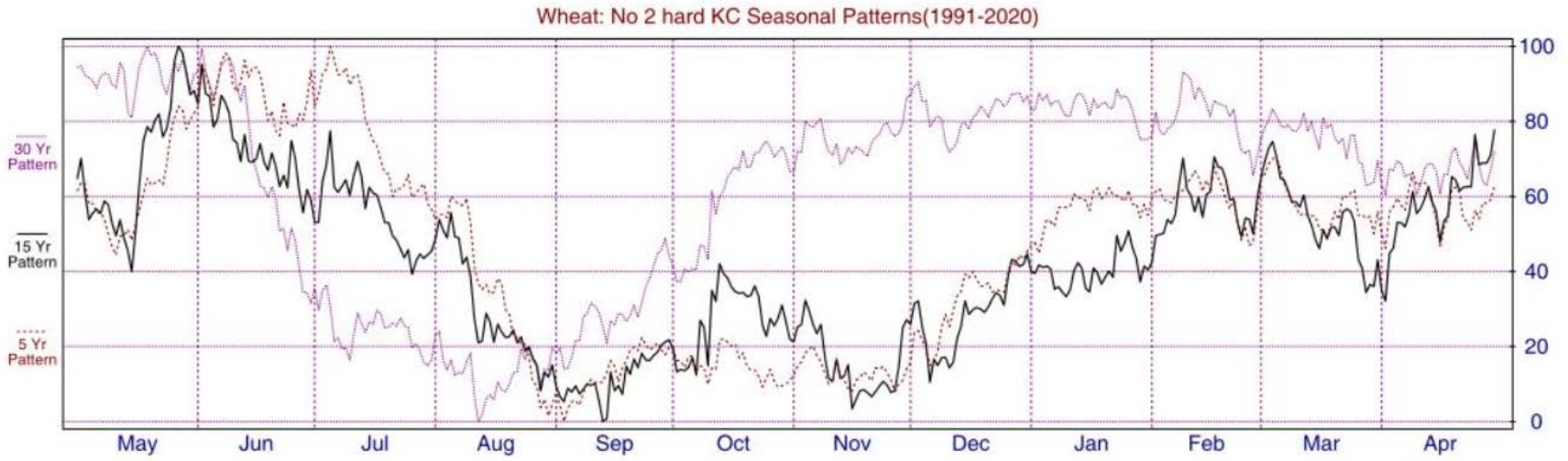
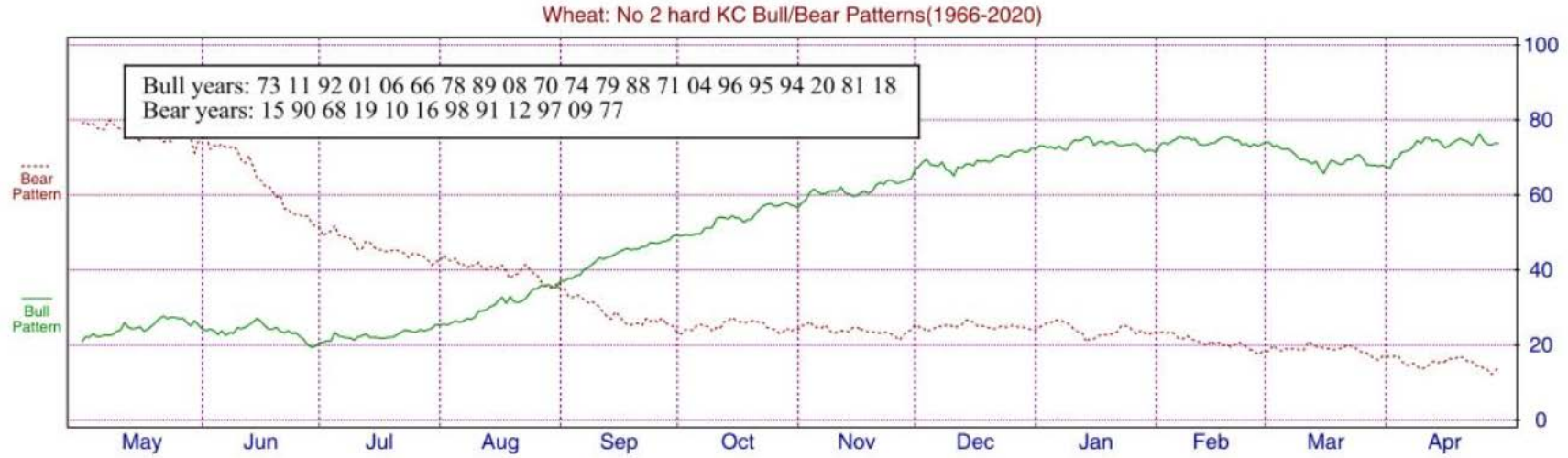
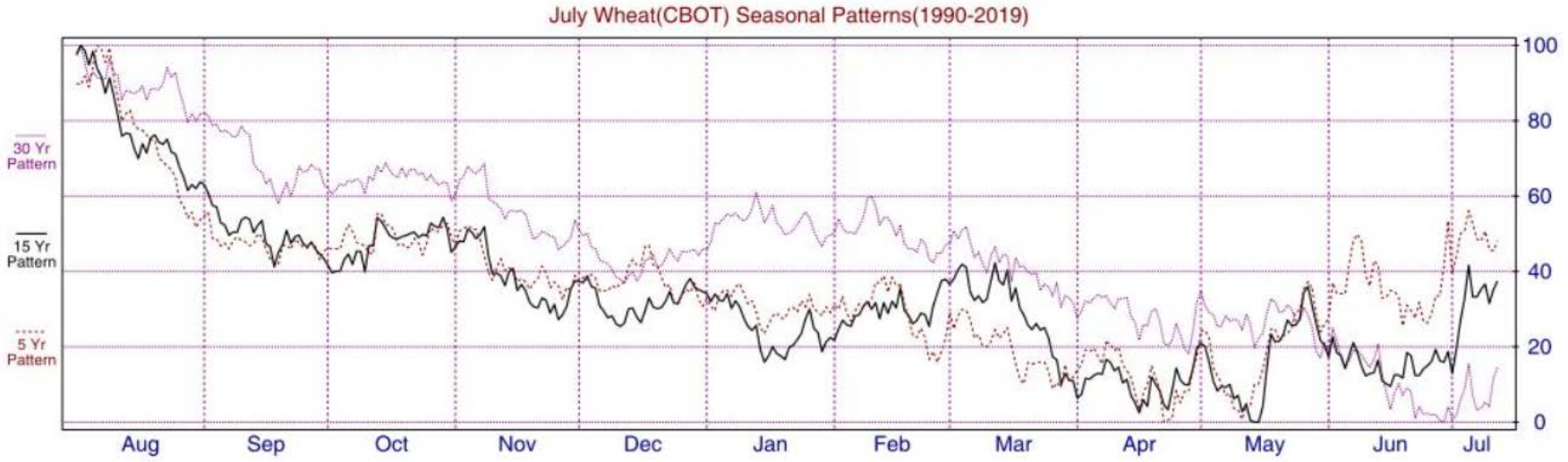
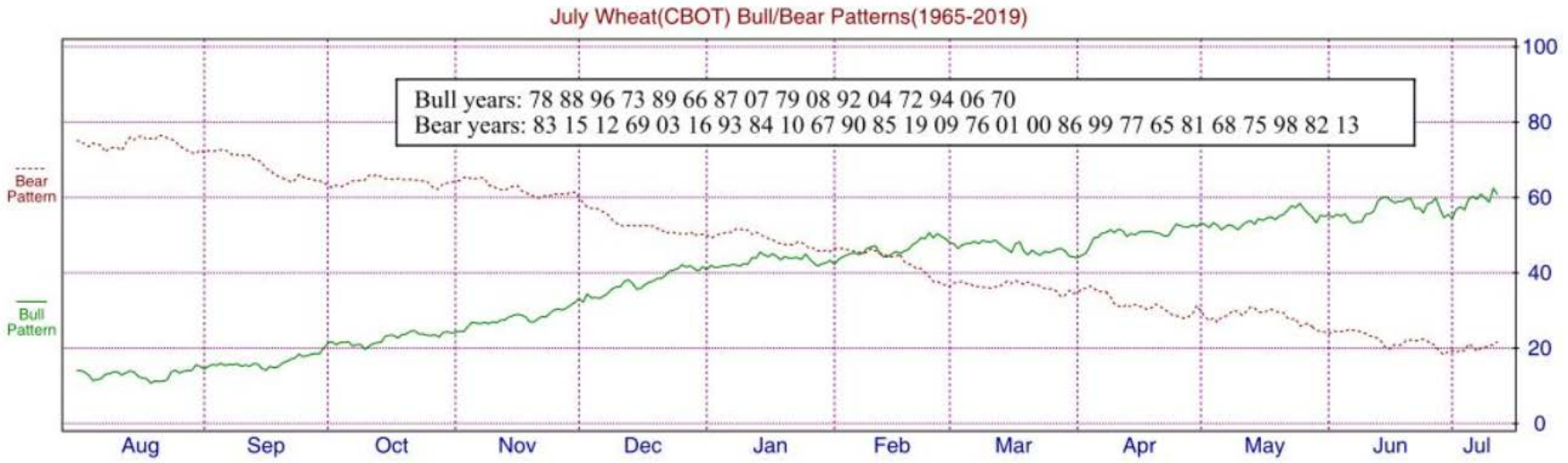




