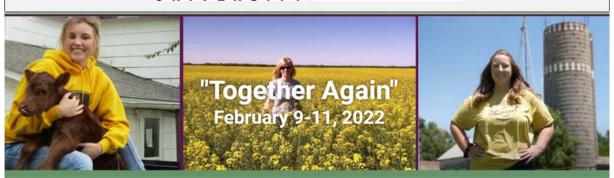


Rich Llewelyn

Email: rvl@ksu.edu/Phone: 785.532.1504

KANSAS STATE

Agricultural Economics



Price Analysis and Forecasting

• "Prediction is very difficult, especially if it's about the future".

Neils Bohr, Physicist

 "I have seen the future and it is very much like the present, only longer."

Kehlog Albran, Author

• "The future, predict we cannot."

Yoda



Moneyball: The Art of Winning an Unfair Game

- By Michael Lewis (2003)
- Sabermetrics (Bill James: 1980s)
- Billy Beane Oakland A's general manager
- Determined "prices" for things not generally considered "priceable"
 - Fielding skills, on-base percentage, pitches not in the strike zone that are swung at.



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Moneyball: Valuing Hitters

- For hitters, the most important statistic:
 - OBP: on-base percentage (3x more important than slugging percentage). Most important predictor of run production.
 - Also: strikeout percentage and ERV (expected run value). These are all more important than HR,
 RBI or batting percentage.
 - A few others: pitches per plate appearance,
 walk:strikeout ration, pitches not in strike zone
 that are swung at.



Moneyball: Valuing Pitchers

- For pitchers, the most important stat:
 - Ground ball:fly ball ratio. By far the most important. 2.5x more important in predicting low runs scored than ERA (earned run average).
 - Others: walk:strikeout ratio, pitches per batter.



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Market Efficiency

- In "Moneyball", market inefficiencies existed:
 high-priced players did not have some of the most
 important statistics; those with some of the most
 important stats were low-priced.
- Much economic analysis assumes that markets operate efficiently (perfectly competitive market)
 - Perfect information
 - Homogeneous good
 - No participant with market power to set prices
 - No barriers to entry or exit
 - Equal access to production technology



Market Efficiency

- For the most part, commodity markets are efficient. (You cannot/will not consistently beat the market over a long time).
- BUT: you may well be behind the market if you don't know what is going on.
- If inefficiencies exist, opportunities exist.
 - Land markets?
 - Valuing used equipment and machinery?
 - Commodities?
 - Others?



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Fundamental Analysis vs. Technical Analysis

- Fundamental Analysis: uses supply and demand data (and other economic data such as income, costs, currency rates, inflation, etc) to understand prices. <u>USDA reports provide data about</u> <u>fundamentals (supply/demand).</u>
- Technical analysis: primarily uses the patterns of price data itself. Looks for trends in prices, as well as highs and lows which provide "natural" limits to price movement.



Fundamental Analysis

- Advantages of fundamental analysis
 - Provides extra information not available using technical analysis.
 - May predict a price movement well in advance of it actually happening
 - Gives incentive to hold a winning position in the longer term
 - Fundamental news provides information to the entire market, but is best utilized by someone who knows what it means.



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Fundamental Analysis

- Disadvantages of fundamental analysis
 - Difficult to determine timing
 - May be missing variable(s)
 - Does not account for unexpected developments
 - 1973: Russian wheat sales and OPEC embargo
 - 1979: Russian invasion of Afghanistan; Iran revolution
 - 1991: Iraq invades Kuwait
 - 2001: 9/11
 - 2006: Ethanol subsidy/mandate/tariff
 - 2014: Oil glut caused by shale oil (fracking)
 - 2018-2020: Tariff war with China
 - 2020-2021: COVID-19



Fundamental Analysis

- In today's world, the factors affecting the market fundamentals (supply and demand) are more numerous and more interconnected than ever.
 - Argentina's export ban on grains (2008) and export taxes (2010)
 - Russia's drought and fires (2010)
 - Greek debt drama (2011-2015)
 - China's economic slowdown (2015)
 - Brexit (2016-2020)
 - U.S. rejects TPP and renegotiates NAFTA (2017)
 - U.S./China engage in escalating tariff war (2018-2020)
 - COVID-19 pandemic disrupts supply chains and demand.



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USDA Reports

- USDA provides a variety of reports on agricultural commodities at daily, weekly, monthly, quarterly, and annual intervals.
 - Crop reports, including supply-demand info, planting intentions, stocks and inventory, and crop condition reports, among others.
 - Livestock reports, including animal inventories, slaughter, cold storage, on-feed, among others.
- In addition to reports, the annual USDA
 Outlook Conference at the end of February
 is something to pay attention to.
 Presentations released online after the
 conference.



