

GAP GLOBAL SOY COMPLEX OUTLOOK

TRANSITION: from supply chain concerns to demand unknowns

PRESENTED FOR: 34TH POC 2023 – BURSA MALAYSIA

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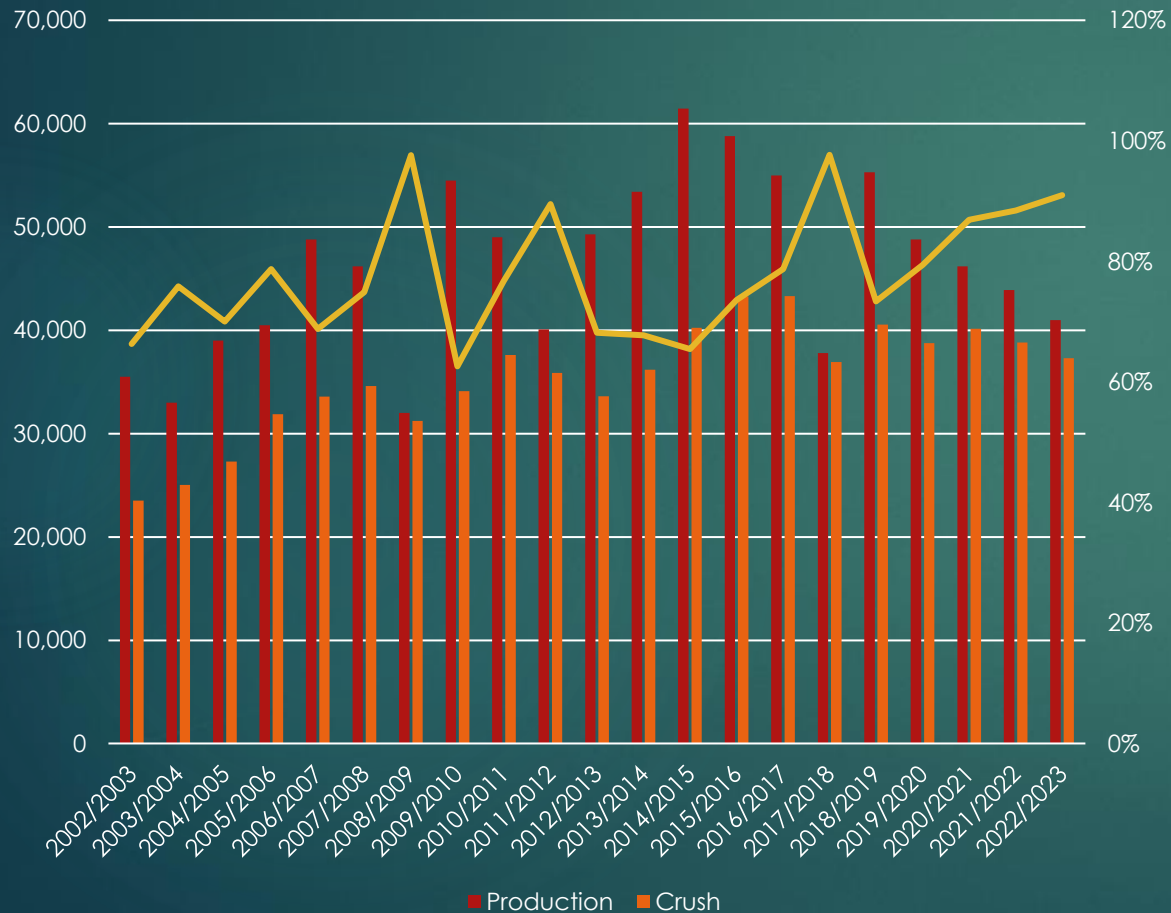
KEY ITEMS – 2023 drivers + global landscape

1. Final ARG soy production + crush
2. Geopolitics: China vs U.S.
3. Currency + finance
4. Market structure – MM\$
5. Brazil soy outlook
6. Europe soy and soymeal demand
7. U.S. crush
8. China crush + soymeal demand
9. World soymeal demand vs other feed ingredients
10. Oil share
11. Price charts & outlook: soybean, soymeal and soy oil

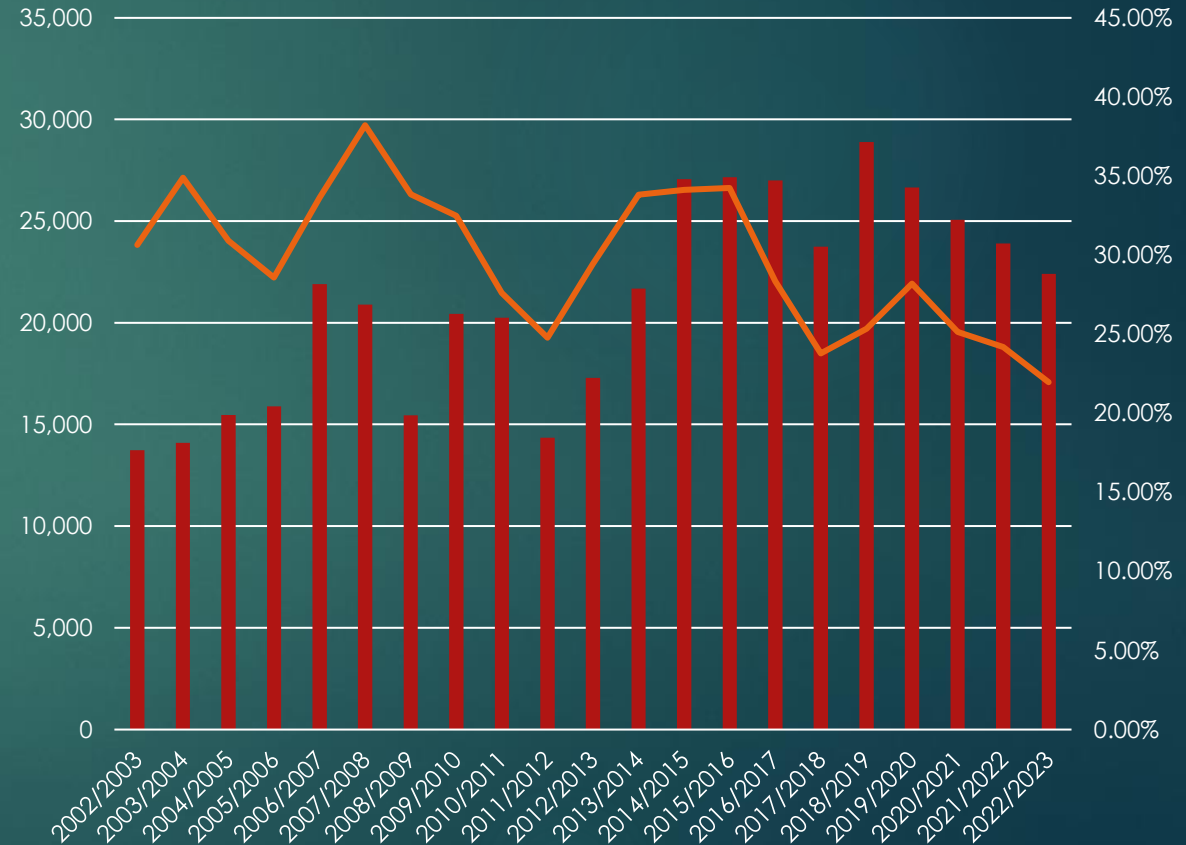
ARGENTINA – go back to 2008/09 to gauge risk / likely flows for 2022/23. If crush margins remain positive – discharge capability will dictate. Soy dollar

Largest soy import program = 6.4MMT in 2018/19 following the 2017/18 drought production = 37.8MMT

ARG soy production + crush: use 2008/09 as comparison.
Production = 32MMT. Crush = 31.2MMT (98% utilization)



ARG ending soy stocks = 22.4MMT or 22% (15.4MMT in 08/09 or 33.8% world stocks). Could draw down to 15MMT and be viewed as minimal threat to world S trade given ARG's reduced role in world S export grid



