

# Animal Production Forum

Perspectivas globais para os preços dos grãos – O que podemos aprender de experiências passadas?

Adolfo Fontes

dsm-firmenich Animal Production Forum

# Agenda

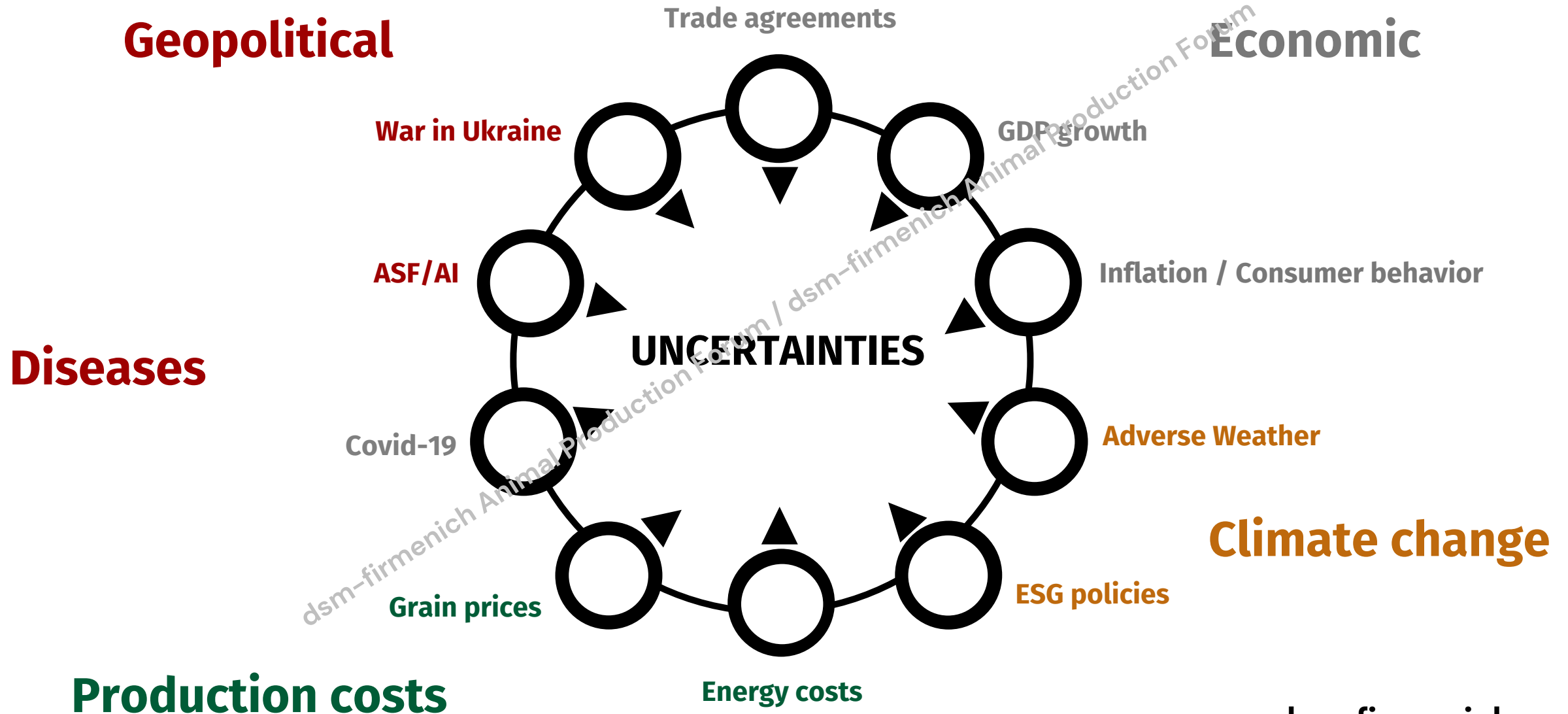
- **Macro trends**
  - **Uncertainties in the short term**
  - **Long term landscape**
- **Raw material**
  - **Historical analyses and outlook**
    - **Corn**
    - **Wheat**
    - **Soybeans**
- **Takeaways**



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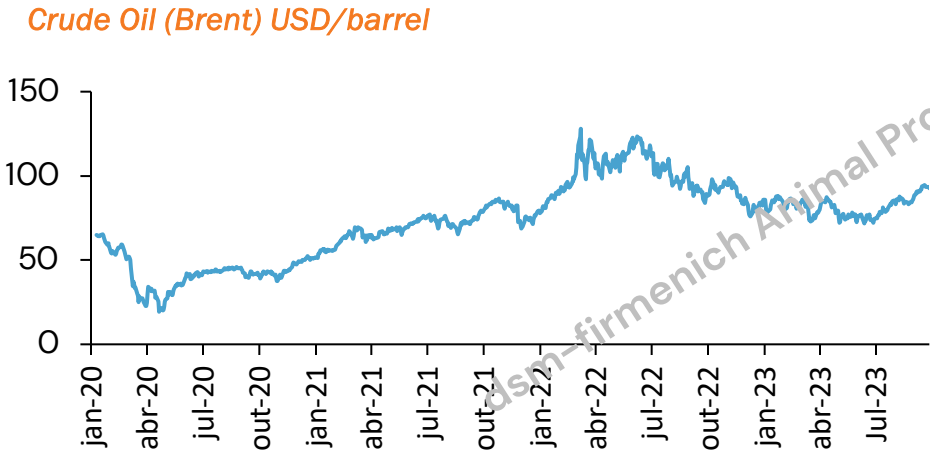
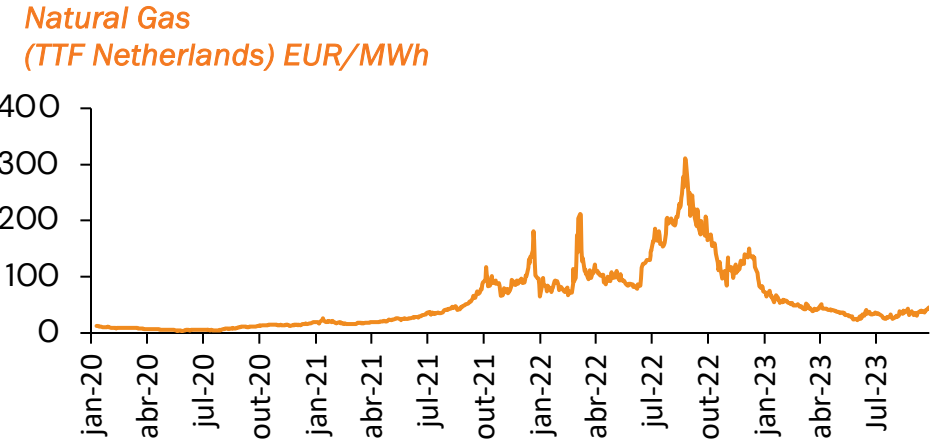
# Lower uncertainty in the near term

Main factors impacting our value chain

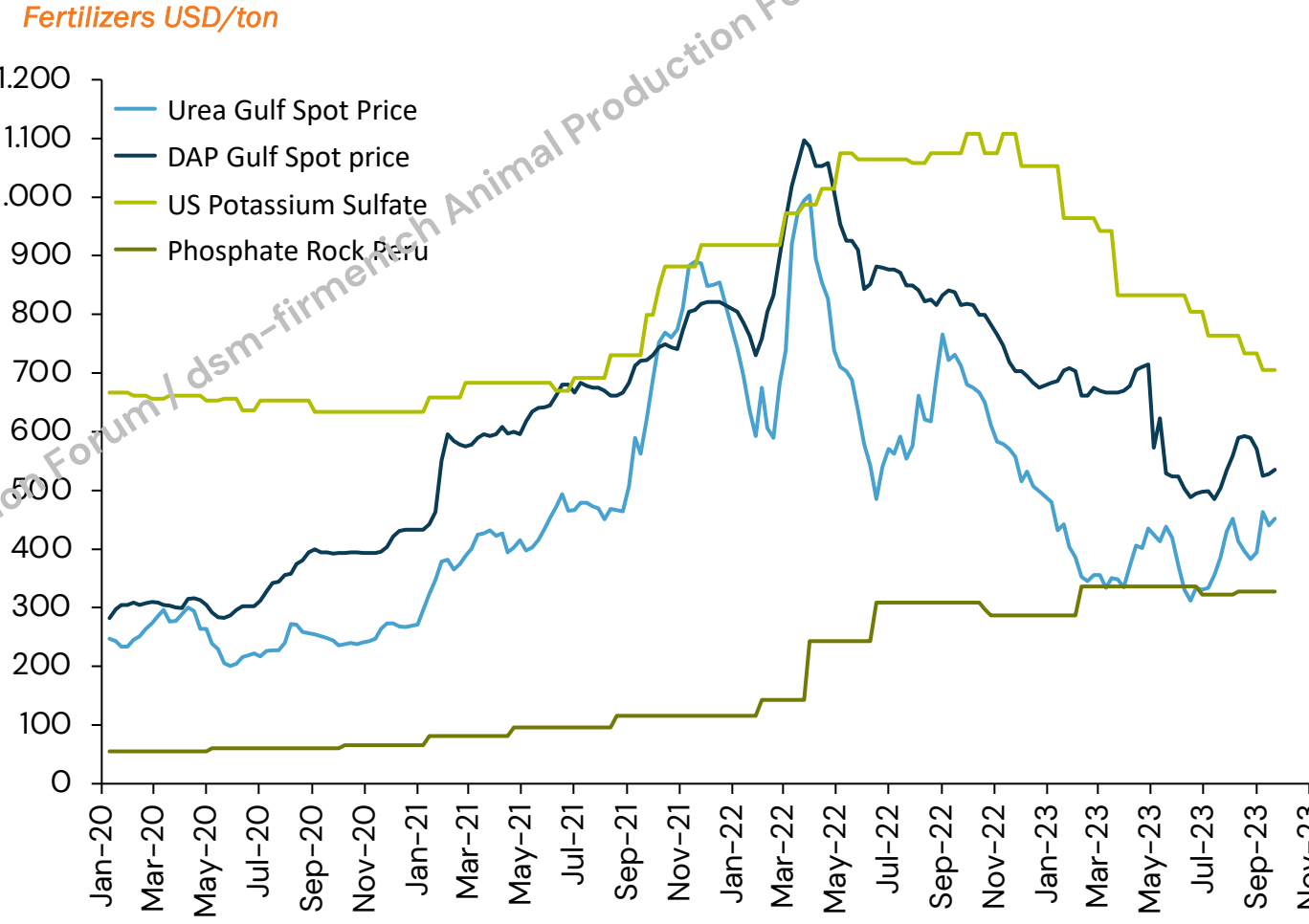


# Fertilizer prices are gradually falling after achieving record levels in 2022 following gas prices

## Natural gas and crude oil prices



## Fertilizers

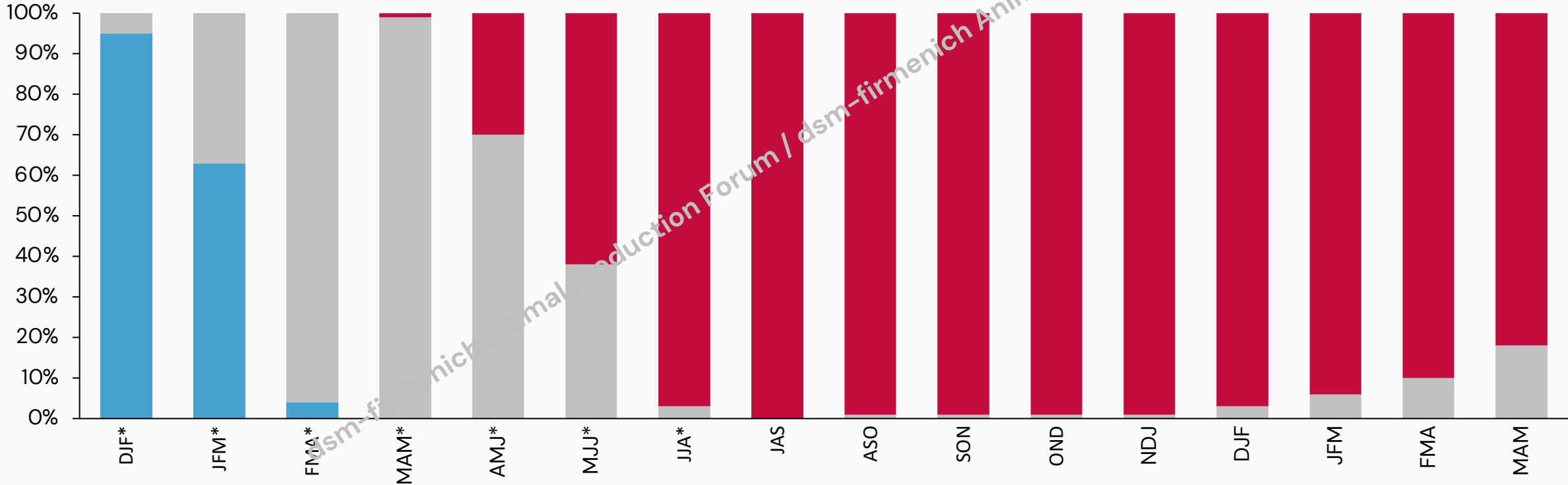


# A strong El Niño has caused adverse weather conditions in Q3 2023

Official NOAA CPC ENSO Probabilities (issued Jul. 2023)

