

# Ukraine & Russian Federation Conflict:

## Grain Market Impacts

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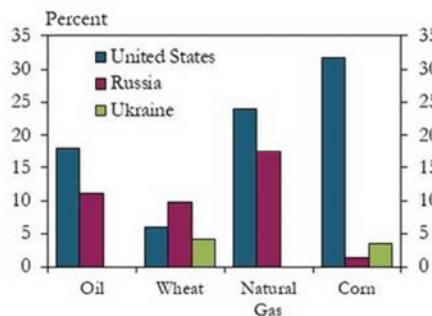


### Turmoil in Commodity Markets Following Russia's Invasion of Ukraine

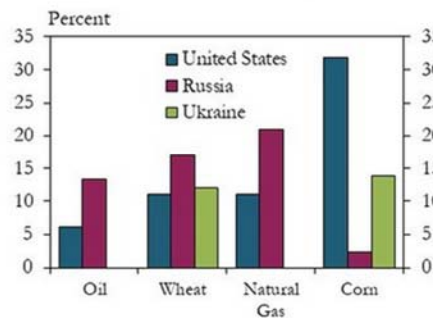
Russia's invasion of Ukraine, which began in February 2022, has caused broad disruptions in global commodity markets. Kansas City Fed researchers explore the substantial impacts of these disruptions to markets and consumers.

May 23, 2022 | Commodities Market | Agriculture | Energy

Share of World Production



Share of World Exports



Source: U.S. Departments of Energy and Agriculture.

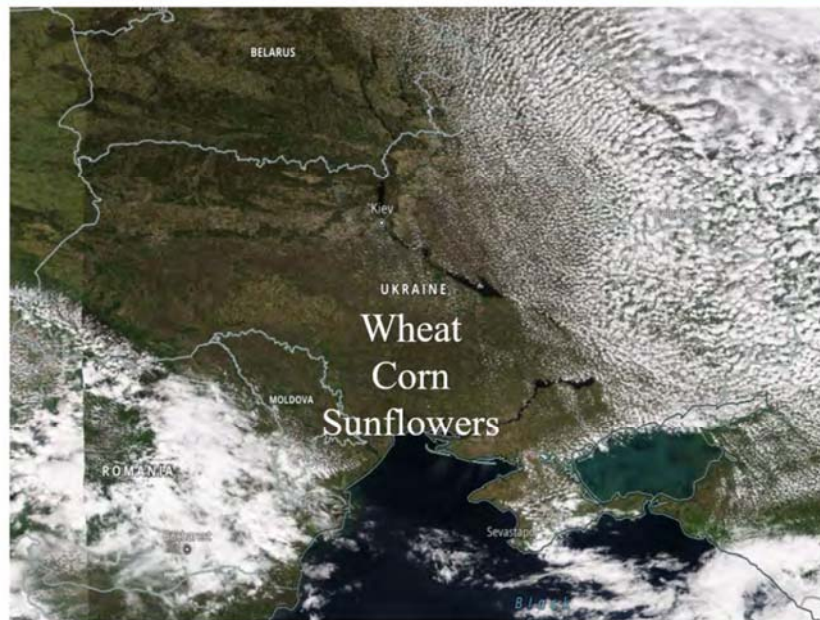


# Ukraine-Russia Conflict Impacts on Grain Markets

- **Wheat** Global \*\*\*\*
- **Corn** Global \*\*\*\*
- **Sunflower & Sunflower Oil** Global \*\*\*\*
- **Soybeans** Global



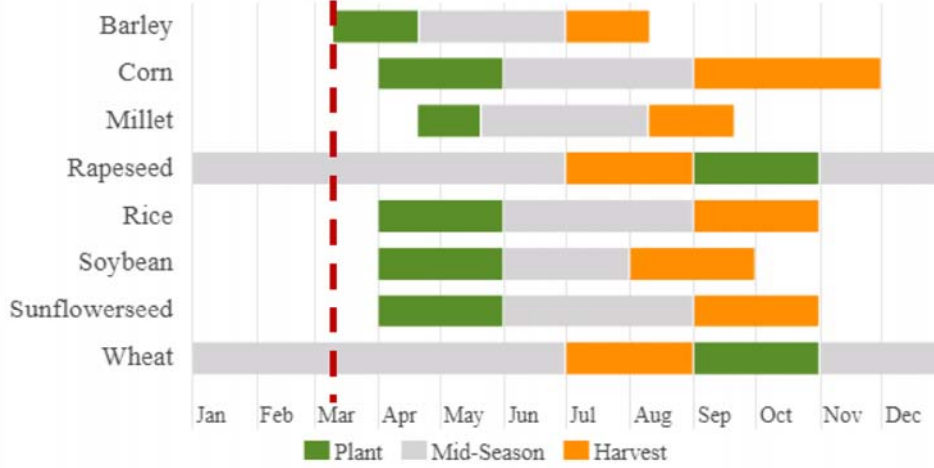
USDA Office of the Chief Economist  
United States Department of Agriculture



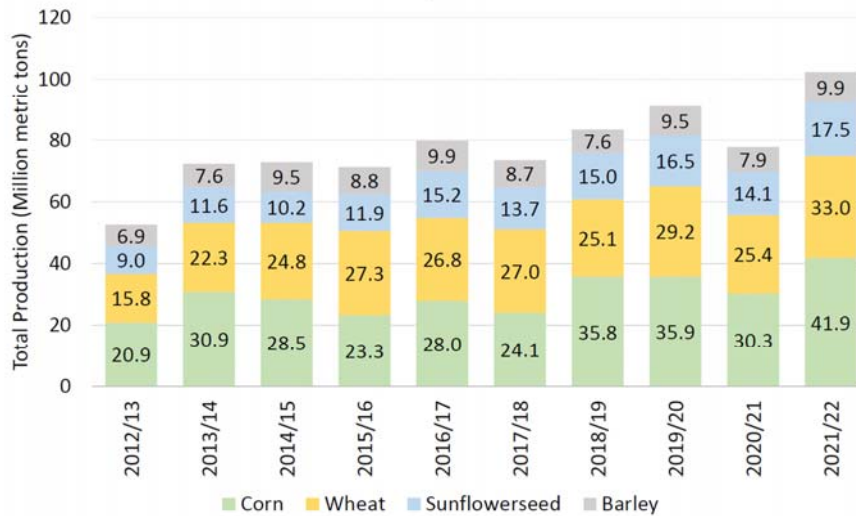
May 12, 2022

### Ukraine – Crop Calendar

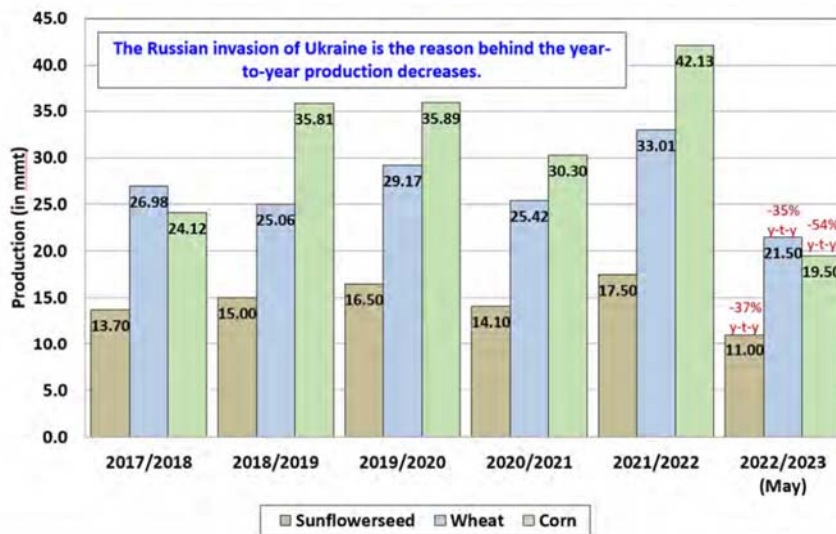
Winter barley is not on this list but follows the same calendar as wheat.



### Ukraine Crop Production



## Ukraine Crop Production: Corn, Sunflowers, and Wheat



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## Ukraine Assumptions

### • Area:

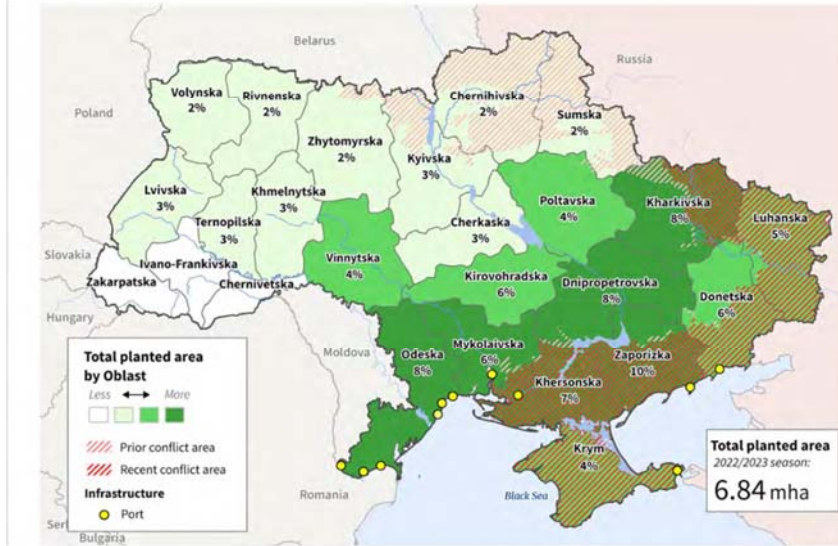
- Conflict Zones Destruction Rate/Will not plant for areas in conflict zones: ~30% loss (from LES from contacts/Minag/Ukraine resources) –See map for example
- This 30 percent includes areas that have been destroyed because Russians have mined fields, areas that have been left unworkable due to bomb craters and debris in fields, and areas that cannot be planted due to lack of seeds or manpower.
- Areas that the Russians have been pushed back (in the north) are still being considered as “conflict”
- Fuel availability is 82.09% (from the Ministry of Agriculture).

