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John Stewart and Associates serves a range of
agricultural producers, farmers, and
commercial hedgers throughout the U.S. with
price risk management, hedging solutions, grain
marketing services, and premium ag research.

Applying JSA Index to Yield

- Introduce Crop Conditions Dashboard & Indexes
 - How to use the JSA Crop Conditions Dashboard as a preview to National & State Yields
 - Using JSA Conditions Index to identify analog years for comparison.
- Take these Analog years comparing their final yields vs trendline.
- Use the avg of the analog years deviation from trends to provide guidance on current years setup.

JSA Index

The JSA Index takes each grouping of conditions ratings and assigns a weight to each.

The Weights go as follows:

- Excellent 100
- Good 75
- Fair 50
- Poor 25
- Very Poor 0

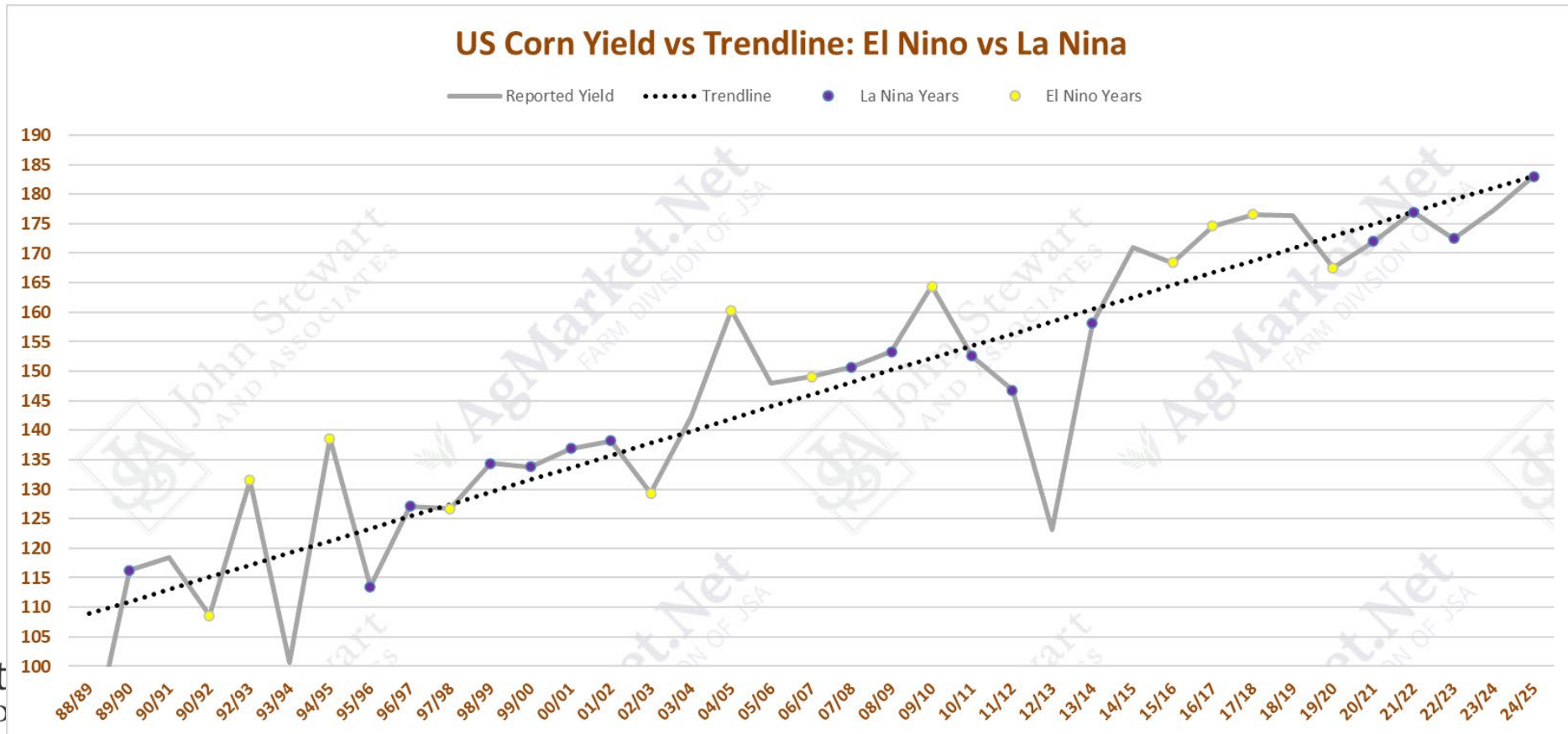
Scale ranges from 0-100

Example: Crop rated 50% Excellent and 50% Very Poor would have an index rating of 50.0

The index allows for a more variable crop to be accounted for beyond just the Good-to-Excellent ratings.

Applying Historical Yields to Crop Conditions/Index

- Taking current crop conditions and index levels and comparing to similar level crop years can be a useful approach to understanding potential yield indications.
- To compare these years on a level playing field (i.e. 2024 vs 1994 & technology advancement) we look at yields by their deviation from trendline.



U of I Study shows Longer Duration Trendlines are Superior

- Accounting for this along with the history we have on the conditions dashboard we use a 40 year trend line in this study.