Based on  $-0.5^{\circ}/+0.5^{\circ}$  C thresholds in ERSSTv5 Niño-3.4 index

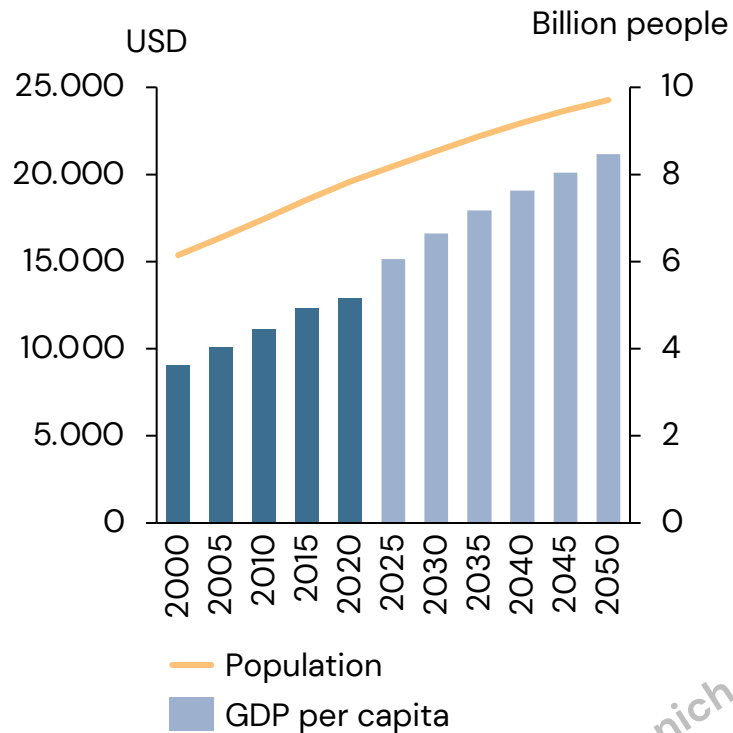
El Niño Neutral La Niña



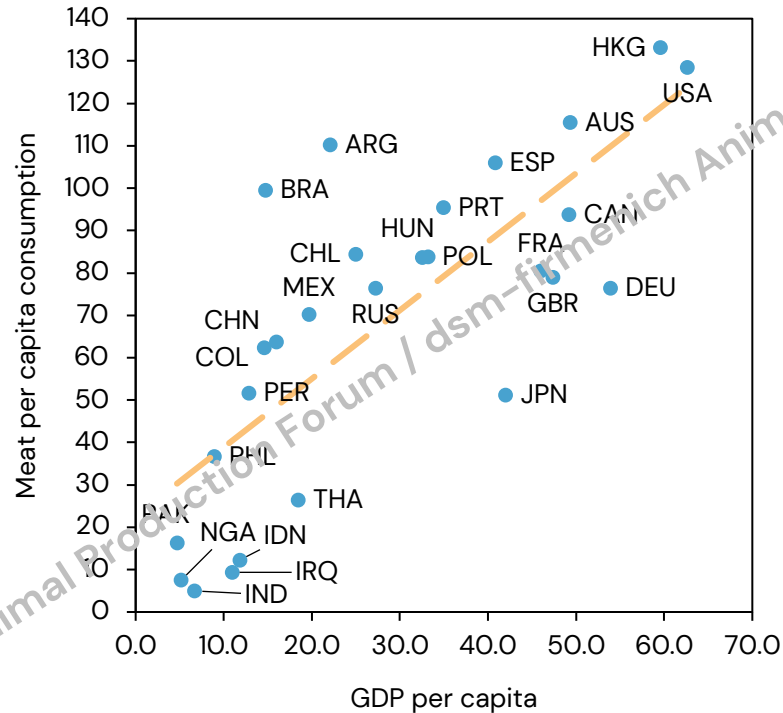
Source: NOAA-ENSO, IRI  
\*previous projections

# Long term landscape: solid growth

## Growing population and income

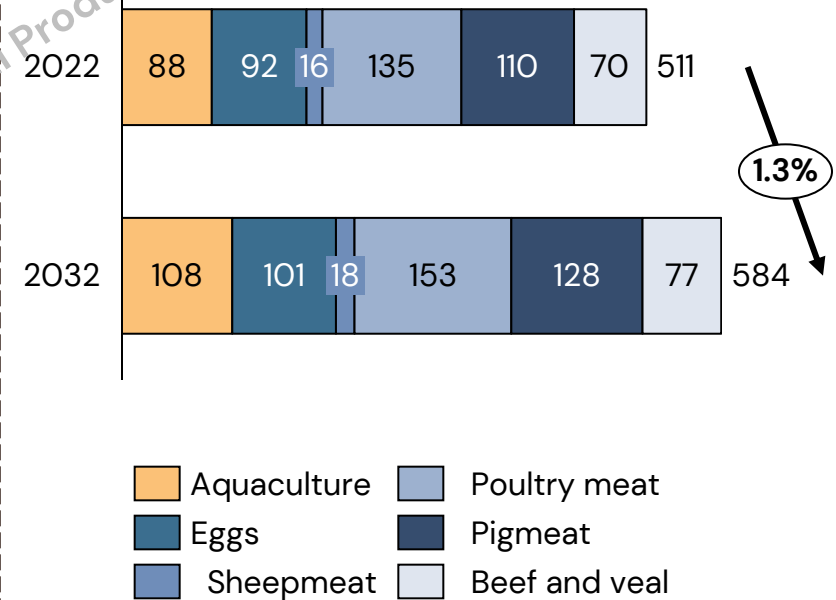


## Income vs meat consumption



## Animal protein production

### Million tons



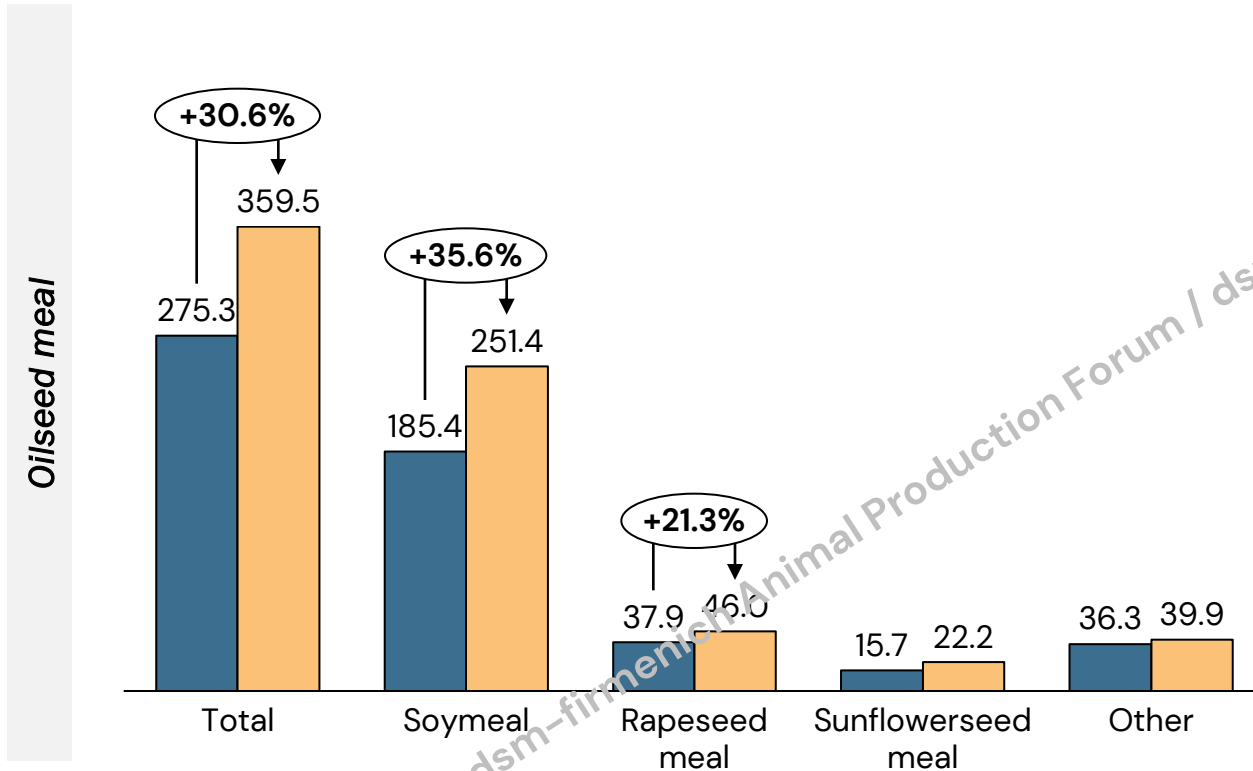
## Impacts on consumer behavior

# G&O in feed use

Soymeal represents 70% of oilseed meal in feed use, and corn + wheat 90% of grains in feed use

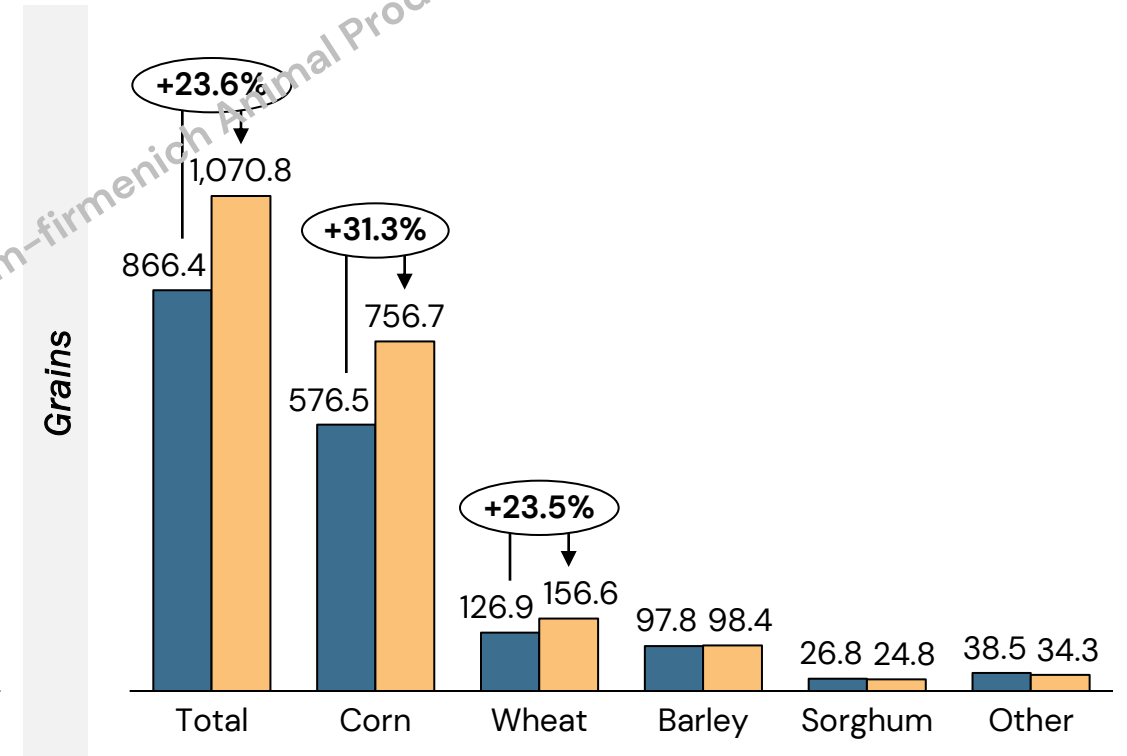
Oilseed meal feed use (million tons)

2013/2014 2023/2024



Grains feed use (million tons)

2013/2014 2023/2024



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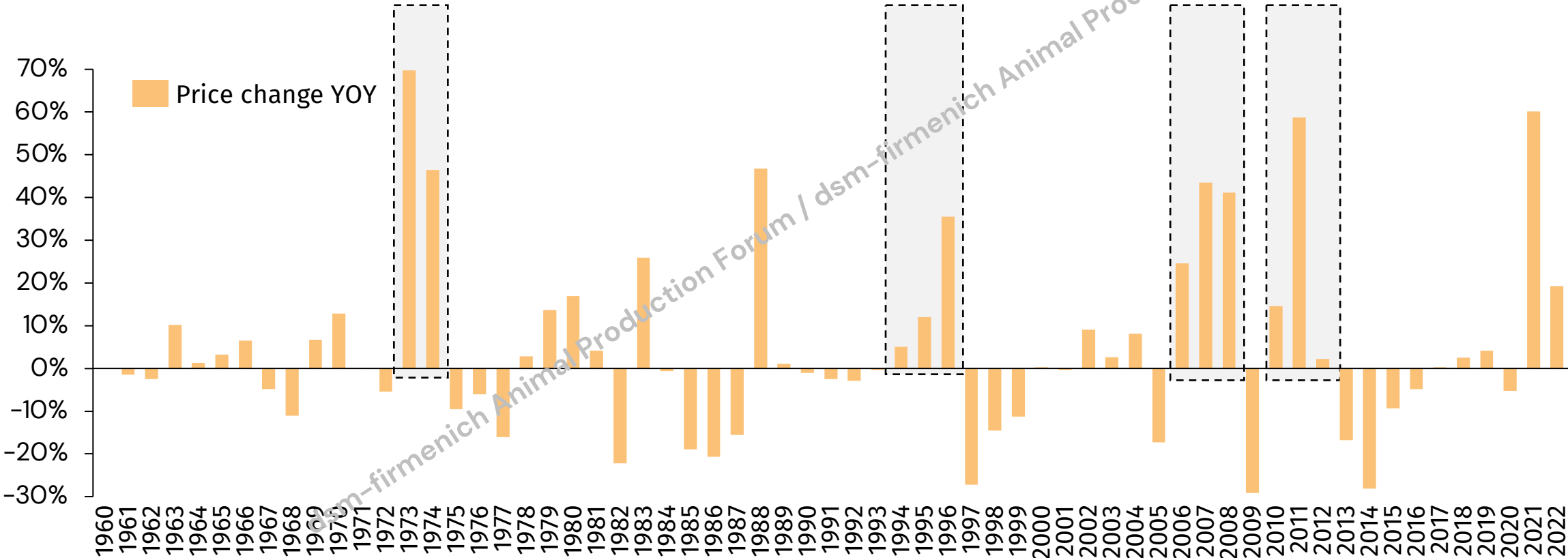