### • Yield:

- 2020 is a good proxy year for crop yield because supply chain issues stemming from the COVID-19 pandemic, similar to the current year with the blockage of the Black Sea Ports.

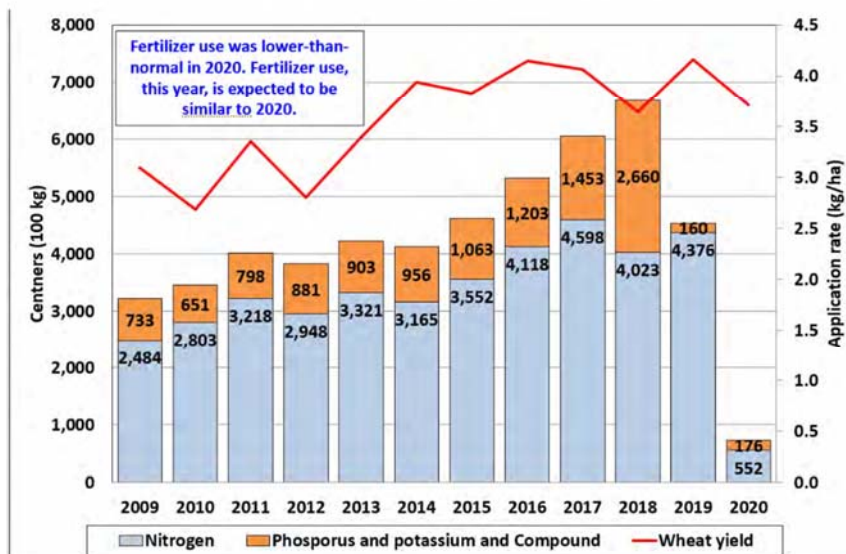
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## Ukraine Winter Wheat Planted Area Overlaid with Conflict



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## Ukraine: Mineral Fertilizer Applied to Wheat



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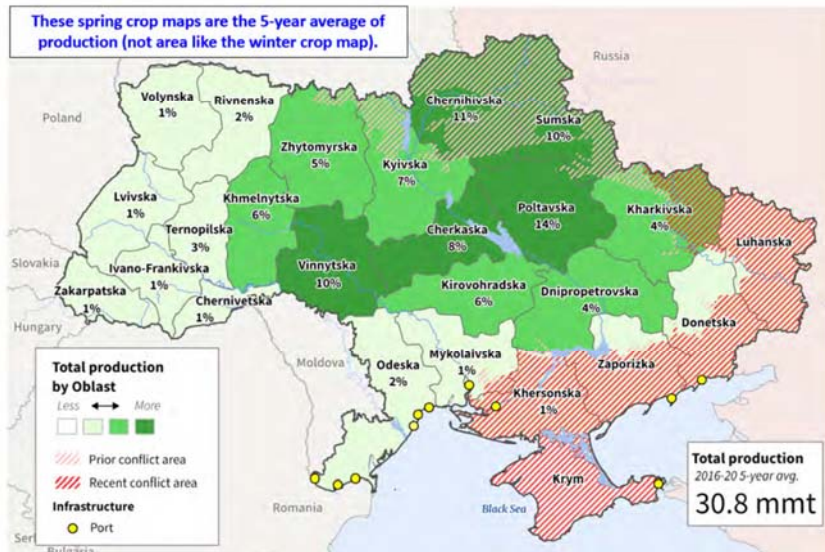
## World Wheat Production

Country or Region	2021/2022		2022/2023	
	Estimate	Change from April 8	Forecast	Change from 2021/2022
----- Million Tons -----				
World	779.3	0.5	774.8	-4.5
United States	44.8	--	47.0	2.3
Foreign	734.5	0.5	727.8	-6.7
Argentina	22.2	1.2	20.0	-2.2
Canada	21.7	--	33.0	11.3
Australia	36.3	--	30.0	-6.3
European Union	138.4	--	136.5	-1.9
Turkey	16.0	-0.2	17.5	1.5
Russia	75.2	--	80.0	4.8
Ukraine	33.0	**	21.5	-11.5
Kazakhstan	11.8	--	13.0	1.2
China	136.9	--	135.0	-1.9
India	109.6	--	108.5	-1.1
Northwest Africa	11.2	-1.2	7.2	-4.0

-- No change. \*\*Rounds to zero.

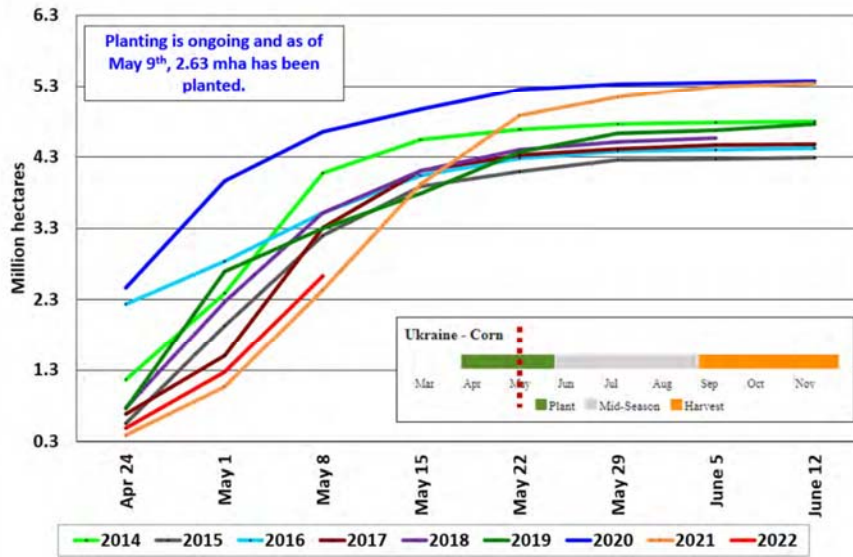
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## Ukraine: Corn Production and Conflict Areas



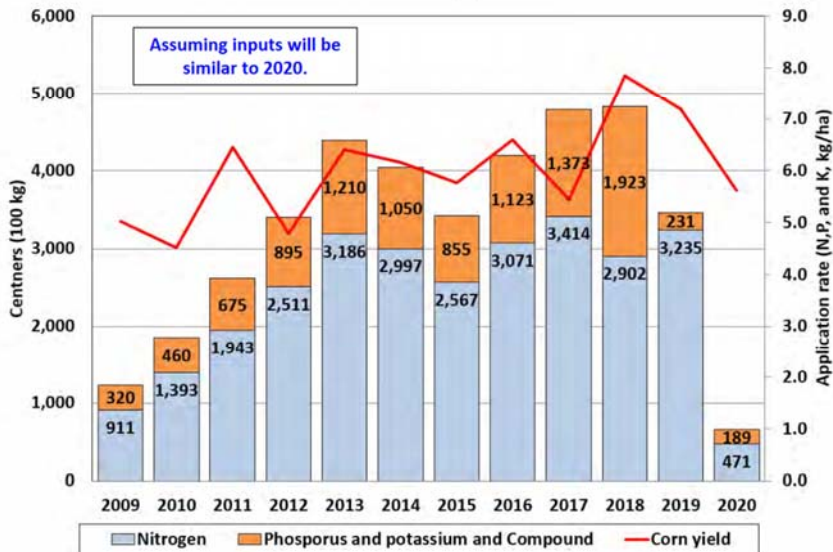
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## Ukraine Corn Planting Progress



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## Ukraine: Mineral Fertilizer Applied to Corn



May 12, 2022

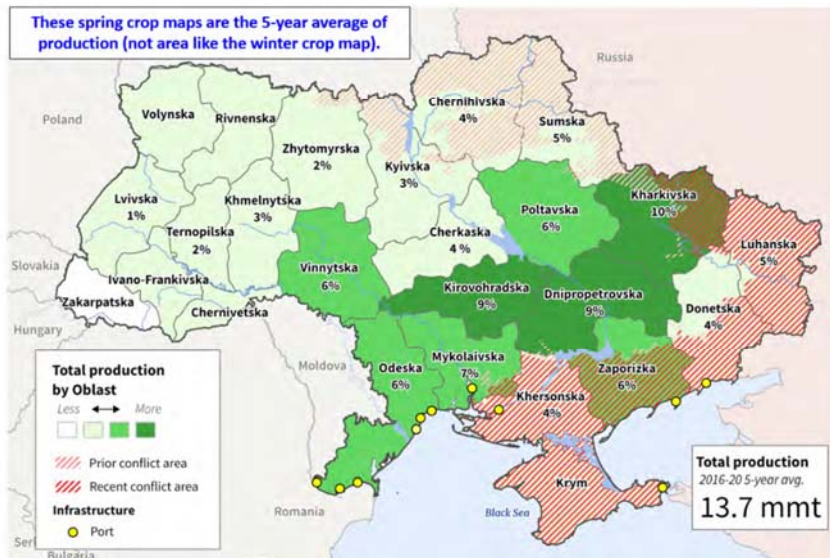
## World Corn Production

Country or Region	2021/2022		2022/2023	
	Estimate	Change from April 8	Forecast	Change from 2021/2022
----- Million Tons -----				
World	1,215.6	5.2	1,180.7	-34.9
United States	383.9	--	367.3	-16.6
Foreign	831.7	5.2	813.4	-18.3
Argentina	53.0	--	55.0	2.0
Brazil	116.0	--	126.0	10.0
Mexico	27.6	--	27.6	--
Canada	14.0	--	14.0	**
European Union	70.5	--	68.3	-2.2
Serbia	6.0	-0.2	7.2	1.2
FSU-12	63.6	0.3	40.2	-23.3
Ukraine	42.1	0.2	19.5	-22.6
Russia	15.2	--	15.5	0.3
South Africa	16.3	--	17.3	1.0
China	272.6	--	271.0	-1.6
India	32.5	--	31.5	-1.0

-- No change.