Crop Reports

- The USDA publishes monthly crop supply and demand estimates for the USA and the world
 - These benchmark estimates provide grain markets with objective, timely and comprehensive supply-demand info
 - World Agricultural Supply-Demand Estimates (WASDE)
 - Crop Production Reports
- USDA crop and WASDE reports have broad impact as they define fundamental supplydemand conditions in commodity markets



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USDA World Agricultural Outlook Board and WASDE Reports

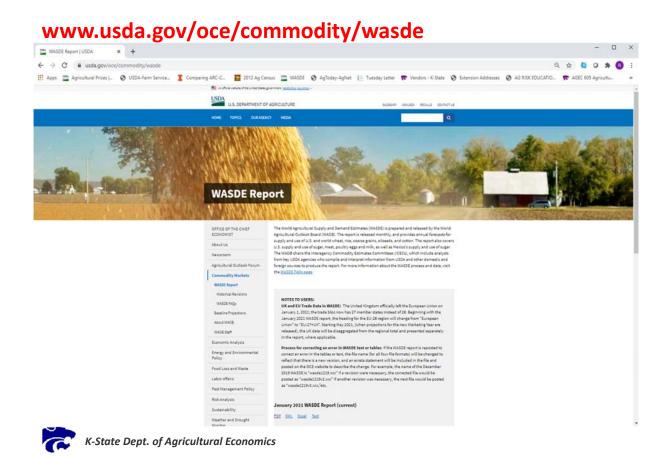
- Interagency process, with monthly forecasts of U.S. and world supply and demand for major crops
- A balance-sheet approach
 - Supply: Beginning stocks, Production & Imports
 - <u>Use</u>: Food, seed and industrial use, Exports, Feed+Residual
 - Ending Stocks or carryout stocks
 - Prices: U.S. average cash price projections (by marketing year)



Monthly Crop Production & WASDE Reports

- USDA <u>Crop Production (NASS)</u> & <u>WASDE (WAOB)</u> reports are prepared simultaneously in a secured area & released at 12:00 noon ET (11 am CT) between the 8th & 12th day of each month
 - NASS production forecasts are incorporated into U.S. crop supplydemand estimates







USDA United States Department of World Agricultural Supply and Demand Estimates

ISSN: 1554-9089

Office of the Chief Economist

Agricultural Marketing Service Farm Service Agency

Foreign Agricultural Service

WASDE - 620

Approved by the World Agricultural Outlook Board

January 12, 2022

WHEAT: The outlook for 2021/22 U.S. wheat this month is for smaller supplies, reduced domestic use, lower exports, and higher ending stocks. Imports are lowered 10 million bushels to 100 million on a slower than expected pace for Durum and Hard Red Spring. Feed and residual use is lowered 25 million bushels to 110 million on lower implied feed and residual use in the second quarter, based on December 1 stocks reported in today's NASS Grain Stocks report. Seed use is unchanged at 66 million bushels, reflecting the latest estimated seed use for winter wheat plantings in the fall of 2021 reported in today's NASS Winter Wheat and Canola Seedings report. Exports are reduced 15 million bushels to 825 million bushels with all the reduction in Hard Red Winter. U.S. wheat sales and shipments continue to be sluggish as U.S. wheat remains uncompetitive in several markets. Projected 2021/22 ending stocks are raised 30 million bushels to 628 million but still down 26 percent from last year and the lowest level since 2013/14. The season-average farm price is raised \$0.10 per bushel to \$7.15 based on NASS prices reported to date and expectations for prices in the remainder of the marketing year.

The 2021/22 global wheat outlook is for stable supplies, decreased consumption, reduced exports, and increased stocks. Production increases in Argentina and the EU are offset by decreased production in Brazil and Paraguay and lower beginning stocks for Russia. Argentina's production is increased 0.5 million tons to a record 20.5 million on updated harvest results. Russian beginning stocks are lowered 0.6 million tons on larger end-of-season exports in 2020/21. World 2021/22 consumption is lowered 1.9 million tons to 787.5 million, primarily due to lower feed and residual use for the United States, the EU, and Ukraine. Relatively higher wheat prices compared to feed grains are expected to reduce global feed use. Projected 2021/22 global trade is lowered 1.1 million tons to 204.4 million

as reductions in ex from mid-February while EU exports a States, Russia, Ka

exports from the E WASDE report includes summary information and latter half of the m highlights for each commodity, world supply and use stocks are raised tables, U.S. supply and use tables, and prices.

forecast at the lowest level since 2016/17.