TEXAS A&M AGRILIFE EXTENSION

CHICAGO WHEAT





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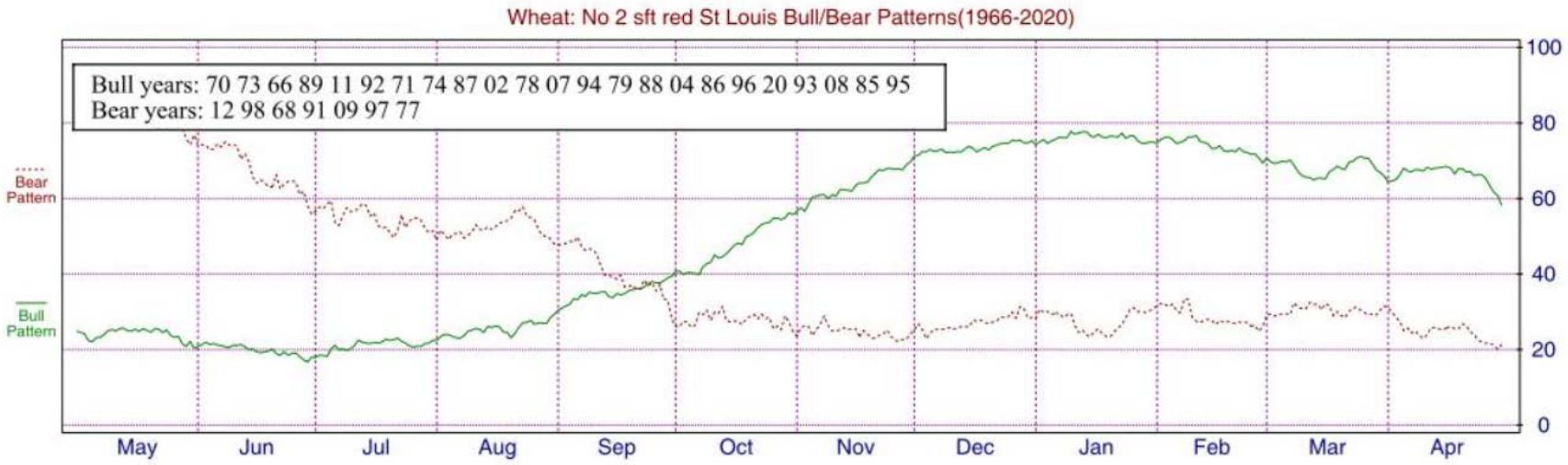
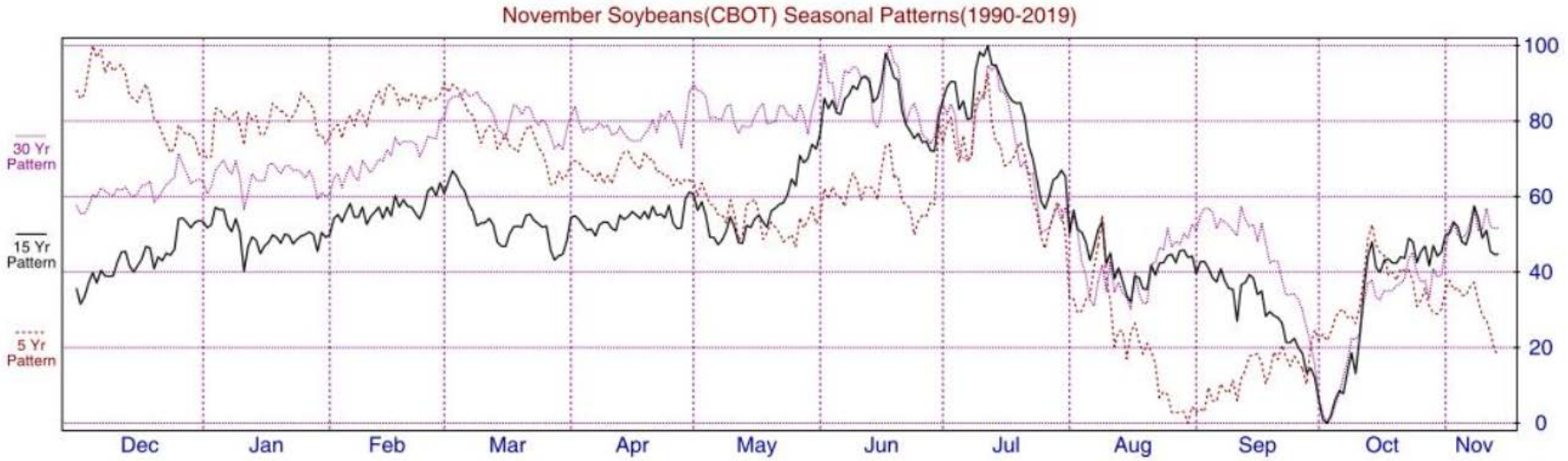
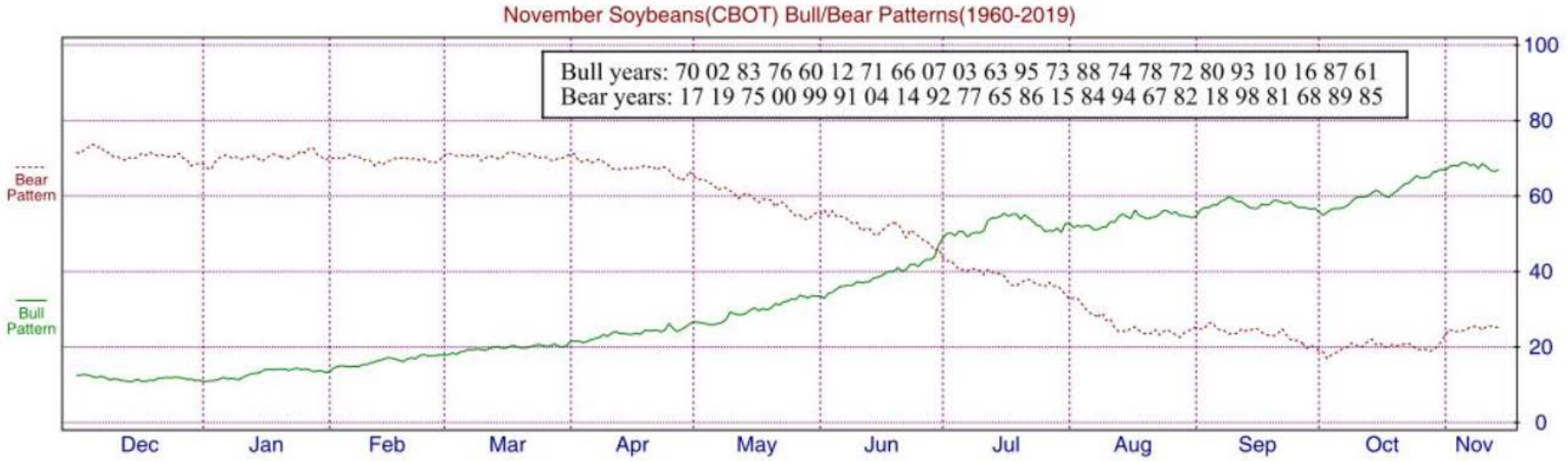
CHICAGO WHEAT