May 12, 2022

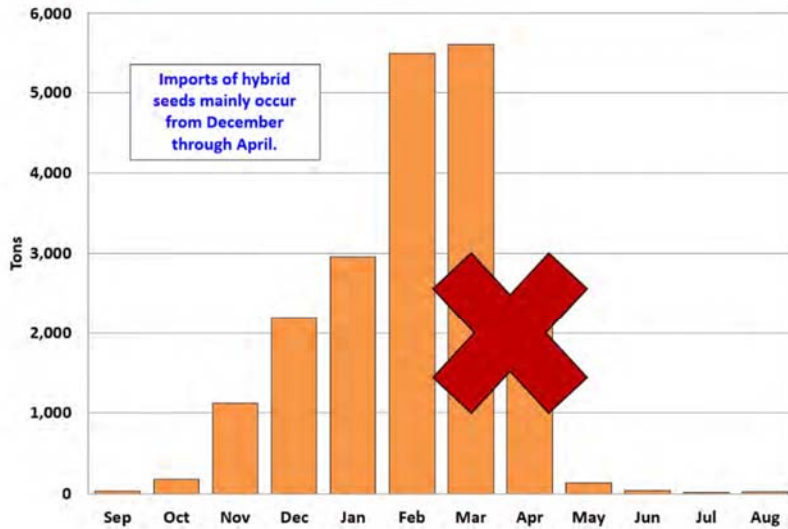
## Ukraine: Sunflower Seed Production and Conflict Areas



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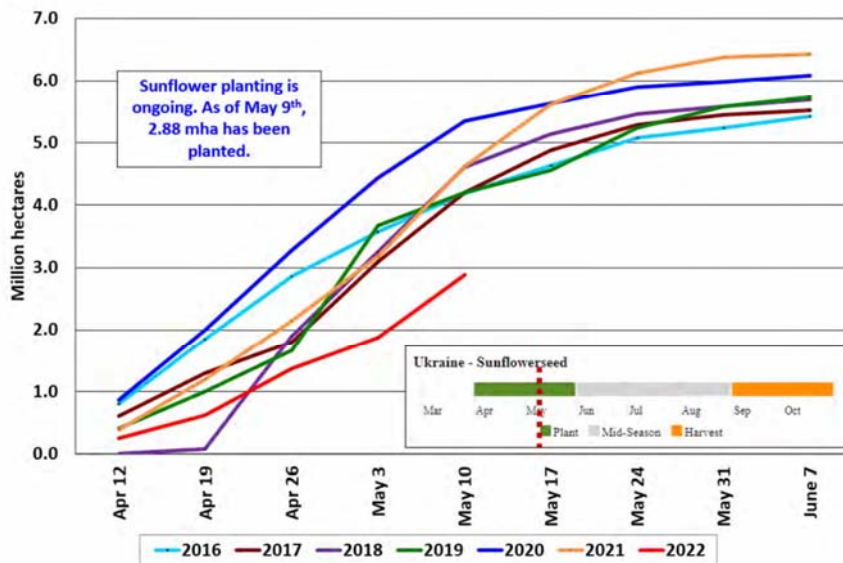
## Ukraine Sunflowerseed: Average Monthly Hybrid Seed Imports (2012-2021)



Source: Trade Data Monitor

May 12, 2022

## Ukraine Sunflower Planting Progress



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# Wheat Markets



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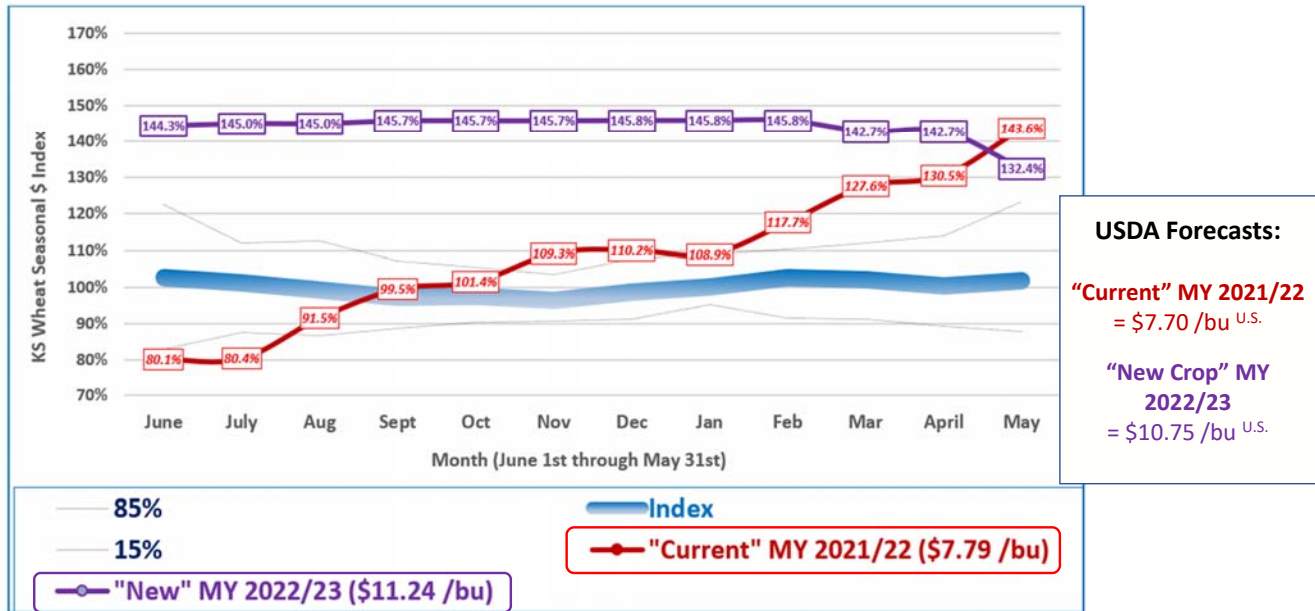
## Wheat (Kansas) (Electronic) (KCBT)

TFC Commodity Charts



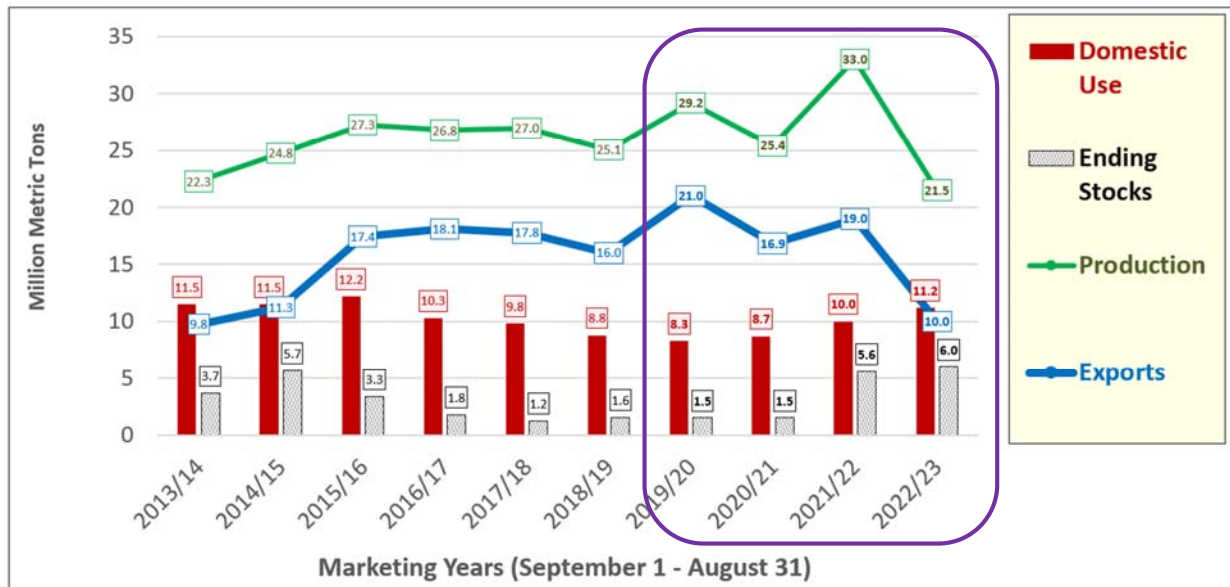
# Seasonal Prices for Kansas HRW Wheat: MY 1999/00 – 2019/20 +

“Current” MY 2021/22 & “New” MY 2022/23 Estimates thru May 25, 2022



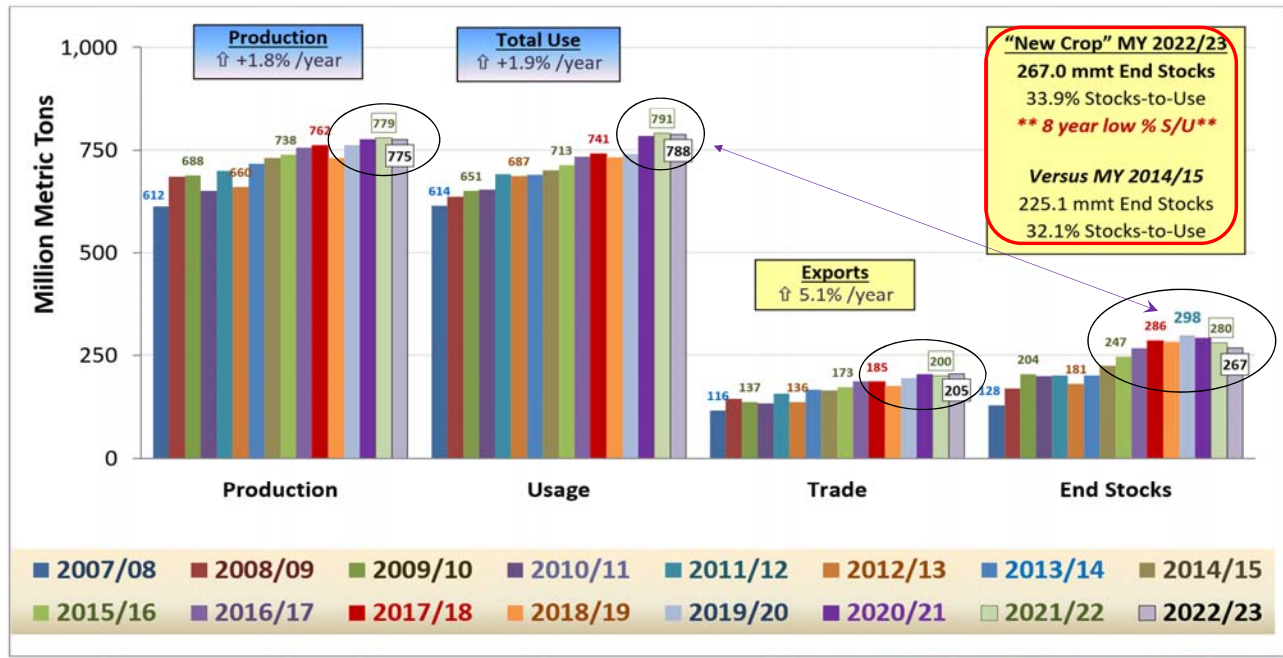
# Ukraine Wheat S-D Trends: MY 2013/14 – “New Crop” MY 2022/23 as of the May 12, 2022