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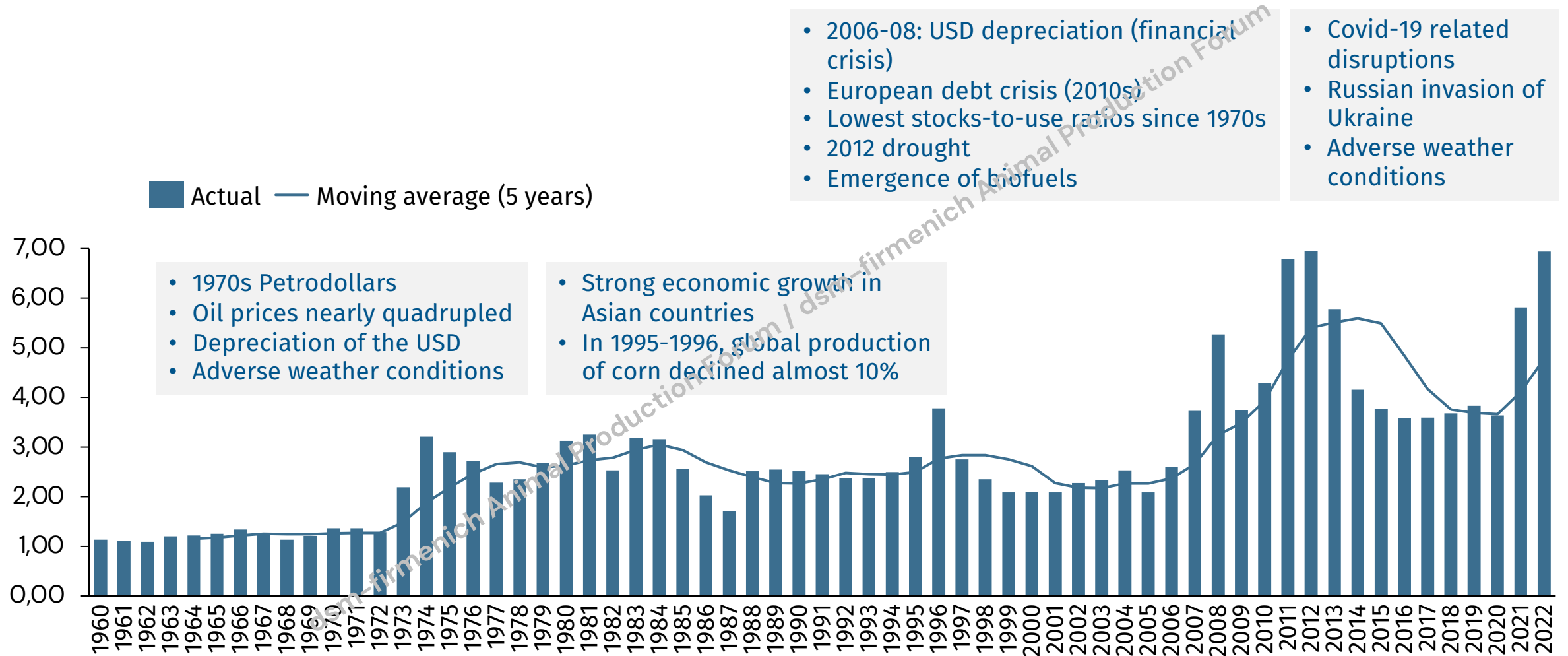
# Corn price change YOY in selected periods

- The selected periods below saw record prices of at least two of three principal field crops—wheat, corn, and soybeans—and the price increases were sustained for two or more consecutive years
- Those periods were followed by declines in prices



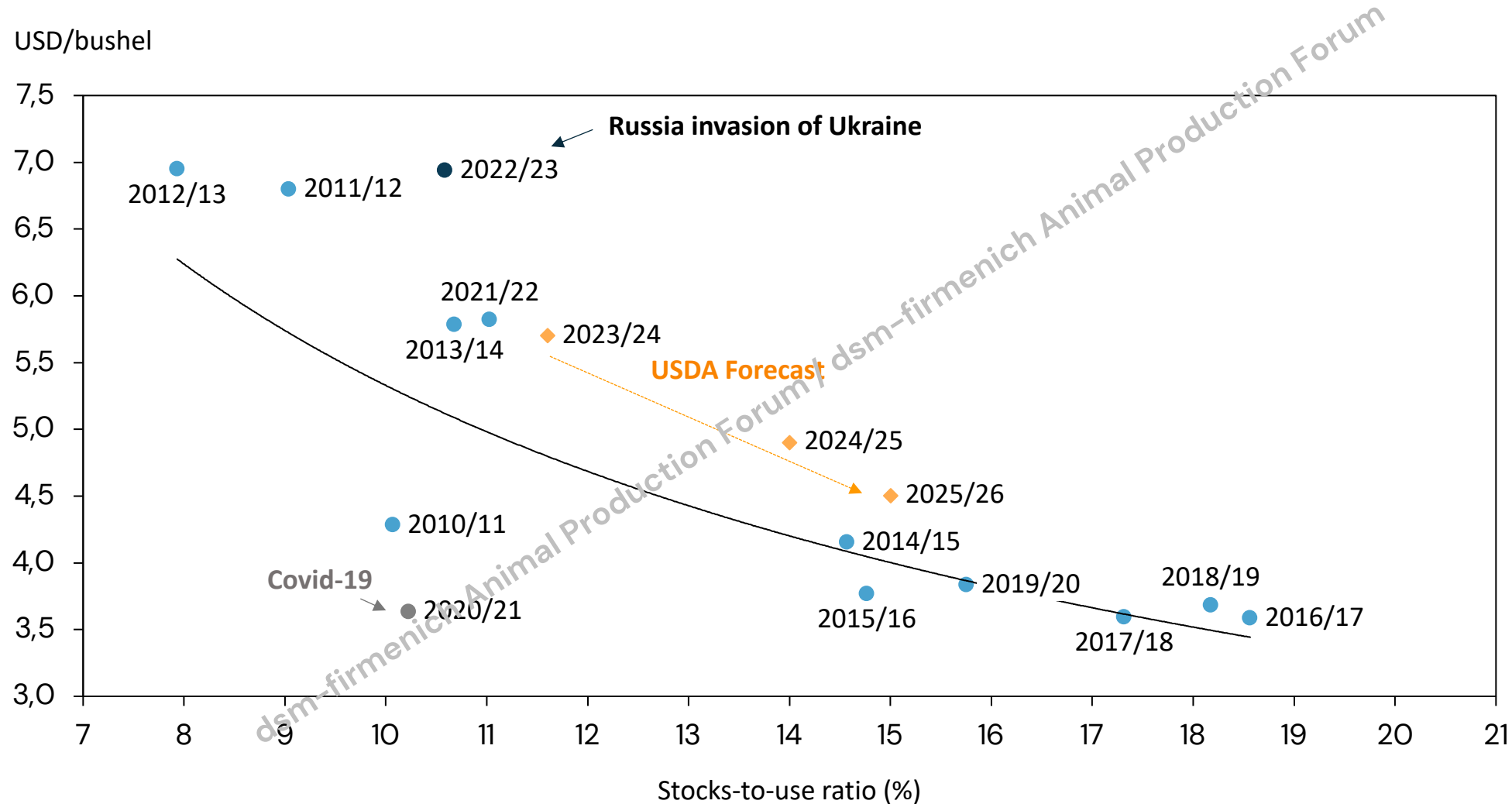
# Historical corn prices

Average corn prices in 2022 were only behind 2012



# Stocks-to-use ratio and corn prices in the USA

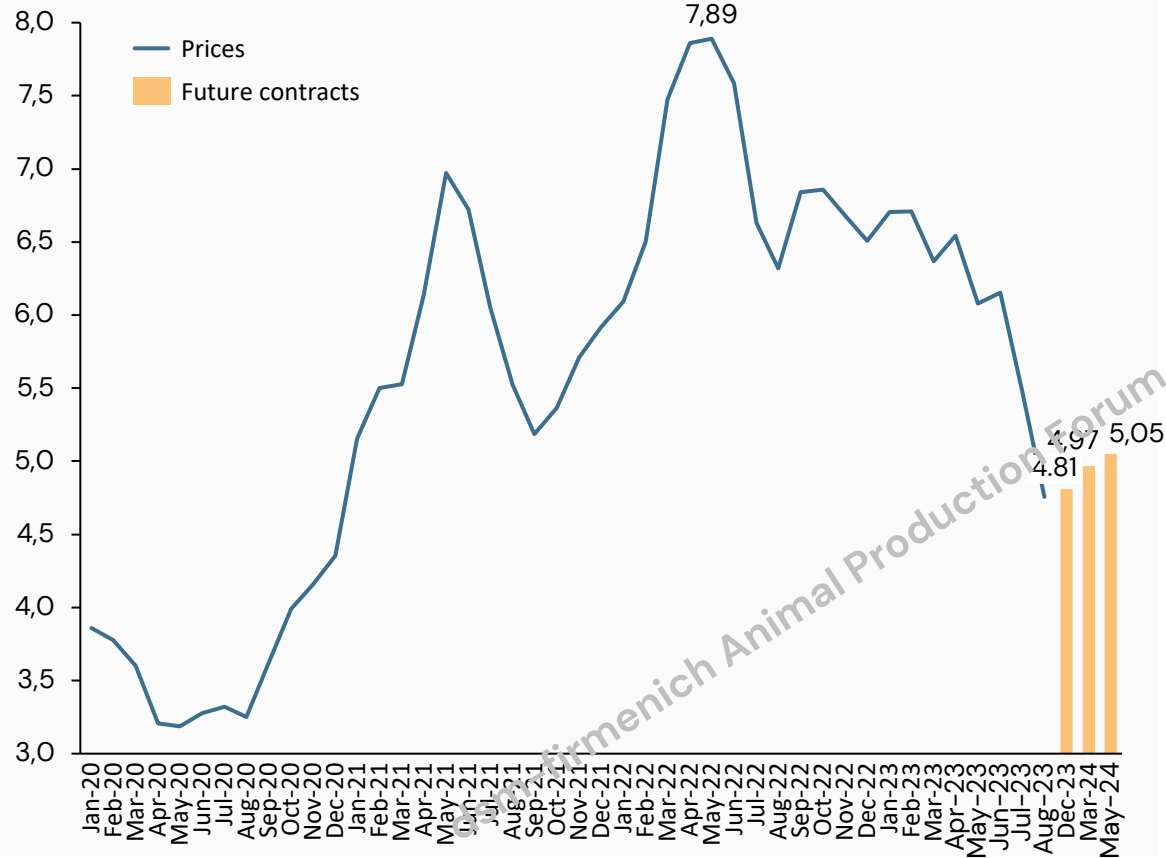
Projections show average corn prices declining as stocks-to-use ratio improves



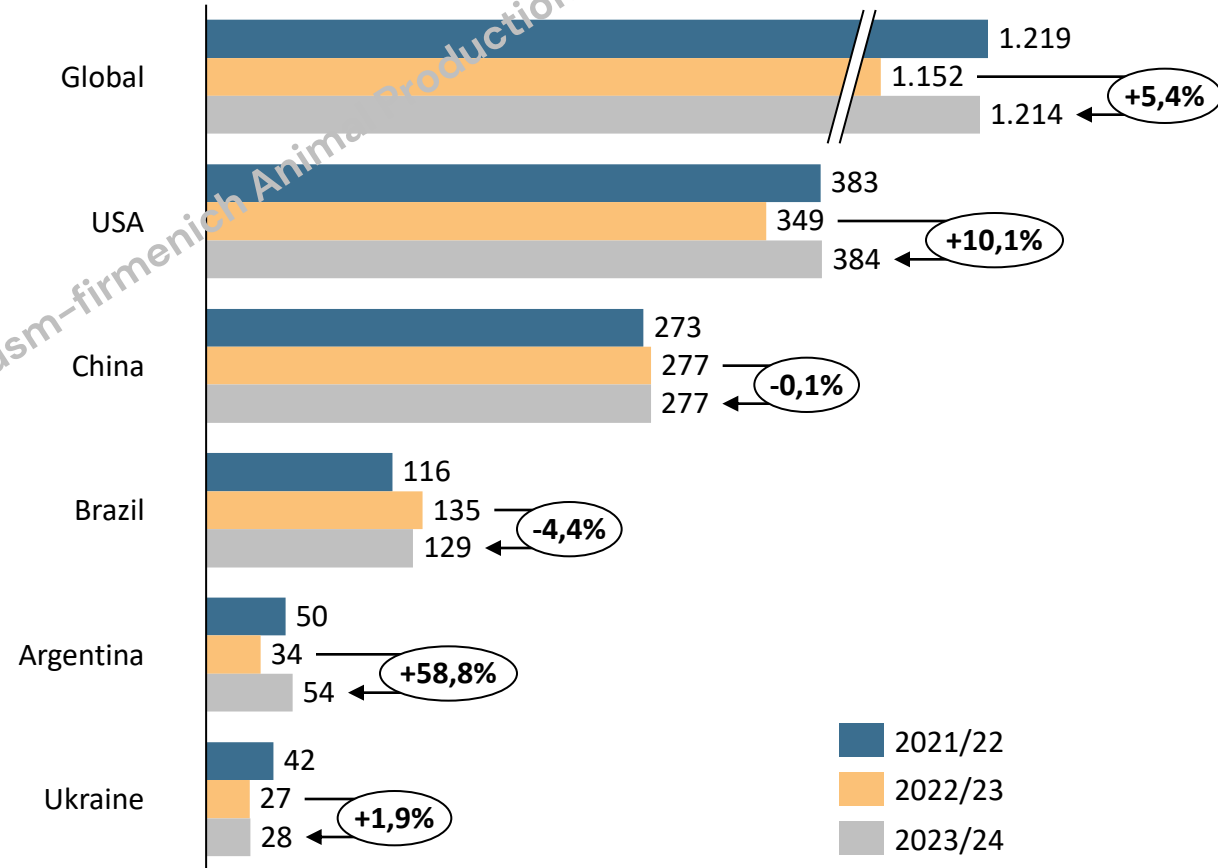
# Corn prices in H2 23 are expected to stay 15–20% below H1 23

With improved weather forecast, US 2023/24 crop are projected to bring relief to global stocks in H2

Chicago prices (USD/bushel)



Global supply (million tons)



