

IX. 全球大宗穀物(bulk grain)生產、貿易與海上運輸

World Grains – Production, Trading and Logistics

Speaker:



2025/3/31

Robin Jan



2025/3/31



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World Grains –
Production,
Trading and
Logistics



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Let's talk about dinner



What's in your dinner?

- Carbohydrate: product of rice, wheat, barely.
- Protein: meat, tofu, fish.

Our meal is like building blocks, stacked and linked by supply chain.

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Taiwan Grain Import Qty

- Soybean: ~ 2.5 Million MT. (Brazil,US)
 - Non-GMO Soybean 70,000MT
- Corn : ~ 4.2 – 4.4 Million MT (Brazil, US)
- Wheat: ~ 1 Million MT (US,)
- Barley : ~ 20,000 MT (Australia)
- Sorghum: 50,000 MT (Australia)
- Rice: ~ 144,720 MT (Govt: 94,068/ Pvt 50,652)
 - USA 55,000MT, Thailand 25,000MT, Vietnam 35,000MT

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GROWING AREA



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World Grain Production

Unit: mmt		2020	2021	2022	2023
Corn	USA	358.45	381.47	346.74	389.69
	Brazil	103.99	88.27	109.74	131.95
	Argentina	58.40	60.53	59.04	41.41
Soybean	USA	121.82	134.80	121.29	152.14
	Brazil	114.75	121.50	116.22	113.34
	Argentina	48.78	46.22	43.86	25.04
Wheat	USA	49.75	44.80	44.90	49.31
	Australia	14.48	31.92	36.24	41.20
	Russia	85.70	76.06	104.23	91.50
Raw Sugar	Brazil	38.44	35.96	40.22	

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Top 10 Exports to Taiwan in 2024

Commodity	Total Value (USD)	Total Volume (Metric Tons)	10-Year Average Value (USD)	10-Year Growth
Beef & Beef Products	\$709.22 Million	62,504	\$550.59 Million	122%
Soybeans	\$601.39 Million	1.28 Million	\$693.17 Million	4%
Corn	\$383.8 Million	1.66 Million	\$353.22 Million	12%
Wheat	\$324.97 Million	1.09 Million	\$308.25 Million	15%
Fresh Fruit	\$262.12 Million	115,796	\$216.26 Million	34%
Poultry Meat & Prods. (excl. eggs)	\$261.94 Million	210,073	\$210.72 Million	61%
Food Preparations	\$176.04 Million	9,034	\$158.34 Million	18%
Dairy Products	\$107.59 Million	19,892	\$105.4 Million	49%
Processed Vegetables	\$96.21 Million	54,392	\$76.96 Million	48%
Non-Alcoholic Bev. (excl. juices)	\$92.32 Million	3,987	\$80.06 Million	13%

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Grain Export Logistic

- Grains exported by bulk carrier and container.
- Modernized port facilities enhanced efficiency.
- The supply chain was constructed by combination of land and marine transportation.
- Example : US Gulf export Harvest → Storage → truck/rail → river elevator → barge → export elevator → loading → marine transportation → discharge shore silo → truck → end user

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US EXPORT– Production Area and Logistics



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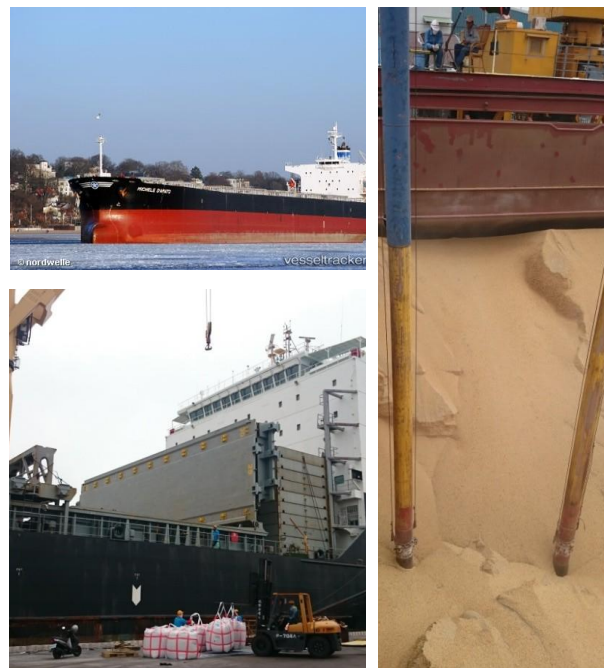
Bulk Vessel