TEXAS A&M AGRILIFE EXTENSION

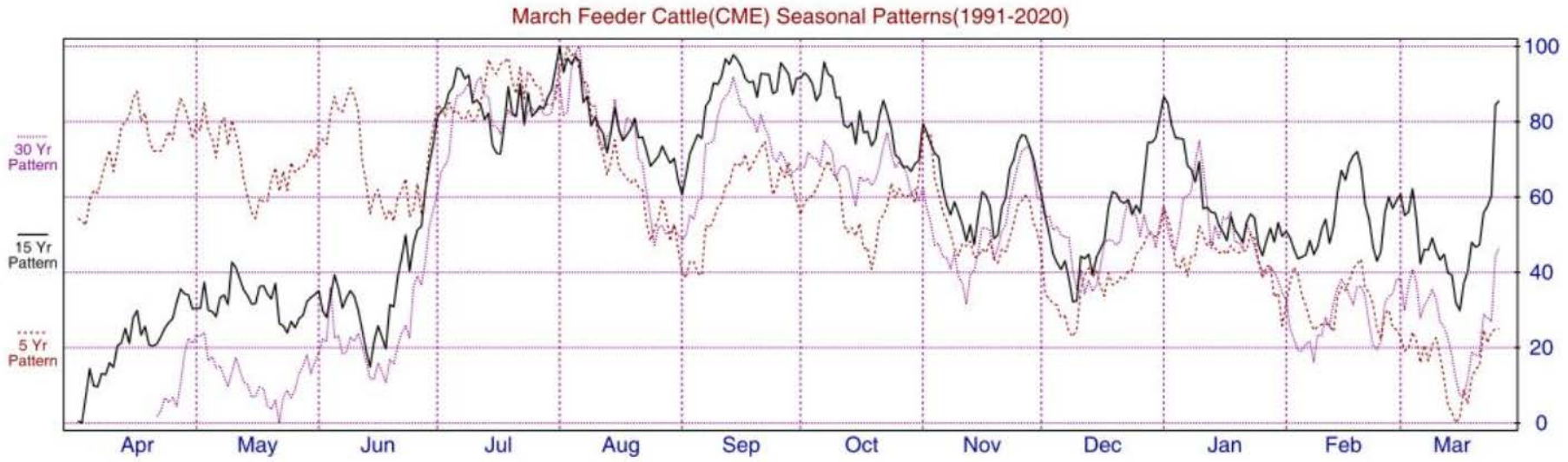
SOYBEANS

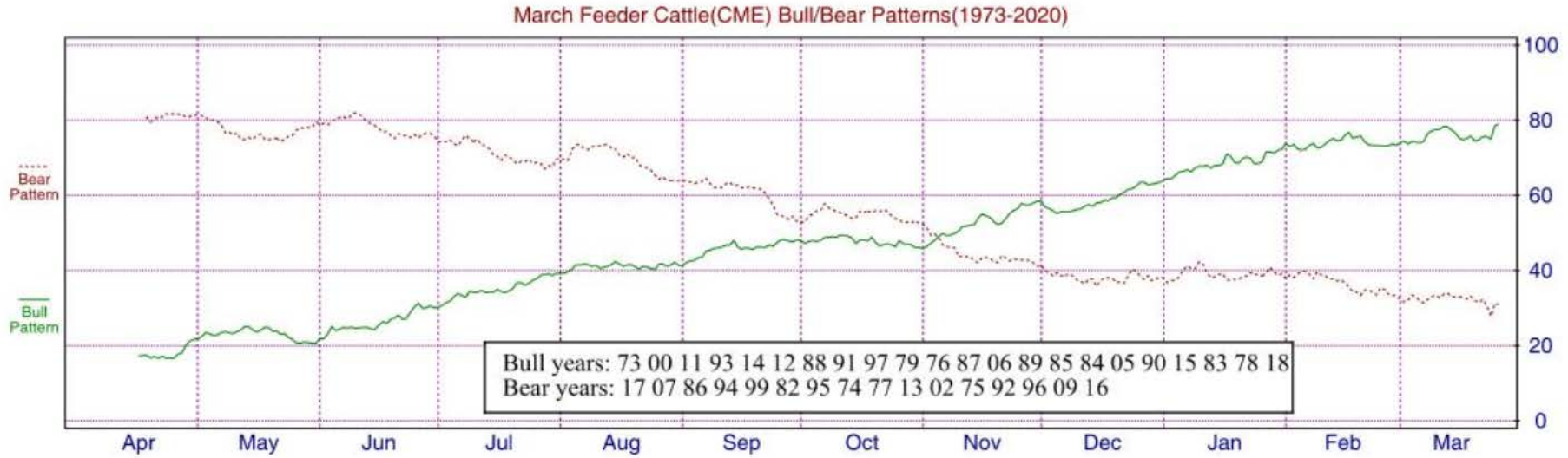




TEXAS A&M AGRILIFE EXTENSION

FEEDER CATTLE





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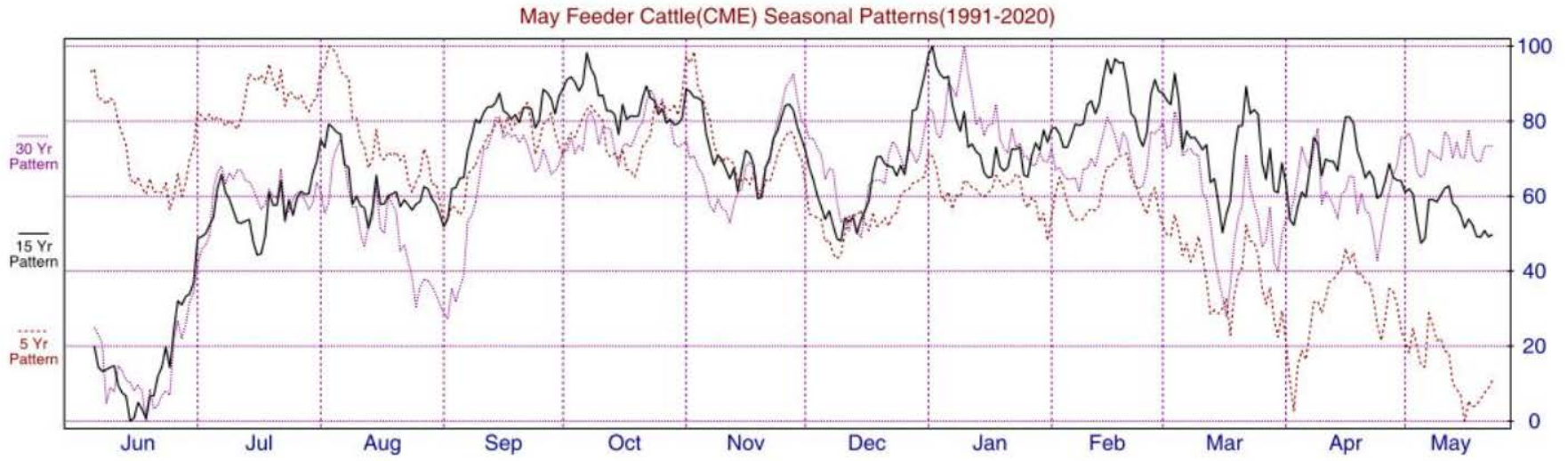
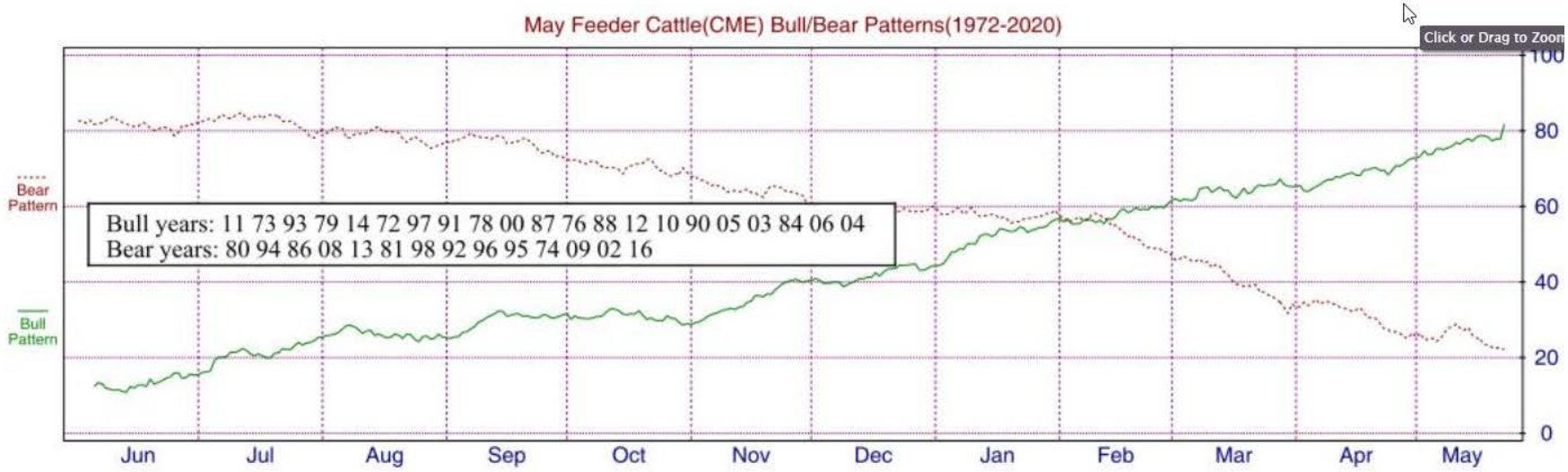
FEEDER CATTLE





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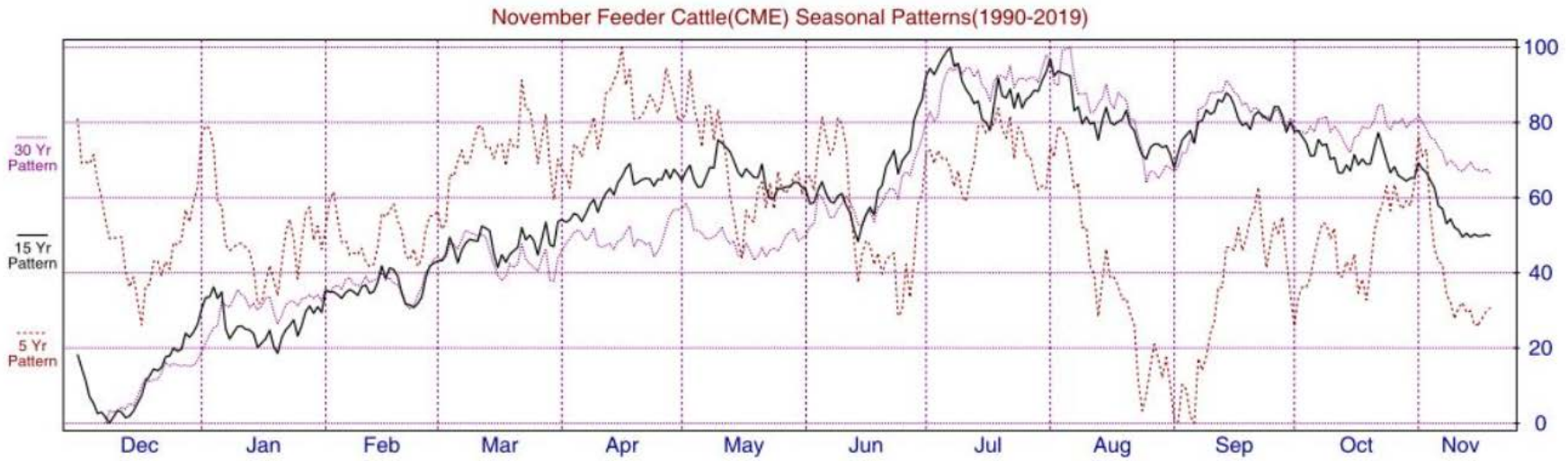
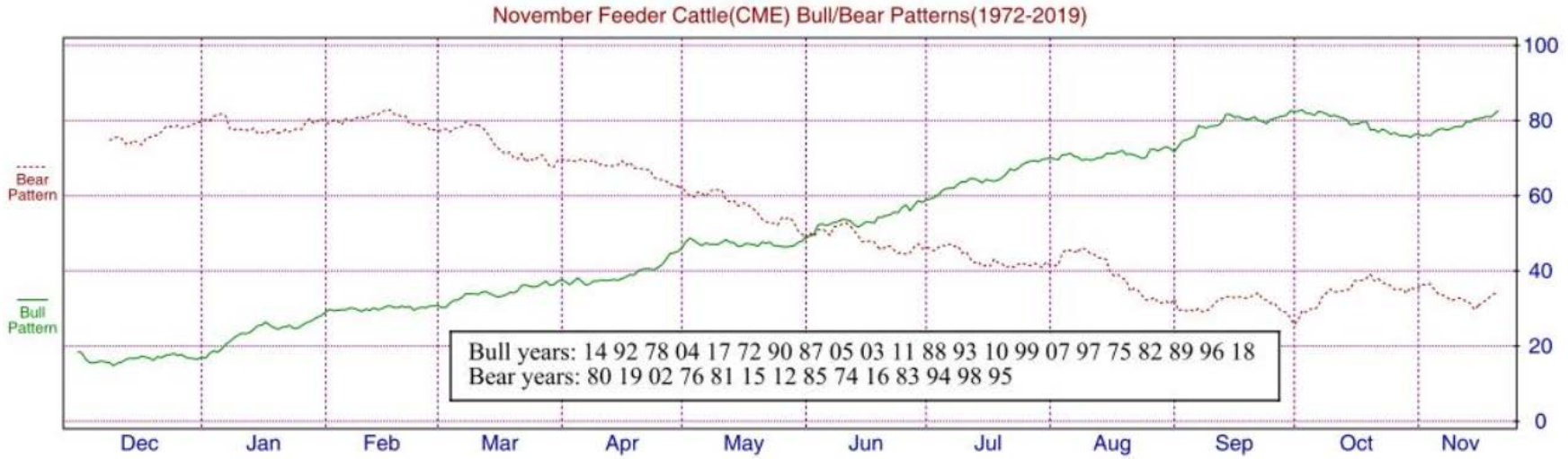
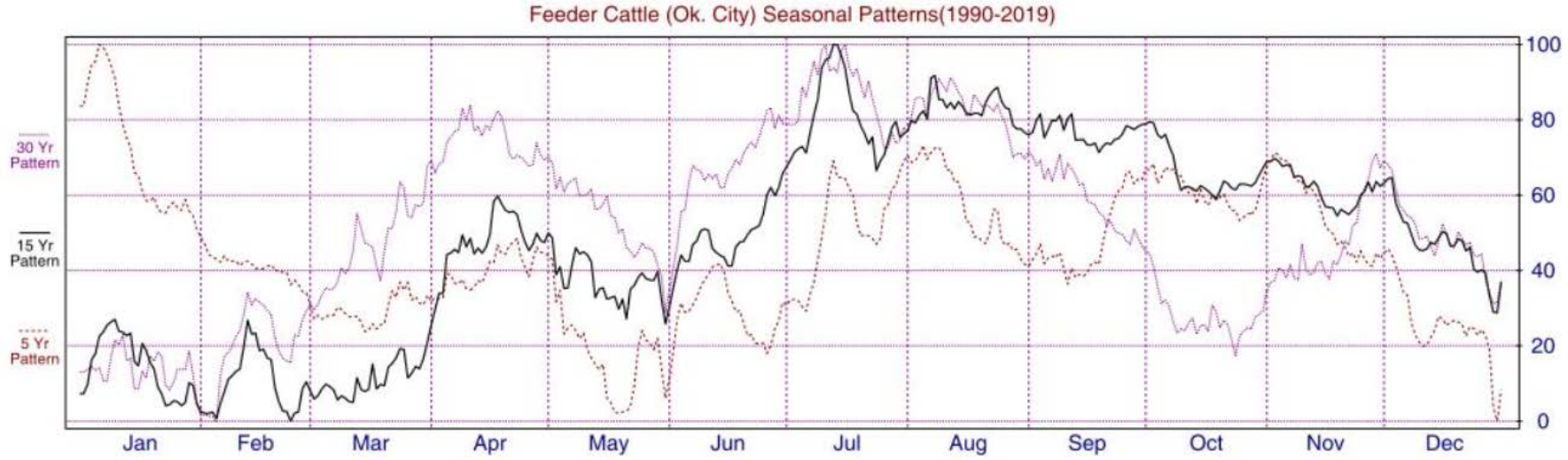
FEEDER CATTLE