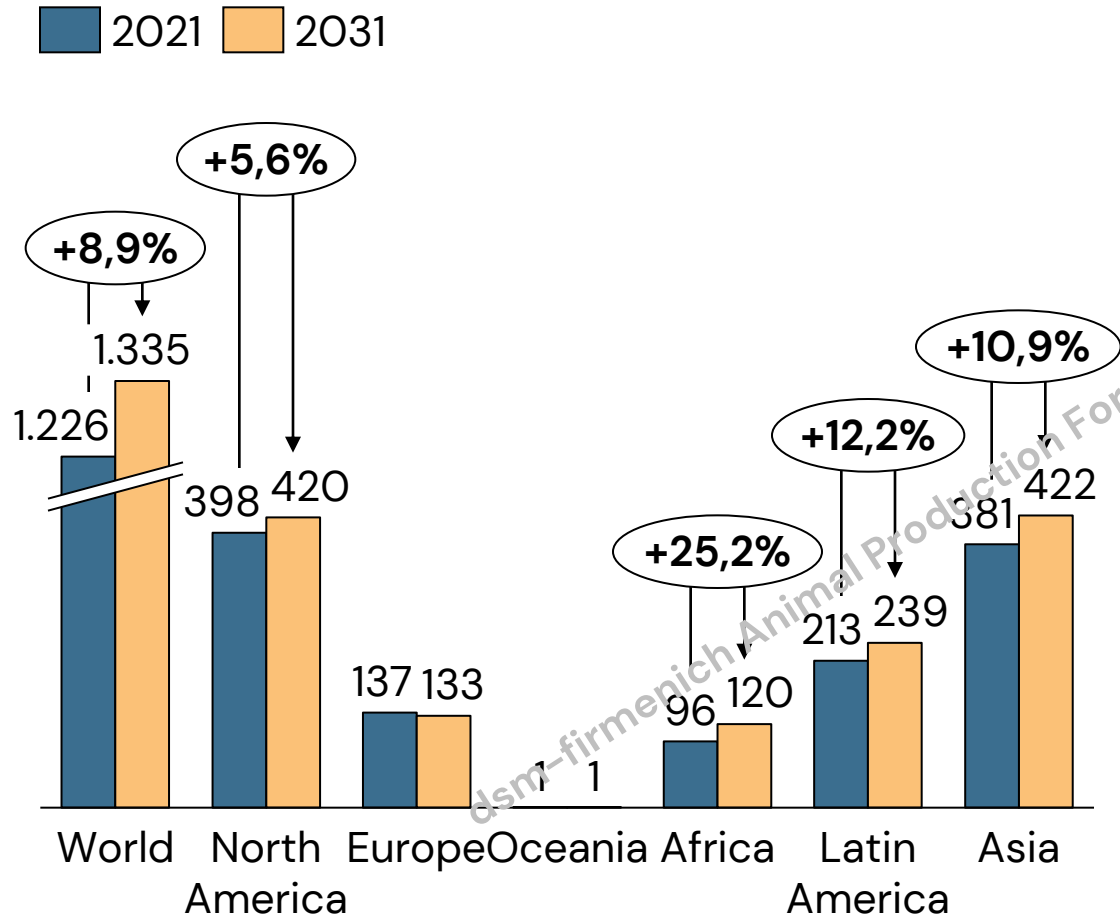
Source: USDA, Bloomberg

Note: (i) Future contracts on September 28<sup>th</sup>

# Corn projections (2021 – 2031)

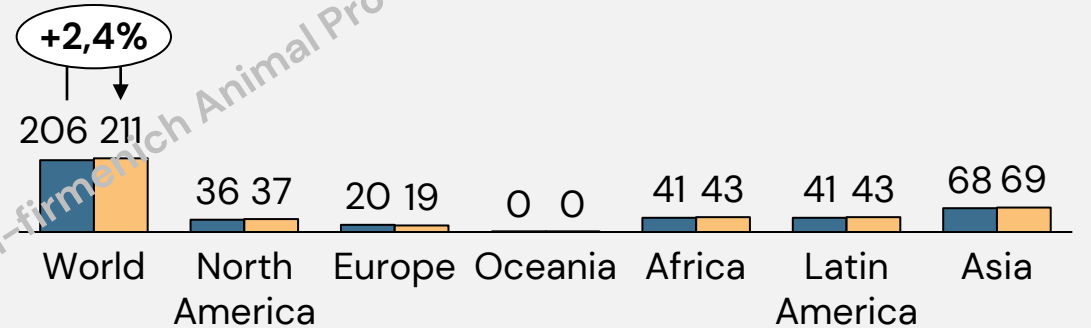
Yields are projected to increase 6.4% by 2031

## Corn production (million tons)

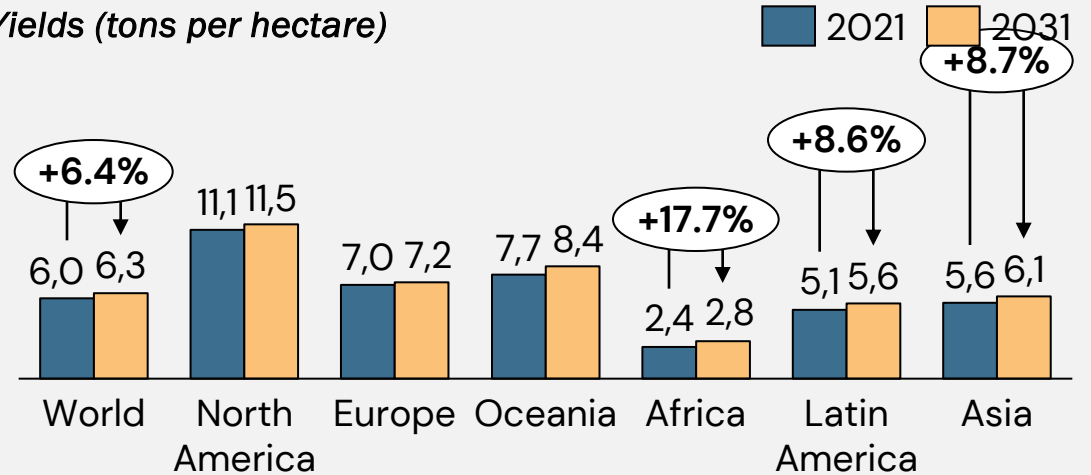


## Area and yield changes

### Area harvested (million hectares)



### Yields (tons per hectare)



# Agenda

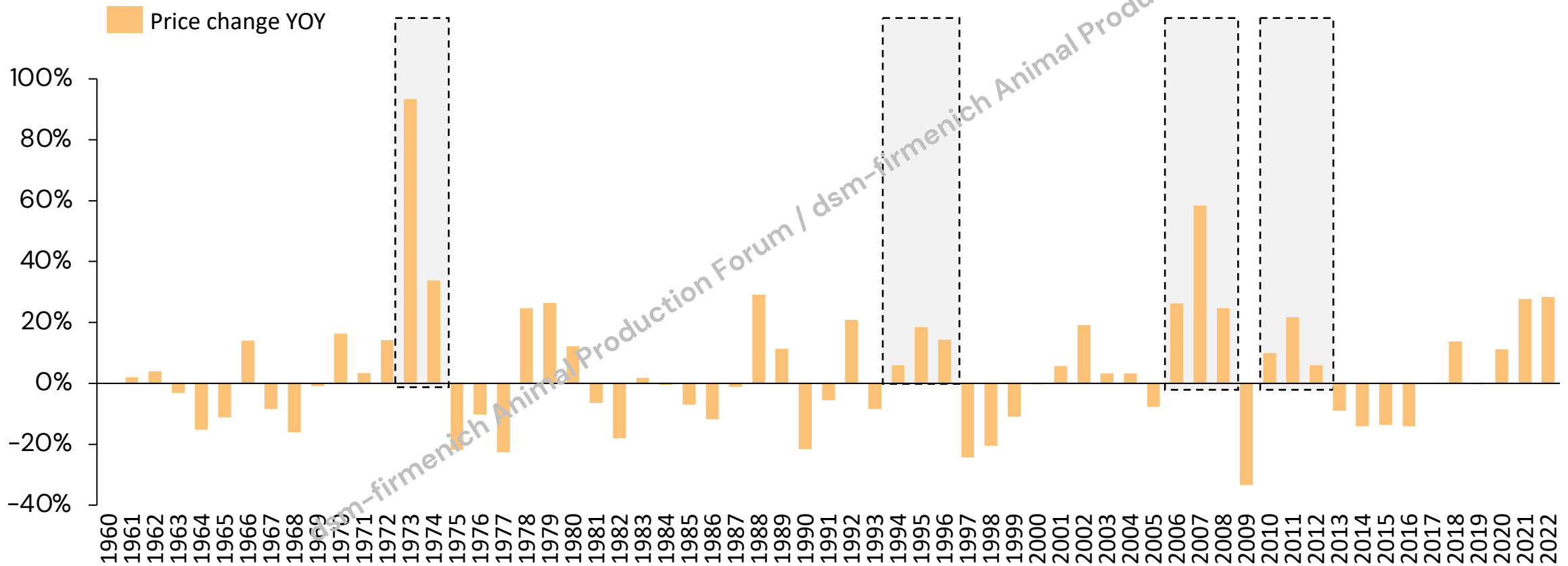
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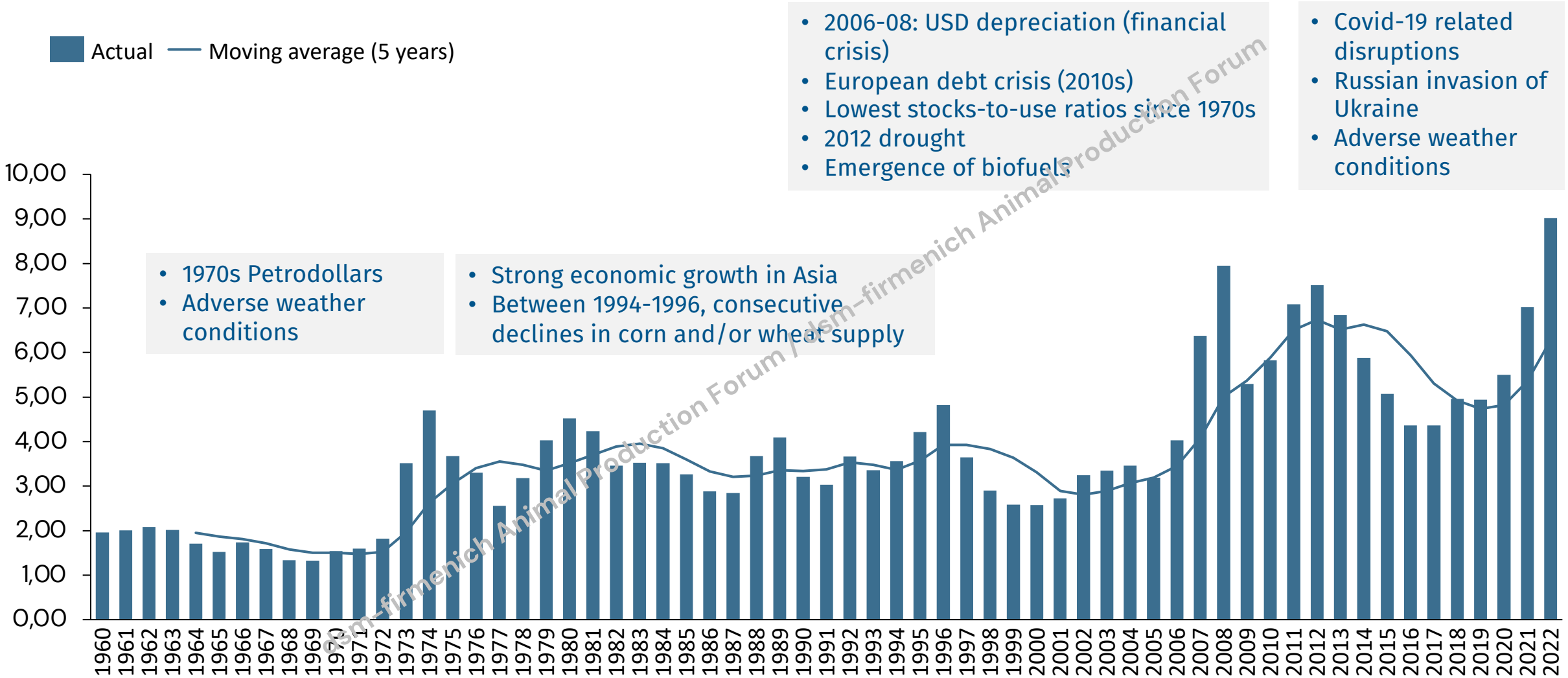
# Wheat prices have gradually increased since 2018

- The selected periods below saw record prices of at least two of three principal field crops—wheat, corn, and soybeans—and the price increases were sustained for two or more consecutive years
- Those periods were followed by declines in prices