January 2022

Current year

WASDE - 620 - 15

U.S. Soybeans and Products Supply and Use (Domestic Measure) 1/

Past years

SOYBEANS	2019/20	2020/21 Est.	2021/22 Proj.	2021/22 Proj.			
SOTBEANS			Dec	Jan			
	Million Acres						
Area Planted SUPPLY	76.1	83.4	87.2	87.2			
Area Harvested	74.9	82.6	86.4	86.3			
1000 (100) (1000 (100) (1000 (1000 (100) (1000 (100) (1000 (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (100) (1000 (100) (100) (1000 (100) (100) (1000 (100) (100) (100) (1000 (100) (100) (100) (1000 (100) (Bushels						
Yield per Harvested Acre	47.4	51.0	51.2	51.4			
	Million Bushels						
Beginning Stocks	909	525	256	257			
Production	3,552	4,216	4,425	4,435			
Imports	15	20	15	15			
Supply, Total	4,476	4,761	4,696	4,707			
Crushings	2,165	2,141	2,190	2,190			
Exports USE	1,679	2,265	2,050	2,050			
Seed	97	101	102	102			
Residual	11	-4	15	16			
Use, Total	3,952	4,504	4,356	4,357			
Ending Stocks	525	257	340	350			
Avg. Farm Price (\$/bu) 2	8.57	10.80	12.10	12.60			

Marketing Year

- The marketing year for wheat:
 - June 1 May 31
- The marketing year for summer crops (corn, soybeans, milo)
 - September 1 August 31.
- USDA begins estimating yields/production, usage, and prices in May each year for the following marketing year (projections for 2021-2022 MY began in May, 2021).



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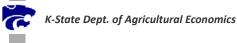
Marketing Year Average Prices

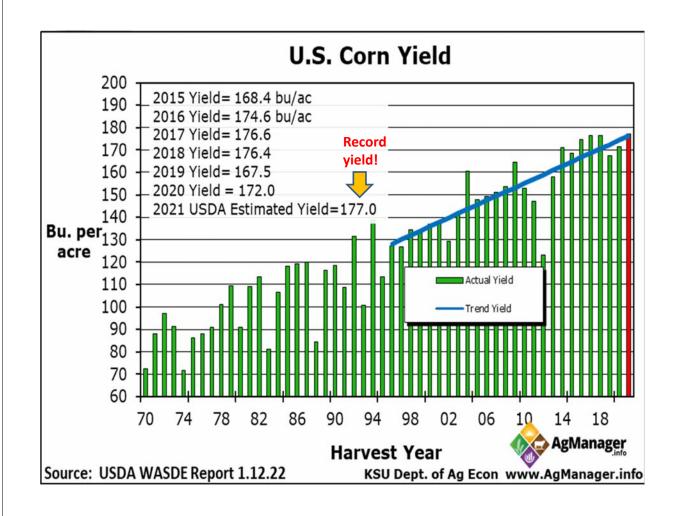
- Marketing Year Average (MYA) prices are determined by a weighted average of NATIONAL cash prices.
- Prices are weighted by sales each month.
- A relatively large proportion of sales take place in the three months following harvest for most crops (grain sorghum is an exception).
- MYA prices are used for government program payments (ARC, PLC), as well as crop insurance.
- USDA estimates MYA prices each month based on historical weights and expected prices and provides a range of expected prices.