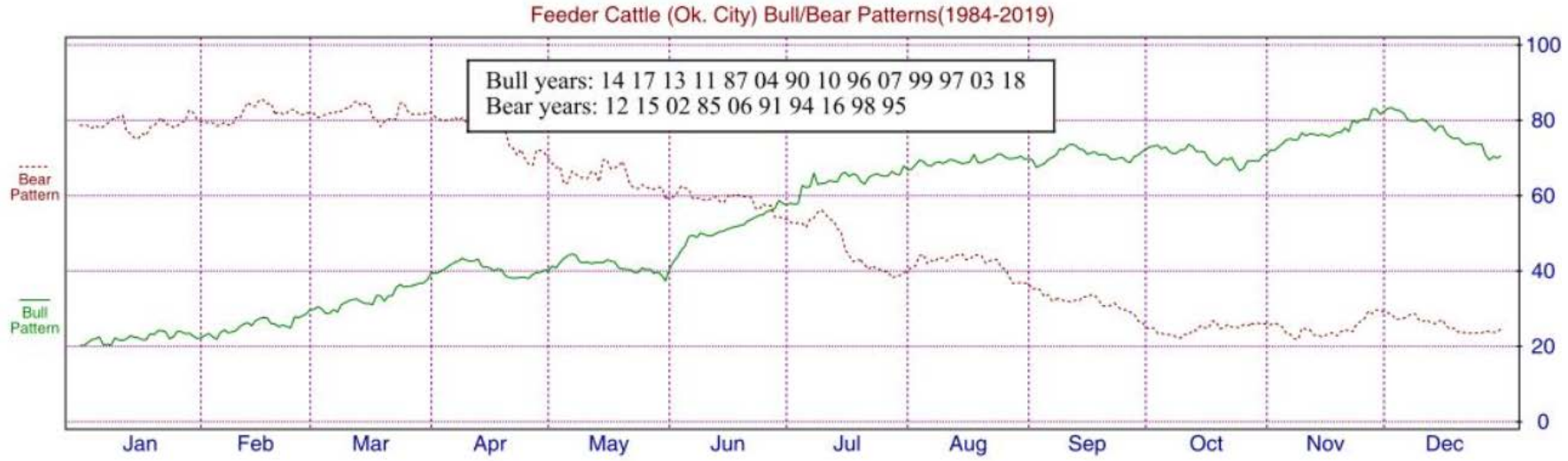




TEXAS A&M AGRILIFE EXTENSION

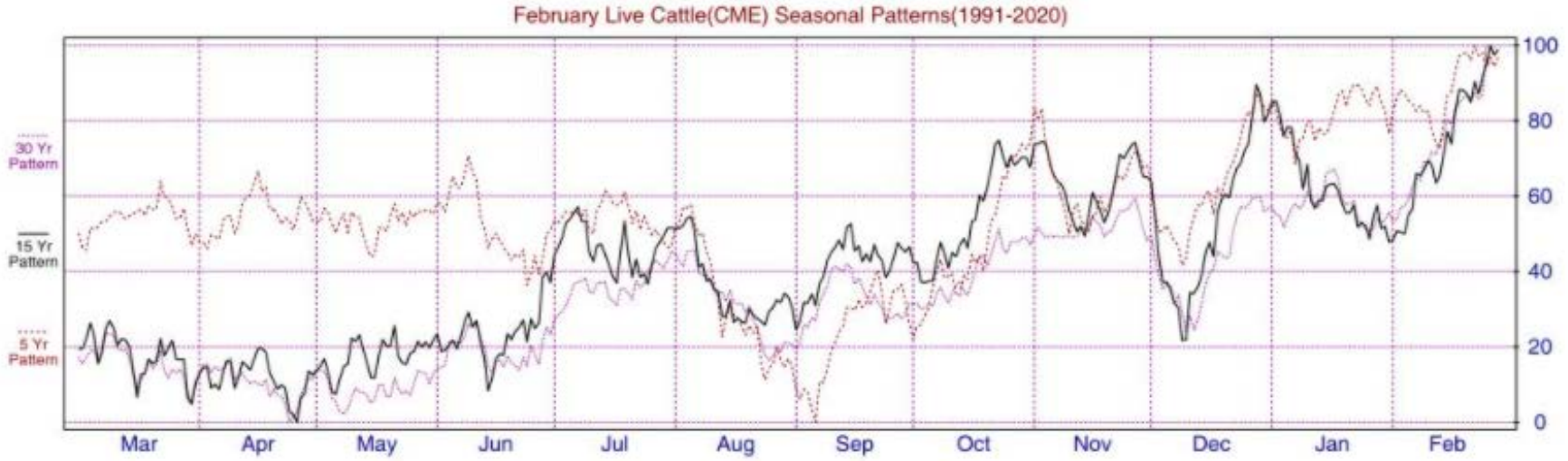
CASH FEEDER CATTLE

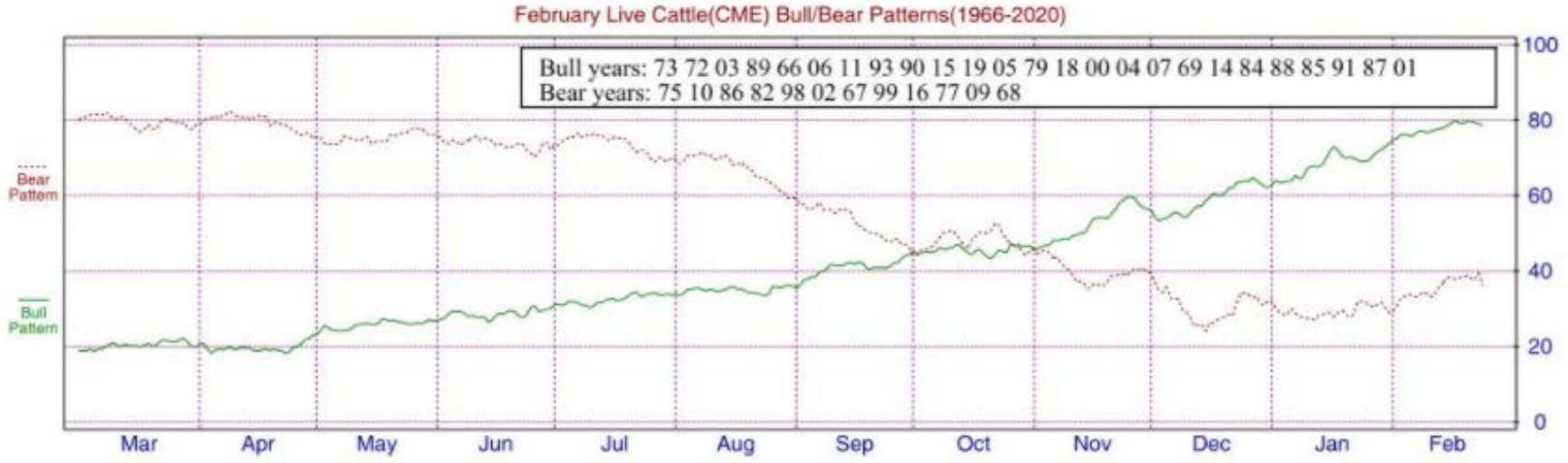




TEXAS A&M AGRILIFE EXTENSION

LIVE CATTLE





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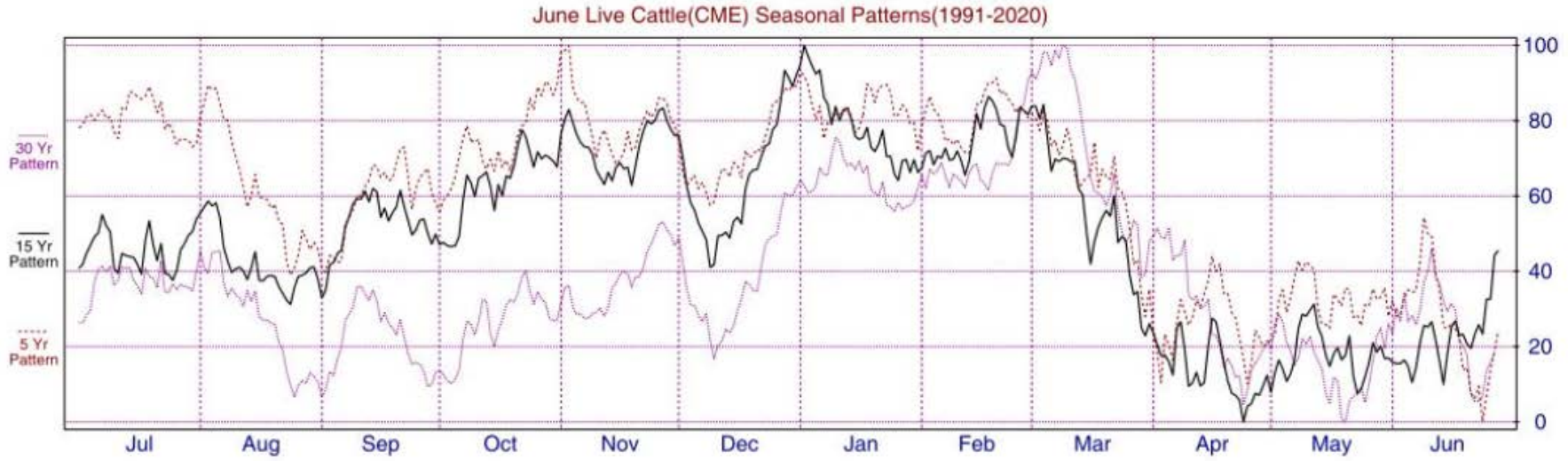
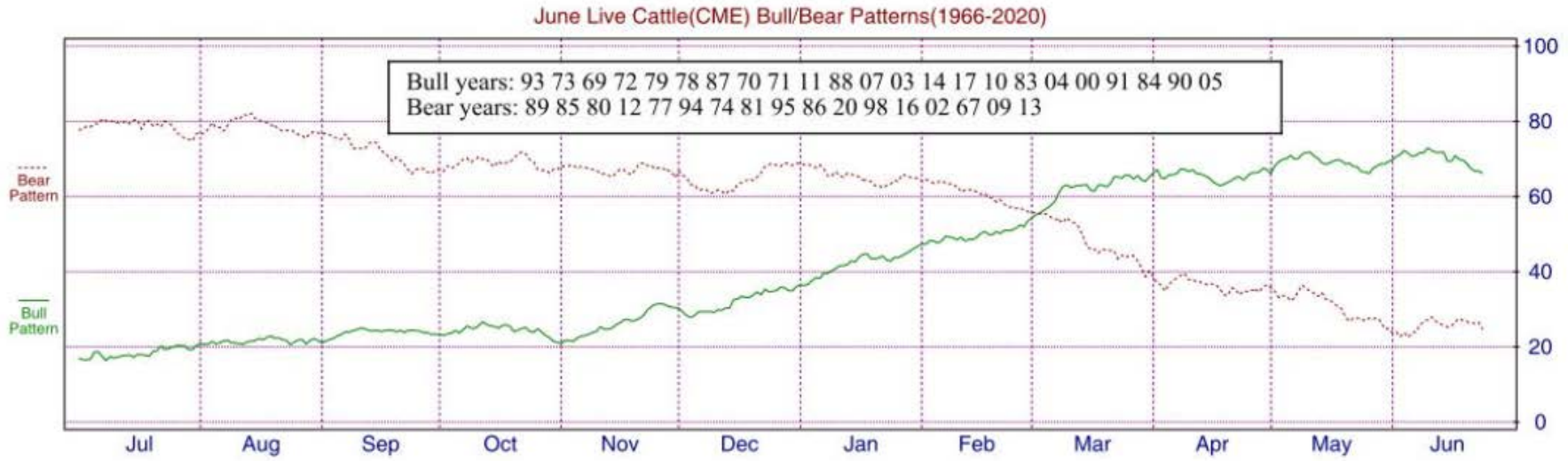
LIVE CATTLE