# Historical wheat prices

## Wheat prices achieved record levels in 2022



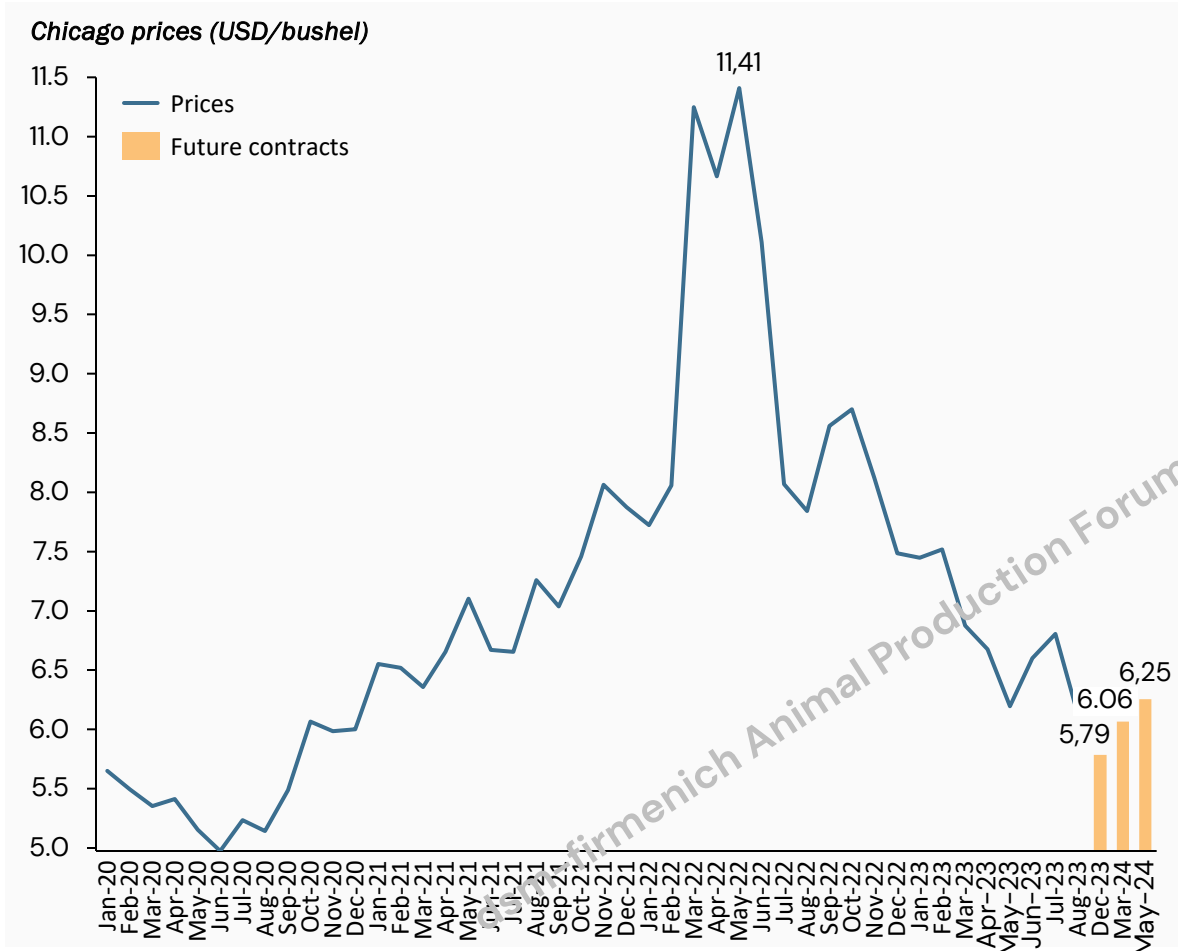


# Stocks-to-use ratio and wheat prices in the USA

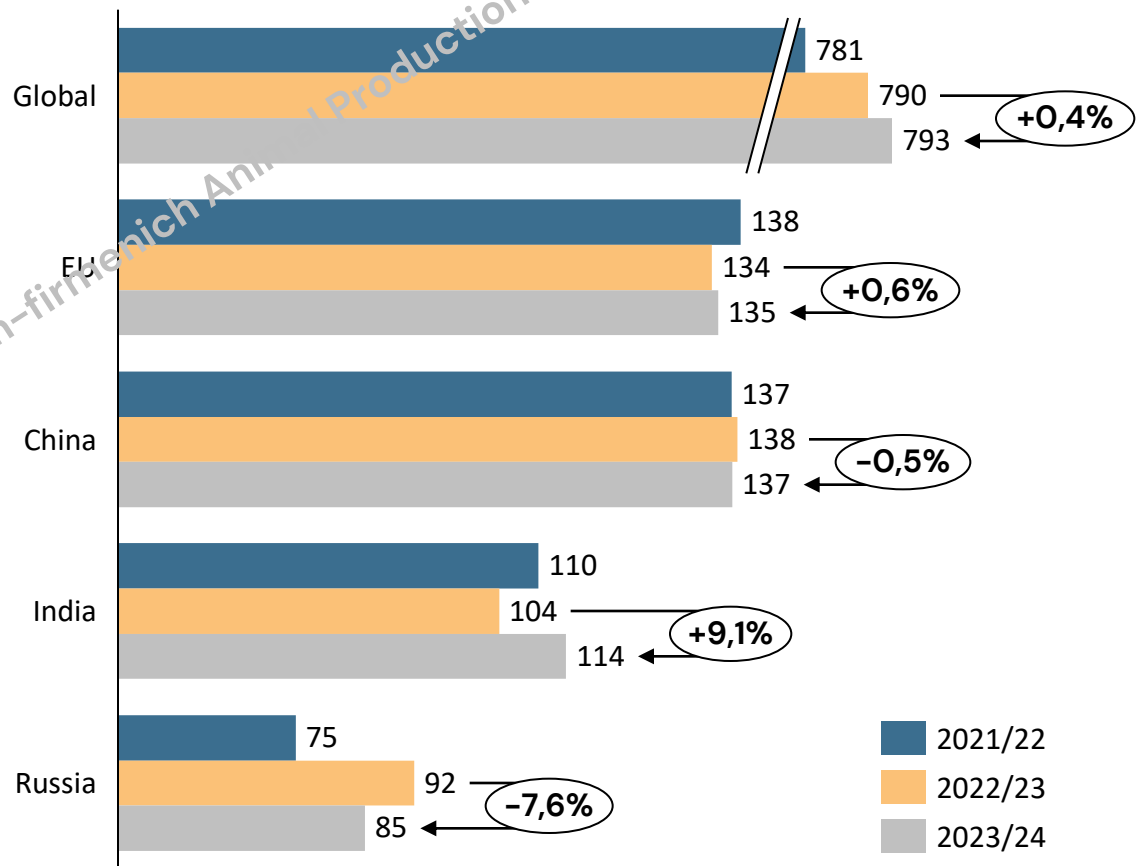
USDA has projected higher stocks-to-use ratios in the coming years



# Wheat: uncertainties in the Black Sea have boosted volatility in Chicago



Global supply (million tons)



Source: USDA, Bloomberg  
 Note: (i) Future contracts on September 28th

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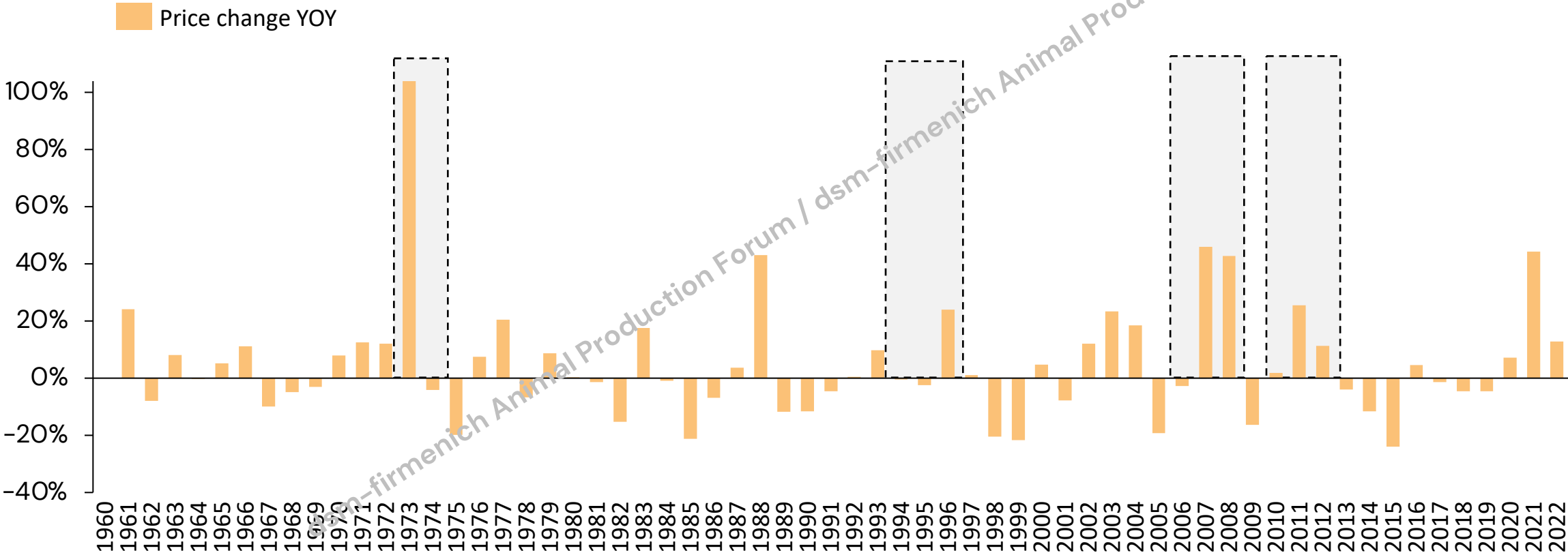
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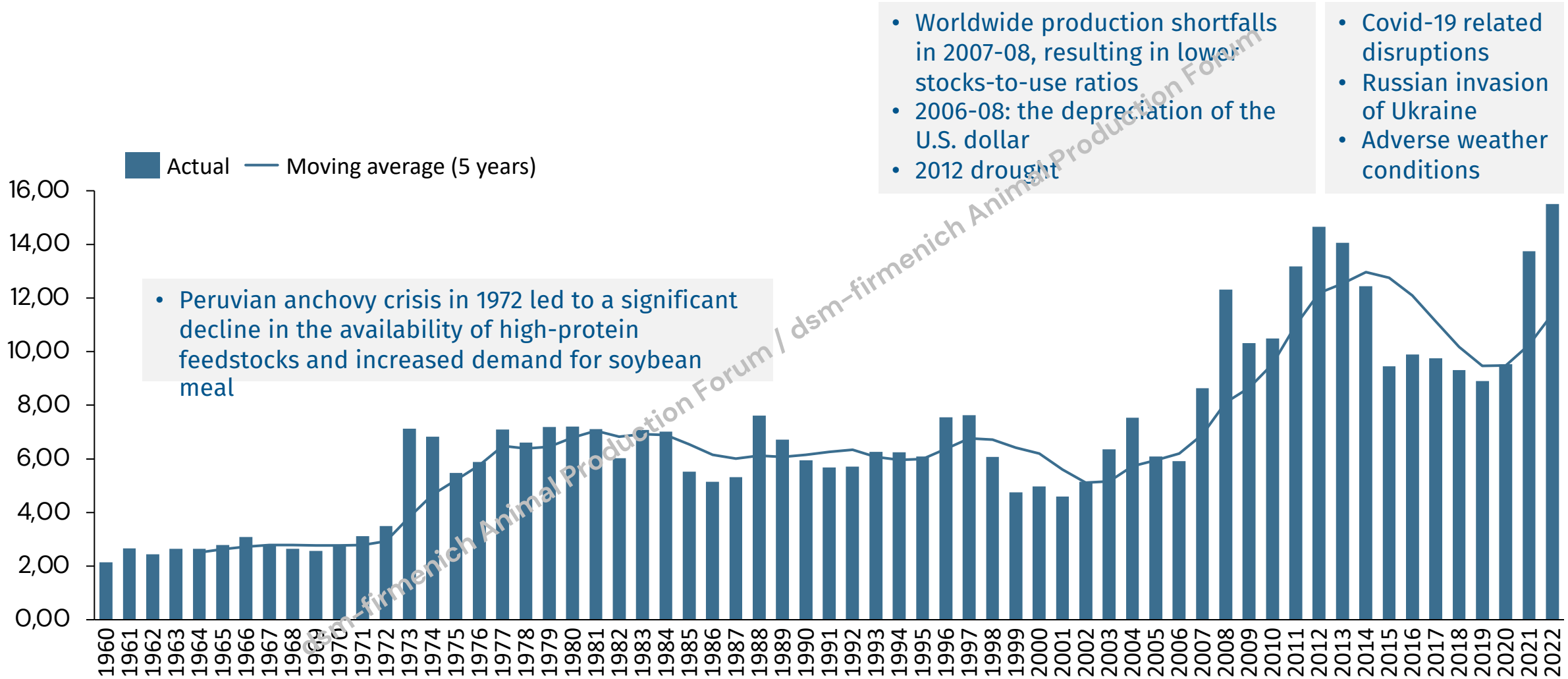
# Soybean price change YOY in selected periods

- The selected periods below saw record prices of at least two of three principal field crops—wheat, corn, and soybeans—and the price increases were sustained for two or more consecutive years
- Those periods were followed by declines in prices