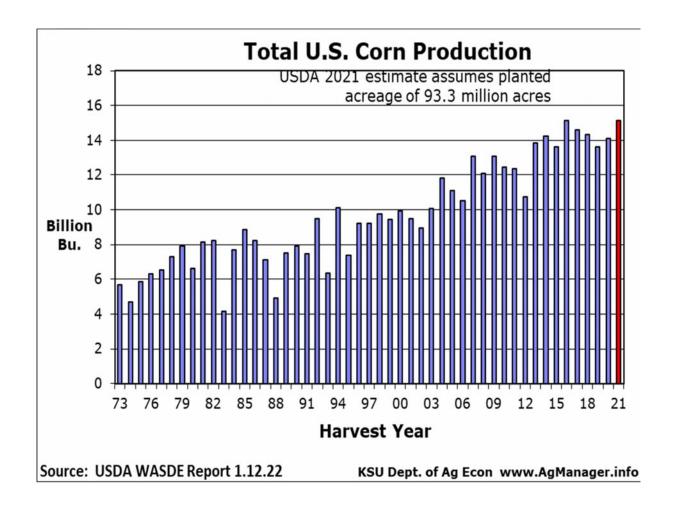


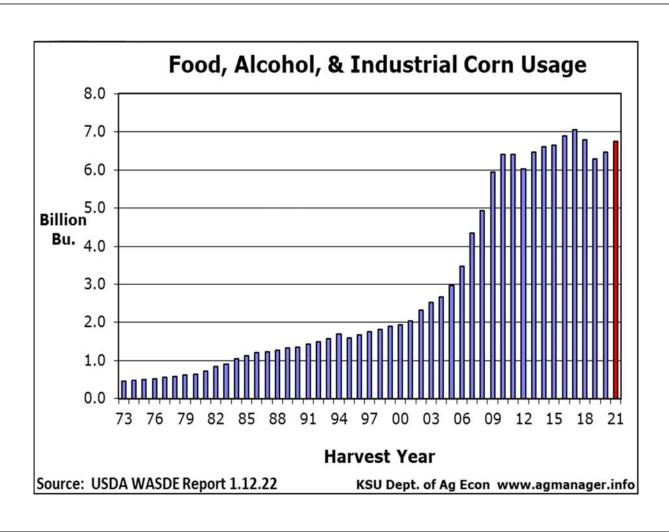


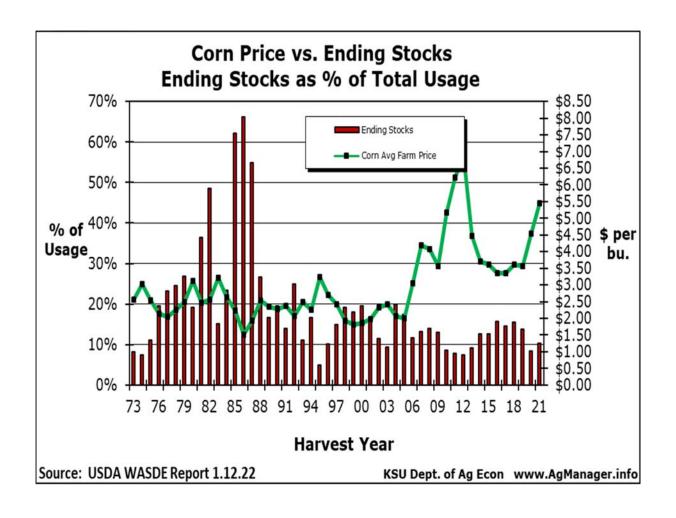
- Understanding supply and demand situation by comparing with historical values. Includes exports, production, imports, domestic use (ethanol), etc.
- Evaluating the size of ending stocks of a commodity and expected effects on prices (stocks-to-use ratio).
- Obtaining an idea of what USDA expects for MYA prices.











Other Crop Reports: National Agricultural Statistics Service (NASS)

- Winter wheat and rye seedings report early January
 - Reports actual planted acres from survey data
- Planting Intentions Report end of March
 - For summer crops, based on farmer survey in early March
- Acreage Report late June
 - Planted acres, based on early June survey. First report of actual planted acres.



Other Crop Reports: National Agricultural Statistics Service (NASS)

- Monthly yield and production forecasts
 - Winter wheat starting in May
 - Spring wheat and other small grains starting in July
 - Other spring-planted crops starting in August
 - Final crop estimates end of the harvesting season
- Quarterly Stocks Reports
 - Grain and soybeans stored on and off farms (January, March, July, September)
 - These inventory reports have become large market-changers in an era of relatively low stocks.



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Other Crop Reports: National Agricultural Statistics Service (NASS)

- Weekly crop progress and condition report
 - Beginning in March, for each state.
 - Released each Monday morning, reporting on the previous Monday-Sunday period.
 - Also includes days suitable for fieldwork as well as topsoil and subsoil conditions for the state.
- Expected yield reports
 - Monthly, August to November, for corn and soybeans.
 - Reflect conditions as of the first of the month.