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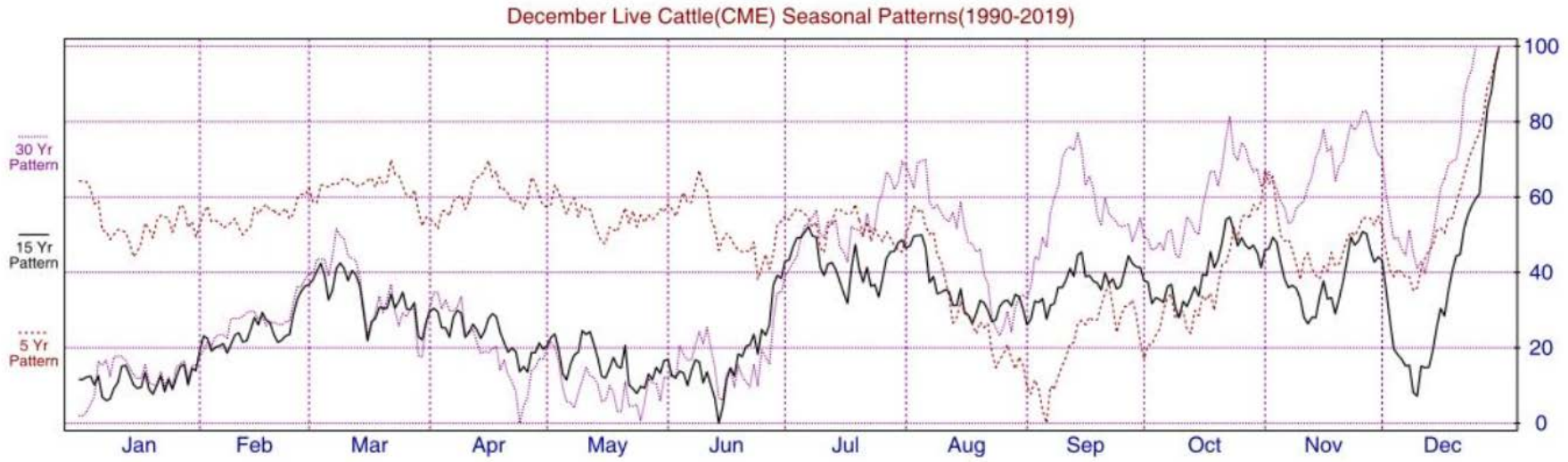
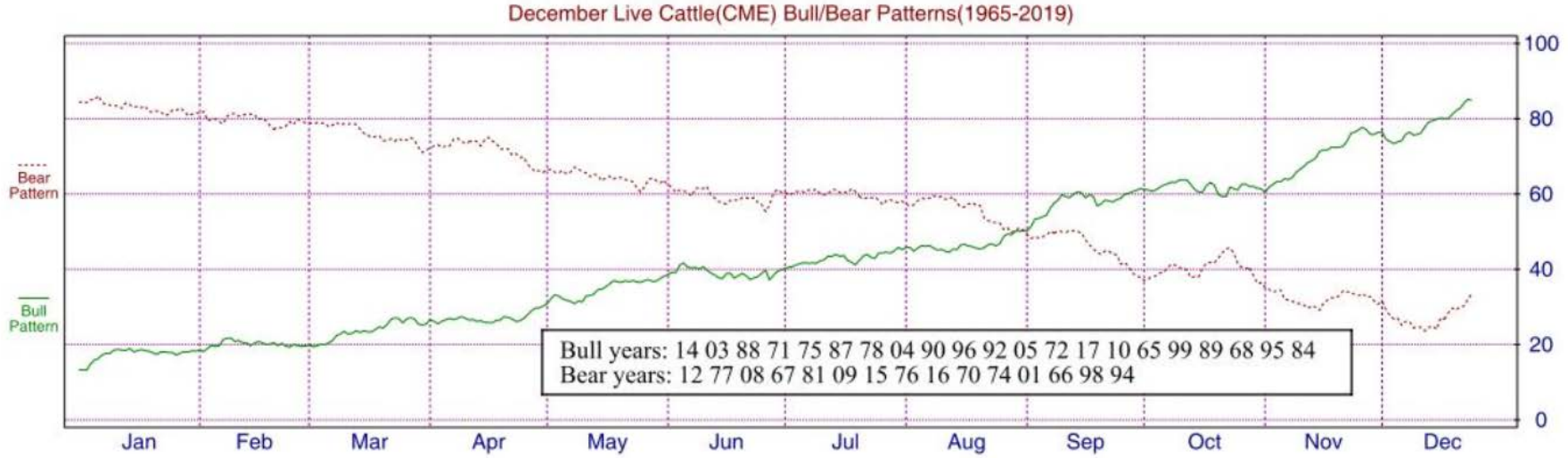
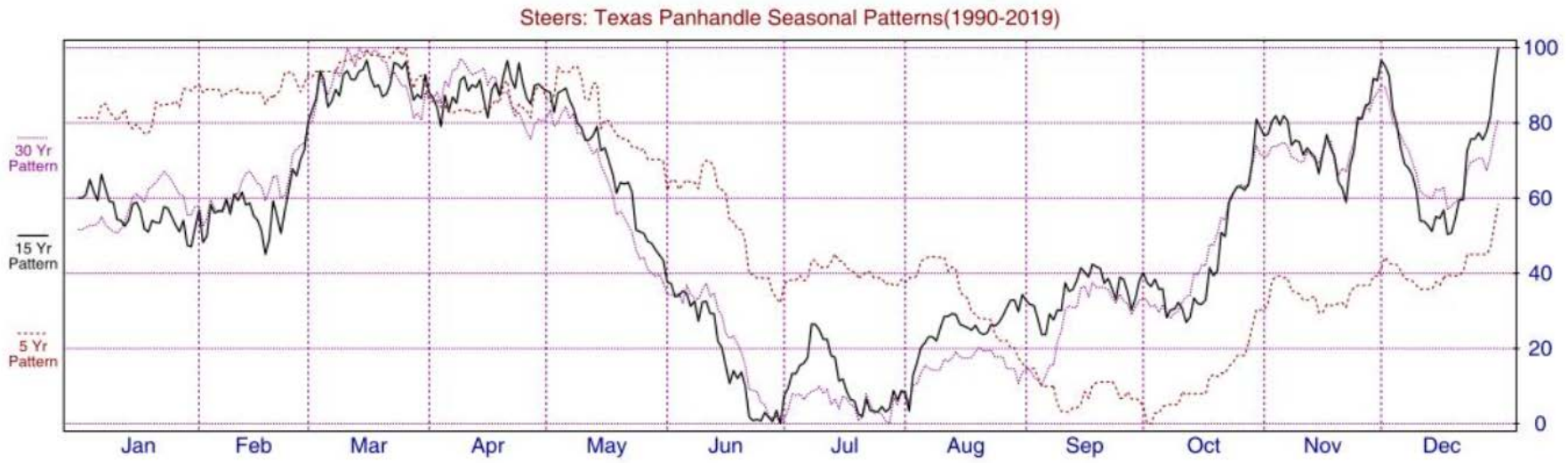
LIVE CATTLE