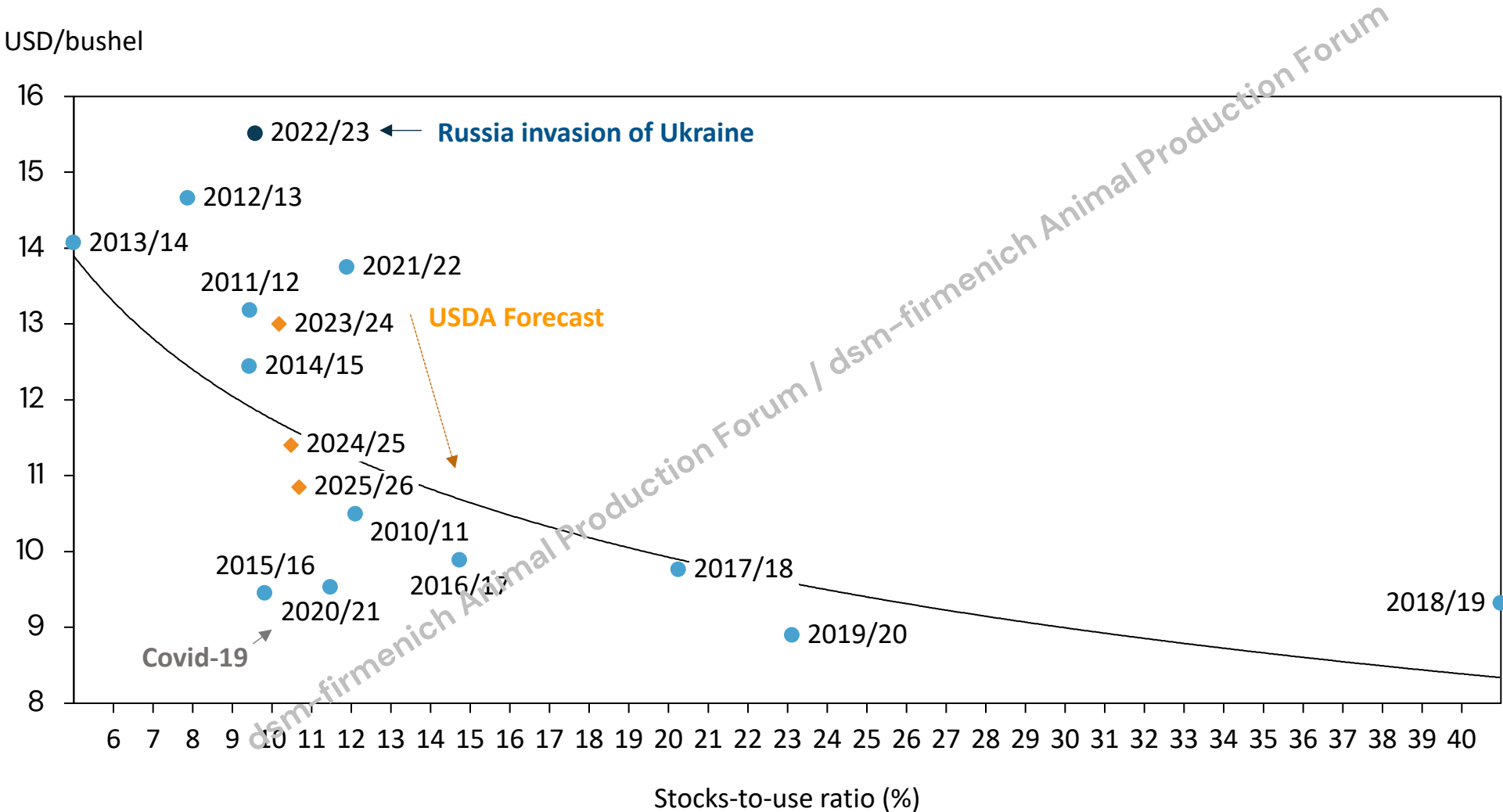
# Historical soybean prices

3 consecutive years with growing prices brought soybean to record levels in 2022

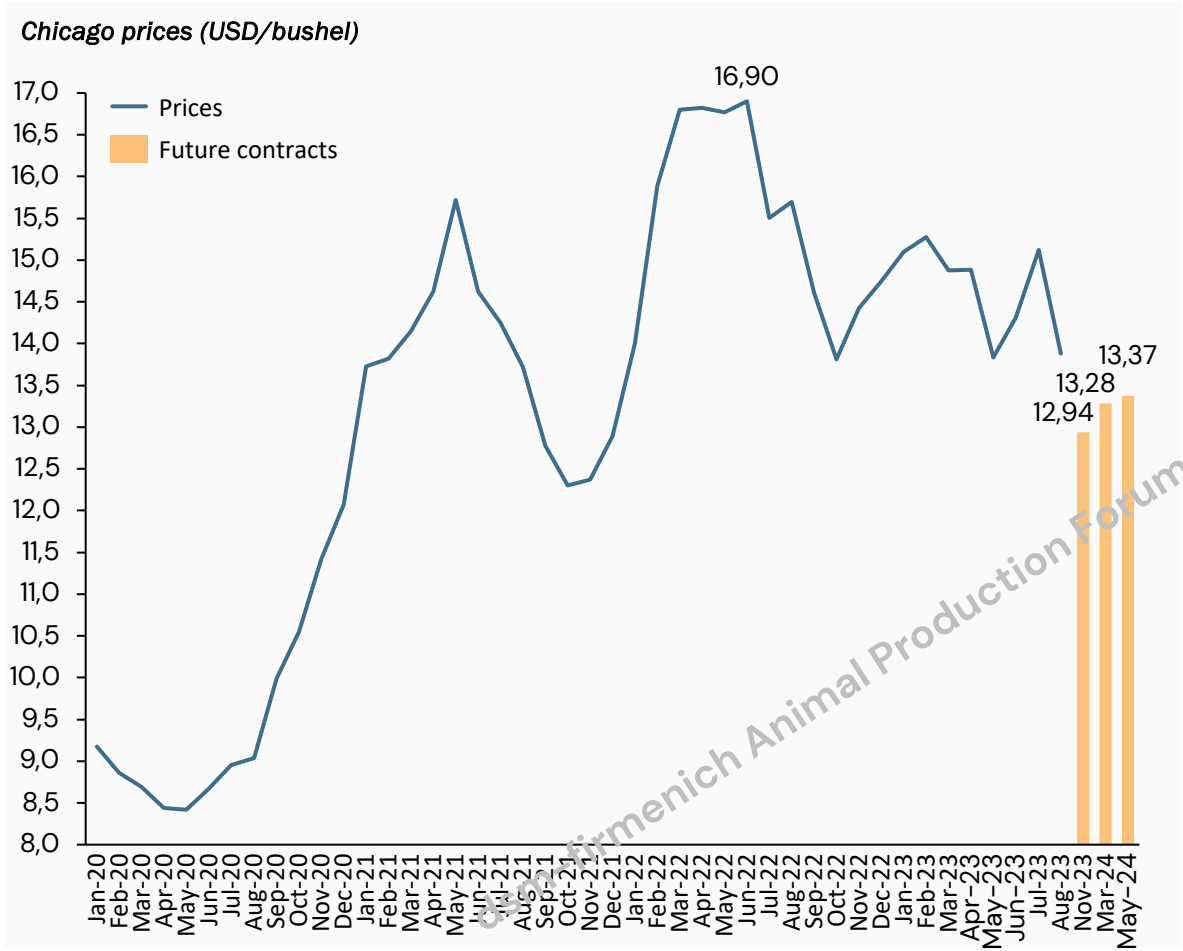


# Stocks-to-use ratio and soybean prices in the USA

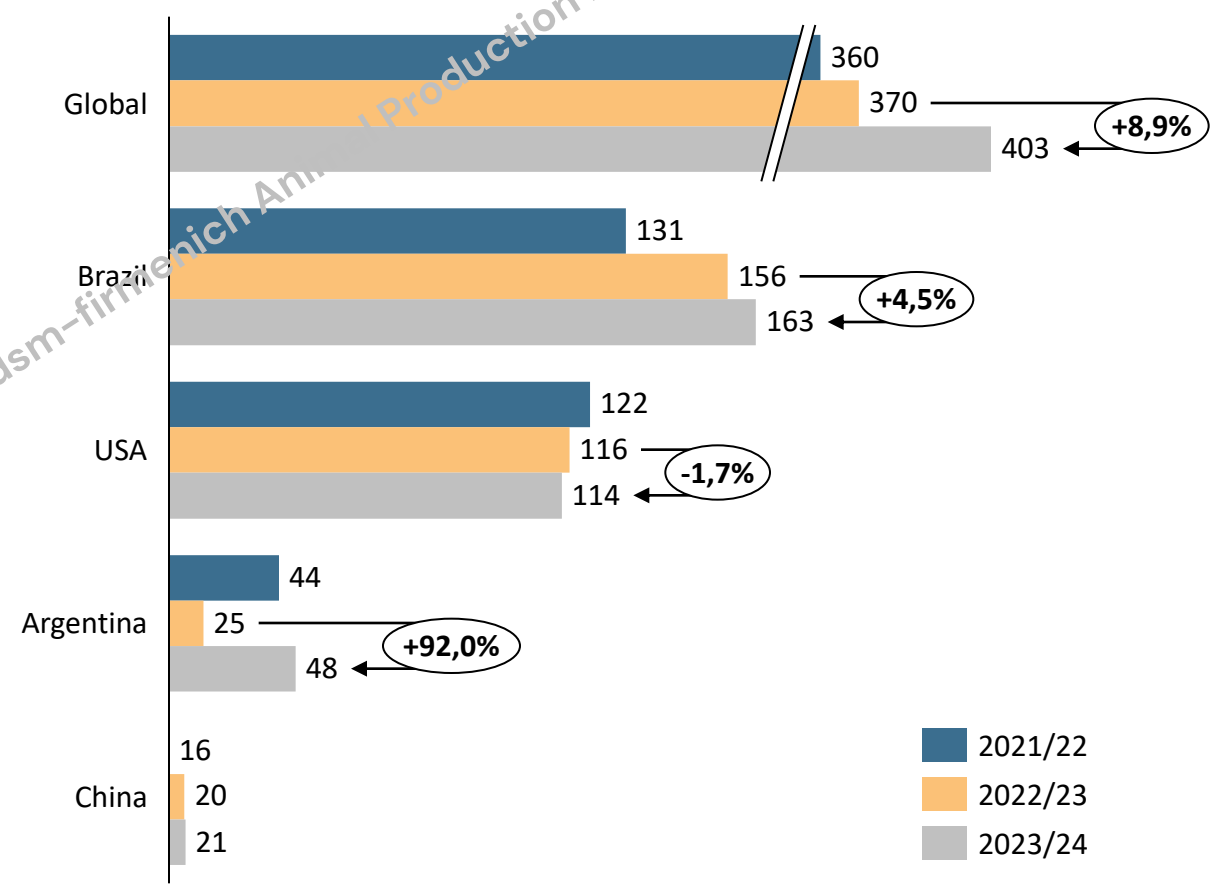
Soybean stocks-to-use ratio is projected to increase, but at a lower pace compared to corn



# Soybean production is expected to increase by almost 9% in the 2023/2024 season

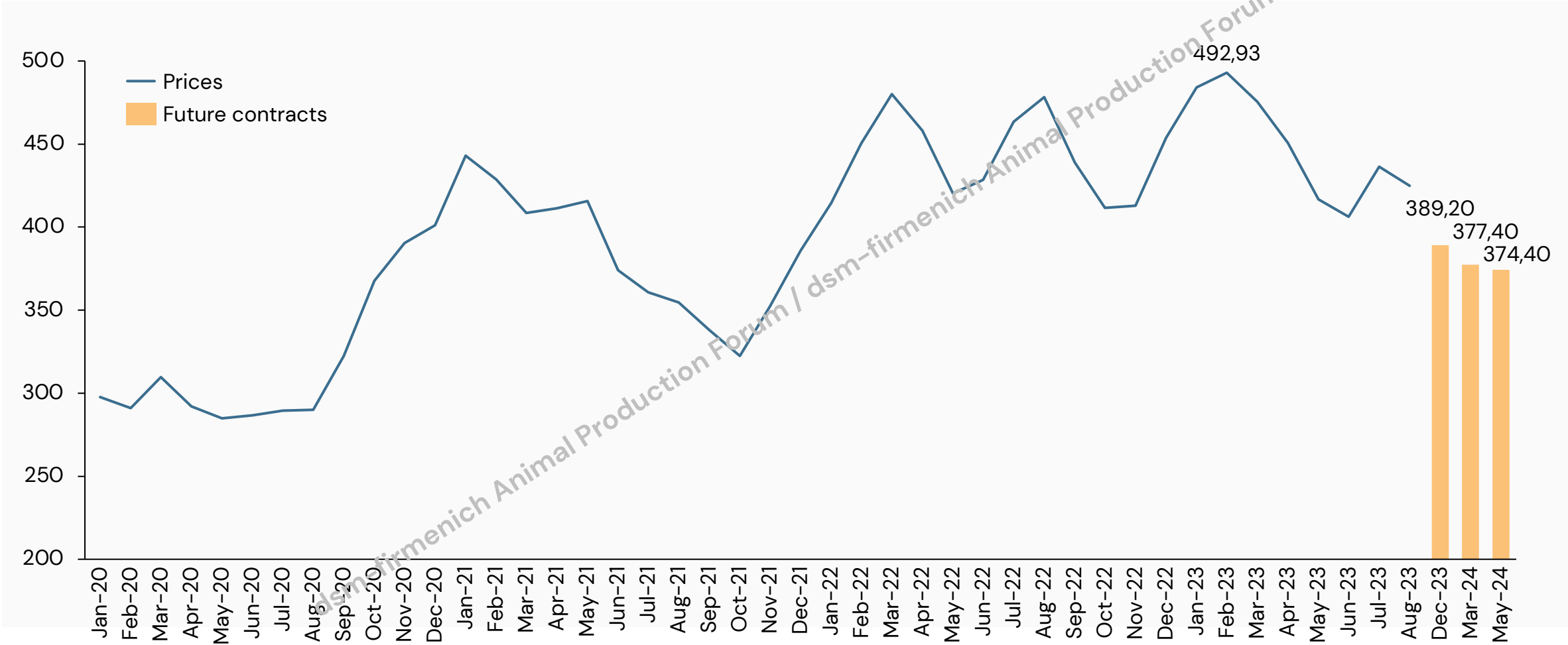


**Global supply (million tons)**



# Soymeal prices following soybean

Chicago prices (USD/ton)



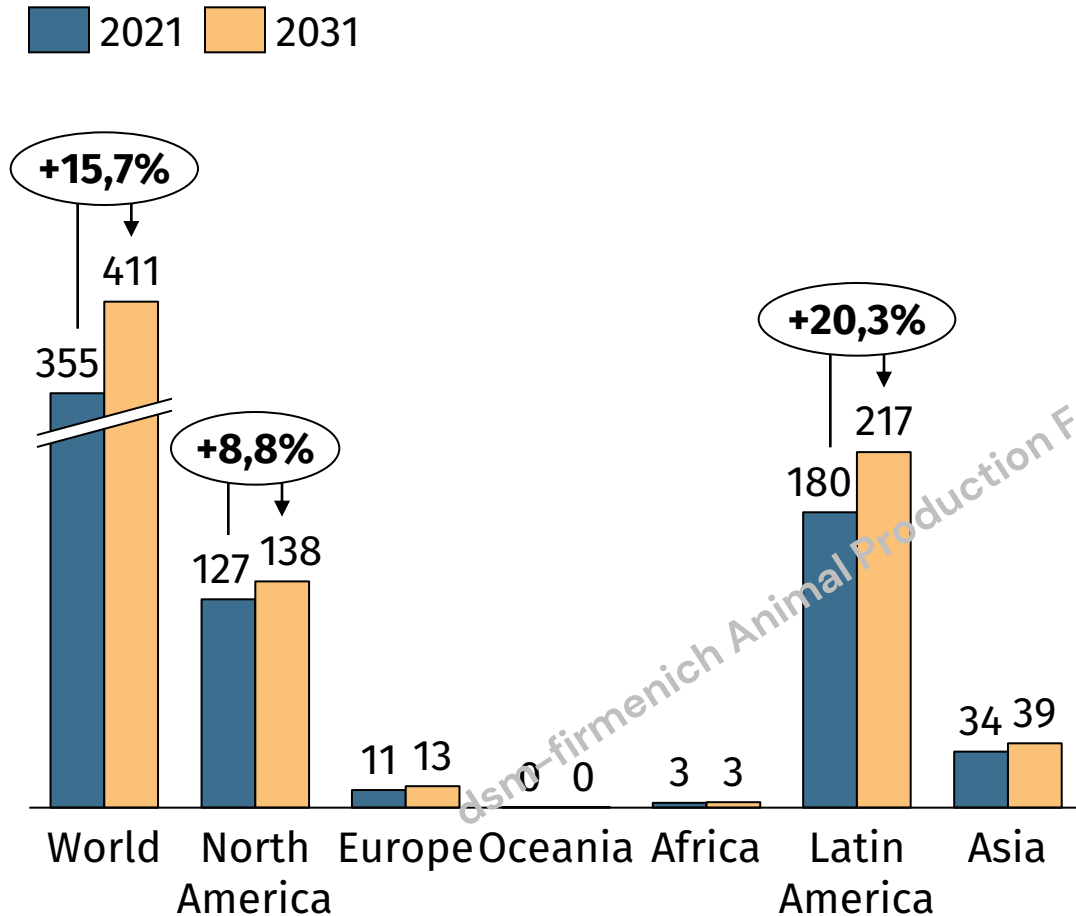
Source: USDA, Bloomberg  
 Note: (i) Future contracts on September 28<sup>th</sup>