- Most common purchased qty : 65,000MT 5% MOL.
- Port limitation:
Taichung 1, 3: 12.5M
Kaohsiung 72, 73: 13.5M
- Taiwan Sugar Corp.:
Kaohsiung 46: 11m

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Container

- Containerized shipments mostly imported from USA.
- Bulk freight dictated containerized grain purchase.
- Able to target specific origin or variety.
- Advantage: Better Quality, less broken, flexibility, confidentiality.
- Disadvantage: Voyage, Heat and Sweat damage.



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Growing Season

世界主要黃豆、玉米、小麥生產國 種植及收成季節

黃豆 主要生產國種植及收成月份：

SOYBEAN WORLD PLANTING AND HARVEST											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
USA											
BRAZIL											
CHINA											
ARGENTINA											

玉米 主要生產國種植及收成月份：

CORN PLANTING AND HARVEST SEASON											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
USA											
China											
Brazil											
South Africa											
PSU											
Argentina											

小麥 主要生產國種植及收成月份：

WHEAT PLANTING AND HARVEST SEASON											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
USA/winter											
USA/spring											
China/winter											
China/spring											
Australia											
Argentina											

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UKRAINE



USDA Foreign Agricultural Service
U.S. DEPARTMENT OF AGRICULTURE

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



USDA Foreign Agricultural Service
U.S. DEPARTMENT OF AGRICULTURE

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



USDA Foreign Agricultural Service
U.S. DEPARTMENT OF AGRICULTURE

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



USDA Foreign Agricultural Service
U.S. DEPARTMENT OF AGRICULTURE

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

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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



USDA Foreign Agricultural Service
U.S. DEPARTMENT OF AGRICULTURE

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

Ukraine Agricultural Production and Exports (2021/22 Marketing Year)

Product	Production			Exports		
	Volume (1,000 MT)	Rank Among Global Producers	% of Global Production	Volume (1,000 MT)	Rank Among Global Exporters	% of Global Exports
Corn	41,900	#6	3.5%	23,000	#4	12%
Wheat	33,000	#7	4.3%	19,000	#5	9%
Sunflower	17,500	#1	30.6%	75	#9	3%
Barley	9,900	#4	6.8%	5,800	#3	17%
Sunflower Oil	5,676	#2	30.6%	4,950	#1	46%
Sunflower Meal	5,452	#2	27.5%	4,100	#1	54%
Rapeseed	3,015	#6	4.2%	2,700	#3	20%

Source: USDA WASDE and PSD Database, updated March 9, 2022.

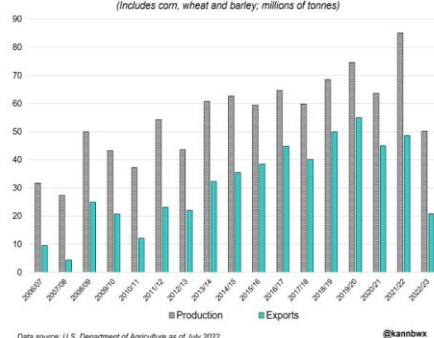
<https://www.fas.usda.gov/sites/default/files/2022-04/Ukraine-Factsheet-April2022.pdf>

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Ukraine Grain Production & Exports



2021 carry-over estimated
Wheat 5.3~5.5 mmt (X1.5 y/y),
Barley 1.1mmt (+14% y/y), corn
7.7mmt (X3.8 y/y).

Est 50~52 mmt grain production of
2022 (down from 86mmt 2021)