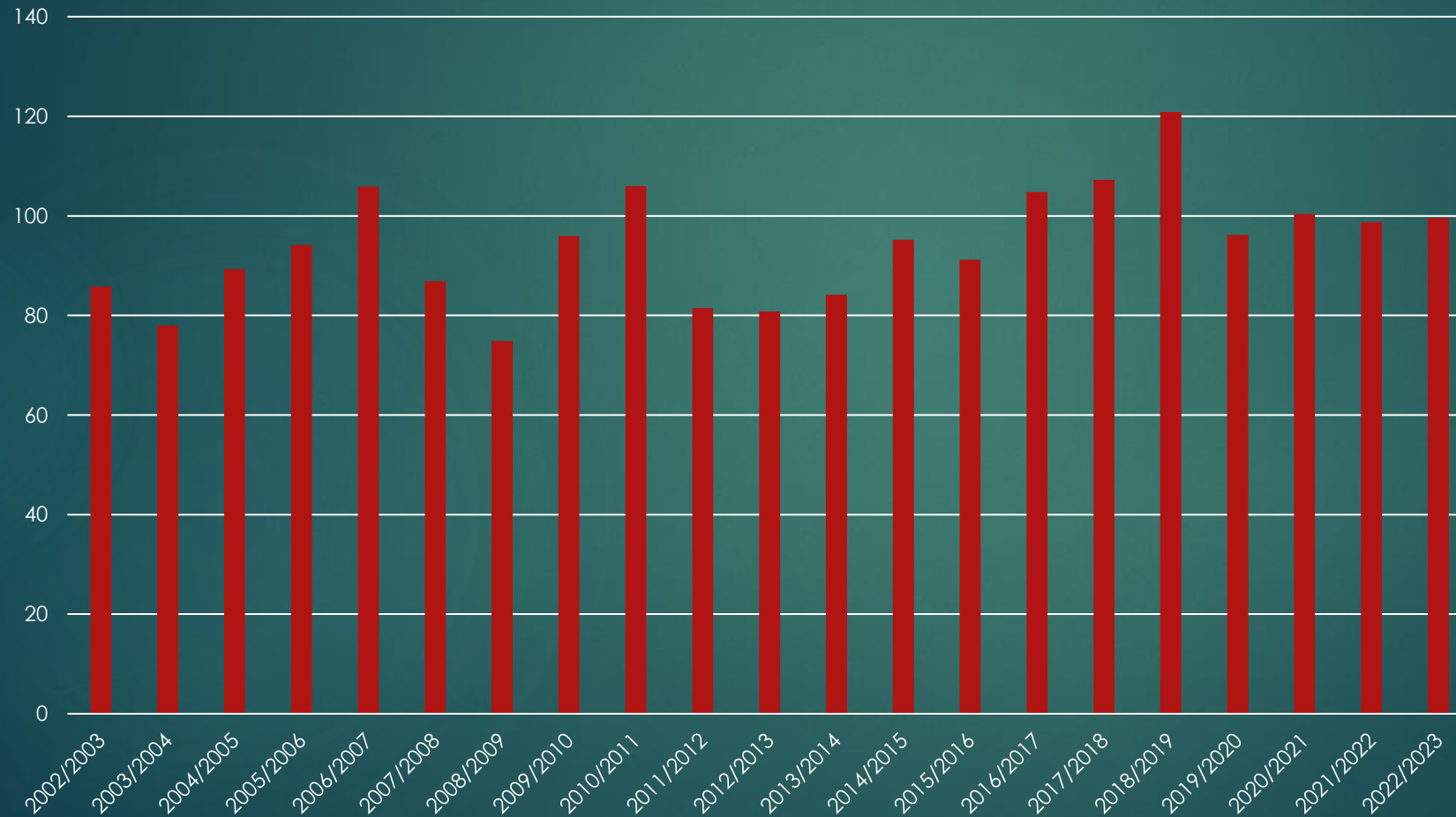
ARGENTINA – 2008/09 demand & trade flows vs 2022/23 forecasts

Country	2008/09 (MMT)	2022/23	Change
Brazil soy production	57.8	153	+95.2
U.S. soy production	80.7	116.4	+35.7
Brazil soy exports	30	92	+62
U.S. soy exports	34.8	54.16	+19.4
China soy imports	41.1	96	+54.9
ROW soy imports	36.78	68.1	+31.3
Brazil crush	31.9	52.75	+20.85
Arg crush	31.2	37.3	+6.1
U.S. crush	45.2	60.7	+15.5
China crush	41.1	94	+52.9
BR SM exports	13.1	21	+7.9
ARG SM exports	24	26.2	+2.2
U.S. SM exports	7.7	12.4	+4.7
BR BO exports	1.91	2.25	+0.34
ARG BO exports	4.7	5.1	+0.4
U.S. BO exports	995	318	-0.677

**Bottom-line:
Brazil solves
“most
problems”
when it
comes to
ARG soy
production
disaster in
202223**

ARGENTINA: global soy supply cushion = 99 days. World consumption = 1MMT / day. ARG closer to 30MMT vs bloated demand #s for China, Europe and others

World soy supply cushion = 99 days (98.7 days LY) - continues to hover around 100d days for past 3 years - and is the largest supply cushion of the grains & oilseeds



Points to ponder

Daily consumption = 1MMT

ARG production = 41MMT – market races to bottom in that 30-32MMT range

ARG likely to take another 5-6 days off the supply cushion

BR looks super solid

More questions than answers on the demand side – led by China and as goes China goes so much of its neighbors

GEOPOLITICS – CHINA VS UNITED STATES – biggest impact on U.S. soy and corn / sorghum export trade should escalation continue. China real estate bubble and debt-to-GDP ratio highly problematic



CURRENCY & FINANCE – USD outperformed in 2022 & hammered importing countries that are tied to USD... sold off November 2022 & now tries to stabilize



Demand challenges:

- Cost of finance
- Credit limitations
- Strong USD
- China's "tailwinds"

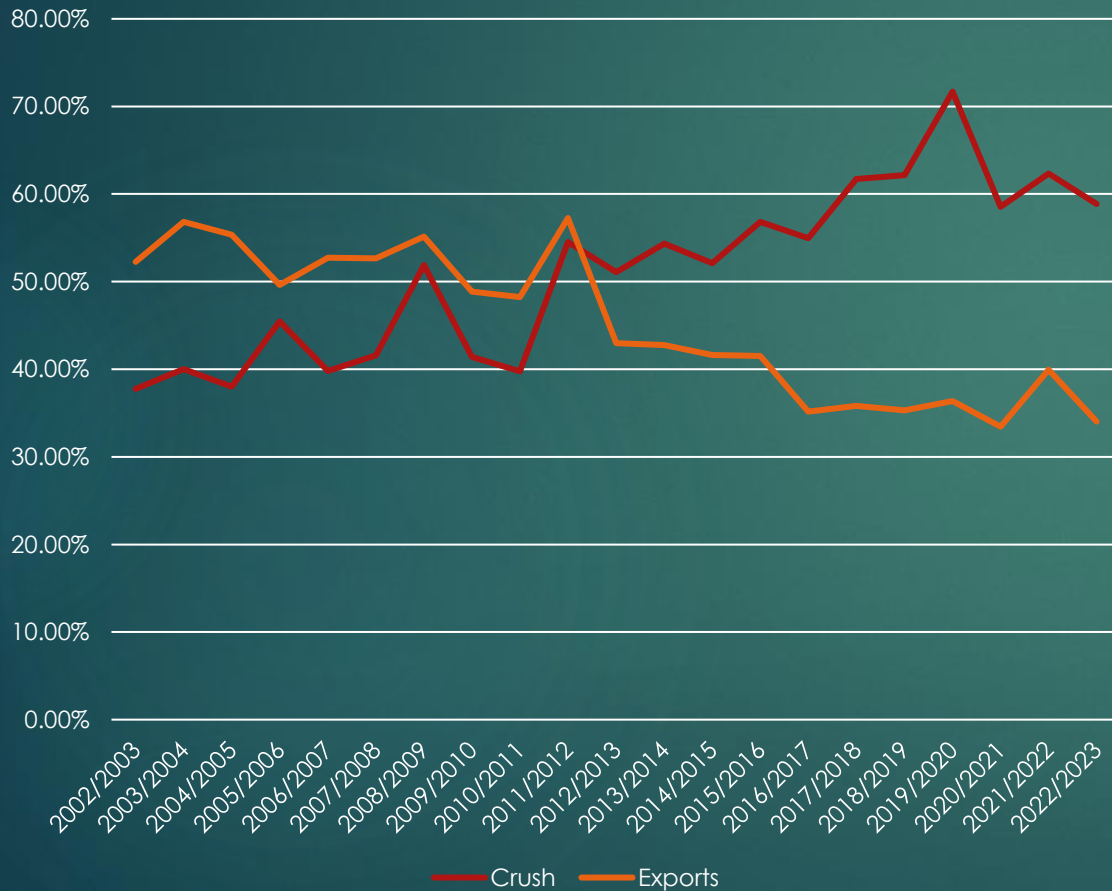
MARKET STRUCTURE – most important will be the MM\$ ownership of the soymeal leg in Q2 going forward (CoT data will not be “up to date” until mid-March 2023)