# Soybean projections (2021 – 2031)

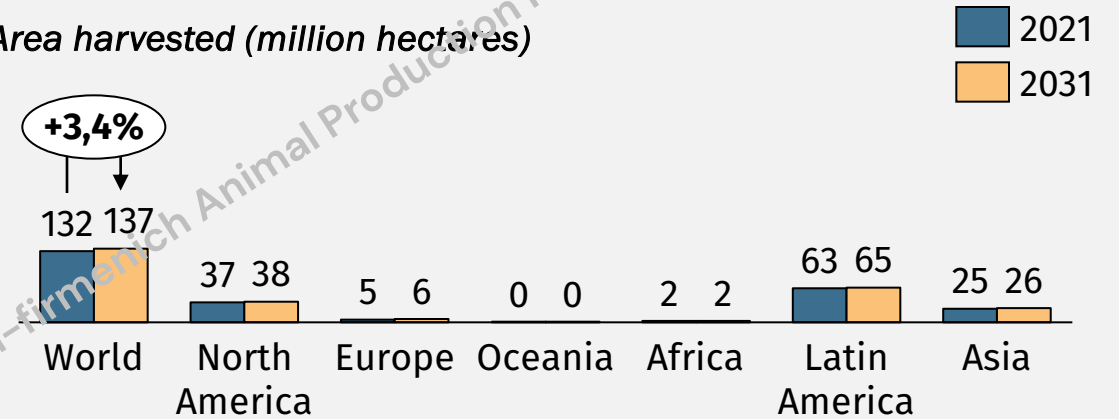
Yields are projected to improve significantly in LATAM

## Soybean production (million tons)

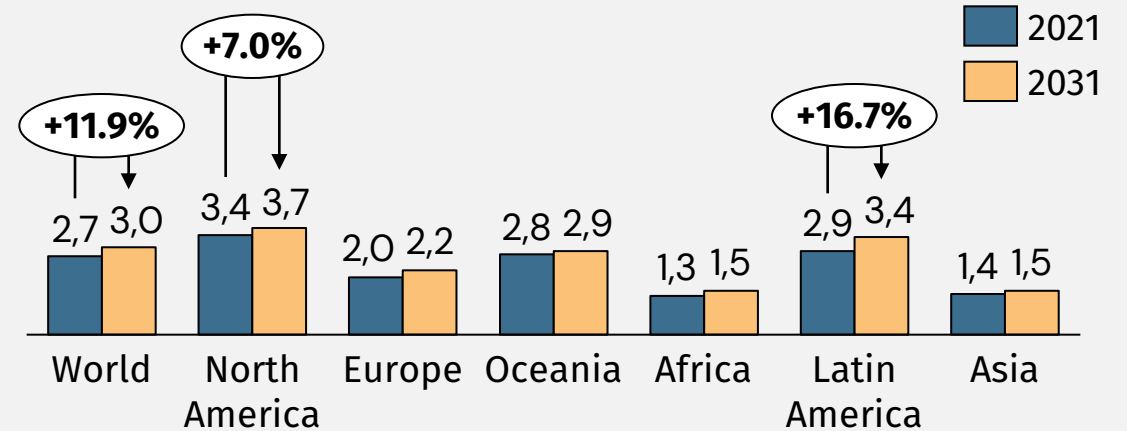


## Area and yield changes

### Area harvested (million hectares)



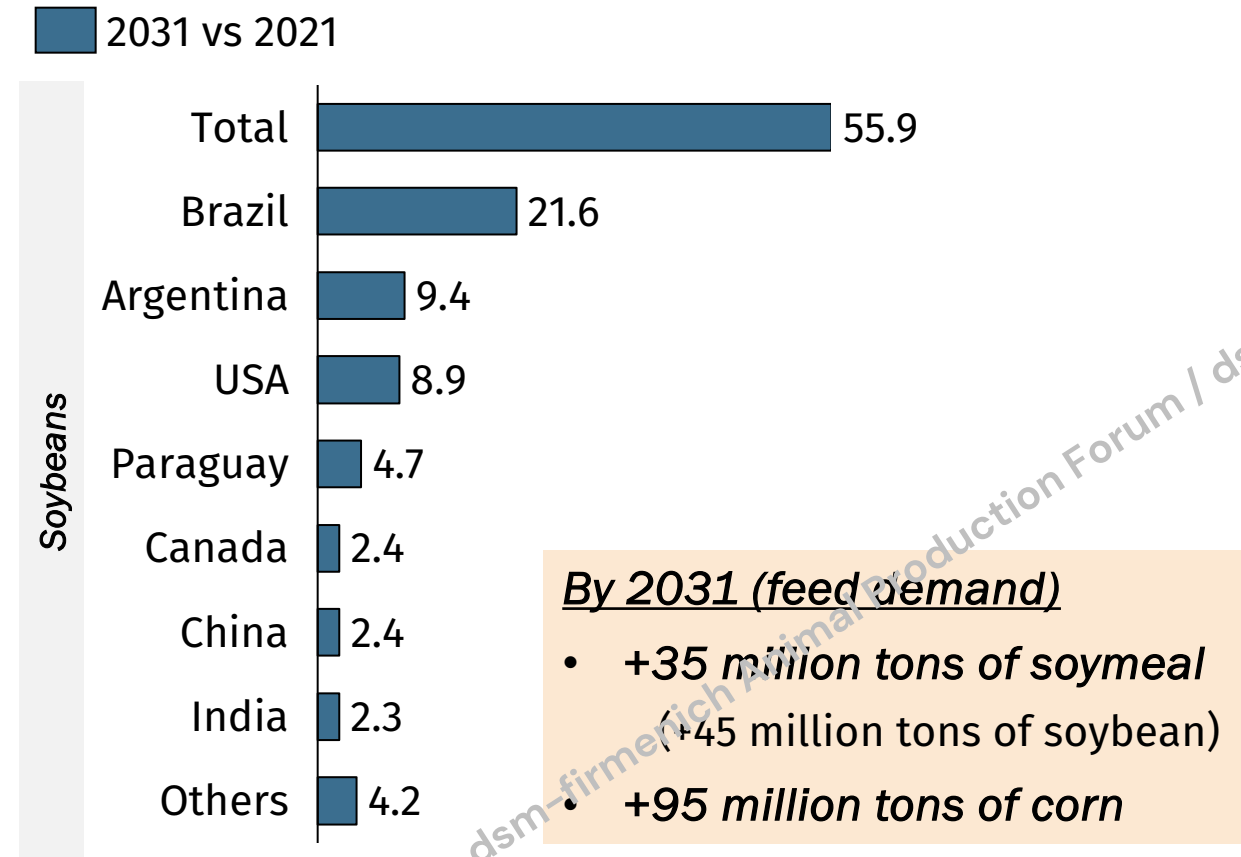
### Yields (tons per hectare)



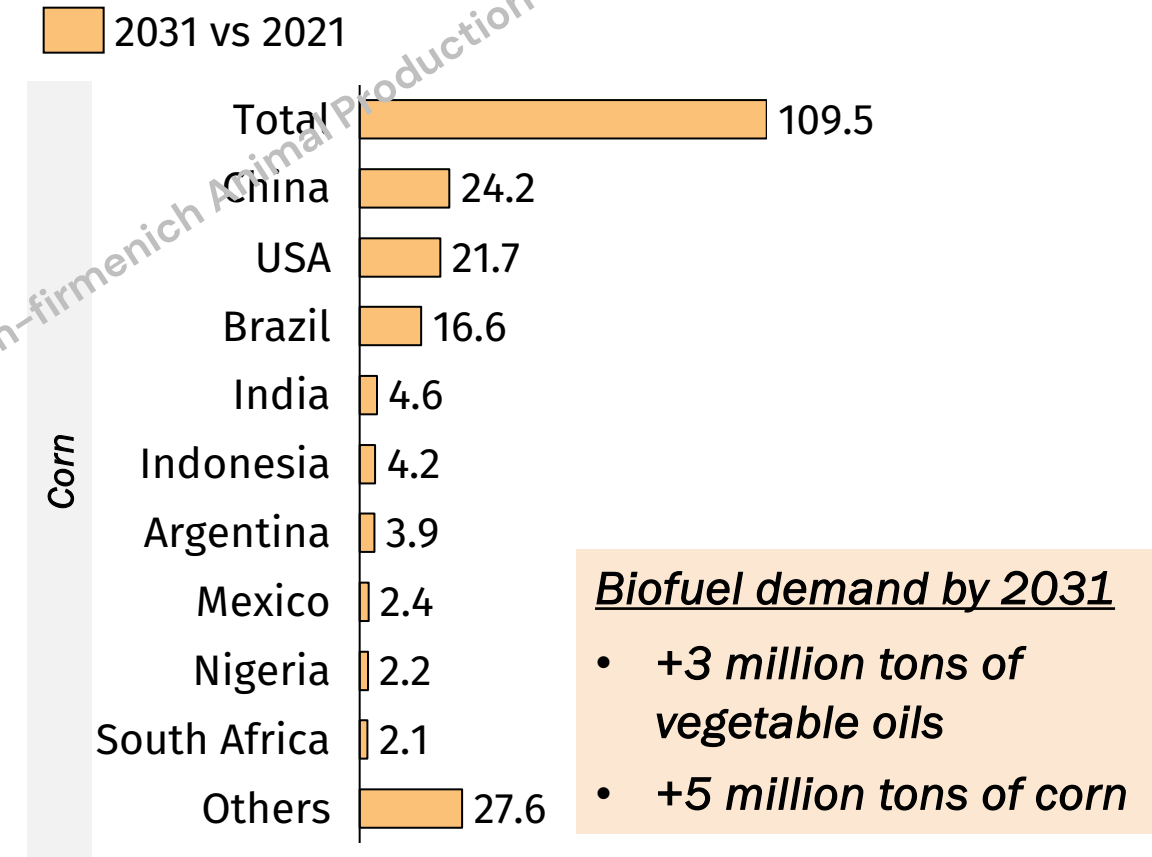
# Will there be grains and oilseeds for feed and biofuel?

Will there be grains and oilseeds for feed and biofuel?

*Soybean additional production (million tons)*



*Corn additional production (million tons)*



# Content

- Macro trends
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    - Corn
    - Wheat
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# Key takeaways

While history provides some insights, the past does not necessarily predict the future

## Historically

- The period of high prices during the 1970s ended as growth in world consumption slowed because of declining global economic expansion and oil prices, which reduced the availability of petrodollars. At the same time, global G&O production, supported by higher prices, increased faster than consumption
- In other periods, high grain and oilseed prices supported investments on innovation and/or on logistics on developing agricultural areas (e.g., South America)
- **The gains in production coupled with the slowdown in consumption caused global stocks of grains and oilseeds to grow, pressuring prices – however, prices normally stabilize at “new-normal levels”**

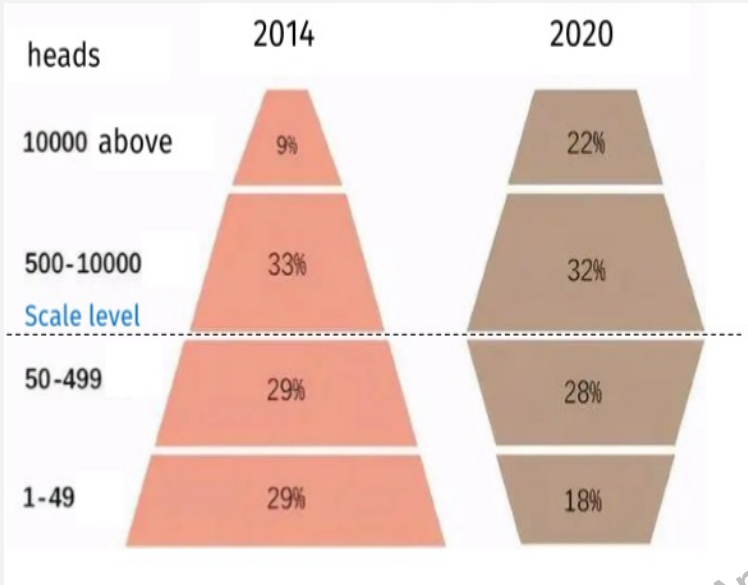
## Now

- Like other periods, in the current situation, many market adjustments are already occurring
- Soybean production is expected to increase almost 9% compared to 2022/23
- Average prices for all three crops are projected to be lower than in 2022 (although higher compared to historical averages)
- **The current market environment is significantly different than in the past and possible actions have also changed. Additionally, beginning stocks for 2023/24 are still low by historical standards**

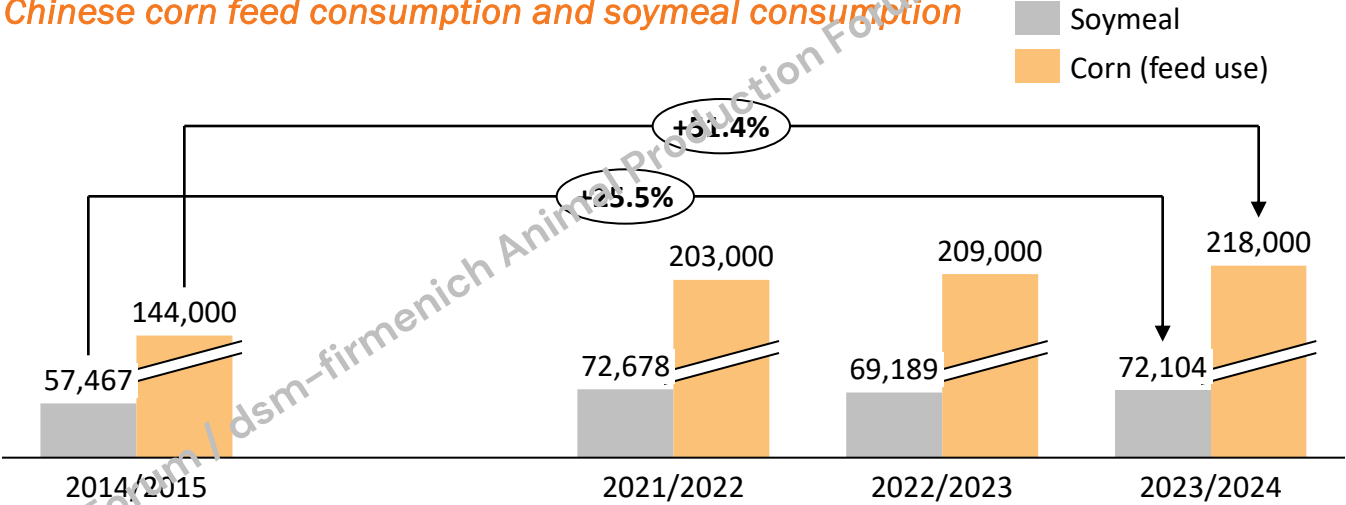
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# ASF in 2023 is still unclear, but grains consumption in China has increased significantly, reflecting the new industry structure