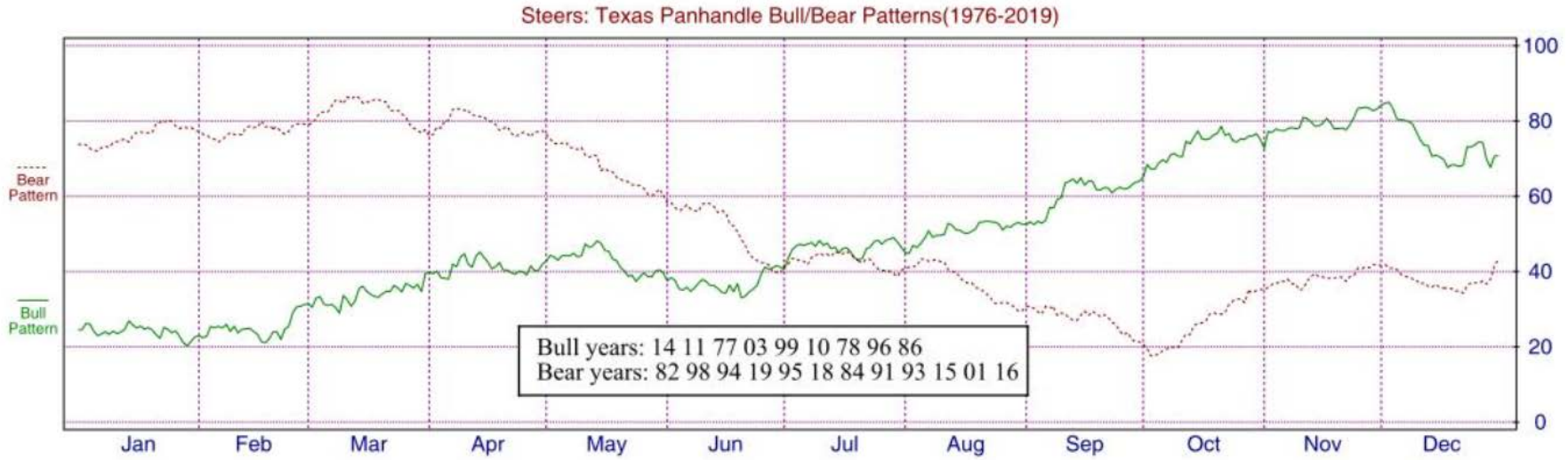




TEXAS A&M AGRILIFE EXTENSION

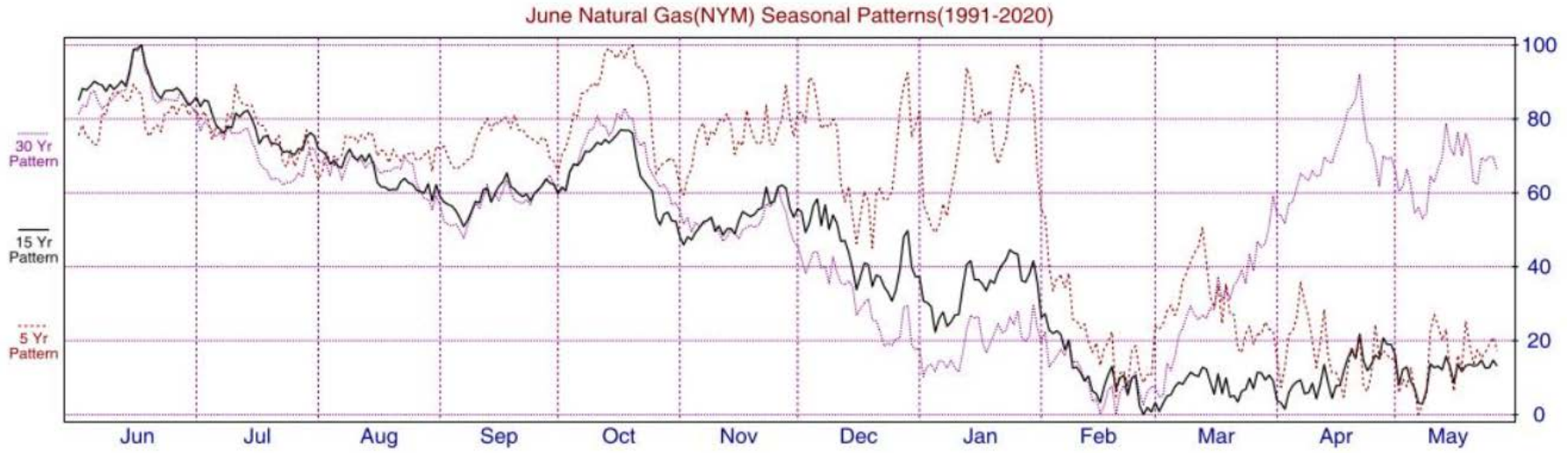
CASH CATTLE





TEXAS A&M AGRILIFE EXTENSION

NATURAL GAS



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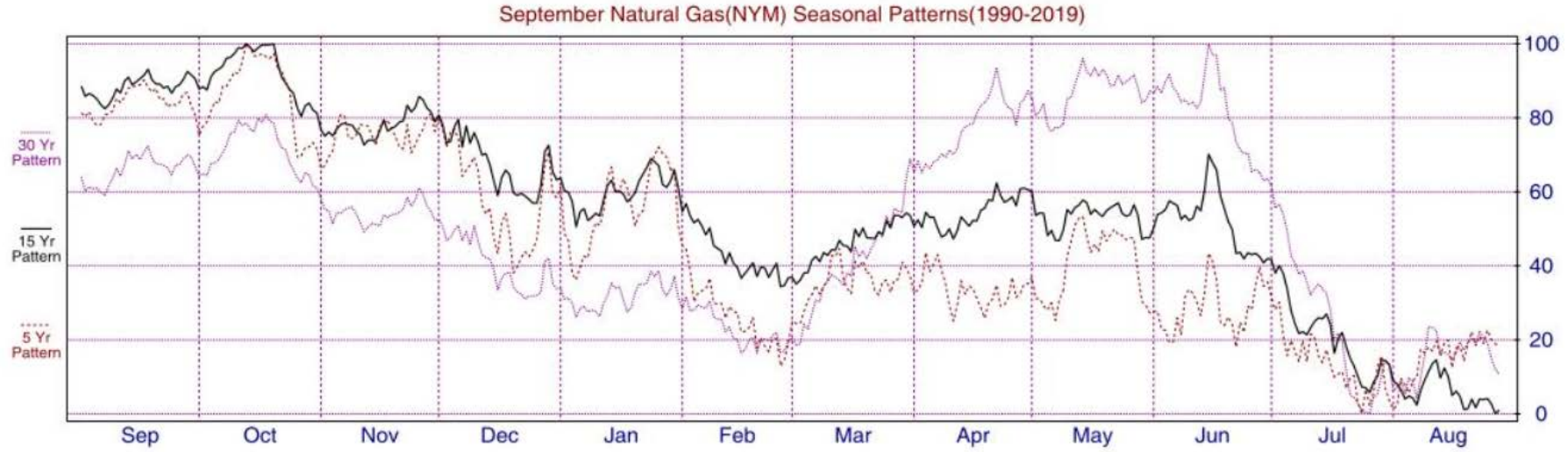
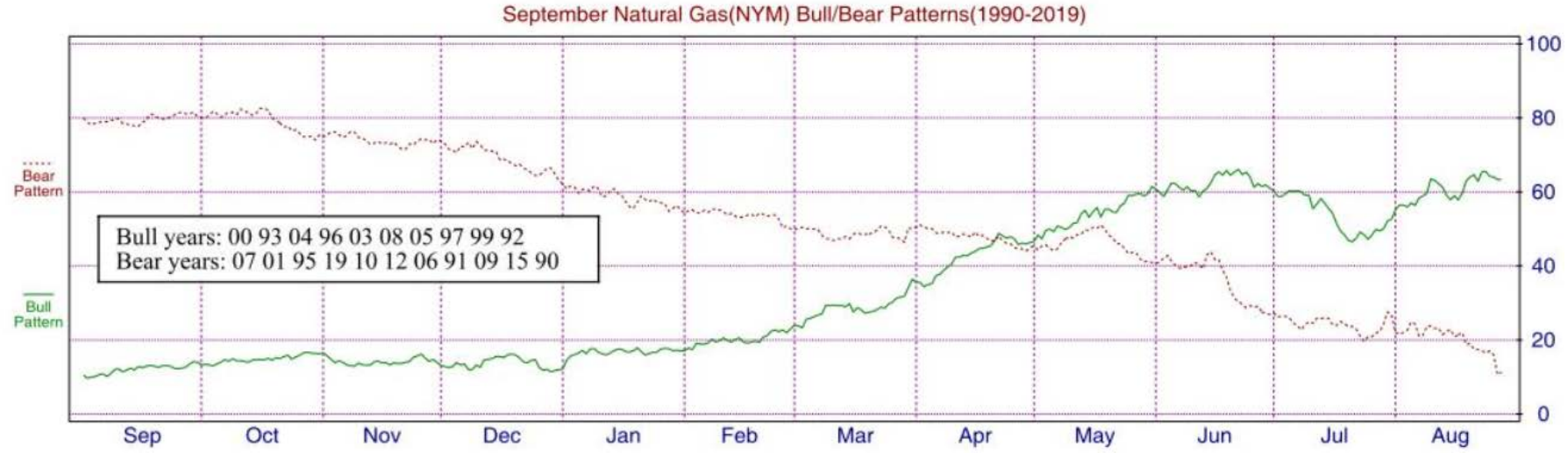
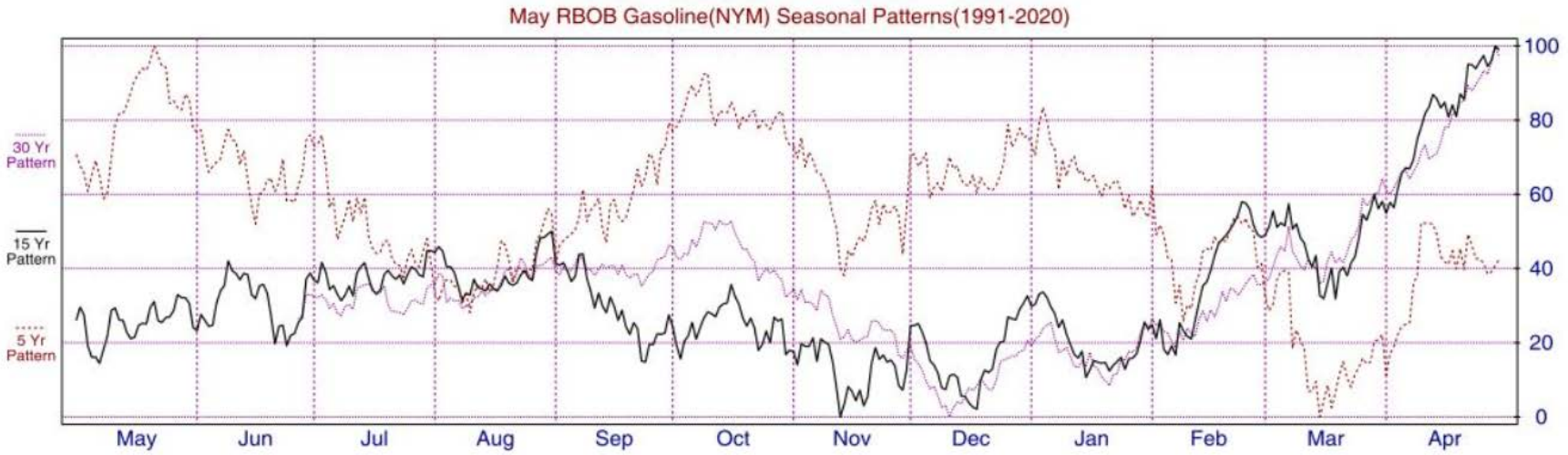
NATURAL GAS