01/31/2023 - 02/07/23

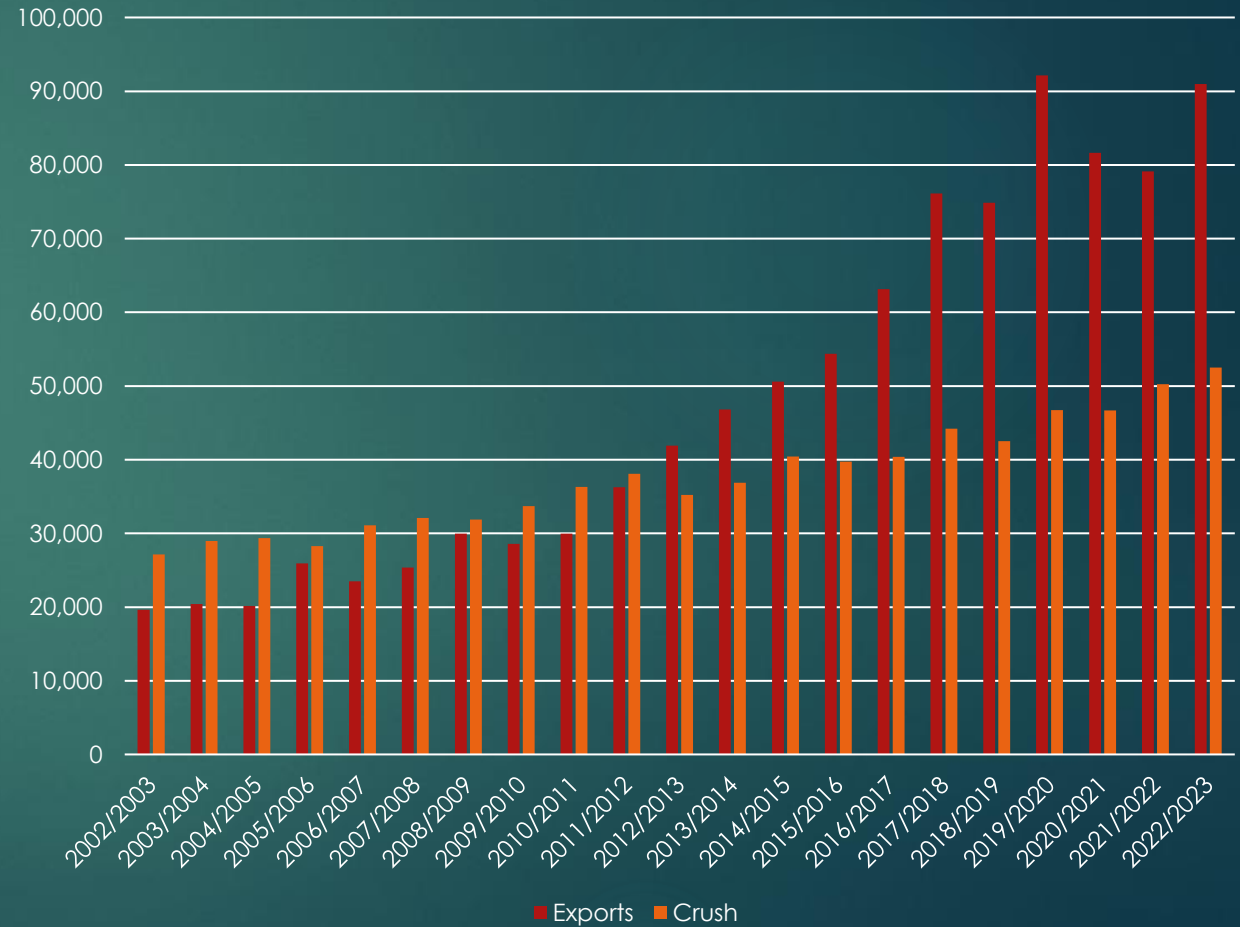
	Producer/Merchant		Swap Dealers		Managed Money			
	Net Position	Weekly Change	Net Position	Weekly Change	Net Position	Weekly Change	Record	
							Long	Short
GRAINS								
Corn	-399,749	17,344	218,556	3,013	202,018	-17,906	429,189	-322,215
Wheat	-14,808	8,227	65,692	1,445	-71,391	-7,763	80,827	-162,327
Soybeans	-203,823	4,922	77,735	4,911	165,075	-10,429	253,889	-168,835
KC Wheat	-36,380	-5,559	36,816	1,291	3,782	2,443	73,111	-58,866
MN Wheat	-4,025	-2,038	1,634	-12	-295	1,530	19,867	-25,401
Soybean Oil	-127,541	7,039	99,087	1,280	22,495	-8,729	126,543	-109,950
Soybean Meal	-252,683	-3,750	78,645	1,951	142,710	1,767	150,939	-77,112
Canola	38,811	-2,648	972	-1,195	-35,003	6,126	70,001	-74,195

BRAZIL SOY OUTLOOK – an absolute monster of a crop. SM and BO exports benefit from ARG disaster.

Brazil utilization of its soy production: crush around 60% over past 3 years (59% this year). Exports have averaged 36% over past 5 years



Brazil soy demand profile: exports = 92MMT (79.1MMT LY). Record = 92.1MMT in 2019/20. Crush = 52.75MMT (50.25MMT LY, 46.7MMT 2Y, 3Y)