Figure 2. Trend Estimates for US Corn Yield

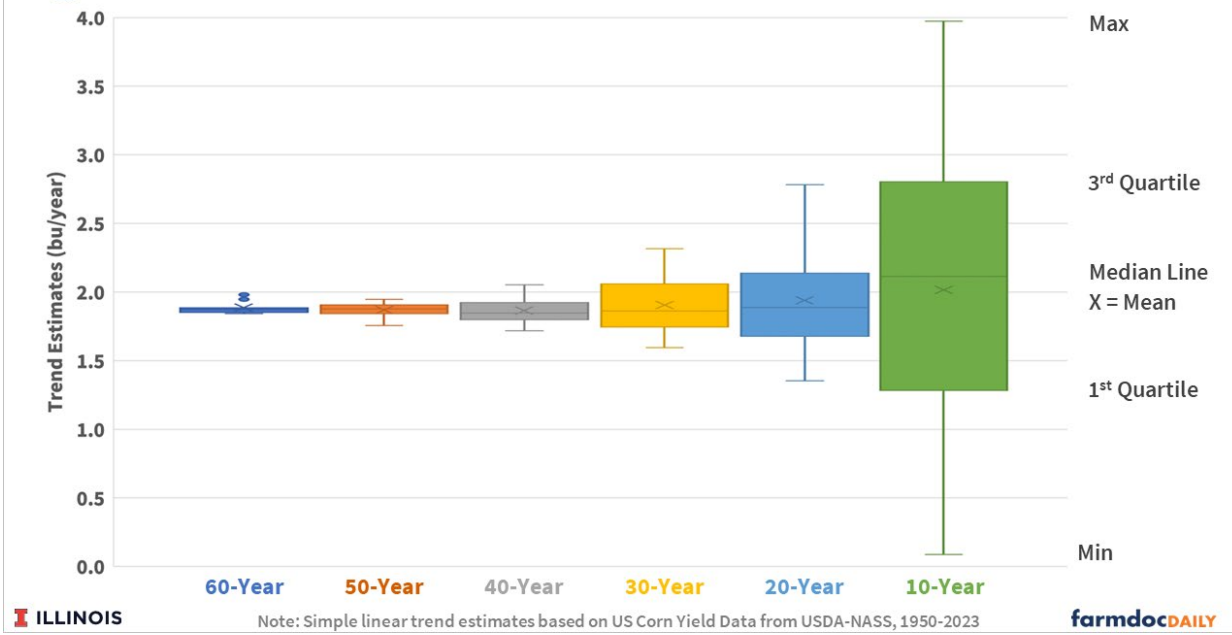
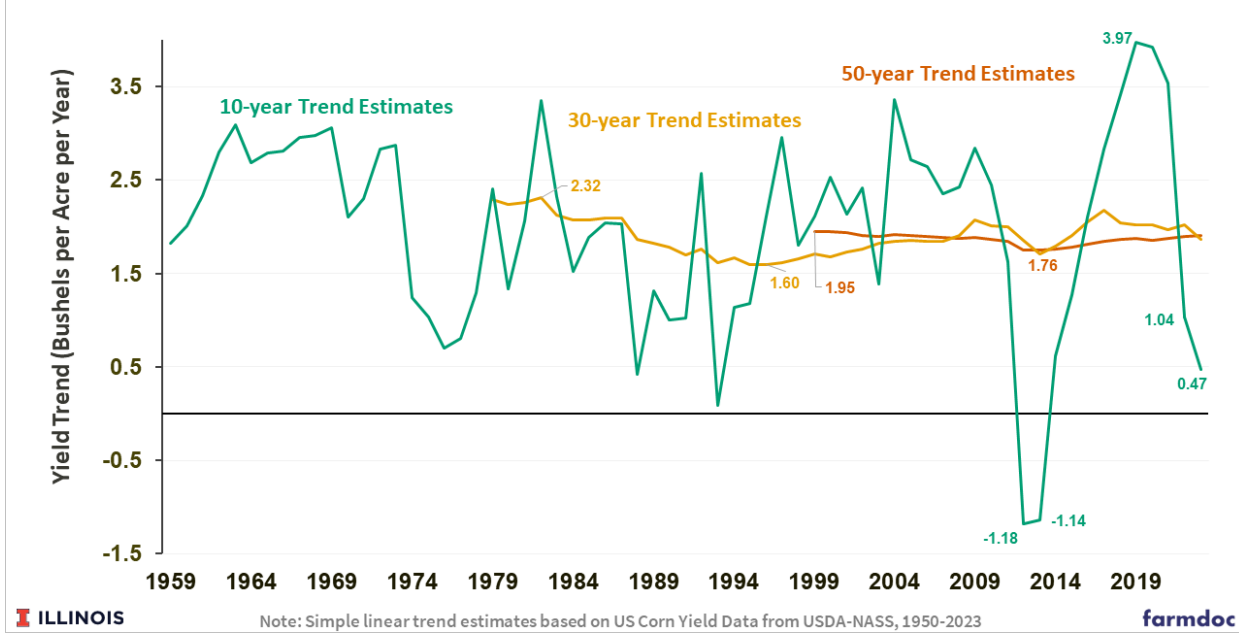
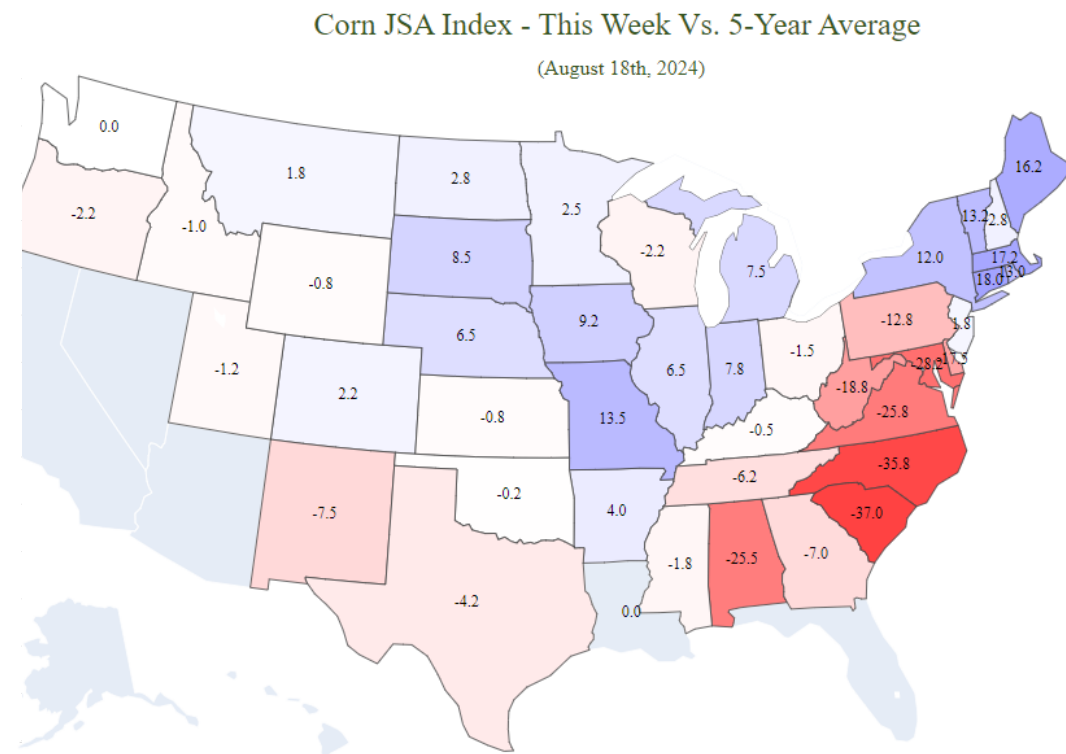


Figure 3. 10-, 30-, and 50-year Trend Estimates for US Corn Yield



	Trend	15-Jul	22-Jul	29-Jul	5-Aug	Current Est	Aug USDA	%	Week Chg
US	181.6	182.8	182.5	182.9	182.1	184.1	183.1	1.4%	Up
Iowa	205.6	206.8	200.4	202.3	204.4	213.8	209	4.0%	Up
Illinois	203.7	205.5	208	205.7	215.5	218.4	225	7.2%	Up
Minnesota	196.6	196	193.1	193.1	196.4	198.2	185	0.8%	Up
Nebraska	188.9	190	192.9	193.8	195.8	192	194	1.6%	Down
Indiana	188.5	194	196.4	198.1	197.9	198.5	207	5.3%	Up
Kansas	130.3	137.3	134.5	126.4	125.9	127	128	-2.5%	Up
South Dakota	161.2	154.6	153.8	173	162	162	162	0.4%	Unch
Ohio	183.7	190.7	187.2	183.9	192.5	182.6	188	-0.6%	Down
Missouri	161.7	184	186	185.6	180.9	187.1	181	15.7%	Up
Wisconsin	178.1	174	172.6	170.4	170.8	181	183	1.6%	Down
North Dakota	145.6	142.5	144.3	142.7	143.4	145.9	144	-0.5%	Up
Michigan	170.7	184.4	178.9	178	174.8	177.9	177	4.2%	Up
Texas	132.1	130.3	133.3	127.2	121.7	128.5	117	-2.7%	Up