Other Crop Reports: National Agricultural Statistics Service (NASS)

- Agricultural Prices publication
 - Monthly, at the end of each month.
 - Prices paid for inputs and prices received by producers for most commodities, as well as marketing year average prices and monthly sales weights.
- Export Reports (weekly)
 - Export Inspection reports (Monday, 8 am)
 - Export Sales Report (Thursday, 8 am)



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Annual USDA June Ag Survey

Largest USDA Survey Each Year

- Survey done in 1st two weeks in June:
 - ≈ 2,400 interviewers contact > 125,000 farmers. Results released the end of June.
- U.S. crop & livestock producers report:
 - Acreage of each crop either planted or intend to plant
 - Acreage they expect to harvest as grain
 - Stocks of grain in on farm storage
 - Livestock inventories



Importance of January Crop Reports

- January is the biggest report period of the year for crops.
 - Crop Production Annual Summary
 - Quarterly Grain Stocks
 - First quarter estimated usage is documented in the stocks report.
 - Winter Wheat Seedings
 - January WASDE reports.
 - First "final" yield for the corn and soybeans



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Other "Big" Reporting Times

- End of March: Planting Intentions report and Quarterly Stocks reports.
- End of June: acreage report (reporting actual plantings, based on early June survey)
- Mid-August: first expected yield report for summer crops, based on field surveys.
- End of September: small grains summaries (including wheat) and quarterly stocks report, with ending MY inventories for summer crops.





Useful Websites for Crop Reports

- Crop Progress and Conditions (Mondays)
 - http://www.nass.usda.gov/Publications/State Crop Progress and Condition/
- Prospective Plantings (end of March):
 - https://usda.library.cornell.edu/concern/publications/x633f100h?locale=en
- Winter Wheat and Canola Seedings (January):
 - https://usda.library.cornell.edu/concern/publications/z890rt24s?locale=en
- Small Grain Summaries:
 - <u>https://usda.library.cornell.edu/concern/publications</u>/5t34sj573?locale=en



Useful Websites for Crop Reports

- Quarterly Grain Stocks Reports:
 - https://usda.library.cornell.edu/concern/publications/xg94hp534?locale=en
- Agricultural Prices (monthly):
 - https://usda.library.cornell.edu/concern/publications /c821gj76b?locale=en&page=2#release-items
- June Acreage Report:
 - https://usda.library.cornell.edu/concern/publications/i098zb09z?locale=en



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A Few Additional Sites

- Weekly Export Inspection Report:
 - Monday morning at 8 am.
 - http://www.ams.usda.gov/mnreports/wa_gr101.txt
- Weekly Export Sales Report:
 - Thursday morning at 8 am.
 - http://www.fas.usda.gov/export-sales/esrd1.html
- Weekly Petroleum Status Report:
 - Wednesday morning at 10:30 am.
 - http://www.eia.gov/petroleum/supply/weekly/
- NOAA 6-10 day forecasts (Daily)
 - http://www.cpc.ncep.noaa.gov/products/predictions/610day/index.php/



USDA Quick Stats and Quick Stats Lite

USDA data

- Census and survey data, by sector and commodity
- County, district, state, national, by year.
- Quick Stats:
 - https://quickstats.nass.usda.gov/
 - More difficult to use, but more data
- Quick Stats Lite:
 - https://www.nass.usda.gov/Quick Stats/Lite/index.php
 - Easier to use, but less data
- Ag Census database:
 - https://www.nass.usda.gov/Quick Stats/CDQT/chapter/1/table/1



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Macroeconomic Data: FRED

FRED: Federal Reserve Economic data

https://fred.stlouisfed.org/

Maintained by the St. Louis Federal Reserve Bank.

Interest rates	Bond yields
GDP	Oil prices
CPI, PPI	Consumption expenditures
Unemployment rate	Public debt
Money supply	Exchange rates
Inflation rates	Consumer sentiment
Housing starts	Vehicle sales
Savings rates	MUCH more.





University of Illinois

 FarmDoc: extension website for ag econ department at University of Illinois. Lots of good information on markets, production, finance and other topics.

http://farmdoc.illinois.edu/

 FarmDoc Daily: a very useful daily blog with articles related to grain markets primarily. Can be very helpful in understanding grain markets and also for varying types of analysis.

http://farmdocdaily.illinois.edu/



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Livestock and Meat Market Information USDA Reports

- Many USDA livestock reports available
- The bigger ones:
 - Livestock, Dairy, & Poultry Outlook middle of each month, with a quarterly forecast for next 4-6 quarters
 - Cattle-on-Feed third or fourth Friday of each month.
 - Livestock Slaughter Thursday, often the day before cattle-on-feed, each month.
 - Cattle Inventory semi-annually, end of January and end of July.
 - Hog and Pig Inventory quarterly, March, June, September, December.