2022 USDA WASDE report



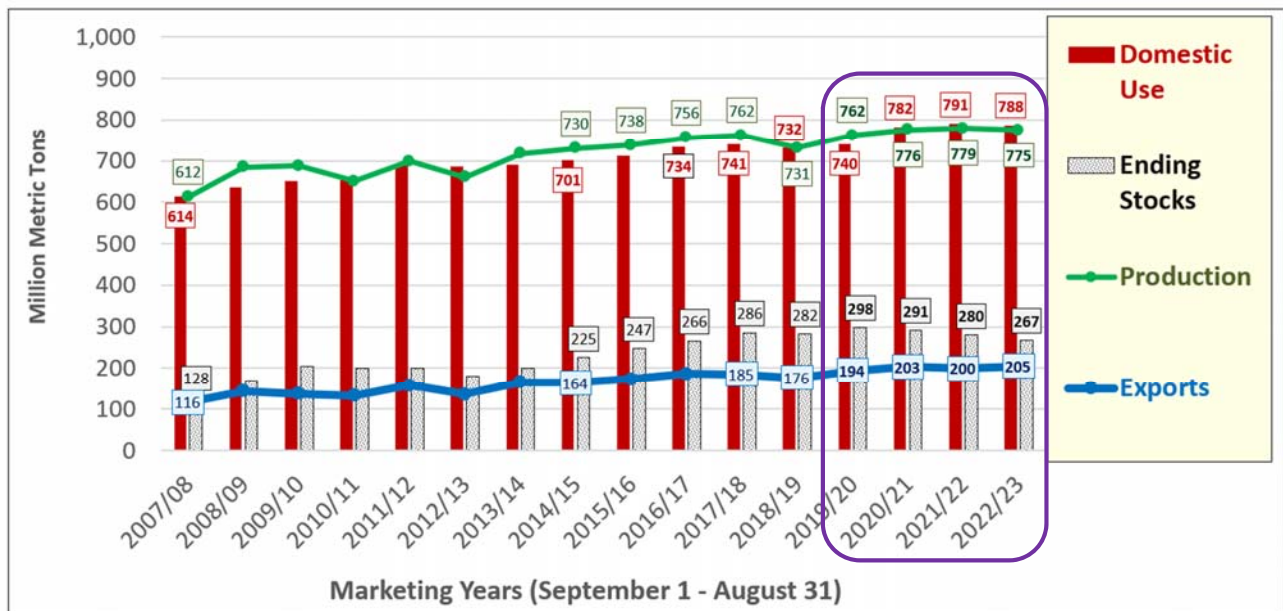
# World Wheat Usage & Ending Stocks: MY 2007/08 - "New Crop" MY 2022/23, as of the

May 12, 2022 USDA WASDE Report



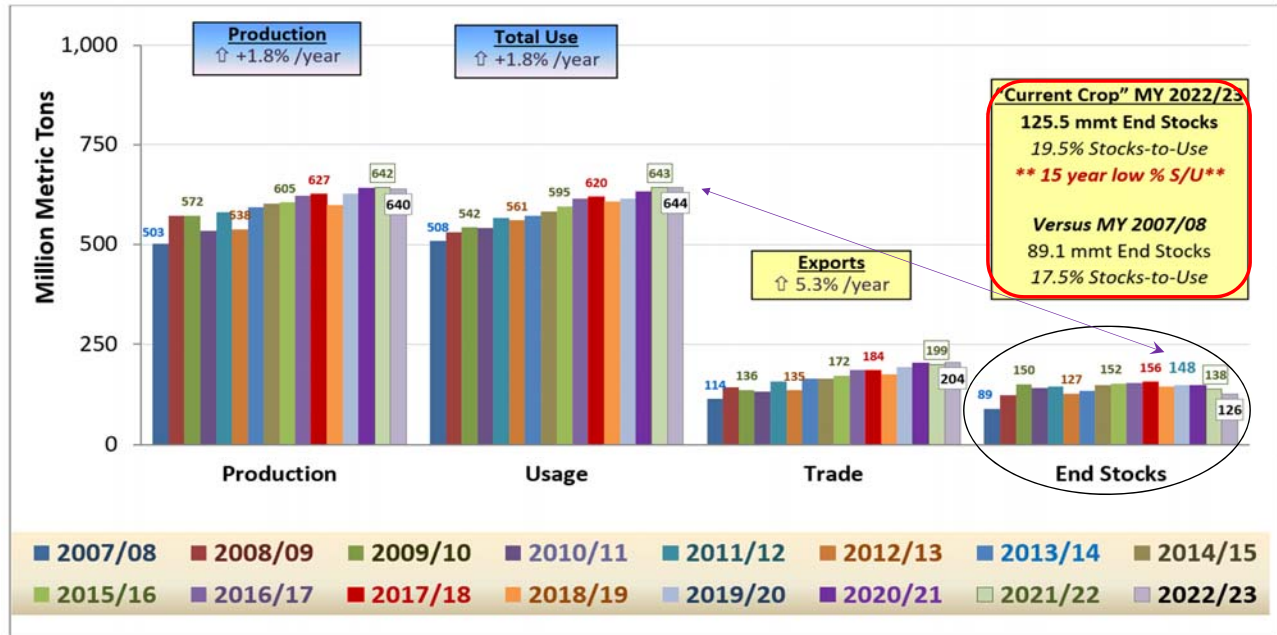
# World Wheat Supply-Demand Trends: MY 2006/07 – "New" MY

2022/23 as of the May 12, 2022 USDA WASDE report



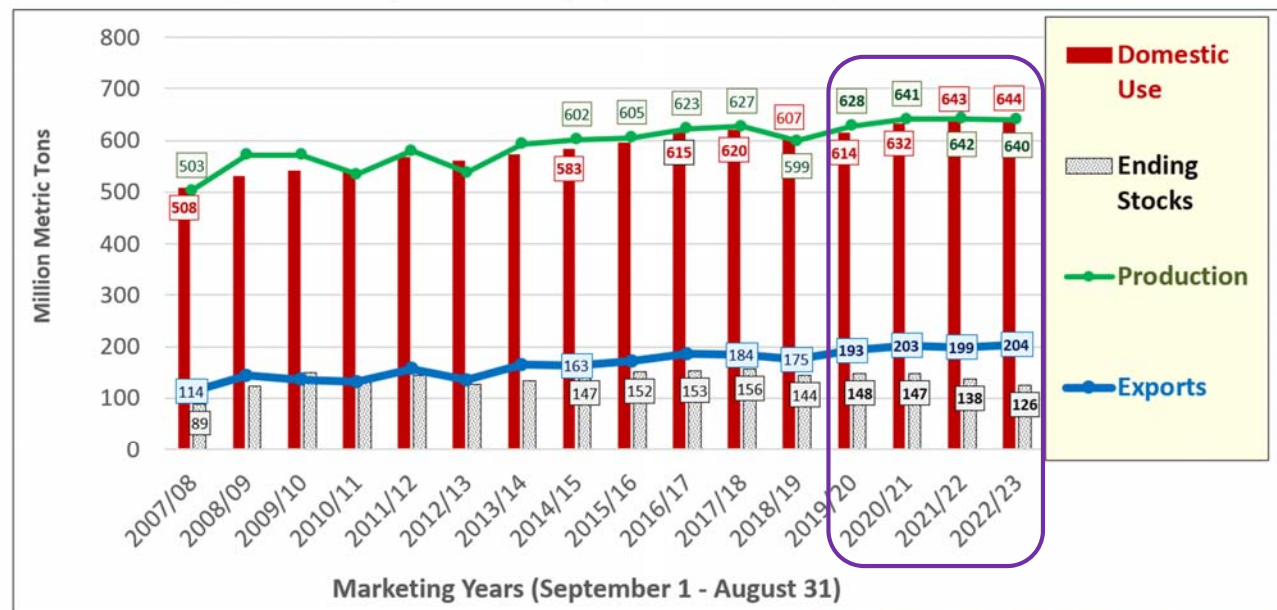
# "World Less-China" Wheat Usage & Ending Stocks: MY 2007/08 - "New" MY 2022/23,