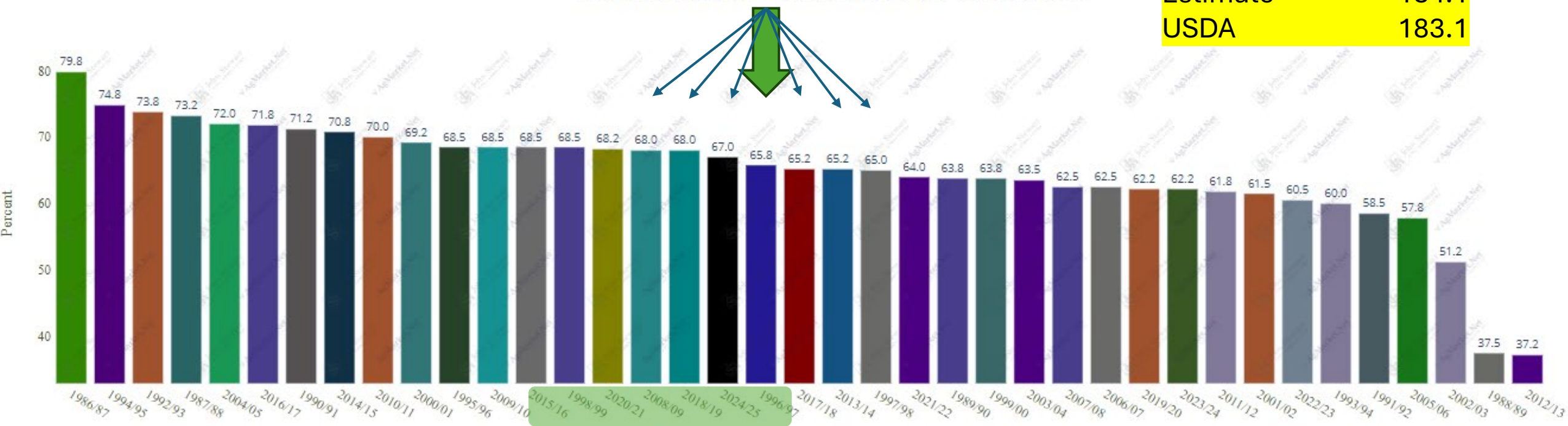
US Total

Ranking table can be found on the Conditions Dashboard for each state.

Analog Years & Deviation of Trend

1996	-0.6%
1998****	+2.1%
2008***	+1.7%
2015****	+2.7%
2018	+3.9%
2020*	-1.2%
Average	+1.4%
Trendline	181.6
Estimate	184.1
USDA	183.1

Corn Jsa Index - US TOTAL for WEEK #33



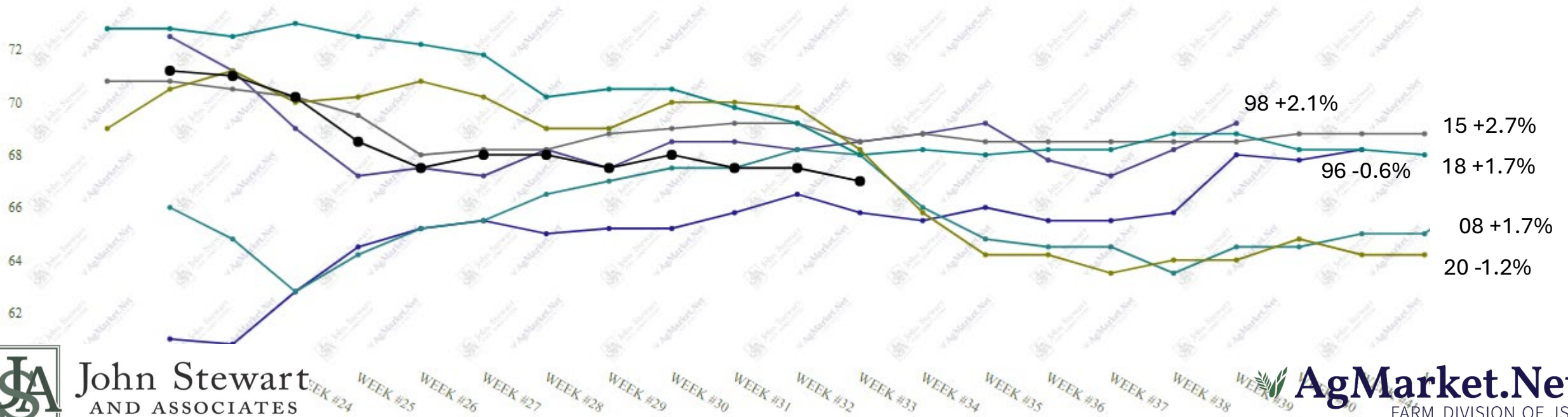
US Total

Year	US			
	Actual	Trend	Diff	% Diff
2019	167.5	172.0	-4.5	-2.6%
2020	171.4	173.9	-2.5	-1.5%
2021	176.7	175.9	0.8	0.5%
2022	173.4	177.8	-4.4	-2.5%
2023	177.3	179.7	-2.4	-1.3%
2024		181.6		

Analog Years & Deviation of Trend

1996	-0.6%
1998****	+2.1%
2008***	+1.7%
2015****	+2.7%
2018	+3.9%
2020*	-1.2%
Average	+1.4%
Trendline	181.6
Estimate	184.1
USDA	183.1

Corn JSA Index Seasonal Chart - US TOTAL



US Total

Corn	July	USDA	Model	Diff
Annual	2023/24	2024/25	2024/25	
Planted Acres	94.6	90.7	90.7	
Harvested Acres	86.5	82.7	82.7	
% Harvested	91.4%	91.1%	91.1%	
Yield	177.3	183.2	184.1	
Production	15342	15147	15225	78
Total Supply	16727	17038	17116	78
Total Use	14855	14905	14905	
Ending Stocks	1877	2079	2151	78
Stocks/Use (%)	12.6%	14.1%	14.4%	0.30%

Analog Years & Deviation of Trend

1996	-0.6%
1998****	+2.1%
2008***	+1.7%
2015****	+2.7%
2018	+3.9%
2020*	-1.2%
Average	+1.4%
Trendline	181.6
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USDA	183.1

Year	US				
	Actual	Trend	Diff	%Diff	
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2020	171.4	173.9	-2.5	-1.5%	
2021	176.7	175.9	0.8	0.5%	
2022	173.4	177.8	-4.4	-2.5%	
2023	177.3	179.7	-2.4	-1.3%	
2024		181.6			