Crop	Area (x 1000 ha)				Yield (t/ha)				Production (x 1000 t)			
	Avg 5yrs	2021	2022	%22/5yrs	Avg 5yrs	2021	2022	%22/5yrs	Avg 5yrs	2021	2022	%22/5yrs
Wheat	6 684	7 090	6 539	-2	4,07	4,53	4,01	-1	27 222	32 152	26 240	-4
Barley	2 487	2 471	1 995	-20	3,35	3,82	3,40	+2	8 321	9 434	6 792	-18
Winter barley	992	1 137	971	-2	3,63	4,27	3,48	-4	3 598	4 856	3 382	-6
Spring barley	1 495	1 334	1 024	-32	3,16	3,43	3,33	+5	4 723	4 579	3 410	-28
Grain maize	4 981	5 482	4 528	-9	6,78	7,68	7,07	+4	33 749	42 109	32 027	-5
Sunflower	6 266	6 665	5 590	-11	2,27	2,46	2,48	+9	14 232	16 398	13 877	-2
Soybean	1 602	1 322	1 572	-2	2,29	2,64	2,35	+3	3 670	3 491	3 699	+1
Rapeseed	1 043	998	1 405	+35	2,63	2,94	2,74	+4	2 744	2 930	3 846	+40

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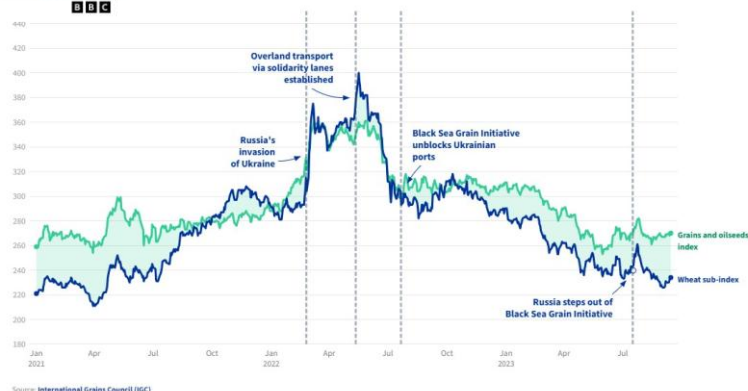
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Alternative routes for Ukrainian grain



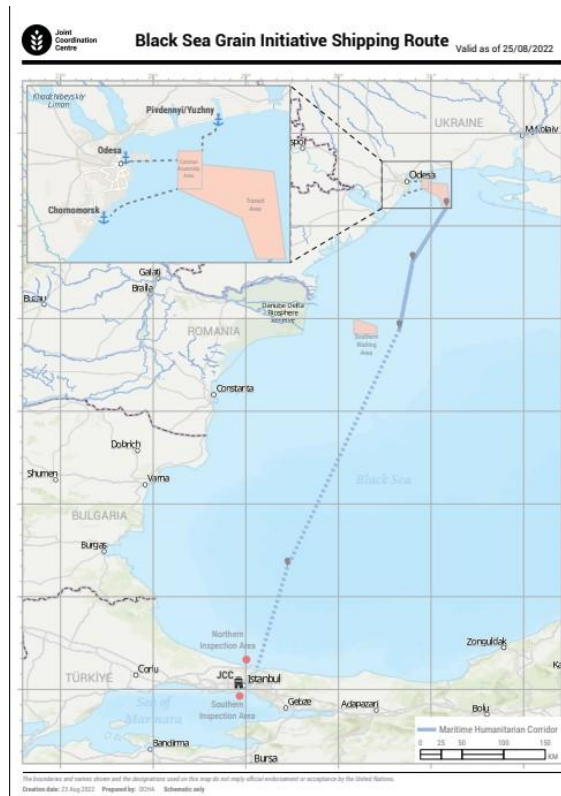
July 2022, Black Sea Grain Initiative unblocks
Ukrainian Ports.
March 2025, negotiating new terms and possible
long-term ceasefire.



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TRUMP 2.0

<March, 2025> US imposed additional 145% tariffs on Chinese imports. China imposed 125% retaliatory tariff on US goods.

Result: Cancelled cargo and supply shift to different origins such as Brazil. Shipping volume decline in trans-pacific routes.

<May 12, 2025> US reduced its additional tariffs to 30%, and China lowered to 10% for 90-day period.

Result: Surge in shipping volumes from China lead to higher rates.

The United States is implementing port fees on vessels with ties to China, aiming to address concerns about China's dominance in the maritime industry. The fees will take effect on OCT, 2025

Result: Increased shipping costs, supply chain disruption, impact on US export.

USA threatened to impose 25% import tariff on goods from Mexico.

- 90% of Mexico's imported corn from USA
- Canada and Mexico are the top 2 beef export countries to USA
- Extra tariff can result in higher price in imported beef, hence leveling USA domestic competitiveness.

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