as of the May 12, 2022 USDA WASDE Report



# World Less China Wheat Supply-Demand Trends: MY 2007/08 -

"New Crop" MY 2022/23 as of the May 12, 2022 USDA WASDE report

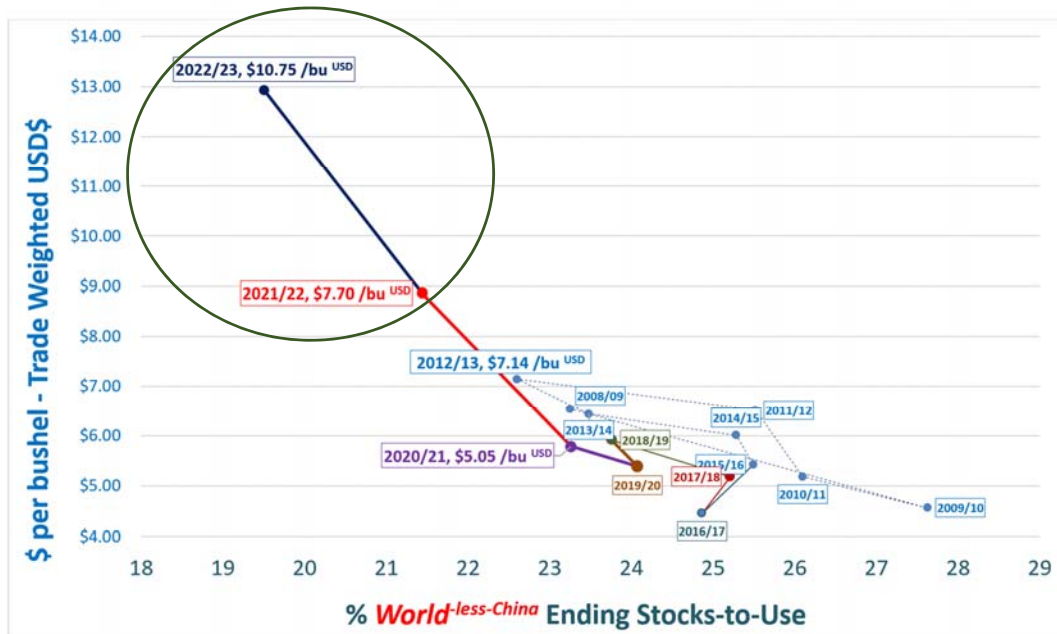


## World vs "World Less-China" Ending Stocks & % Stocks-to-Use: MY 2007/08 through "New" MY 2022/23 as of the May 12, 2022 USDA WASDE report



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nomics

## U.S. Wheat Price <sup>Trade Wtd USD\$ Adj</sup> vs "World Less-China" % Stocks-to-Use: MY 2008/09 through "New" MY 2022/23 as of the May 12, 2021 USDA WASDE report



# Corn Markets

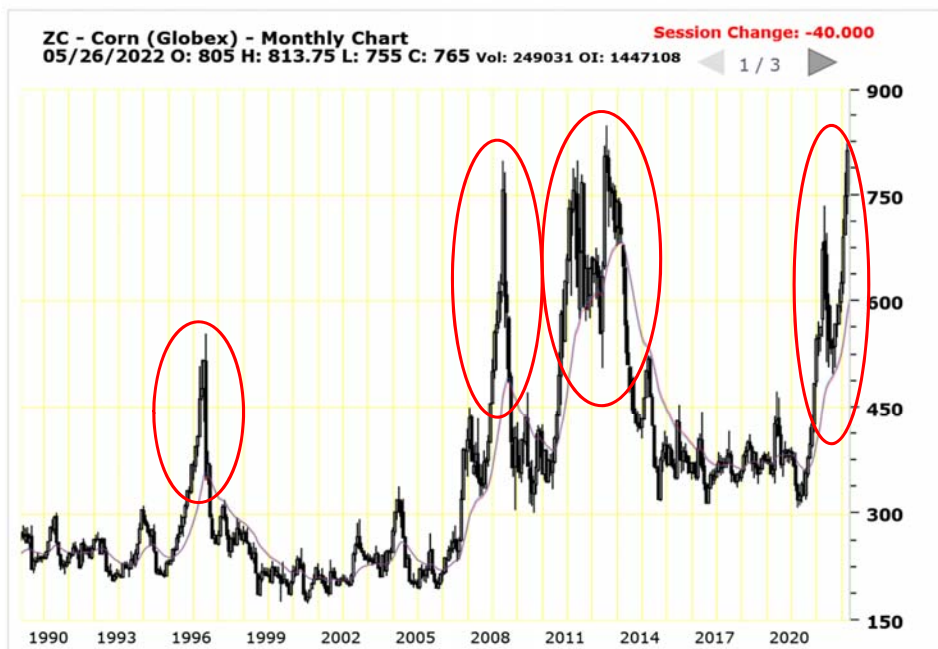


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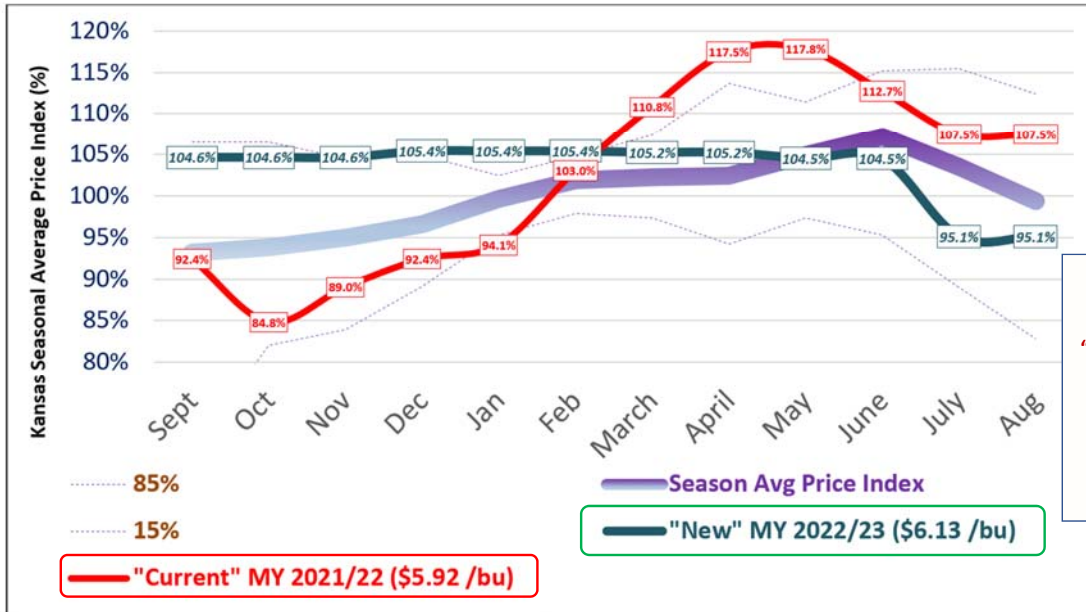
## Corn (Globex) (CBOT)

TFC Commodity Charts



# Kansas Corn Seasonal Prices: MY 1999/00 – MY 2019/20 plus "Current"

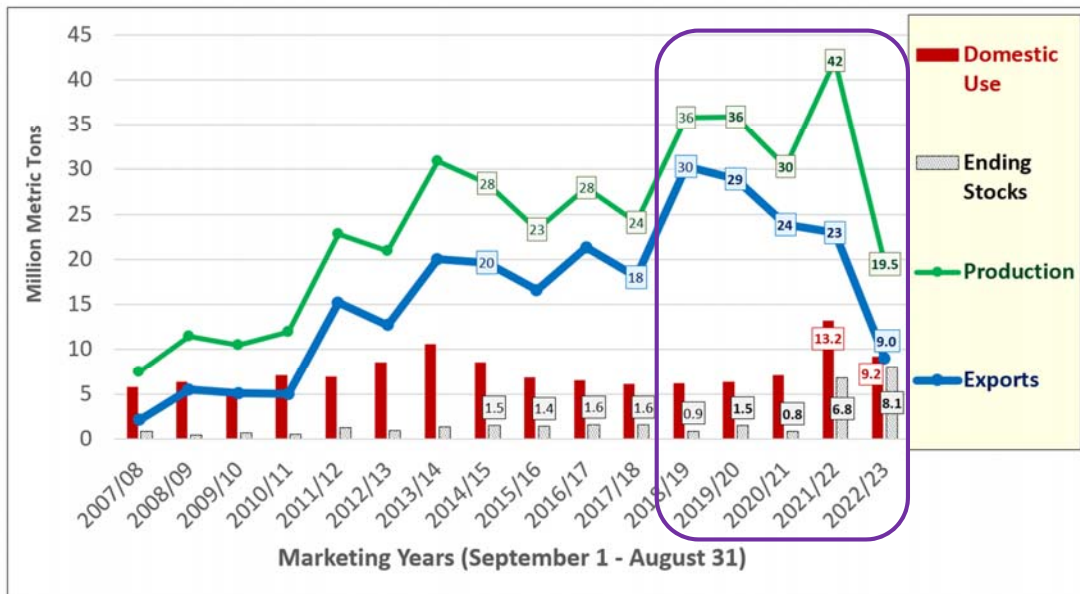
MY 2021/22 & "New Crop" MY 2022/23 as of May 25, 2022



**USDA Forecasts:**  
 "Current" MY 2021/22 = \$5.90 /bu U.S.  
 "New Crop" MY 2022/23 = \$6.75 /bu U.S.

# Ukraine Corn Supply-Demand: MY 2006/07 – "New Crop" MY 2022/23

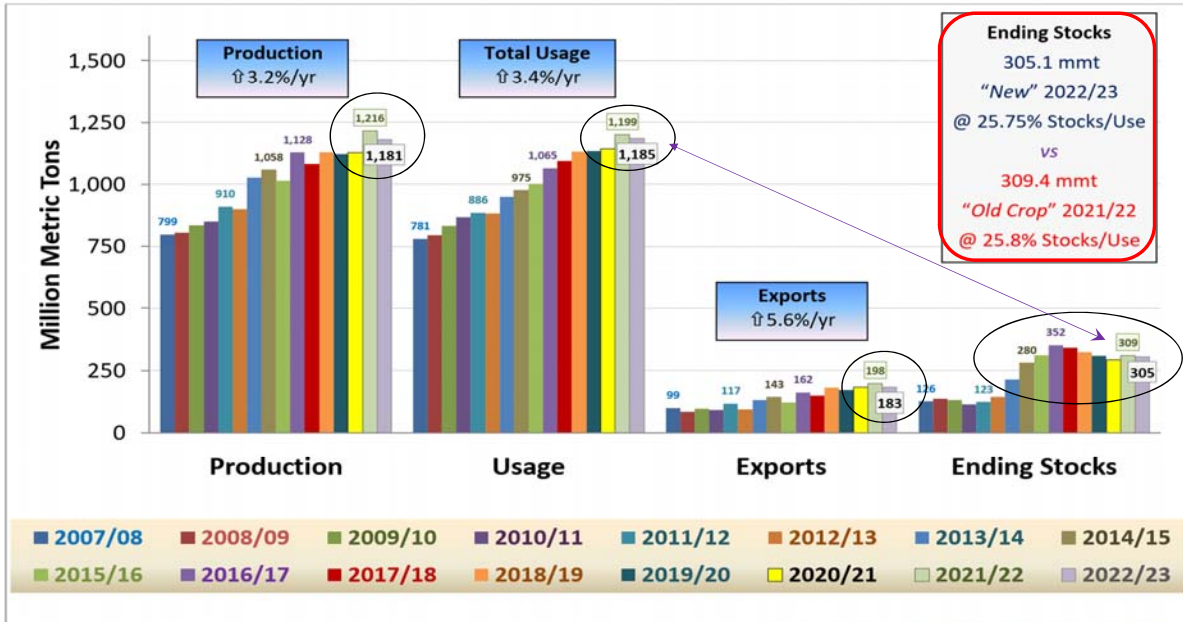
2022/23, as of the May 12, 2022 USDA WASDE report