Livestock and Meat Market Information USDA Reports

- Some other reports:
 - Quarterly Hogs and Pigs End of March,
 June, September, December.
 - US and Canadian Cattle / US and Canadian
 Hogs latter parts of February and August.
 - Cold Storage generally around the 22nd of each month
 - Milk Production between the 19th-24th of each month



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Livestock and Meat Market Information USDA Reports

- Livestock, Dairy, & Poultry Outlook
 - https://usda.library.cornell.edu/concern/publicat ions/g445cd121?locale=en
 - Monthly, in the middle of the month
 - Quarterly forecast for next 4-6 quarters
- US & Canadian Cattle
 - https://usda.library.cornell.edu/concern/publicat ions/474299142?locale=en
 - Released 2x per year (March and August)
- US & Canadian Hogs
 - https://usda.library.cornell.edu/concern/publicat ions/7h149p85x?locale=en
 - Released 2x per year (March and August)



Livestock and Meat Market Information USDA Reports

- Cold Storage
 - https://usda.library.cornell.edu/concern/publicat ions/pg15bd892?locale=en
 - Released monthly, about the 22nd
- Livestock Slaughter
 - https://usda.library.cornell.edu/concern/publicat ions/rx913p88g?locale=en
 - Released monthly, about the 20th
- Cattle on Feed
 - https://usda.library.cornell.edu/concern/publicat ions/m326m174z?locale=en
 - Released monthly, 3rd or 4th Friday



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Livestock and Meat Market Information USDA Reports

- Cattle Inventory Reports
 - https://usda.library.cornell.edu/concern/publications/h702g636h?locale=en
 - Released in January & July; end of the month
- Hogs and Pigs Inventory Reports
 - https://usda.library.cornell.edu/concern/publicat ions/rj430453j?locale=en
 - Released quarterly (Mar, Jun, Sep, Dec); end of the month
- Milk Production
 - https://usda.library.cornell.edu/concern/publicat ions/h989r321c?locale=en
 - Released monthly, around the 20th of the month



Livestock and Meat Market Information Other Reports and Information

- Daily Livestock Report
 - http://www.dailylivestockreport.com/
 - 1 page synopsis on livestock/meat market drivers
 - Lists schedule of releases, and links to, current month's USDA reports
- CME Group Livestock Fundamentals
 - http://www.cmegroup.com/trading/commodities/cmegroup-livestock-fundamentals.html
 - Overview of cattle & hog industries; outlines stages of production, etc.
- Interest Rates Forecasts
 - http://www.cmegroup.com/trading/interest-rates/fedfunds.html
- Outlook for US Ag Trade
 - https://www.ers.usda.gov/publications/pubdetails/?pubid=99889



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Livestock and Meat Market Information Newsletters and Commentary from K-State

- KSU Radio Interview
 - http://www.agmanager.info/news/weeklycattle-market-report-glynn-tonsor-and-lmic
- "In the Cattle Markets" from LMIC
 - http://www.agmanager.info/news/cattlemarkets-lmic
- Recent Cattle Finishing Returns
 - http://www.agmanager.info/livestockmeat/cattle-finishing-historical-andprojected-returns/cattle-feeding-returns-1





Shows cattle inventory on January 1 and July 1. Released the end of January and end of July.

Some years did not have a July report (2013 or 2016).

https://usda.library.cornell.edu/concern/publications/h702q636h?locale=en



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Cattle

ISSN: 1948-9099

Released January 31, 2022, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

January 1 Cattle Inventory Down 2 Percent

All cattle and calves in the United States as of January 1, 2022 totaled 91.9 million head, 2 percent below the 93.8 million head on January 1, 2021.

All cows and heifers that have calved, at 39.5 million head, were 2 percent below the 40.3 million head on January 1, 2021. Beef cows, at 30.1 million head, were down 2 percent from a year ago. Milk cows, at 9.38 million head, were down 1 percent from the previous year.

All heifers 500 pounds and over as of January 1, 2022 totaled 19.8 million head, 2 percent below the 20.2 million head on January 1, 2021. Beef replacement heifers, at 5.61 million head, were down 3 percent from a year ago. Milk replacement heifers, at 4.45 million head, were down 3 percent from the previous year. Other heifers, at 9.71 million head, were 1 percent below a year earlier.

Steers weighing 500 pounds and over as of January 1, 2022 totaled 16.6 million head, down 1 percent from January 1, 2021.

Bulls weighing 500 pounds and over as of January 1, 2022 totaled 2.11 million head, down 5 percent from January 1, 2021.

Calves under 500 pounds as of January 1, 2022 totaled 13.9 million head, down 3 percent from January 1, 2021.