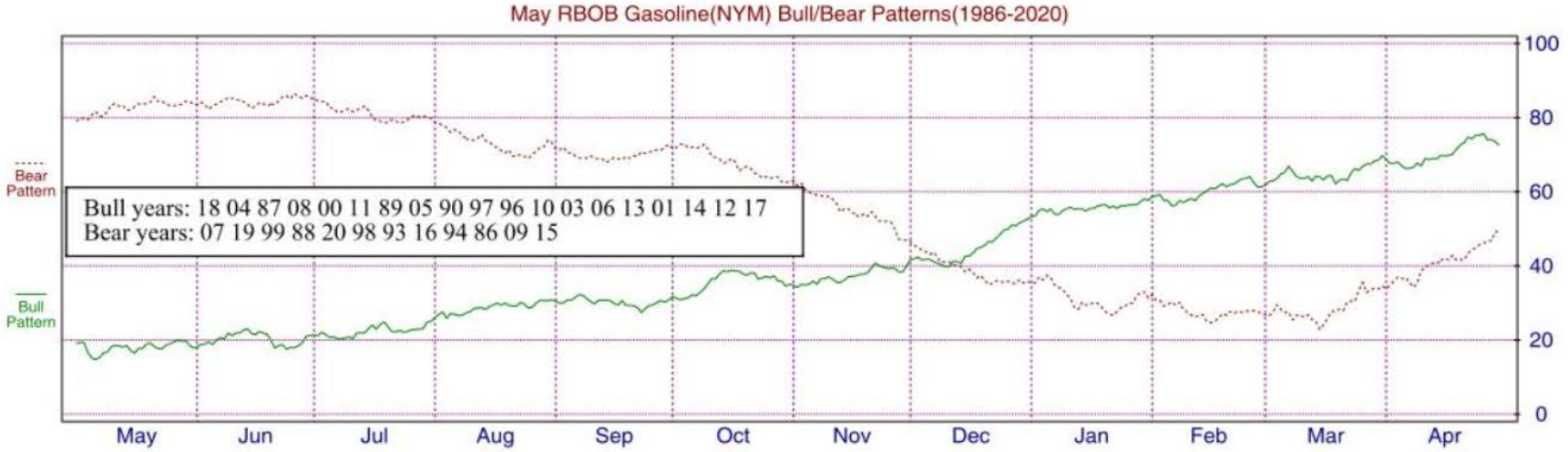




TEXAS A&M AGRILIFE EXTENSION

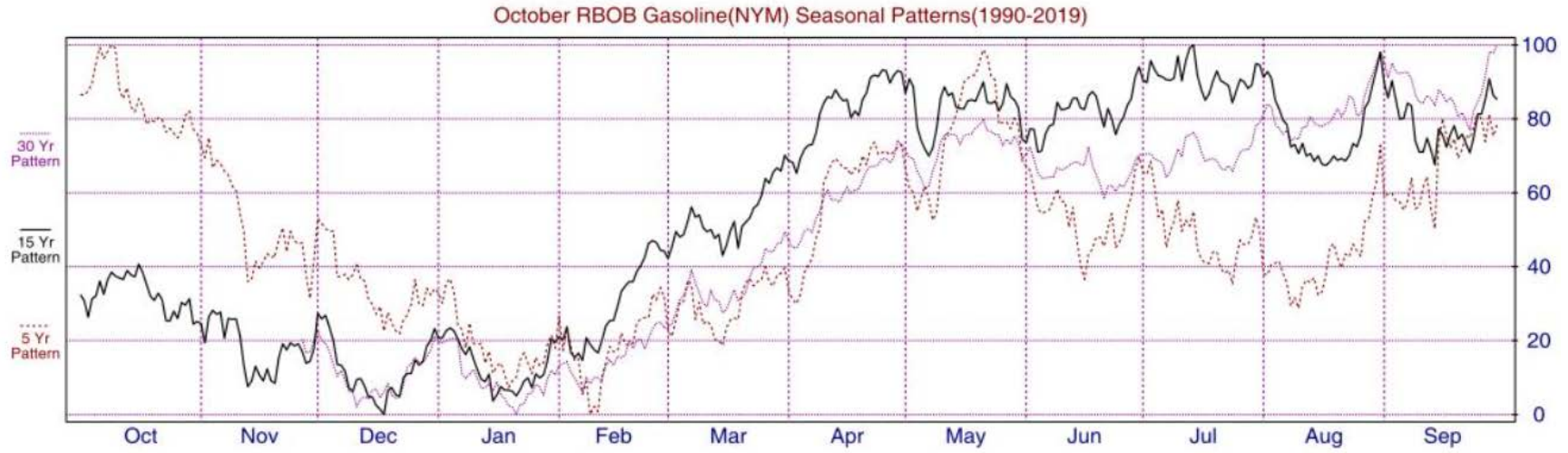
GASOLINE

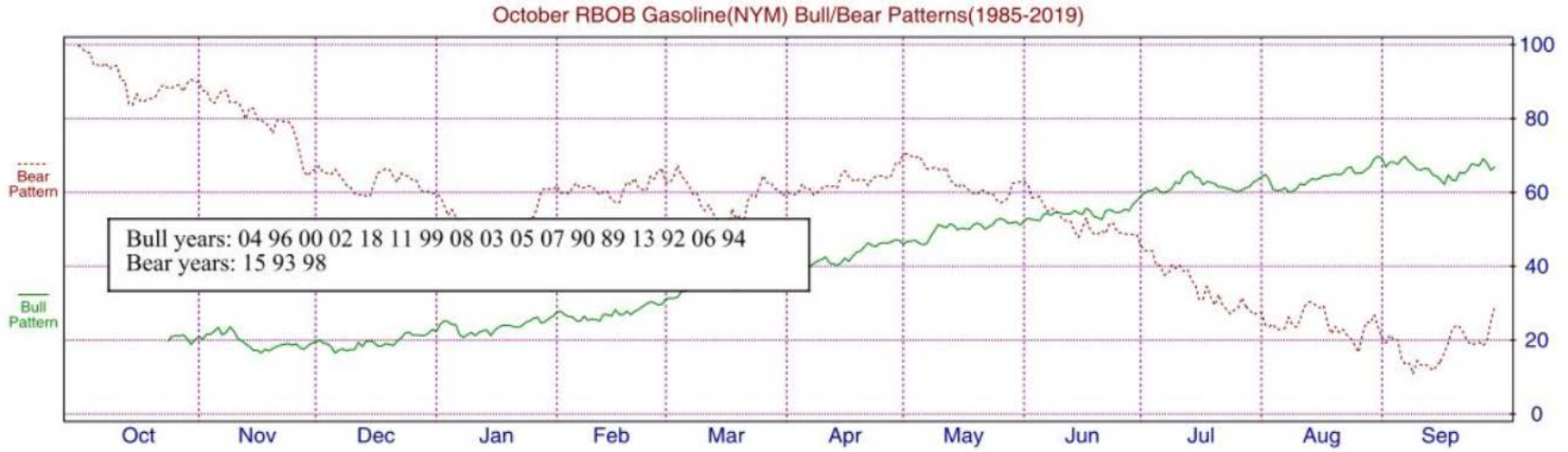




TEXAS A&M AGRILIFE EXTENSION

GASOLINE



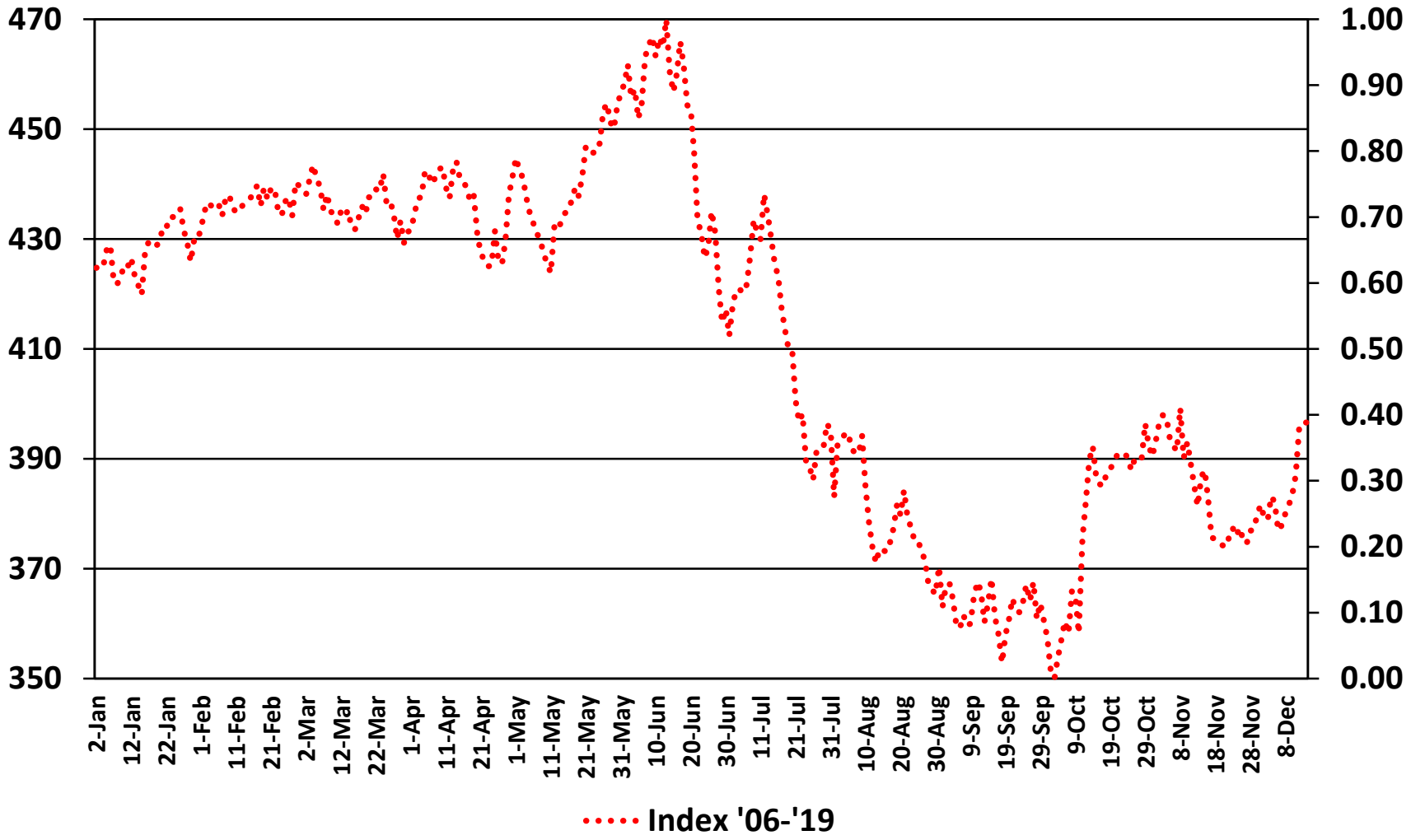


TEXAS A&M AGRILIFE EXTENSION

Counter-Seasonal Price Action

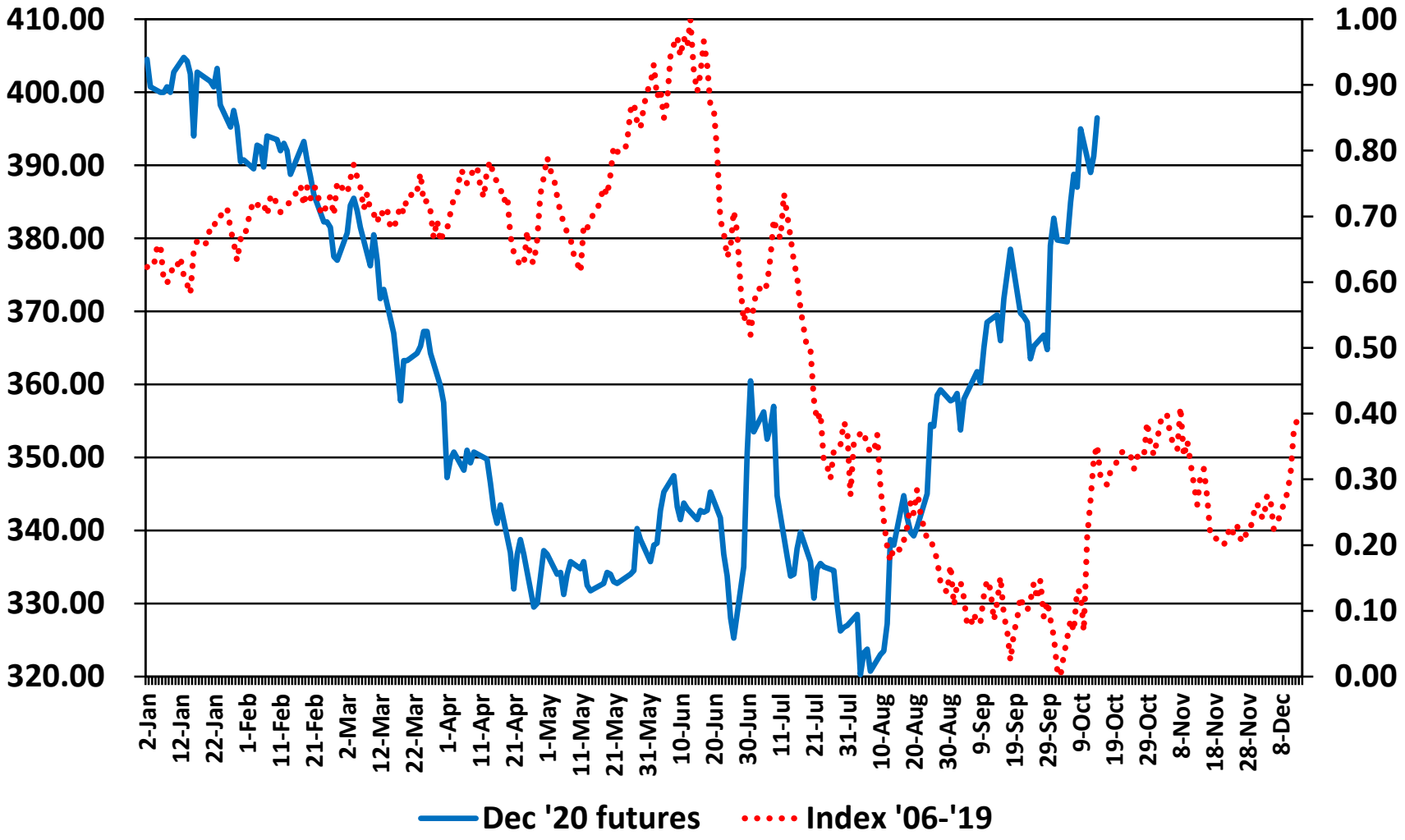
- **Seasonal analysis is used as an input for supporting a trading strategy.**
- **Seasonal analysis can also detect markets that are not behaving right.**
- **A market decline (increase) during a period when prices are normally firm (soft) can be viewed as a sign of a market's inherent weakness (strength).**
- **Counter-seasonal action should be viewed as a potentially critical market feature.**