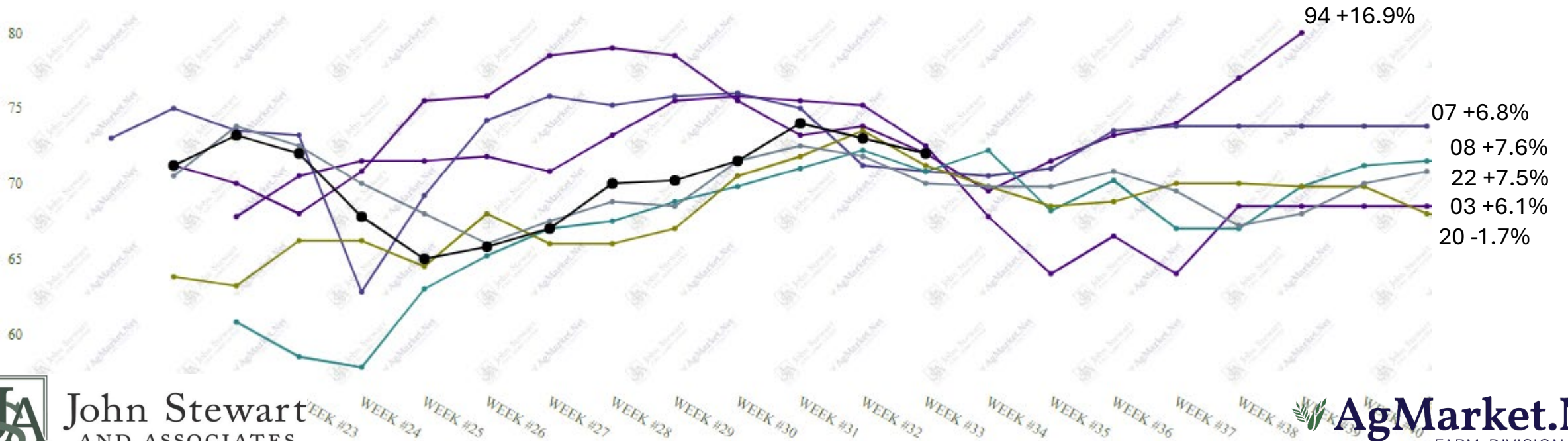
Analog Years & Deviation of Trend

1994*	+16.9%
2003	+6.1%
2007	+6.8%
2008	+7.6%
2020**	-1.7%
2022**	+7.5%
Average	+7.2%
Trendline	203.7
Est	218.4
USDA	225.0

ILLINOIS					
Year	Actual	Trend	Diff	%Diff	
2019	181.0	192.0	-11.0	-5.7%	
2020	191.0	194.3	-3.3	-1.7%	
2021	202.0	196.7	5.3	2.7%	
2022	214.0	199.0	15.0	7.5%	
2023	206.0	201.3	4.7	2.3%	
2024		203.7			

Illinois

Corn JSA Index Seasonal Chart - ILLINOIS



Analog Years & Deviation of Trend

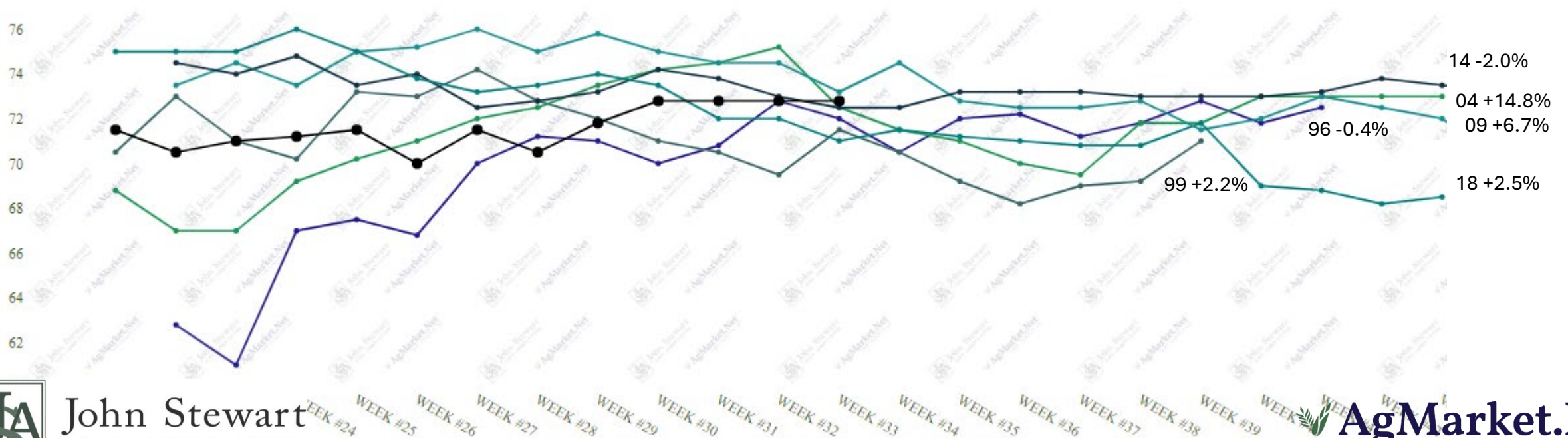
1996***	-0.4%
1999***	+2.2%
2004	+14.8%
2009	+6.7%
2014***	-2.0%
2018**	+2.5%
Average	+4.0%
Trendline	205.6
Est	213.8
USDA	209

2004 & 09 are new years that take the avg up substantially. If I just use the more frequent years avg is 209, in line with USDA.

Iowa

Year	IOWA				
	Actual	Trend	Diff	% Diff	
2019	198.0	193.7	4.3	2.2%	
2020	177.0	196.1	-19.1	-9.7%	
2021	204.0	198.5	5.5	2.8%	
2022	200.0	200.9	-0.9	-0.4%	
2023	201.0	203.3	-2.3	-1.1%	
2024		205.6			

Corn JSA Index Seasonal Chart - IOWA



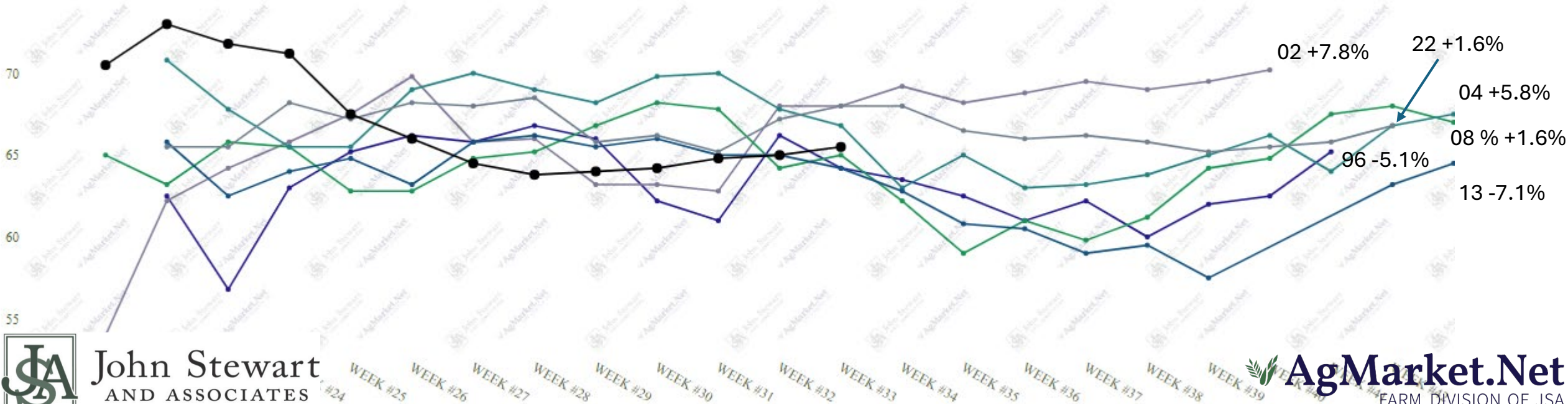
Analog Years & Deviation of Trend

1996***	-5.1%
2002***	+7.8%
2004*	+5.8%
2008	+1.6%
2013***	-7.1%
2022***	+1.6%
Average	+0.8%
Trendline	196.6
Est	198.2
USDA	185.0