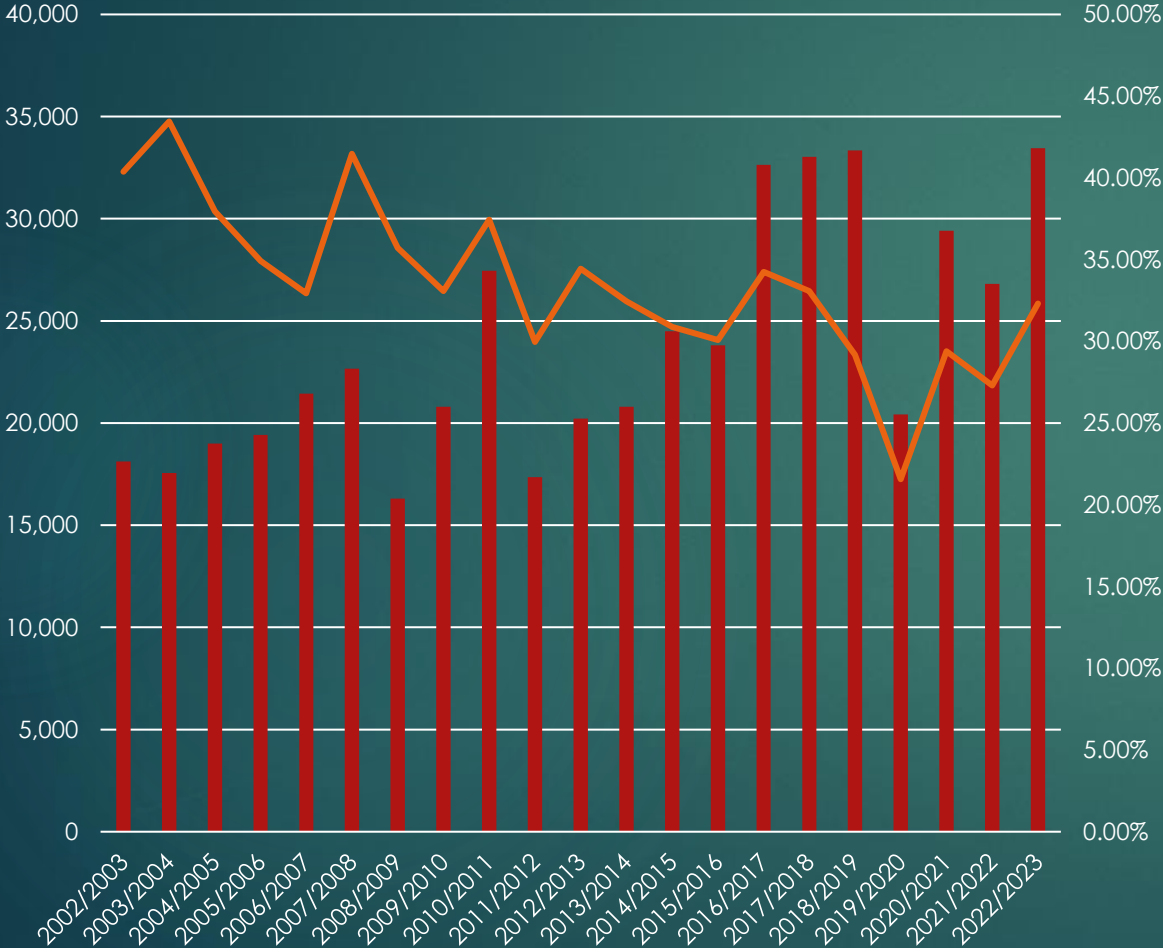


BRAZIL SOY OUTLOOK: Real-USD remains exceptionally favorable for BR farmers. Past few months – has been sideways / going nowhere fast. Has not collapsed / or weakened vs initial forecasts after Lula returns to power



BRAZIL SOY OUTLOOK – world’s largest exporter. World’s largest storage tank (w/ storage constraints). BR farmer undersold (30.5% - 24 Feb).

Brazil soy ending stocks = 33.22MMT (26.8MMT LY) or 32.6% of the world's stocks – HUGE IMPLICATIONS



The below price chart is SX18 – that traded 925-825 from August through expiry and was in a similar price range in SX19

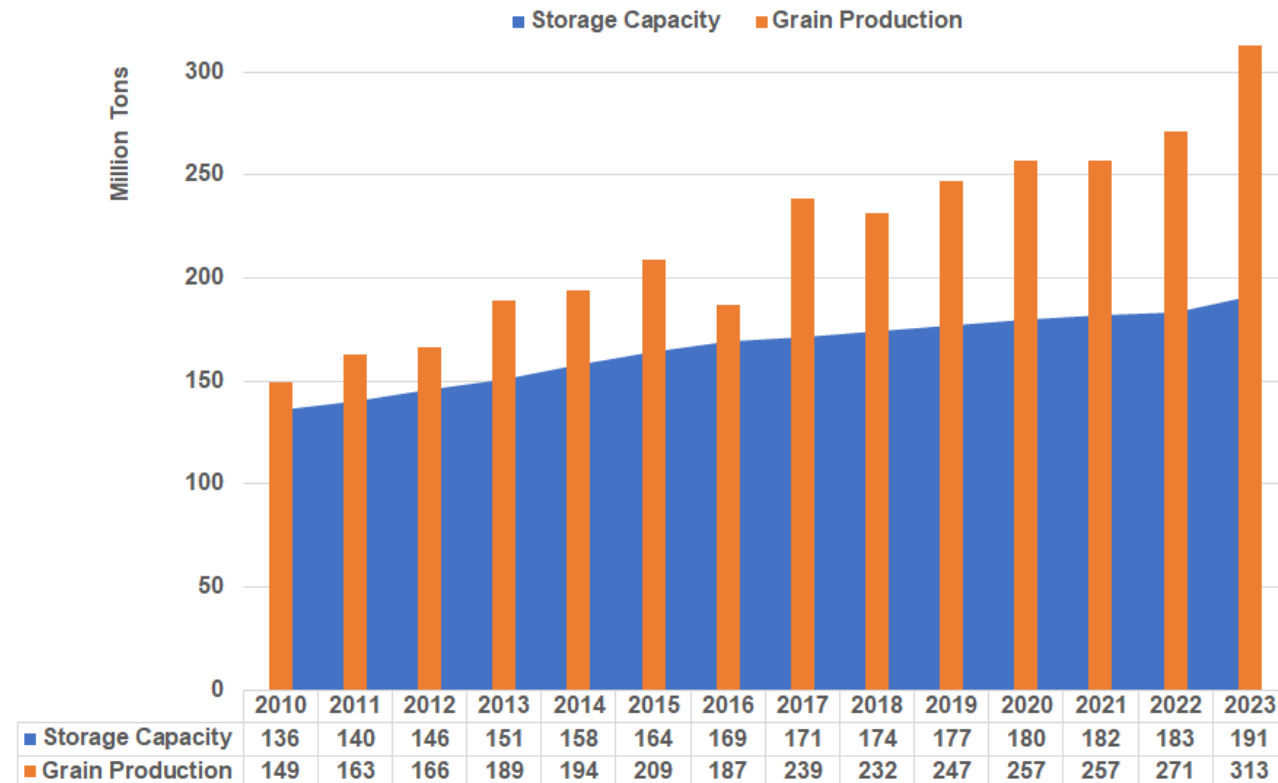


BRAZIL SOY OUTLOOK – supply push has started. Bigger waves ahead with soy, SM and corn exports (back at it July 2023)

In 2010 – Brazil could store 90% of its production (ratio of storage capacity vs total grain production)
Now?

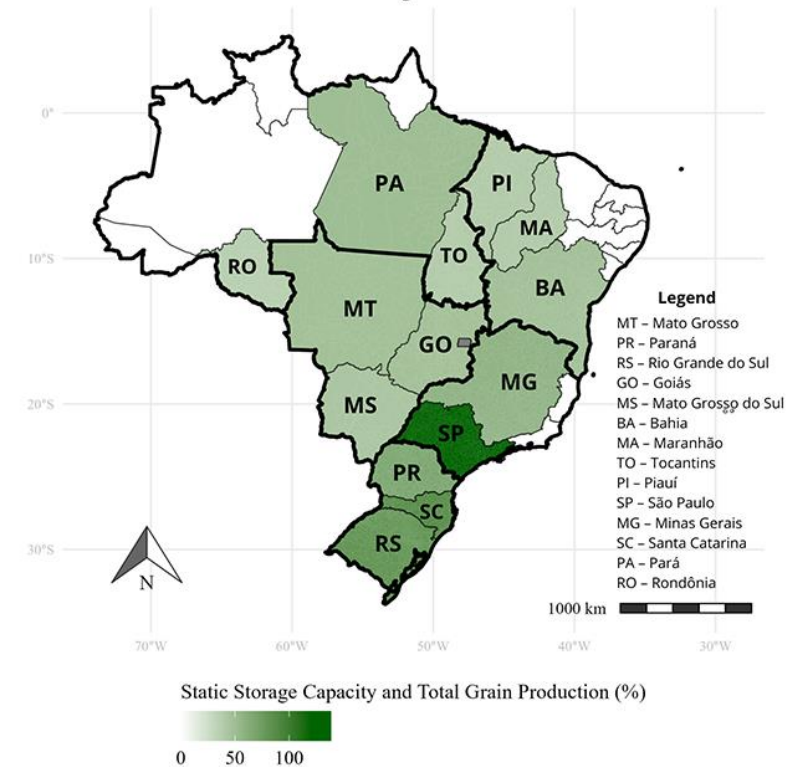
Brazil can store 67% of its grain production with record wheat production (22/23) and record corn production (21/22) and likely record corn production (22/23)

Figure 1. Brazilian Grain Storage Capacity and Crop Production, 2010-2023



Source: National Supply Company (Conab)
* Forecast for Storage Capacity in 2023 by Cogo Intelligence in Agribusiness