December Corn Futures Seasonal Index Pattern



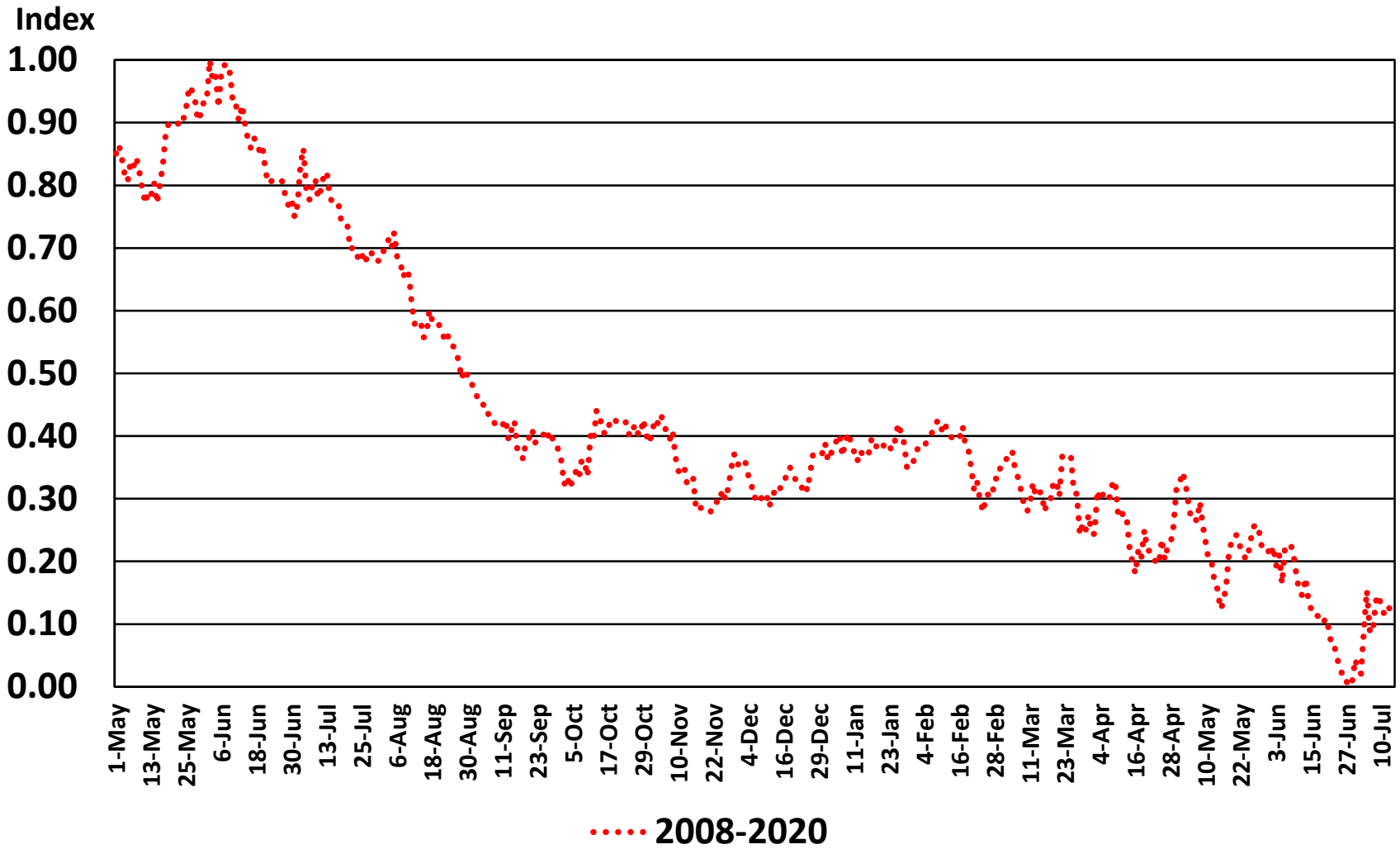
TEXAS A&M AGRILIFE EXTENSION

2020 December Corn Futures and Seasonal Index Pattern



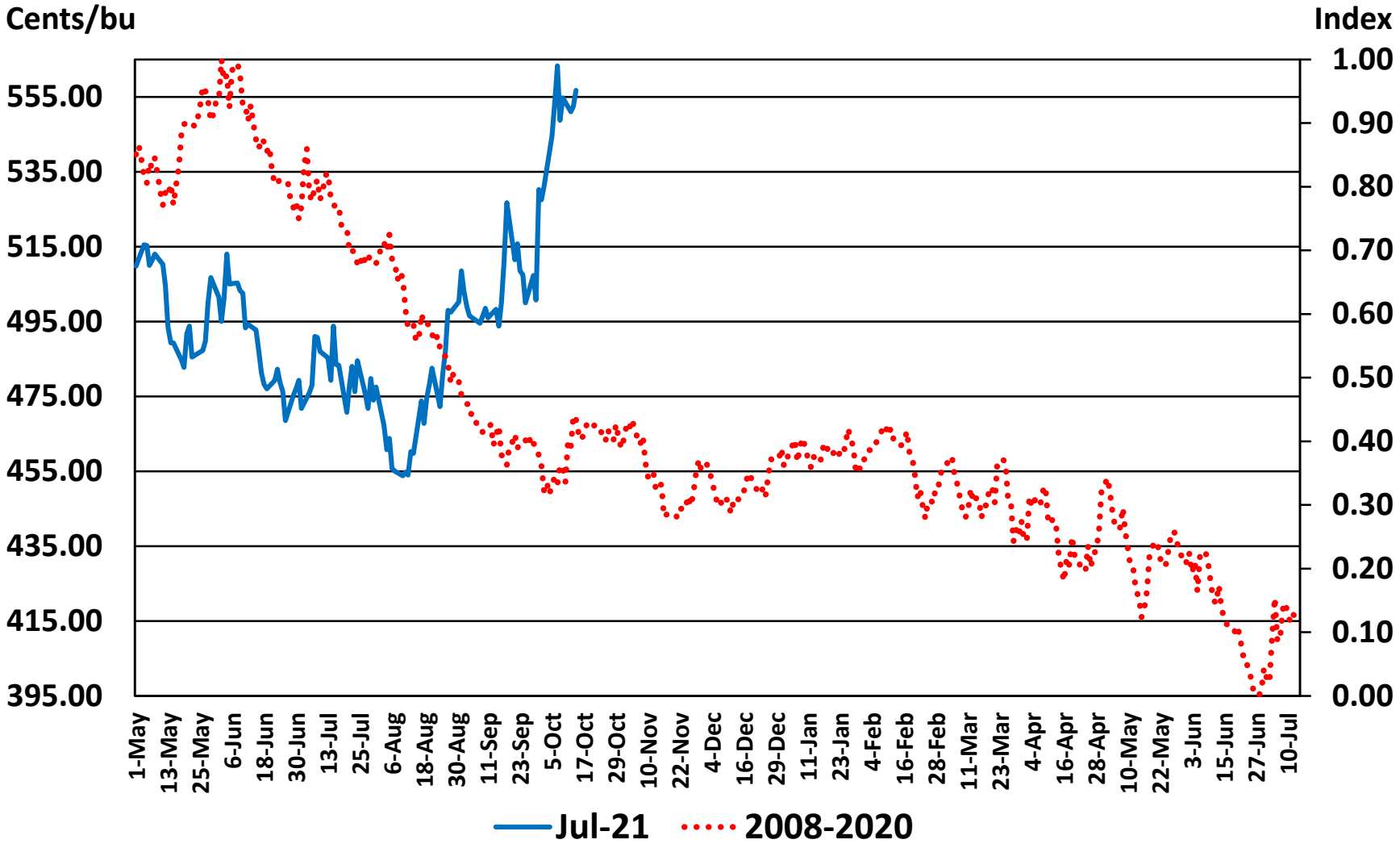
TEXAS A&M AGRILIFE EXTENSION

July KC Wheat Seasonal Index 2008-2020



TEXAS A&M AGRILIFE EXTENSION

July 2021 KC Wheat Futures and July KC Wheat Seasonal Index 2008-2020



TEXAS A&M AGRILIFE EXTENSION

Alternative Approaches

1. Sell 100% of production at harvest (Oct 15)
2. Sell a little each month of the year (10% for 10 months beginning on Jan 15)
3. Market according to a target price (Total Costs plus 10%)
4. Sell based on seasonal price tendencies by the calendar (Mar 1, Jun 15, Aug 1, Oct 15)
5. Sell based on seasonal price tendencies using Moving Averages to time sales

Marketing Results

1000 acres of corn at 180 bushels per acre:

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	14-yr Avg
1. Harvest	3.17	3.62	3.88	3.73	5.55	6.41	7.37	4.44	3.48	3.76	3.54	3.51	3.78	3.93	4.30
2. Average	2.64	3.89	5.80	3.88	4.23	6.42	6.30	5.20	4.27	3.96	3.77	3.82	3.85	4.03	4.43
3. Target	3.17	3.62	4.57	4.25	3.78	5.25	5.36	4.60	4.35	4.37	4.29	4.14	4.13	4.25	4.30
4. Seasonal	2.74	3.84	5.78	3.98	4.34	6.49	6.53	5.01	4.12	3.82	3.75	3.82	3.90	4.15	4.45
5. Seasonal plus MA	2.73	3.72	6.10	3.87	4.70	6.47	6.67	4.99	4.16	3.95	3.64	3.80	3.85	4.10	4.48

Average over Harvest: +$0.14 (+3%) $341,100 or $24,364/year

Seasonal over Harvest: +$0.15 (+4%) $378,900 or +$27,064/year

Moving Average over Harvest: +$0.18 (+4%) $465,300 since 2006 or $33,236/year

TEXAS A&M AGRILIFE EXTENSION

Price Seasonality Closing Comments

- Virtually every commodity is subject to cash and futures contract price seasonality.
- Cash seasonal variation is generally 3%-10% depending on the commodity.
- Futures seasonal price variation is often double cash volatility.
- Understanding the “events” and fundamentals can magnify seasonal pricing opportunities.
- Incorporating seasonal pricing into a marketing plan can add 3 - 5% to a producer’s income.