MINNESOTA				
Year	Actual	Trend	Diff	%Diff
2019	174.0	185.0	-11.0	-6.0%
2020	191.0	187.4	3.6	1.9%
2021	177.0	189.7	-12.7	-6.7%
2022	195.0	192.0	3.0	1.6%
2023	185.0	194.3	-9.3	-4.8%
2024		196.6		

Minnesota

Corn JSA Index Seasonal Chart - MINNESOTA



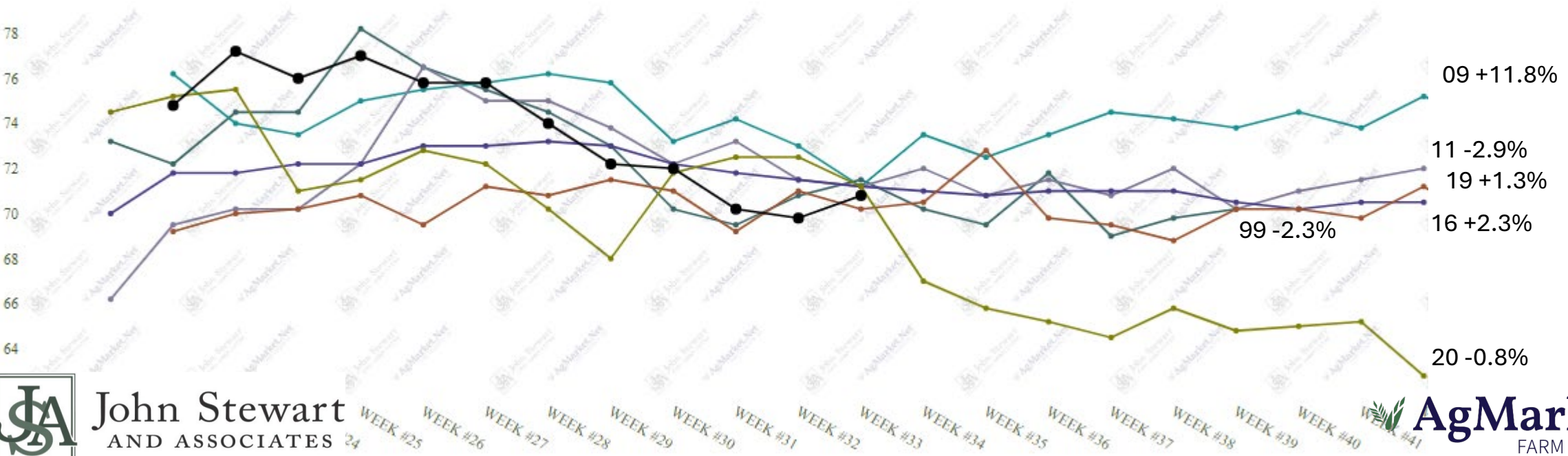
Analog Years & Deviation of Trend

1999***	-2.3%
2009	+11.8%
2011 **	-2.9%
2016**	+2.3%
2019**	+1.3%
2020*	-0.8%
Average	+1.6%
Trendline	189
Est	192.0
USDA	194.0

NEBRASKA					
Year	Actual	Trend	Diff	% Diff	
2019	182.0	179.6	2.4	1.3%	
2020	180.0	181.5	-1.5	-0.8%	
2021	194.0	183.3	10.7	5.8%	
2022	165.0	185.2	-20.2	-10.9%	
2023	182.0	187.1	-5.1	-2.7%	
2024		188.9			

Nebraska

Corn JSA Index Seasonal Chart - NEBRASKA



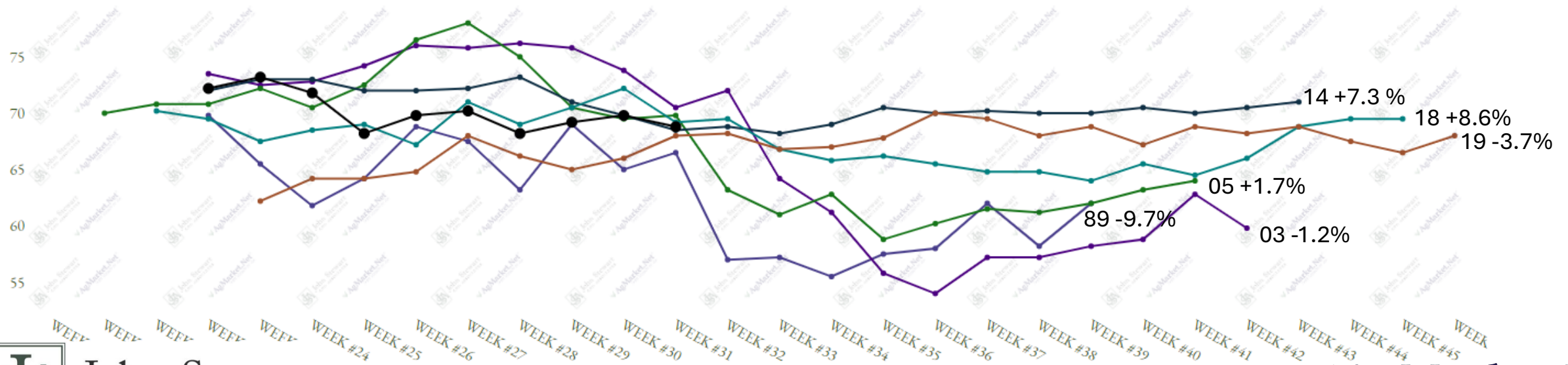
Analog Years & Deviation of Trend

1995*	-15.7%
1999	+9.7%
2000	+6.4%
2001	+1.3%
2013	+1.0%
2014	+7.3%
Average	+0.5%
Trendline	161.2
Est	162.0
USDA	162.0

South Dakota

SOUTH DAKOTA					
Year	Actual	Trend	Diff	%Diff	
2019	144.0	149.6	-5.6	-3.7%	
2020	162.0	151.9	10.1	6.6%	
2021	134.0	154.3	-20.3	-13.1%	
2022	132.0	156.6	-24.6	-15.7%	
2023	152.0	158.9	-6.9	-4.3%	
2024		161.2			