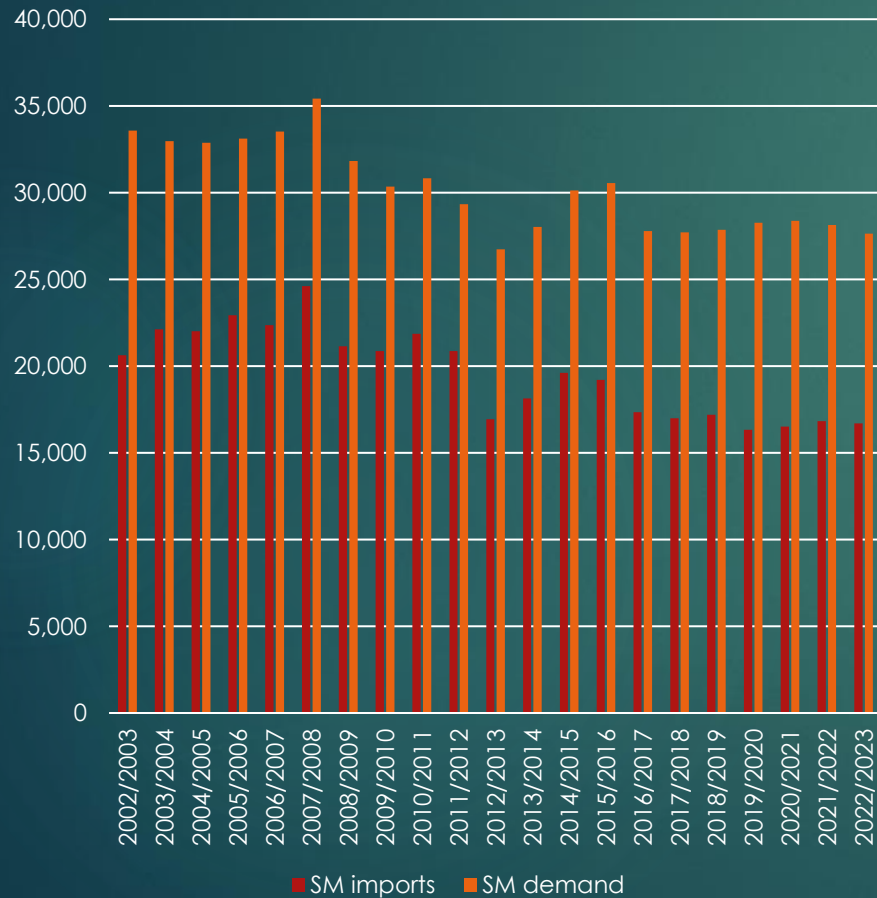
Figure 2. Ratio between the Storage Capacity and Total Grain Production by States



Elaborated by Thiago Simonato, Federal University of Minas Gerais
Source: National Supply Company (Conab)

EUROPE SOYBEAN AND SOYMEAL IMPORT DEMAND: underperforms vs USDA forecasts. Livestock sector challenges. Margins. Animal disease. Consumer demand.

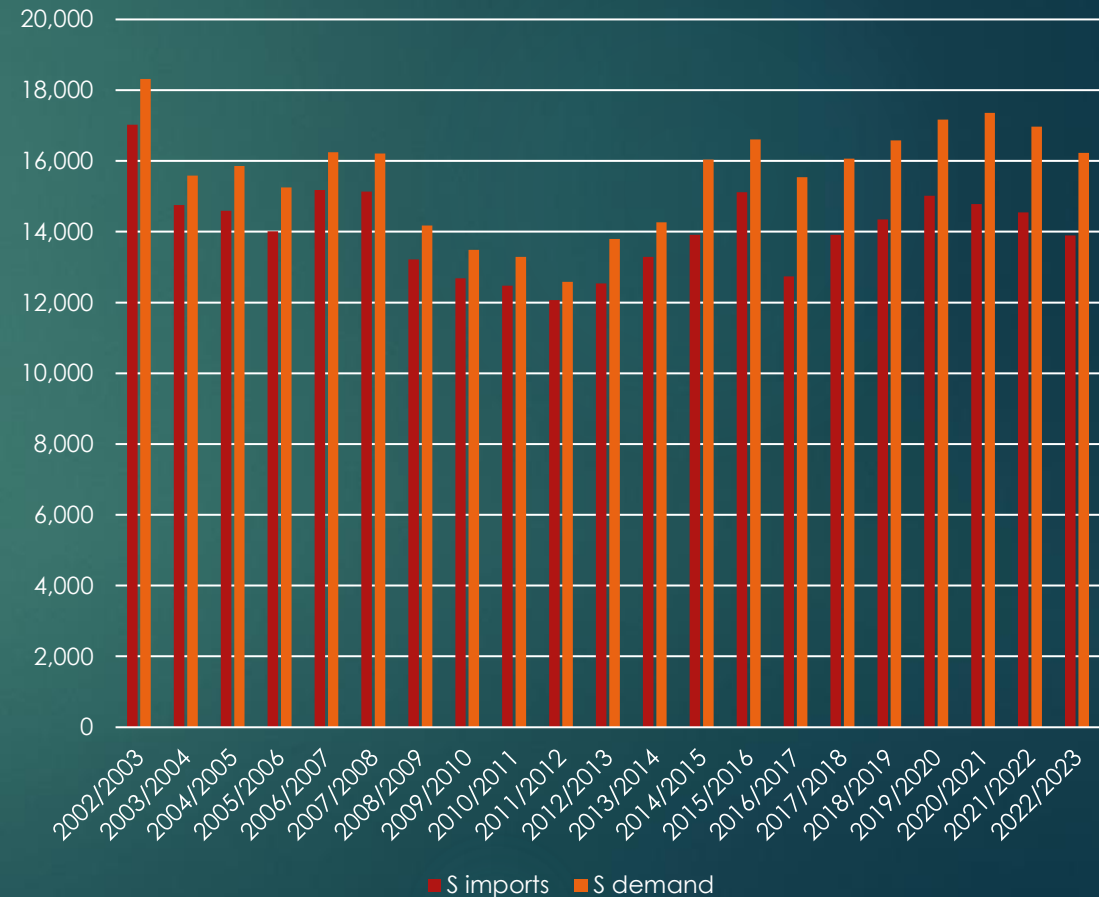
Europe soymeal imports and demand -
contractions: Imports (-140KMT). Demand -500KMT



EU soybean imports
MYTD are now
down 1.89MMT or
21% USDA -648KMT

EU SM imports MYTD are
down 600KMT or 5.6%.
USDA is at -140KMT

Europe soybean imports + crush = contraction. Imports (-
648KMT). Demand (-740KMT)



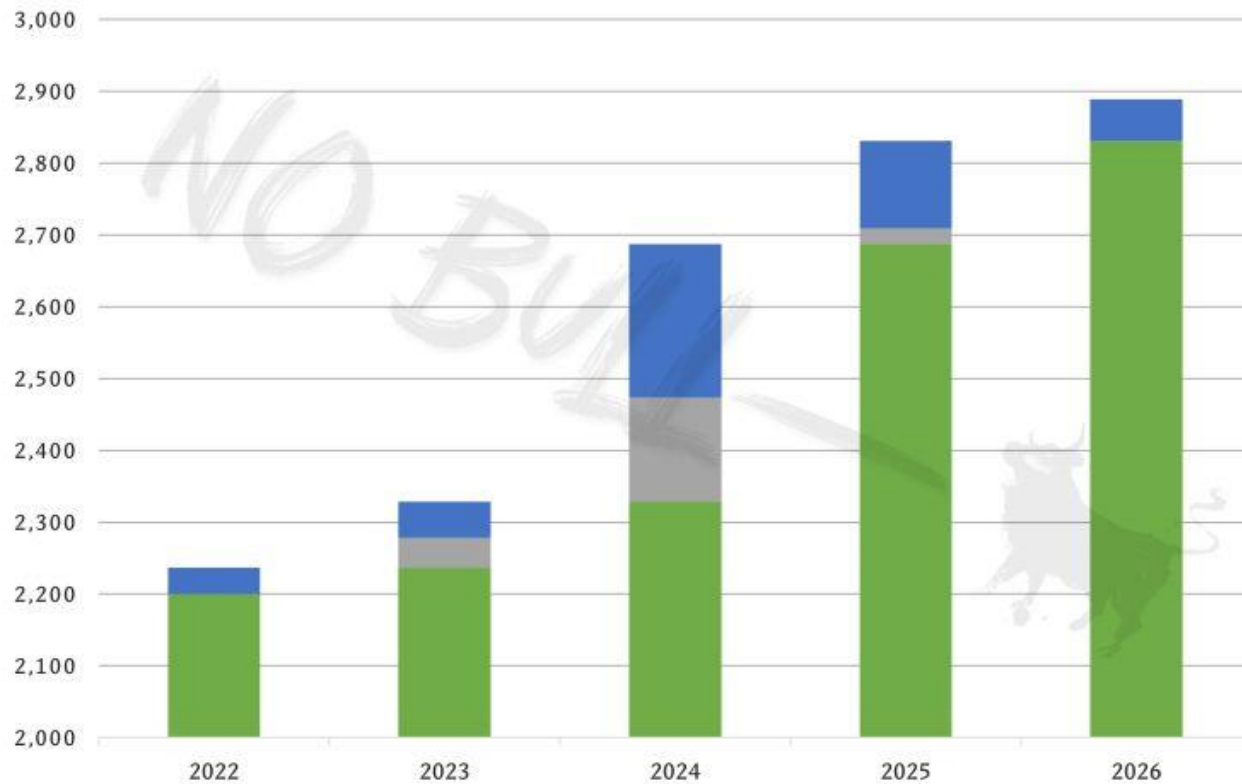
U.S. CRUSH & CAPACITY: existing, expansion plans & new builds: just how much of this actually gets done?