# World Corn Supply-Demand: MY 2007/08 – “New Crop” MY 2022/23, as of the

May 12, 2022 USDA WASDE Report



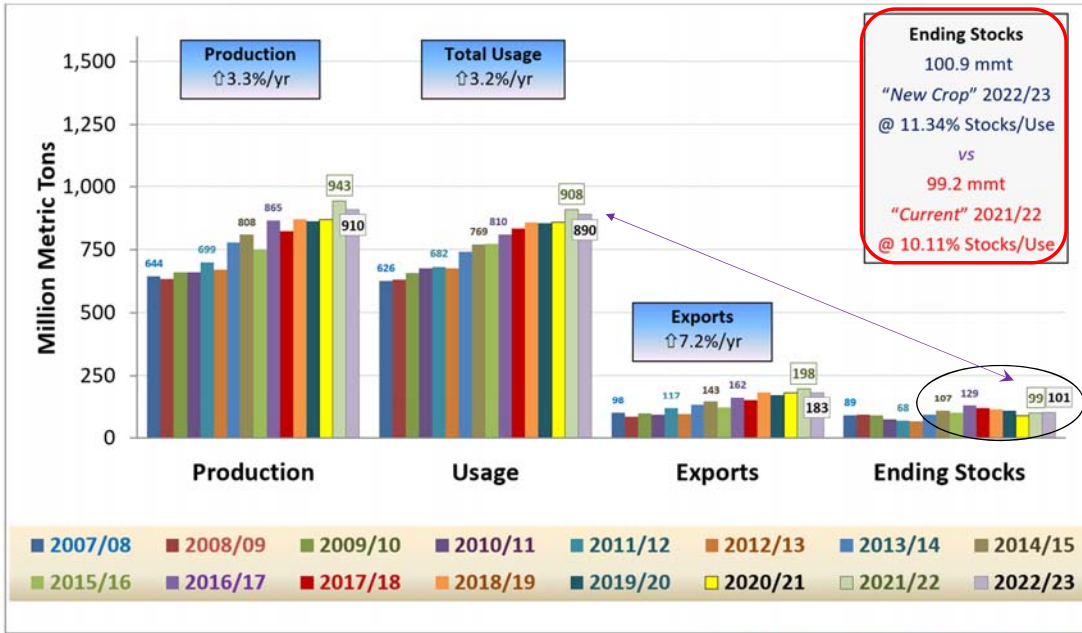
# World Corn Supply-Demand Trends: MY 2007/08 – “New Crop” MY

2022/23 as of the May 12, 2022 USDA WASDE report



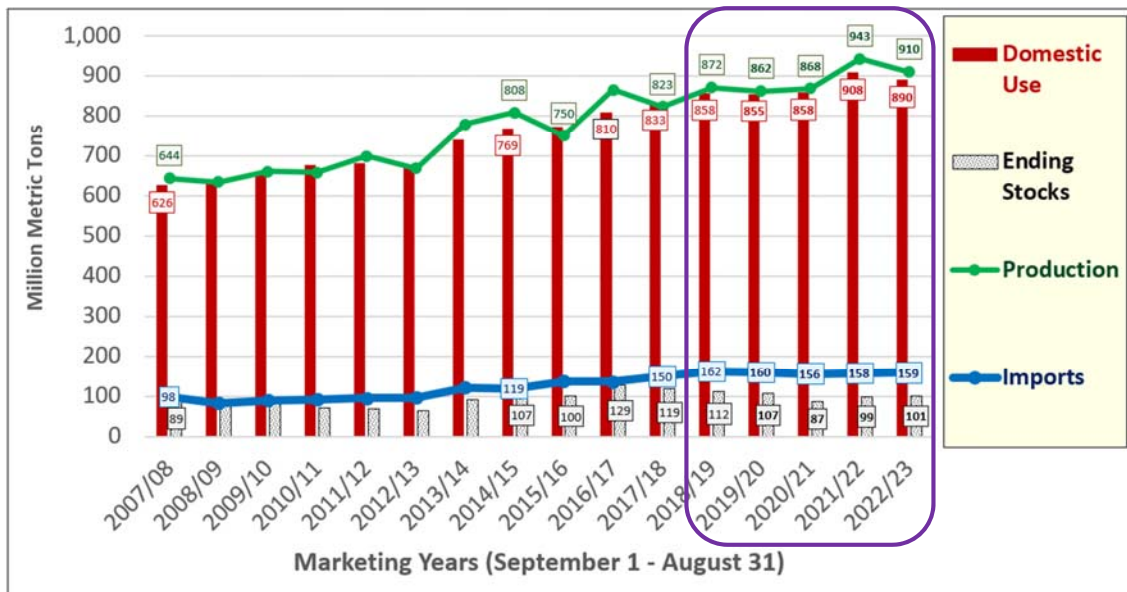
# "World Less-China" Corn Supply-Demand: MY 2007/08 – "New Crop" MY

2022/23, as of the May 12, 2022 USDA WASDE Report



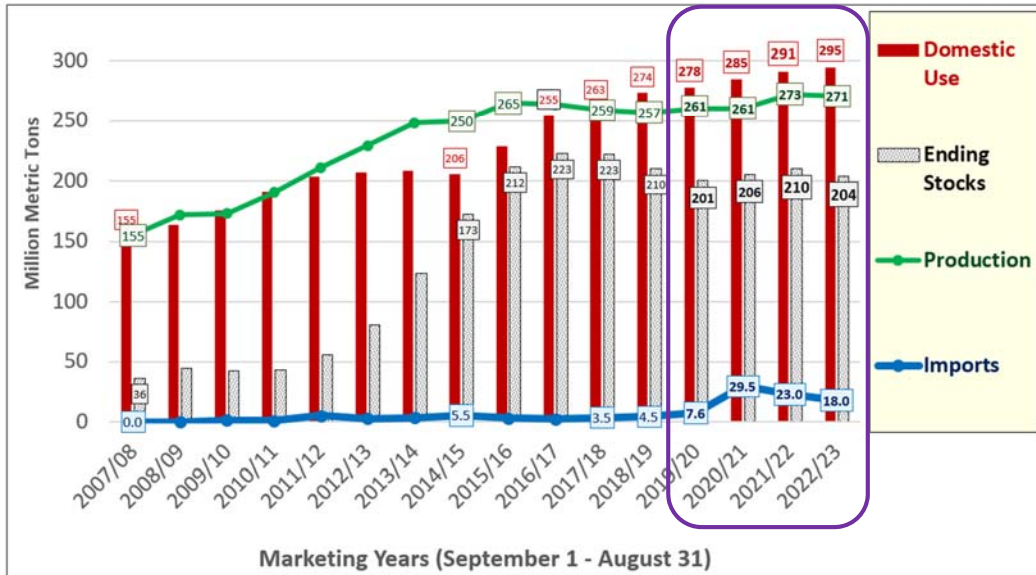
# "World Less-China" Corn Supply-Demand: MY 2007/078 – "New Crop"

MY 2022/23 as of the May 12, 2022 USDA WASDE report



# China Corn Supply-Demand: MY 2007/08 – “New Crop” MY

2022/23 as of the May 12, 2022 USDA WASDE report



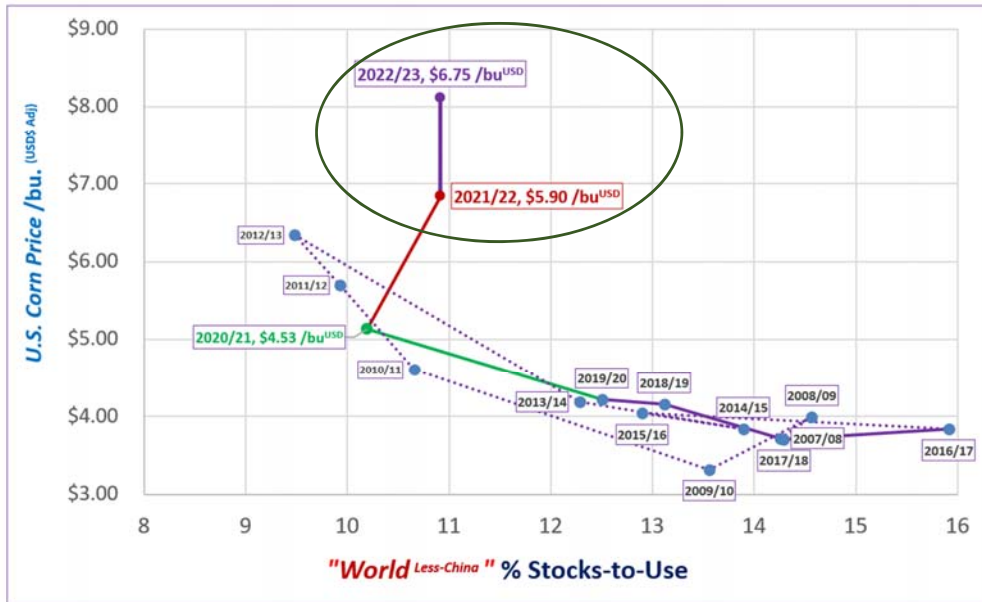
## World vs “World<sup>Less-China</sup>” % Corn Stocks-to-Use:

MY 2007/08 through “New” MY 2022/23, as of the May 12, 2022 USDA WASDE report.