Corn JSA Index Seasonal Chart - SOUTH DAKOTA



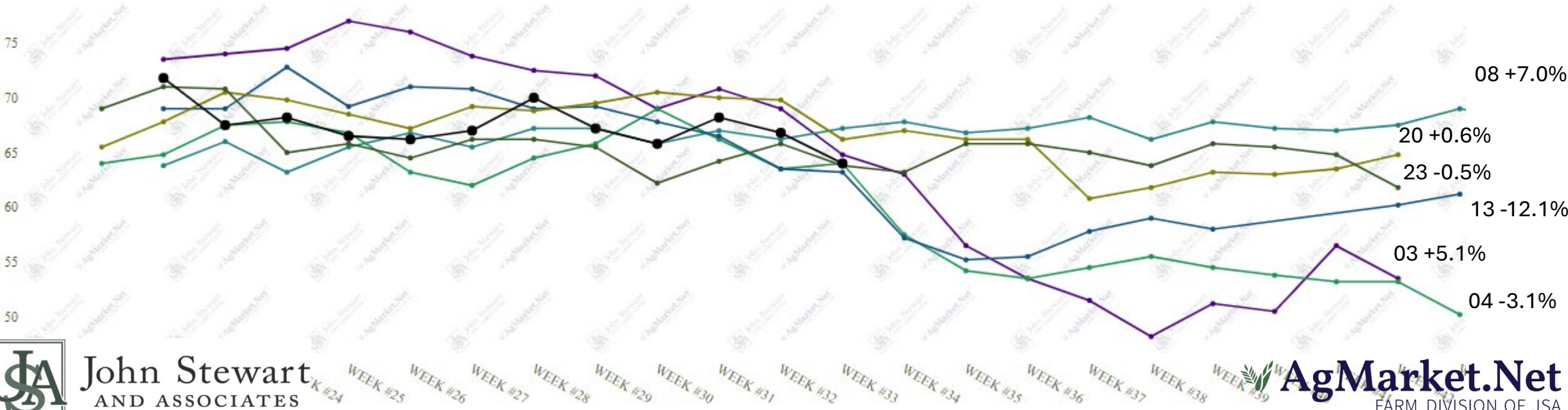
Analog Years & Deviation of Trend

2003	+5.1%
2004***	-3.1%
2008**	+7.0%
2013***	-12.1%
2020*	+0.6%
2023*	-0.5%
Average	-0.5%
Trendline	145.6
Est	145.9
USDA	144

NORTH DAKOTA					
Year	Actual	Trend	Diff	% Diff	
2019	131.0	136.3	-5.3	-3.9%	
2020	139.0	138.2	0.8	0.6%	
2021	105.0	140.0	-35.0	-25.0%	
2022	130.0	141.9	-11.9	-8.4%	
2023	143.0	143.7	-0.7	-0.5%	
2024		145.6			

North Dakota

Corn JSA Index Seasonal Chart - NORTH DAKOTA



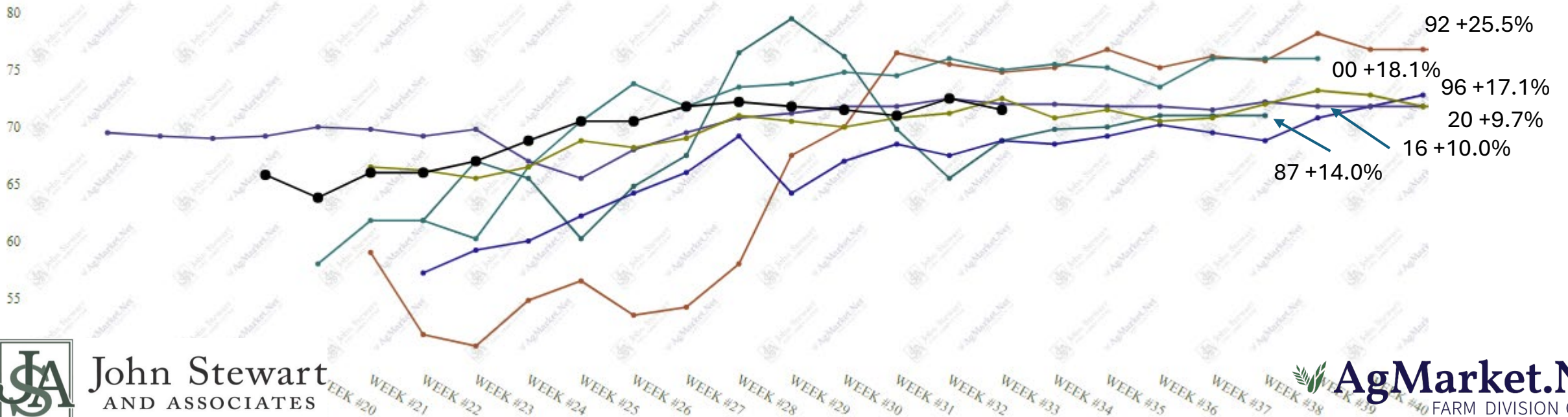
Analog Years & Deviation of Trend

1987*	+14.0%
1992*	+25.5%
1996*	+17.1%
2000**	+18.1%
2016****	+10.0%
2020****	+9.7%
Average	+15.7%
Trendline	161.7
Est	187.1
USDA	181.0

MISSOURI					
Year	Actual	Trend	Diff	%Diff	
2019	155.0	153.3	1.7	1.1%	
2020	170.0	155.0	15.0	9.7%	
2021	159.0	156.7	2.3	1.5%	
2022	161.0	158.4	2.6	1.7%	
2023	153.0	160.1	-7.1	-4.4%	
2024		161.7			

Missouri

Corn JSA Index Seasonal Chart - MISSOURI



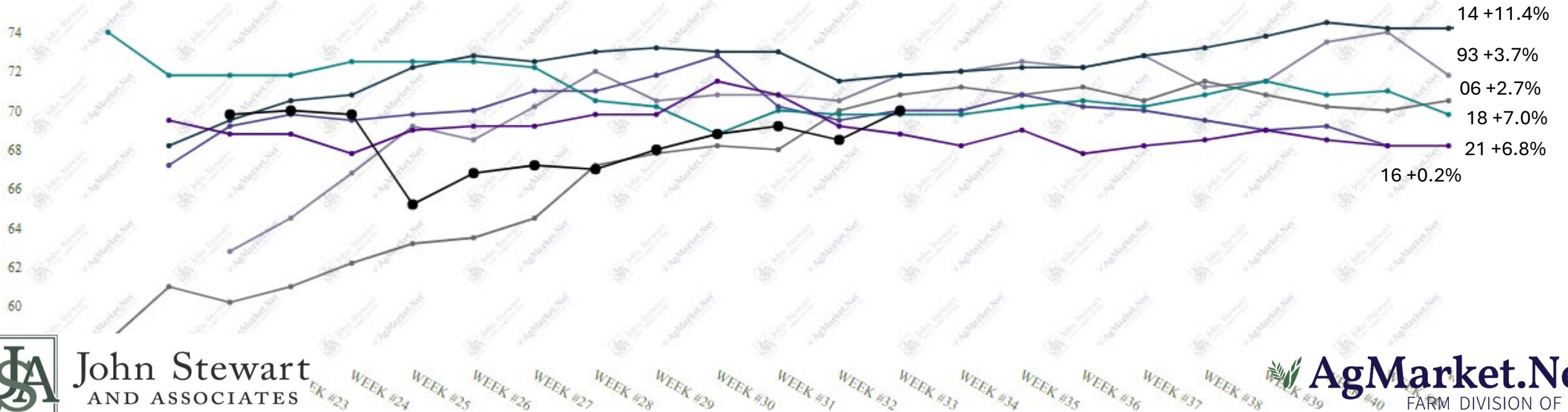
Analog Years & Deviation of Trend

1993**	+3.7%
2006****	+2.7%
2014	+11.4%
2016*	+0.2%
2018***	+7.0%
2021**	+6.8%
Average	+5.3%
Trendline	188.5
Est	198.5
USDA	207

Indiana

INDIANA					
Year	Actual	Trend	Diff	% Diff	
2019	169.0	178.6	-9.6	-5.4%	
2020	187.0	180.6	6.4	3.6%	
2021	195.0	182.5	12.5	6.8%	
2022	190.0	184.5	5.5	3.0%	
2023	203.0	186.5	16.5	8.9%	
2024		188.5			