U.S. Soybean Crush Capacity

Million Bushels/Year

- New Build
- Expansion
- Existing



*Based on announced capacities

@SusanNoBULL

U.S. crush is **not** keeping up with USDA's revised demand # (Feb WASDE) = 60.7MMT vs 60MMT LY – **up 1.1%**

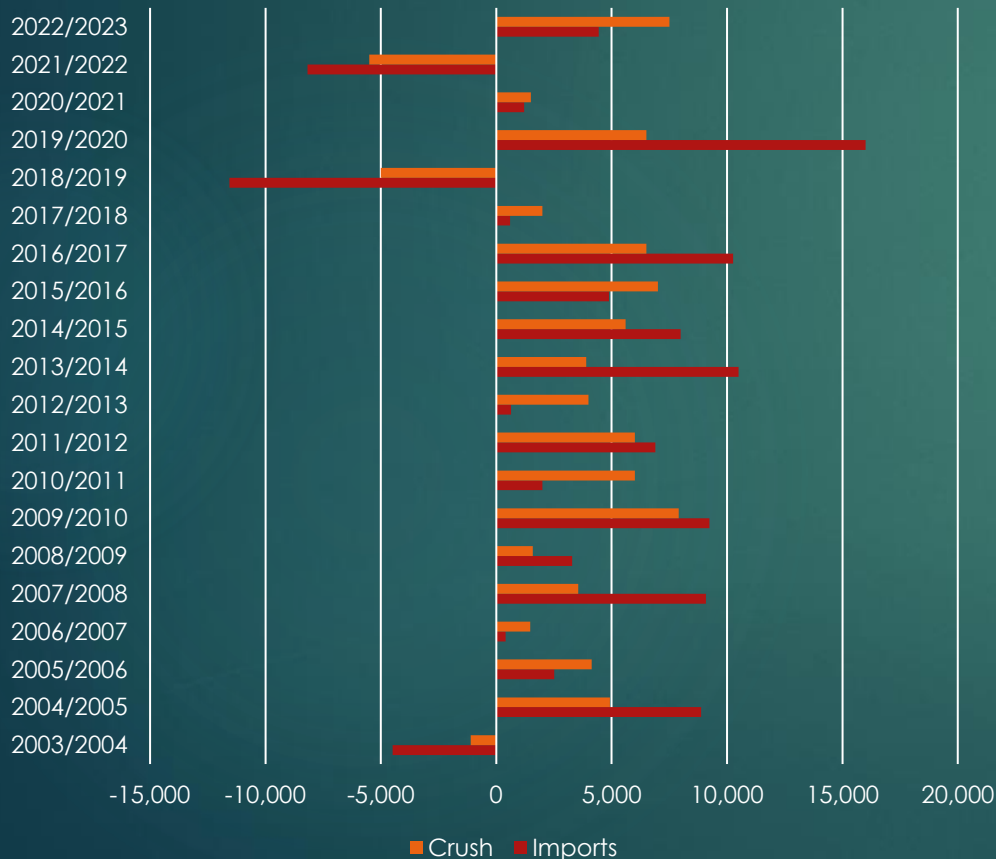
Sept-January U.S. crush = 930 mil bu / 25.3MMT – **down 1.5%** vs LY – **DESPITE \$\$\$\$ CRUSH MARGINS**

Feb-Aug has a major challenge – needs to = 1300 mil bu / 35.4MMT or **+3.2%** vs Feb-Aug 2022

Bottom-line: expanded / increased crush capacity is unlikely to happen as “fast” as what market pundits have projected. (1) parts, (2) labor, (3) expertise to run new plans and the list goes on

CHINA CRUSH AND SOYMEAL DEMAND: crush has shown a bit of recovery of late and is now flat vs LY (underperforms vs USDA forecasts). Why own the inverse as hedged margins negative? SM inclusion rates to be cut further (%) – peak soybean imports?

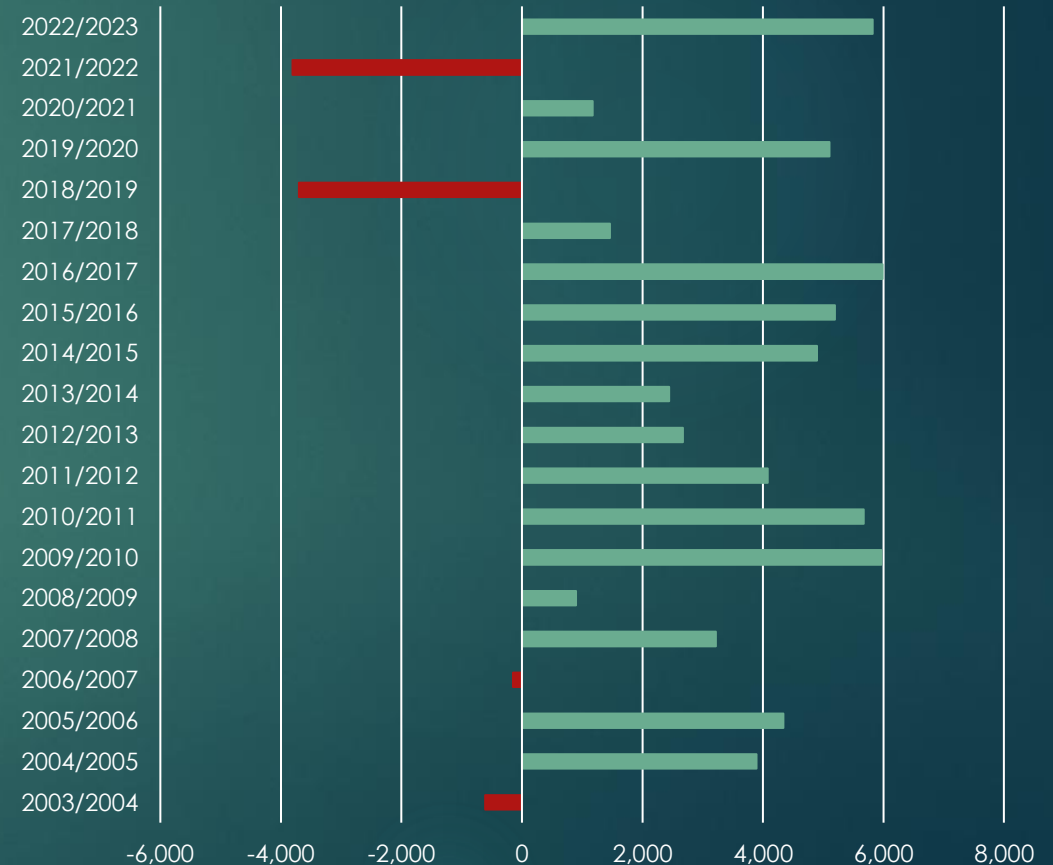
China soybean crush & soy imports: change vs previous year: recovery the word: +7.5MMT crush (-8.2MMT LY). +4.4MMT imports (-5.5MMT LY)