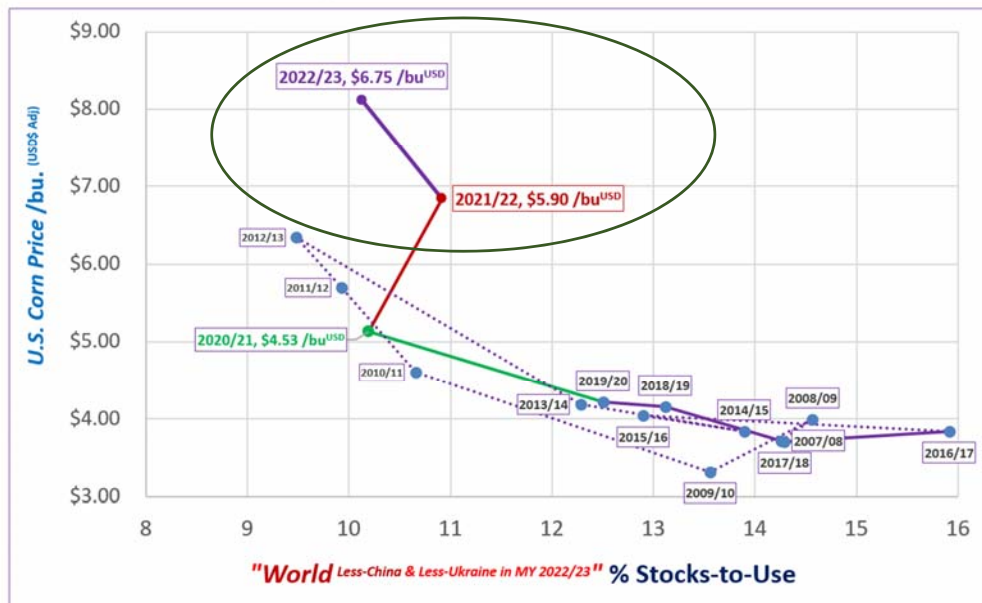
## U.S. Corn $\$_{USD}^{\$ Adj.}$ vs "World *Less-China*" % Corn S/U:

MY 2007/08 – "New Crop" MY 2022/23 as of the May 12, 2022 WASDE



## U.S. Corn $\$_{USD}^{\$ Adj.}$ vs "World *Less-China, & Less Ukraine in 2022/23*" % Corn S/U:

MY 2007/08 – "New Crop" MY 2022/23 as of the May 12, 2022 WASDE



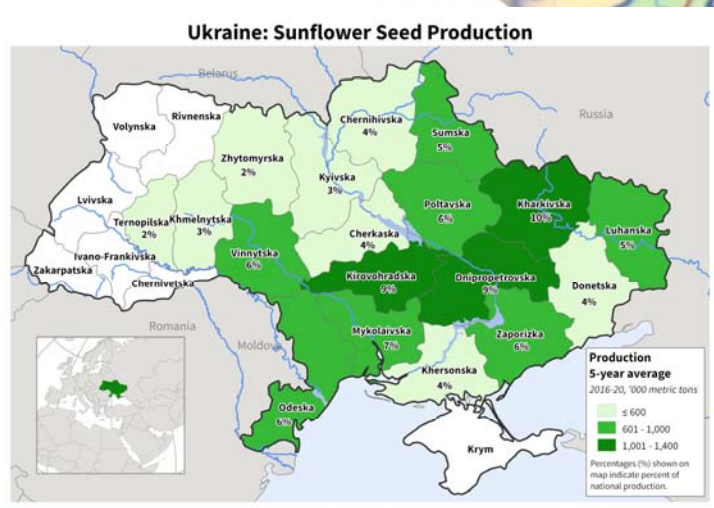
# Sunflower Markets



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## Ukraine Sunflower Seed Production



USDA Foreign Agricultural Service  
U.S. DEPARTMENT OF AGRICULTURE

Source: State Statistics Service of Ukraine (Rosstat for Crimea Oblast)  
Average Sunflower Seed Production 2016-2020



## Ukraine Sunflower S-D Trends: MY 2013/14 – “New” MY 2022/23 as of the May 12, 2022 USDA WASDE Report



## World Sunflower Supply-Demand Trends: MY 2007/08 – “New” MY 2022/23 as of the May 12, 2022 USDA WASDE Report



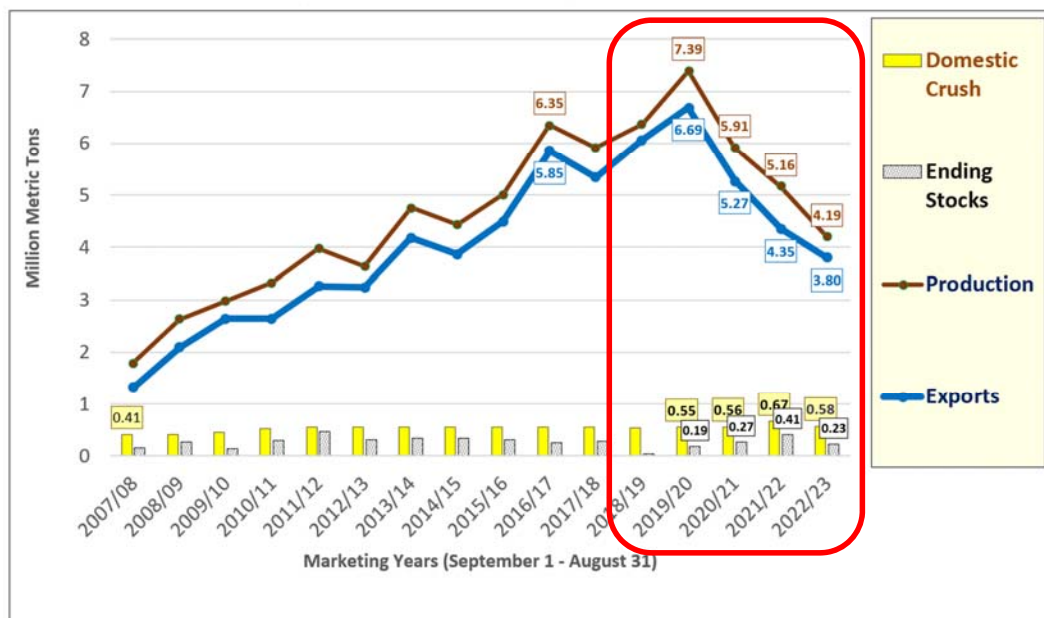
# World Sunflower *Less 50% of Ukraine Crop in 2022/23* S-D Trends:

MY 2007/08 – “New” MY 2022/23 as of the May 12, 2022 USDA WASDE Report



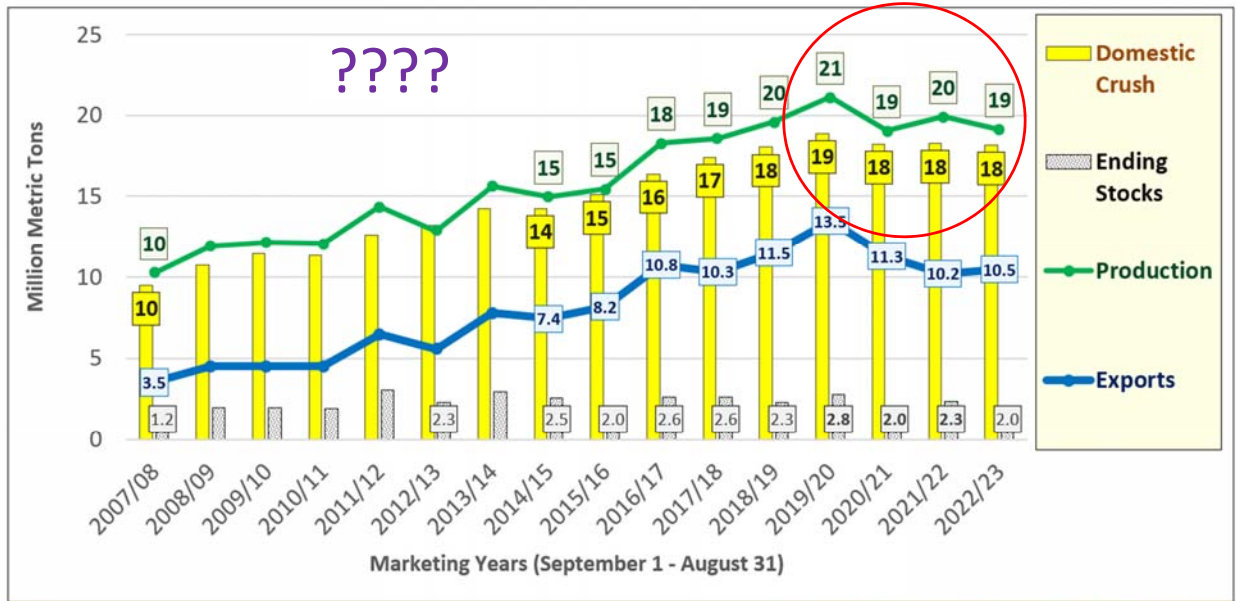
# Ukraine Sunflower Oil S-D Trends: MY 2013/14 – “New” MY