Cattle and calves on feed for the slaughter market in the United States for all feedlots totaled 14.7 million head on January 1, 2022. The inventory is up slightly from the January 1, 2021 total of 14.7 million head. Cattle on feed in feedlots with capacity of 1,000 or more head accounted for 81.9 percent of the total cattle on feed on January 1, 2022, up slightly from the previous year. The combined total of calves under 500 pounds and other heifers and steers over 500 pounds (outside of feedlots) at 25.5 million head, was 3 percent below January 1, 2021.

Calf Crop Down 1 Percent

The 2021 calf crop in the United States was estimated at 35.1 million head, down 1 percent from the previous year's calf crop. Calves born during the first half of 2021 were estimated at 25.6 million head, down 1 percent from the first half of 2020. Calves born during the second half of 2021 were estimated at 9.46 million head, 27 percent of the total 2021 calf crop.

All Cattle and Calves Inventory - United States: January 1

Million head

105

100

95

90

2022=91.9 million head

2007

Cattle: Inventory on January 1 by Year, US

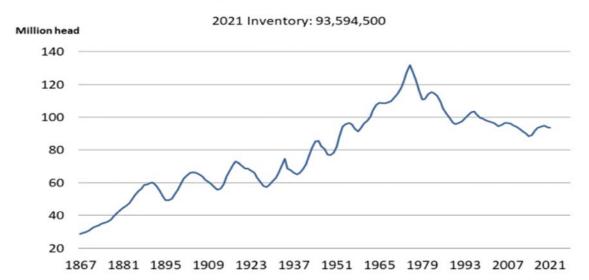
2002

All Cattle and Calves Inventory - United States: January 1

2012

2017

2022



USDA-NASS 1-29-2021



1997

Source: https://www.nass.usda.gov/Charts_and_Maps/Cattle/inv.php K-State Dept. of Agricultural Economics

CFTC Commitment of Traders Report

- To help market participants understand market dynamics, the Commitment of Traders report is released every Friday by the CFTC (Commodity Futures Trading Commission).
- Main page:

https://cftc.gov/MarketReports/CommitmentsofTraders/index.htm

Annual data:

https://cftc.gov/MarketReports/CommitmentsofTraders/HistoricalCompressed/index.htm



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CFTC Commitment of Traders Report

- Provides a breakdown of each Tuesday's open interest for futures markets. Report is released on Friday.
- Open interest broken down into four trader classifications:
 - Producer/Merchant/Processor/User
 - Swap dealers
 - Managed Money
 - Other
- Pay attention to "Managed Money" class





CFTC Commitment of Traders Report: Corn, as of January 11, 2022

:				Report	table Posi	tions				
:										
: Producer/Me	rchant :			:			:			
Processor/	User :	5	wap Dealer	5 :	Mar	naged Mor	ney :	Other	Reporta	bles
Long :	Short :	Long	: Short	:Spreading:	Long :	Short	:Spreading:	Long :	Short	:Spreading
ORN - CHICAG	O BOARD O	FTRADE	(CONTRAC	TS OF 5,000	BUSHELS)					
FTC Code #00	2602				A CONTRACTOR OF THE PARTY OF TH	(Open Interest	is 1,504,	234	
Positions							•			
355,637 1,	018,920	319,128	22,678	11,351	365,679	30,90	3 123,110	125,649	52,933	64,981
Cl			2022							
Changes fro				1.01100001	1000000000	100110-01	0 8029	10100100000	Nen Nenez	101100000
-2,101	5,455	21,462	-2,061	1,345	-16,443	4,13	6 557	-19,226	-1,816	-2,267
Percent of	Open Inte	rest Rep	resented by	y Each Cate	gory of Tra	ader				
23.6	67.7	21.2	1.5	0.8	24.3	2.1	1 8.2	8.4	3.5	4.3
Number of T	raders in	Each Ca	tegory				Total Trader	s: 777		
	369	26	10	18	116	2	7 62	75	67	73