Corn JSA Index Seasonal Chart - INDIANA



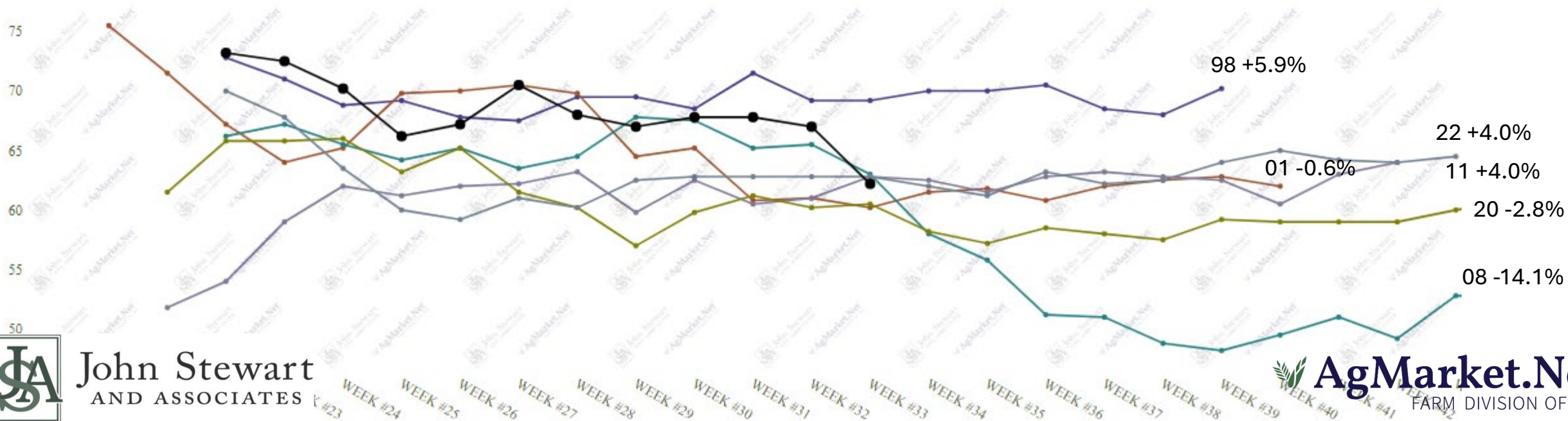
Analog Years & Deviation of Trend

1998*	+5.9%
2001*	-0.6%
2008*	-14.1%
2011	+4.0%
2020	-2.8%
2022	+4.0%
Average	-0.6%
Trendline	183.7
Est	182.6
USDA	188.0

OHIO					
Year	Actual	Trend	Diff	%Diff	
2019	164.0	174.0	-10.0	-5.7%	
2020	171.0	175.9	-4.9	-2.8%	
2021	193.0	177.9	15.1	8.5%	
2022	187.0	179.8	7.2	4.0%	
2023	198.0	181.8	16.2	8.9%	
2024		183.7			

Ohio

Corn JSA Index Seasonal Chart - OHIO



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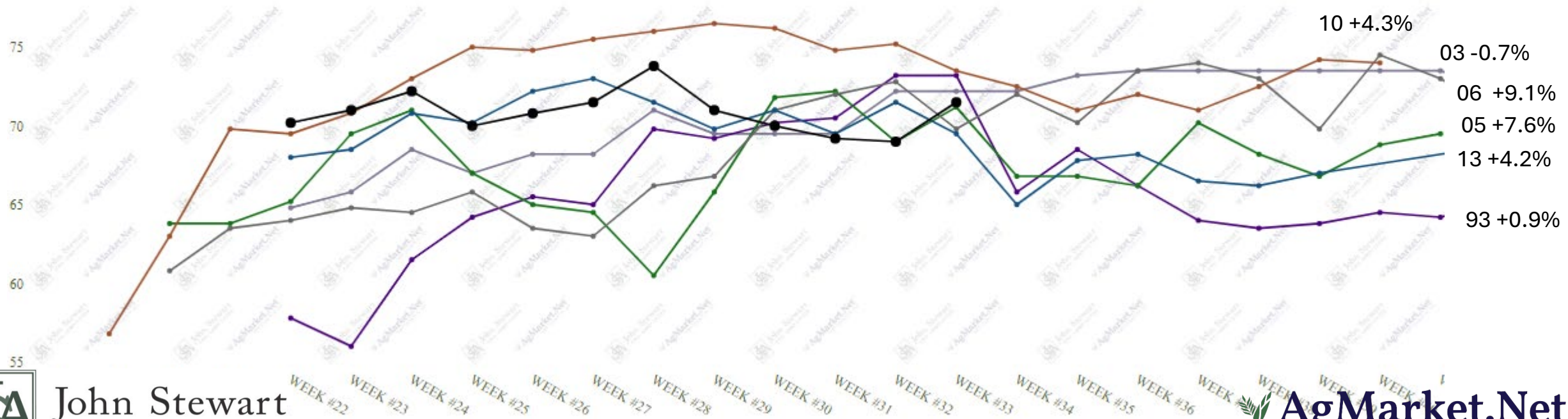
Analog Years & Deviation of Trend

1993***	+0.9%
2003*	-0.7%
2005	+7.6%
2006	+9.1%
2010	+4.3%
2013***	+4.2%
Average	+4.2%
Trendline	170.7
Est	177.9
USDA	177

Michigan

MICHIGAN					
Year	Actual	Trend	Diff	%Diff	
2019	147.0	160.7	-13.7	-8.5%	
2020	153.0	162.7	-9.7	-6.0%	
2021	174.0	164.7	9.3	5.6%	
2022	168.0	166.7	1.3	0.8%	
2023	168.0	168.7	-0.7	-0.4%	
2024		170.7			

Corn JSA Index Seasonal Chart - MICHIGAN



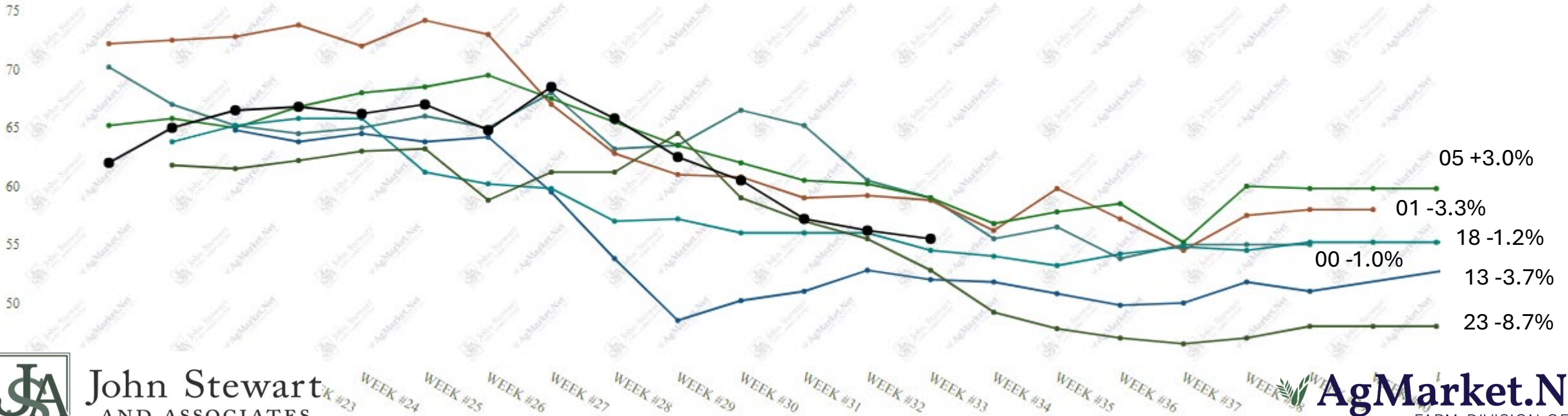
Analog Years & Deviation of Trend

2000	-1.0%
2001***	-3.3%
2005****	+3.0%
2013	-3.7%
2018*	-1.2%
2023***	-8.7%
Average	-2.5%
Trendline	130.3
Est	127.0
USDA	128.0