China MYTD crush +0.5% vs USDA +7.4%

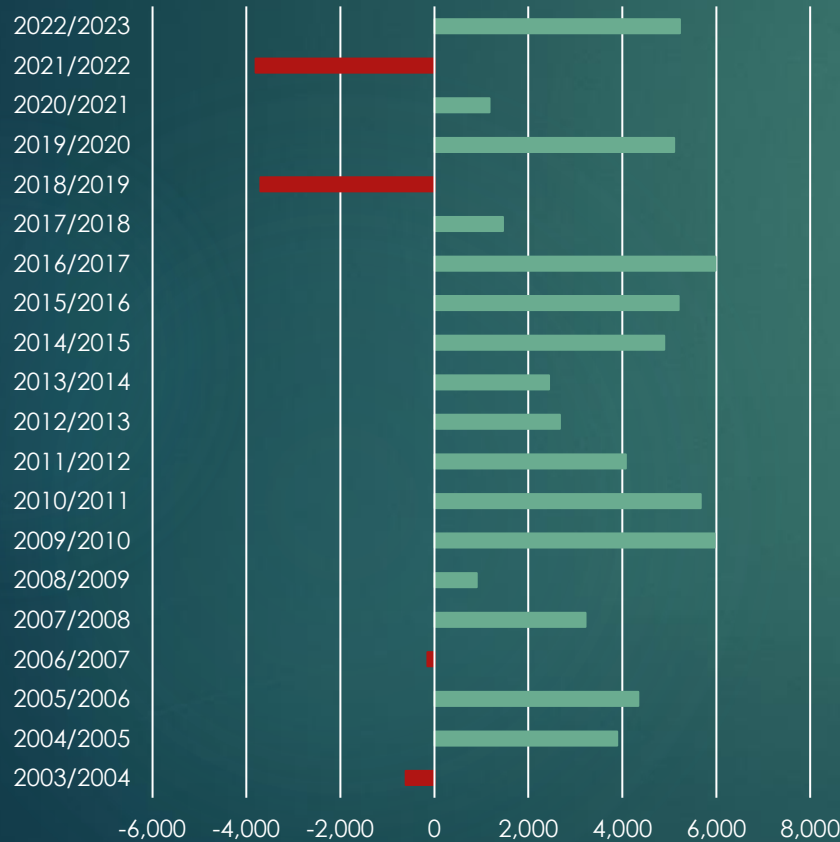
China SM demand – Rabobank out with its paper on SM inclusion: 15.3% in 2021. 13.5% by 2025. 12% by 2030

China soymeal demand: change vs previous year: forecast = 74.7MMT (68.9MMT LY) - up 5.82MMT (-3.81MMT LY - record contraction in past 2 decades)



WORLD SOYMEAL DEMAND VS OTHER FEED INGREDIENTS: ROW soymeal demand +2.3MMT. ROW feed corn demand -27.7MMT. ROW feed wheat demand +2.47MMT. Steep inverse. Record CME futures. Depressed economies

China soymeal demand: change vs previous year: +5.2MMT this year vs record contraction = -3.8MMT



Global animal protein market continues to face a very challenging environment:

Cost of inflation over past few years (inputs & energy costs)

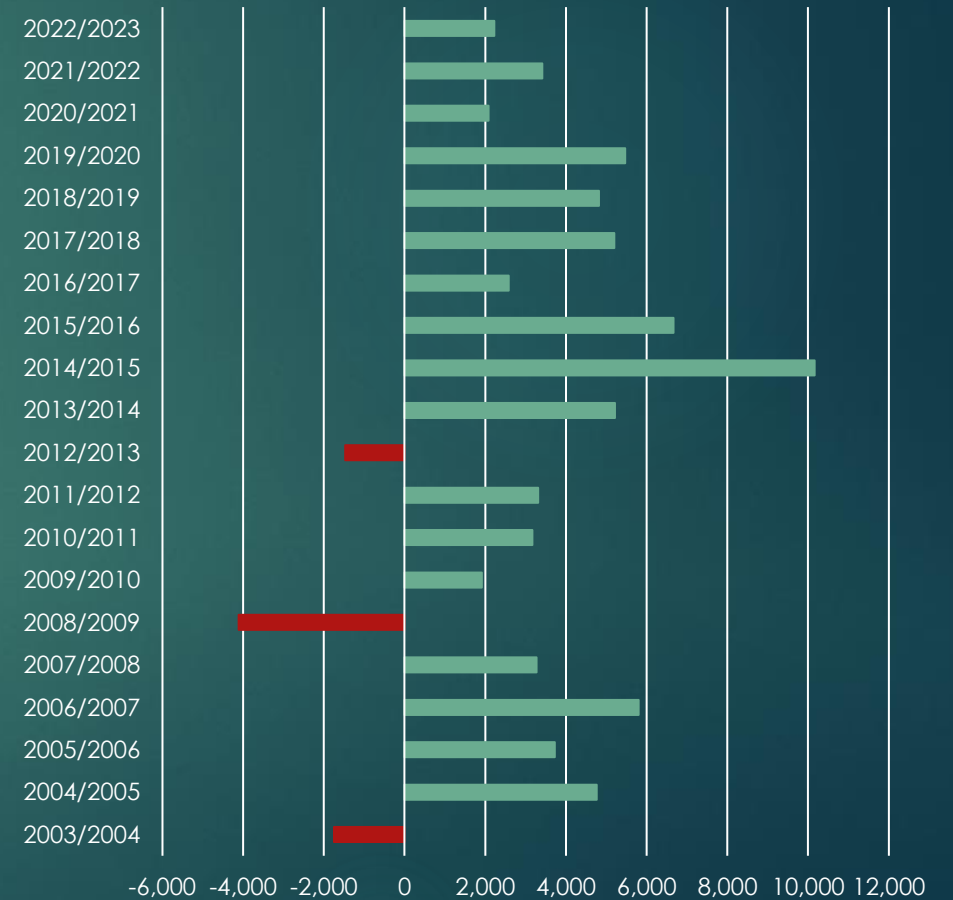
COVID hangover remains

Animal disease (AI in poultry-chicken. ASF in pork)