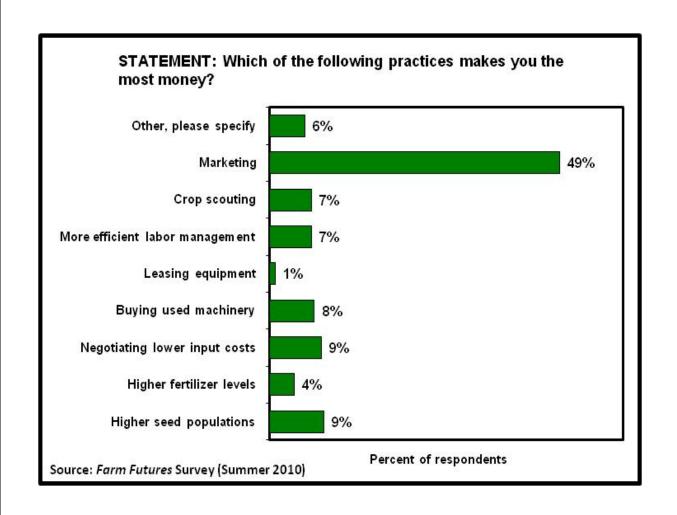


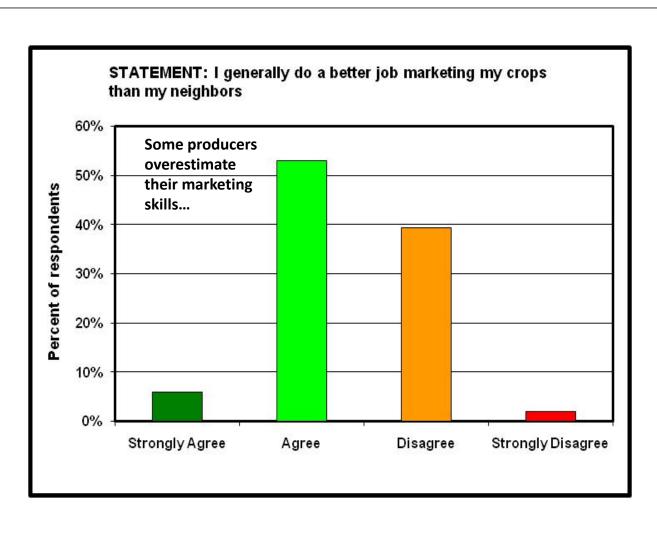
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A Comment on Marketing and Profitability

- Many producers believe that marketing is the key to higher profits.
- This is somewhat true, but more important factors are managing costs and production over which you have more control.
 - Production is important higher production helps when prices are low (wheat in 2016).
 - Cost management is also important.
 - Machinery costs are very important. But also other costs, including seed, fertilizer, chemicals, labor. You have some control over these costs.







Managing production and costs matters!

Somewhat higher yields and prices for higher profitability farms. Prices received not a lot different

Lower variable costs (seed, fertilizer, chemicals, repairs) pretty much across the board for higher profitability farms.

Also lower fixed costs, except for maybe land charge for these farms.

Generally lower total machinery costs and lower total costs. These lower costs are what provide a lot of the profitability.

CORN	High 1/3	Mid 1/3	Low 1/3
KFMA	\$/acre	\$/acre	\$/acre
RETURNS			
Yield	119.13	100.39	96.00
Price	\$3.76	\$3.58	\$3.62
Gross Returns from Crop	\$447.93	\$359.40	\$347.52
VARIABLE COSTS			
Fertilizer	\$59.07	\$75.92	\$81.17
Seed	\$53.85	\$56.57	\$60.51
Chemicals	\$36.24	\$48.68	\$45.14
Machinery Repairs	\$22.63	\$22.33	\$28.44
Gas/Fuel/Oil	\$12.57	\$11.14	\$13.45
Total Variable Costs	\$278.72	\$296.02	\$330.28
FIXED COSTS			
Depreciation	\$30.81	\$30.73	\$41.44
Unpaid Operator Labor	\$30.27	\$39.94	\$54.23
Interest	\$11.19	\$12.40	\$17.04
Land Charge	\$25.48	\$19.86	\$34.85
Total Fixed Costs	\$100.97	\$106.97	\$154.59
Total Machinery Cost	\$71.38	\$68.52	\$86.24
Total Costs	\$379.68	\$402.99	\$484.87
Net Return to Management	\$61.07	-\$38.80	-\$127.59

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K-State Ag Econ Extension Website



Grains:

- Grain market outlook/info
- Weekly grain basis tool and maps
- ARC/PLC payments and price estimates
- WASDE charts/spreadsheets
- Projected budgets and KFMA data

Livestock:

- Marketing charts (prices, slaughter, trade)
- Cattle finishing returns
- Beef, hogs, sheep budgets
- Meat demand surveys and info







QUESTIONS?

Women Managing the Farm Conference
February 9-11, 2022/Manhattan, Kansas

AgManager

Rich Llewelyn

AgManager

Email: rvl@ksu.edu/Phone: 785.532.1504

KANSAS STATE

Agricultural Economics