KANSAS					
Year	Actual	Trend	Diff	% Diff	
2019	133.0	130.5	2.5	1.9%	
2020	134.0	130.5	3.5	2.7%	
2021	139.0	130.4	8.6	6.6%	
2022	115.0	130.4	-15.4	-11.8%	
2023	119.0	130.3	-11.3	-8.7%	
2024		130.3			

Kansas

Corn JSA Index Seasonal Chart - KANSAS



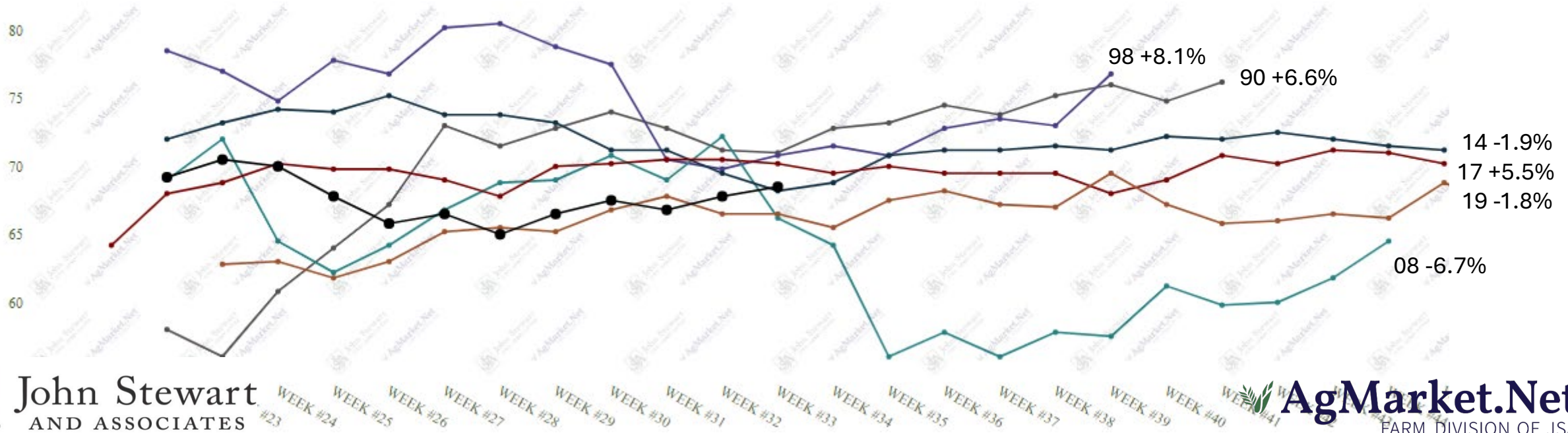
Analog Years & Deviation of Trend

1990	+6.6%
1998	+8.0%
2008***	-6.7%
2014	-1.9%
2017**	+5.5%
2019****	-1.8%
Average	+1.6%
Trendline	178.1
Est	181.0
USDA	183.0

WISCONSIN					
Year	Actual	Trend	Diff	% Diff	
2019	166.0	168.1	-2.1	-1.2%	
2020	173.0	170.1	2.9	1.7%	
2021	180.0	172.1	7.9	4.6%	
2022	180.0	174.1	5.9	3.4%	
2023	176.0	176.1	-0.1	-0.1%	
2024		178.1			

Wisconsin

Corn JSA Index Seasonal Chart - WISCONSIN



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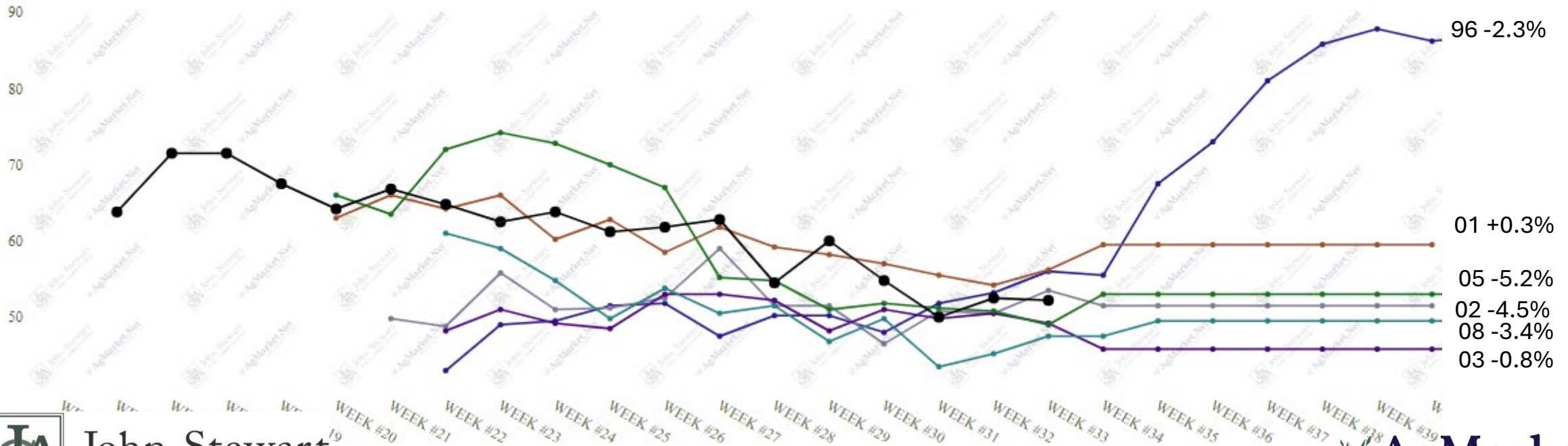
Analog Years & Deviation of Trend

1996*	-2.3%
2001***	+0.3%
2002**	-4.5%
2003***	-0.8%
2005***	-5.2%
2008	-3.4%
Average	-2.7%
Trendline	132.1
Est	128.5
USDA	117.0

TEXAS					
Year	Actual	Trend	Diff	%Diff	
2019	133.0	128.9	4.1	3.1%	
2020	128.0	129.6	-1.6	-1.2%	
2021	128.0	130.2	-2.2	-1.7%	
2022	95.0	130.8	-35.8	-27.4%	
2023	122.0	131.4	-9.4	-7.2%	
2024		132.1			

Texas

Corn JSA Index Seasonal Chart - TEXAS



Thank you.



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