2022/23 as of the May 12, 2022 USDA WASDE Report



# World Sunflower Oil Supply-Demand Trends: MY 2007/08 –

“New” MY 2022/23 as of the May 12, 2022 USDA WASDE Report



## Soybean Markets



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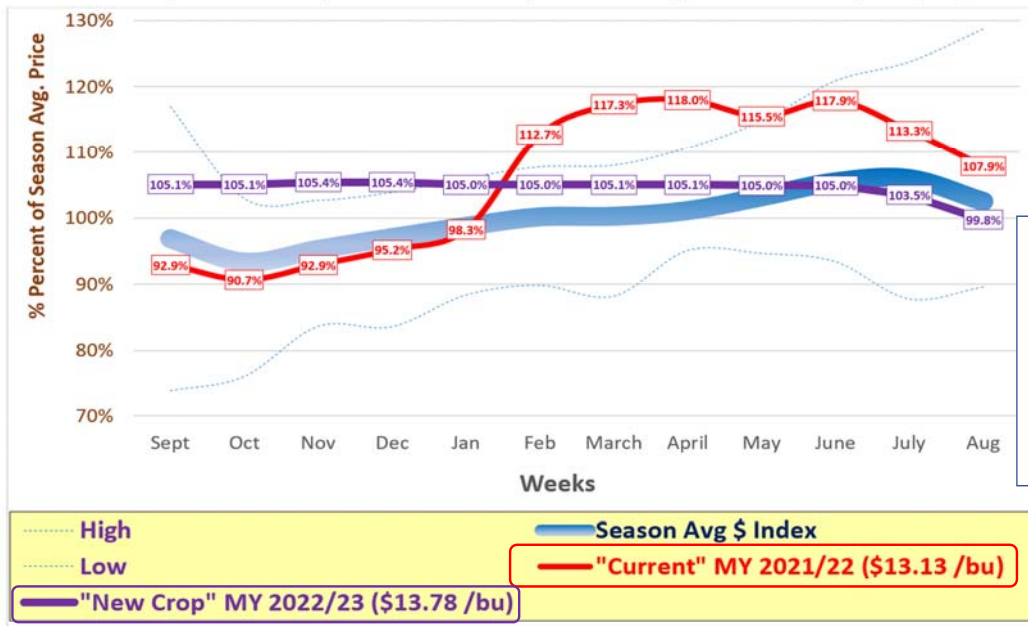
# Soybeans (Globex) (CBOT)

TFC Commodity Charts



## Kansas Soybean Seasonal Prices: MY 1999/00 – MY 2020/21 + “Old Crop” MY 2021/22 & “New Crop” MY 2022/23 Estimates, May 25, 2022

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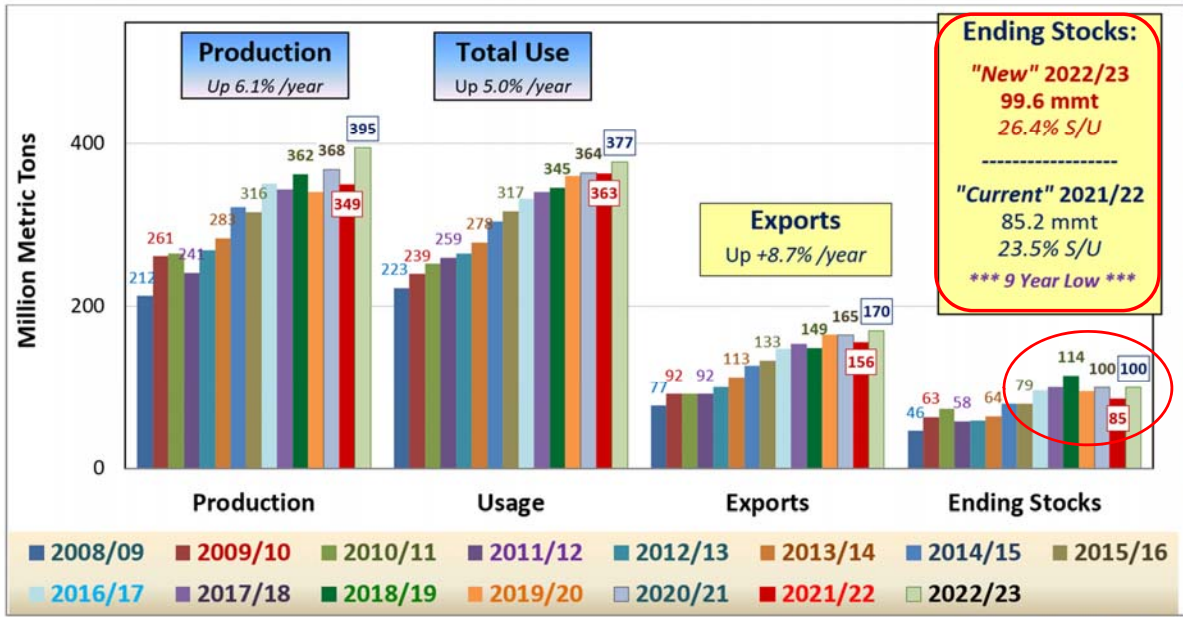
### USDA Forecasts:

“Current” MY 2021/22  
 = \$13.25 /bu U.S.

“New Crop” MY 2022/23  
 = \$14.40 /bu U.S.

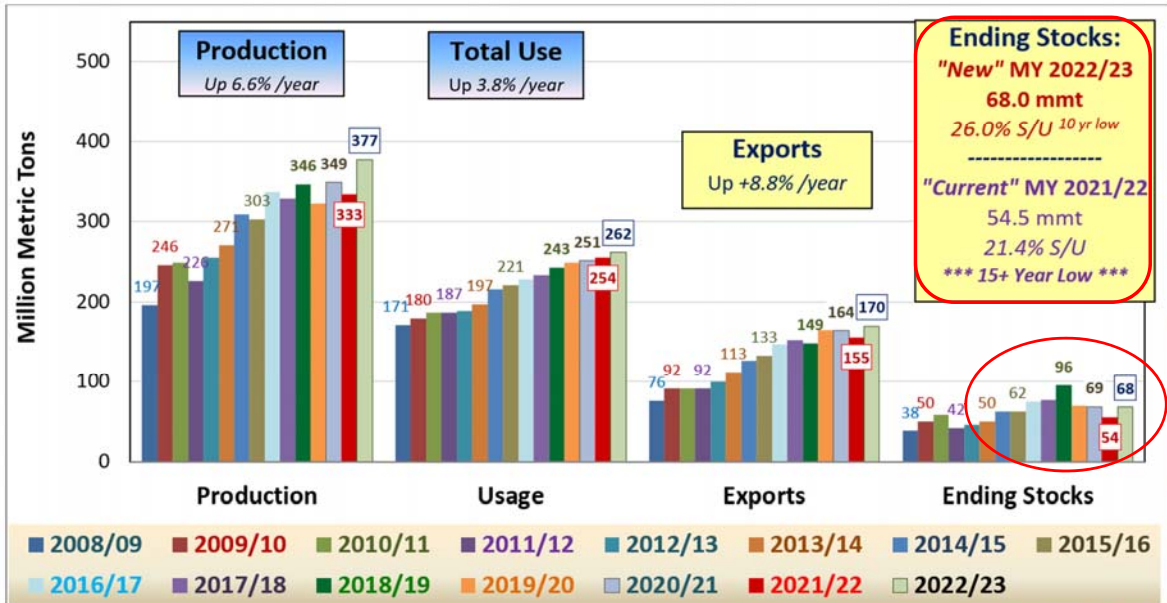
# World Soybean Usage & Ending Stocks: MY 2008/09 through

"New Crop" MY 2022/23 as of the May 12, 2022 WASDE Report



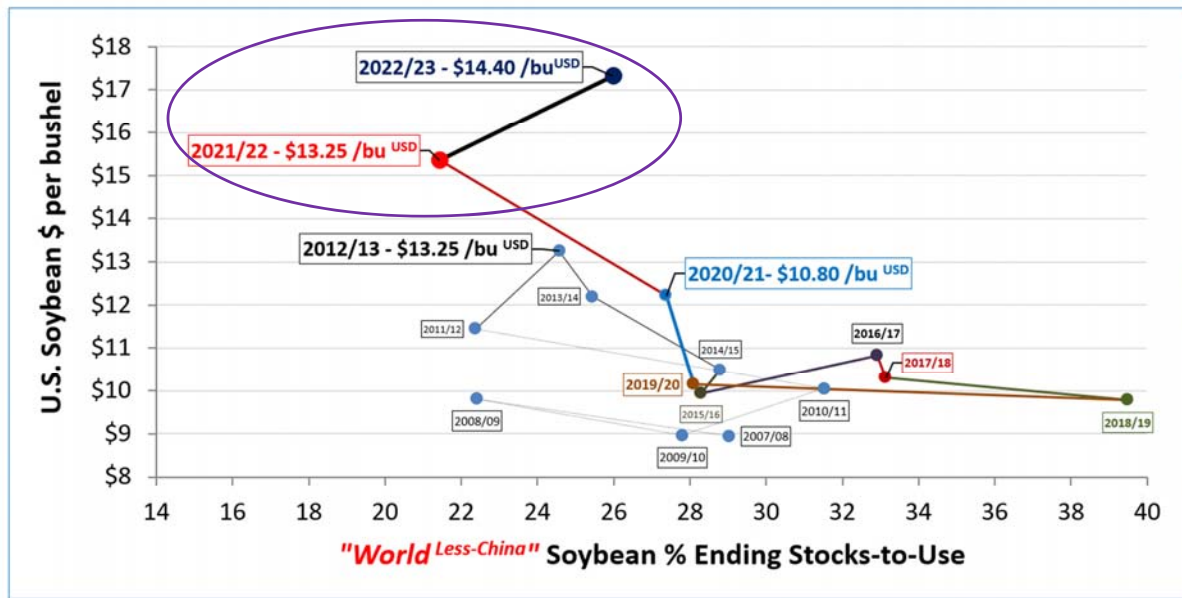
# "World Less-China" Soybean Usage & Ending Stocks:

MY 2008/09 through "New" MY 2022/23 as of the May 12, 2022 WASDE Report



# U.S. Soybean \$<sup>USD</sup>\$ Adj vs "World Less-China" % Stocks-to-Use:

MY 2007/08 through "New Crop" MY 2022/23 as of the May 12, 2022 WASDE Report



## Questions?

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Blog: [www.ksugrains.wordpress.com](http://www.ksugrains.wordpress.com)

**KSUGrains** on Twitter

[www.AgManager.info](http://www.AgManager.info)



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