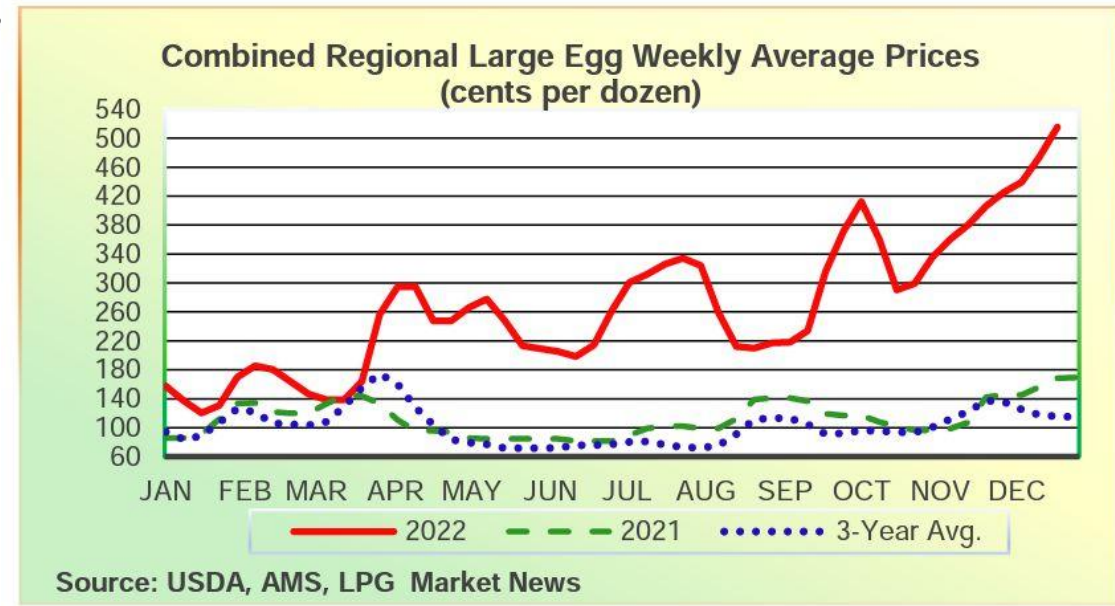
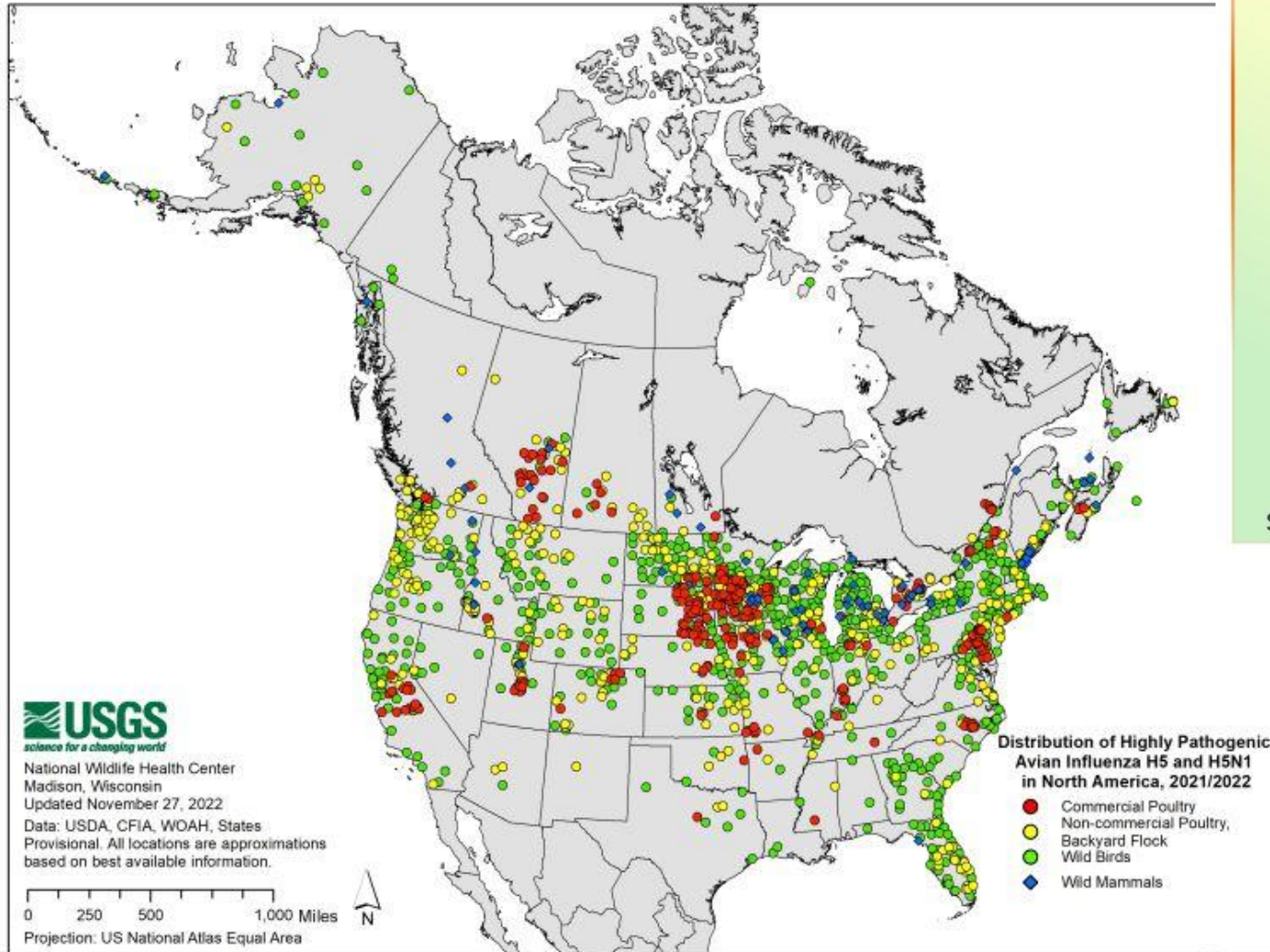
Scaled down production globally

Math matters: in the U.S. – feed corn demand to be down 11.25MMT but SM demand to be +480KMT

ROW soymeal demand: +2.22MMT (+3.4MMT LY, 2.1MMT 2Y)



Avian influenza impacts the world as animal disease remains the one of the least talked about challenges (U.S., Europe and others)



+300 commercial flocks impacted in 2022 – with +57 million bird loss

Layers hit for +44 million of the +57 million losses

+20 outbreaks had excess of 1 mil birds

Poultry consumes 13% of the U.S. corn crop or 1.8 billion bushels / 45.72MMT

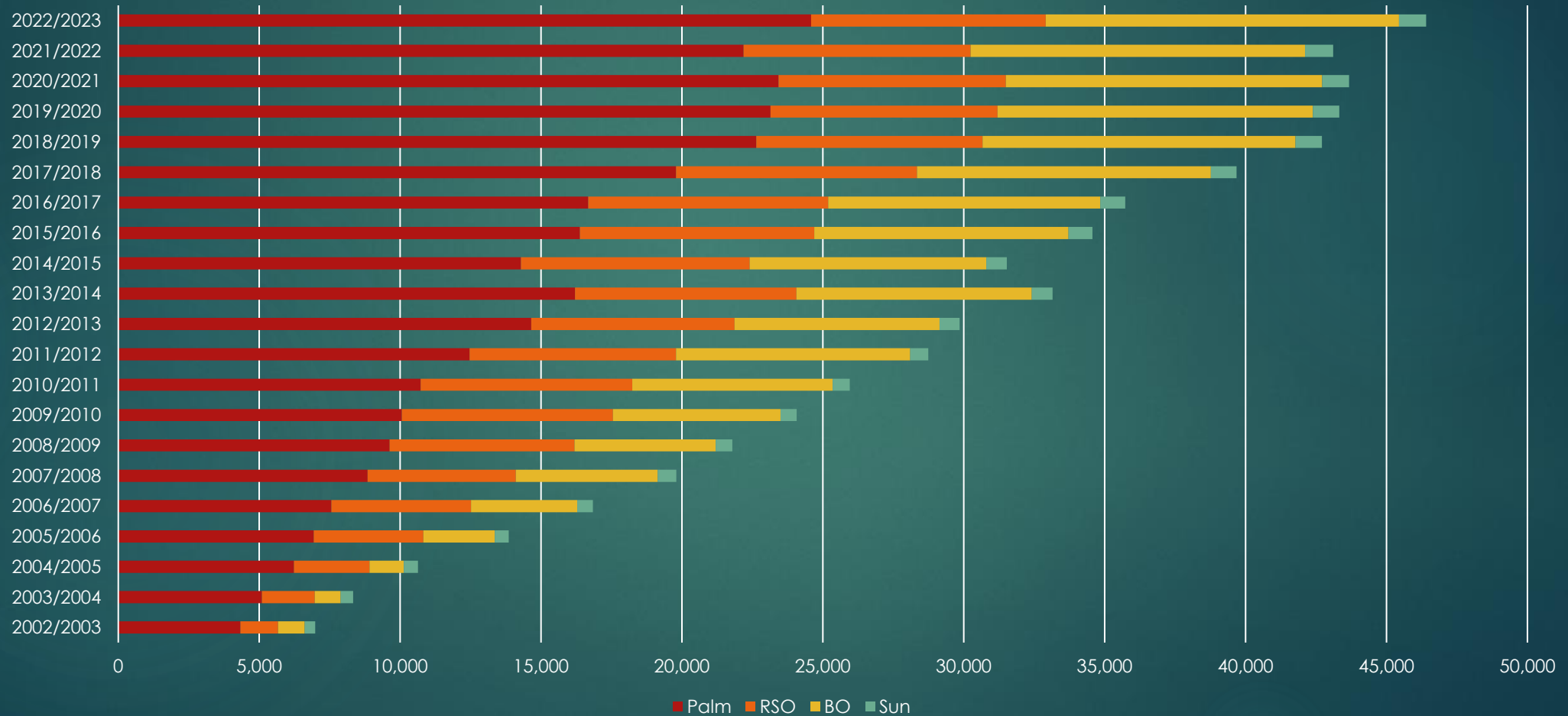
Broilers, turkeys and laying hens consume 2/3 of U.S. SM with broilers eating 50% of that 2/3rds

OIL SHARE: will remain a very important price relationship in CY2023 as Brazil expands its blend, as does Indonesia and California influence on U.S. renewable / biodiesel production exist



It is very likely in the years ahead that the food vs fuel debate will grow louder – as such, here is a look at industrial demand for edible oils in the past 2 decades

World edible oil industrial demand = 46.4MMT (43.1MMT LY) vs 7MMT in 2002/03



PRICE OUTLOOK: weekly soybean chart – who the hell wants to buy the inverse with the size of the BR crop?



PRICE OUTLOOK: weekly soymeal chart – “rare” times but anyone that has tried to fade soymeal has been smacked. Fear remains on MM\$ length



PRICE OUTLOOK: weekly soy oil chart – takes a “breather” as oil share sells off. Soy oil remains leading technical indicator for the soy complex (below all its major moving averages) + very anticipatory in nature vs reactionary