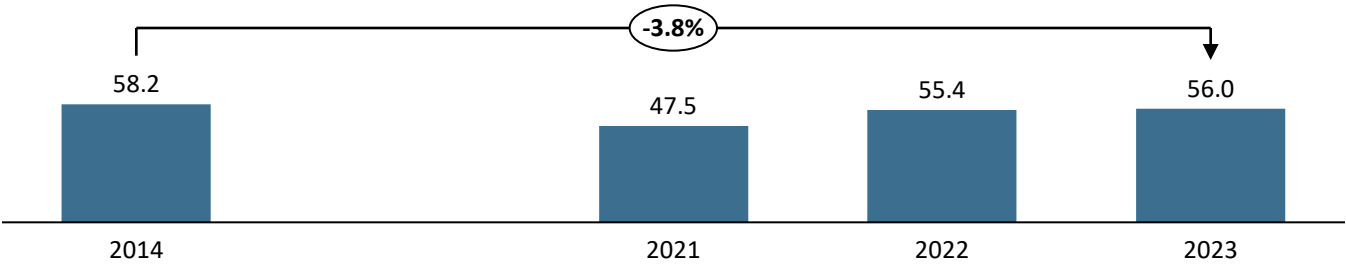
Chinese pork industry



Chinese corn feed consumption and soymeal consumption



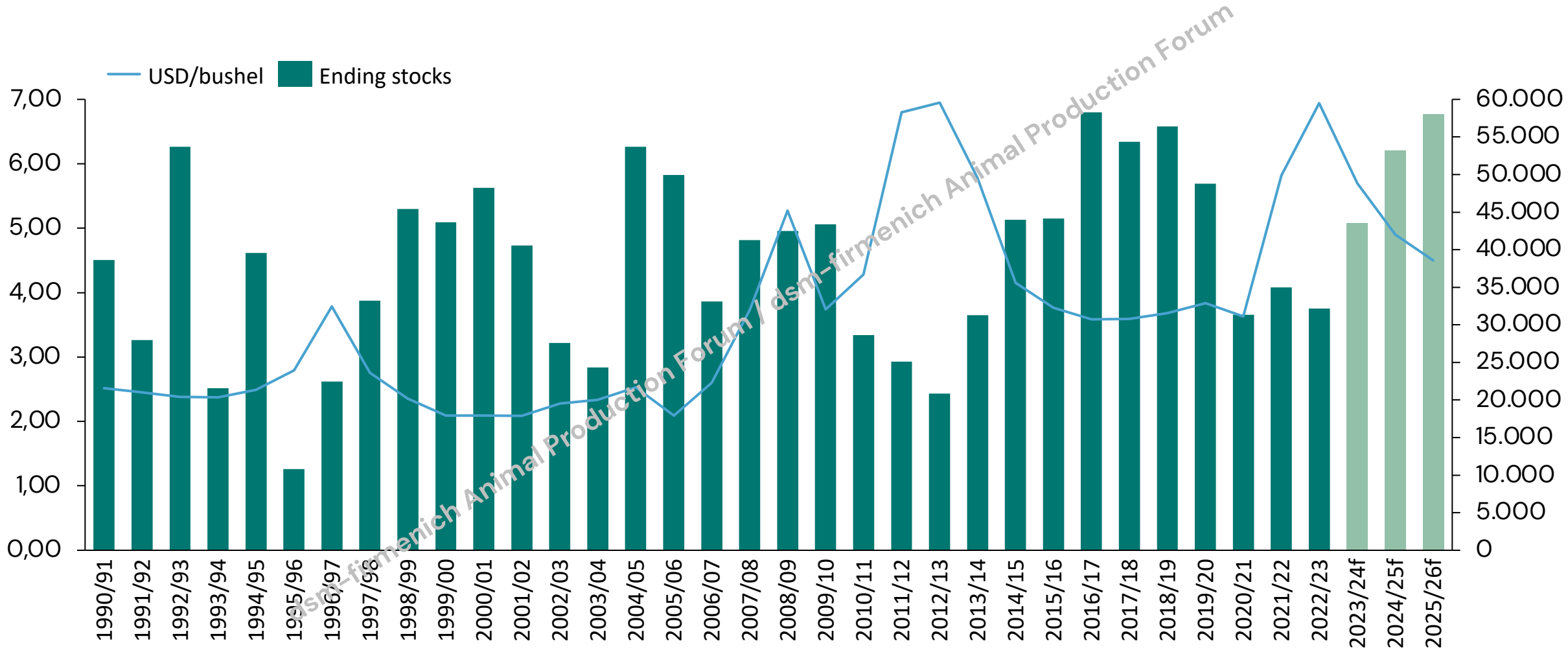
Chinese pork production



Source: USDA, DSM

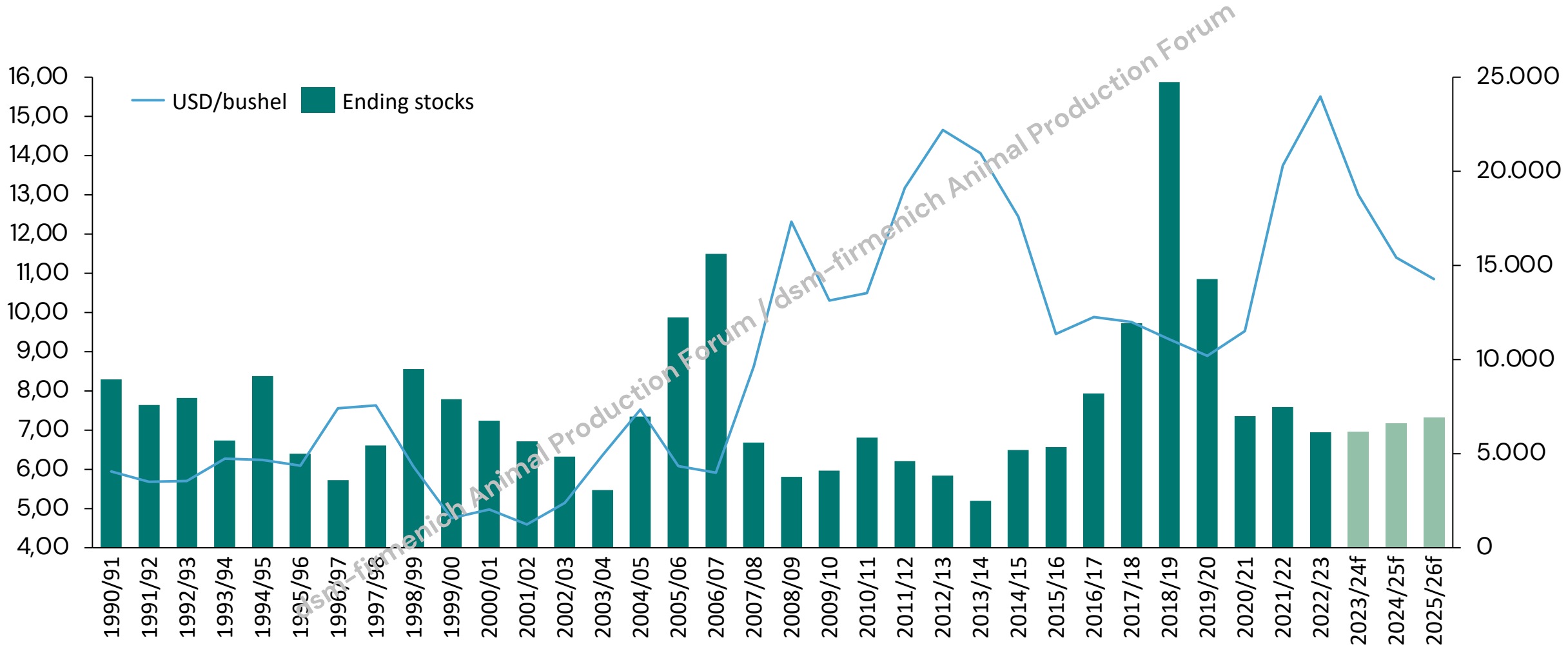
# USA ending stocks and corn prices in Chicago

The corn price is forecast to decline due to higher stocks



# USA ending stocks and soybean prices in Chicago

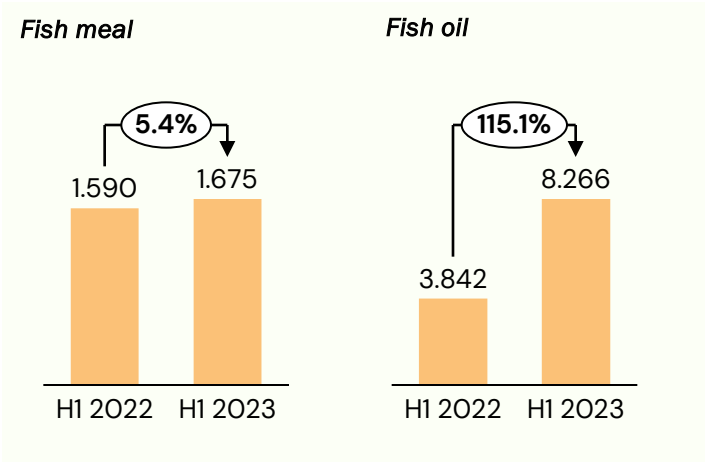
Although ending stocks will remain relatively low in the US, record crops expected in Brazil will likely pressure international prices



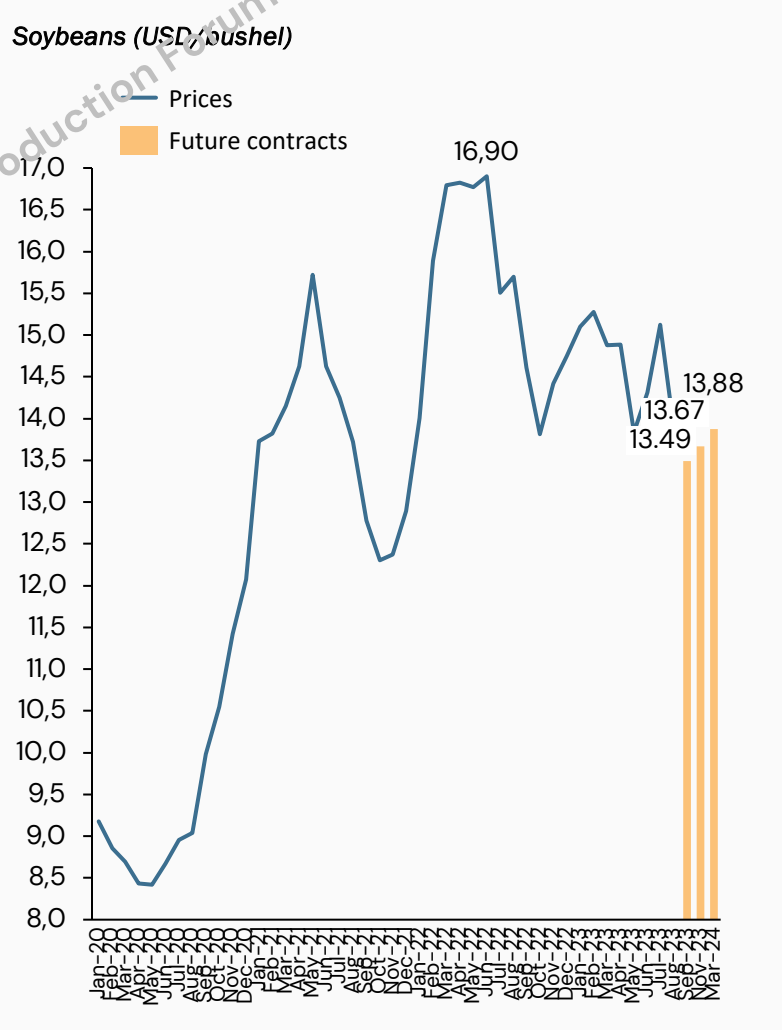
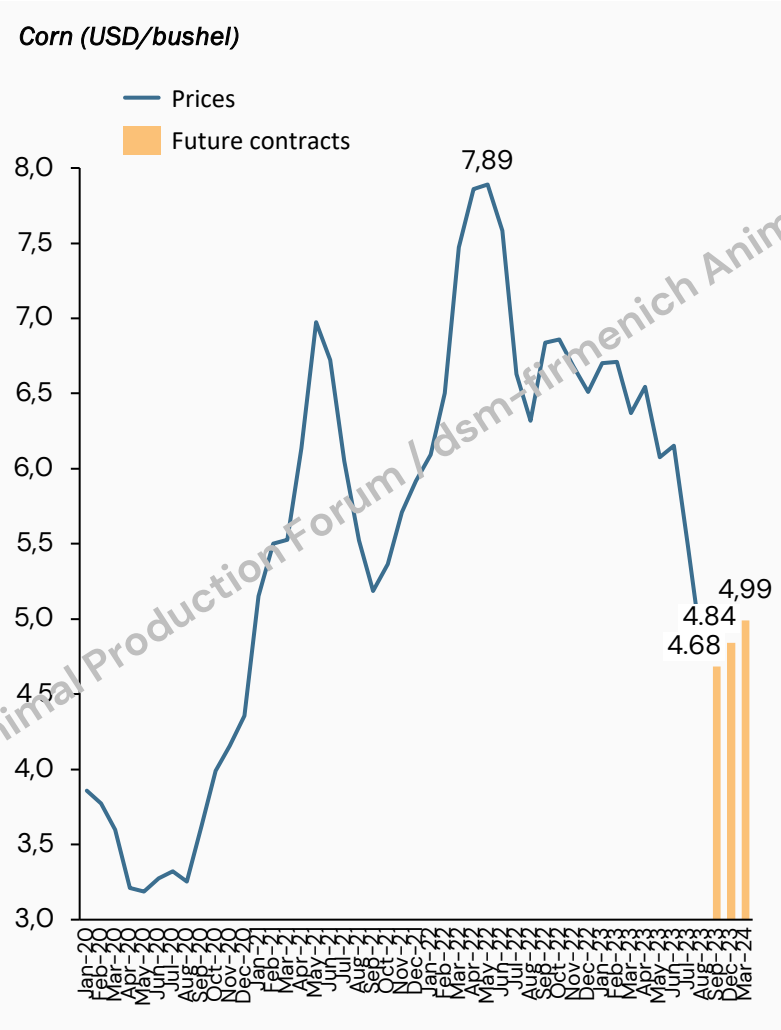


# Costs of natural ingredients: fish and grains

*Fish meal and fish oil costs (USD/ton)*  
 Reference: Chinese import prices



*Grains and oilseeds in Chicago*



**Comments**

- Corn prices in H2 23 are expected to stay 15–20% below H1 23 levels. However, still relatively high from a historical perspective.
- Soybean prices are expected to remain relatively flat during the same period, keeping high historical levels.
- Additionally, with the first fishery season canceled in Peru, fish meal and fish oil prices are expected to remain supported in H2 2023.

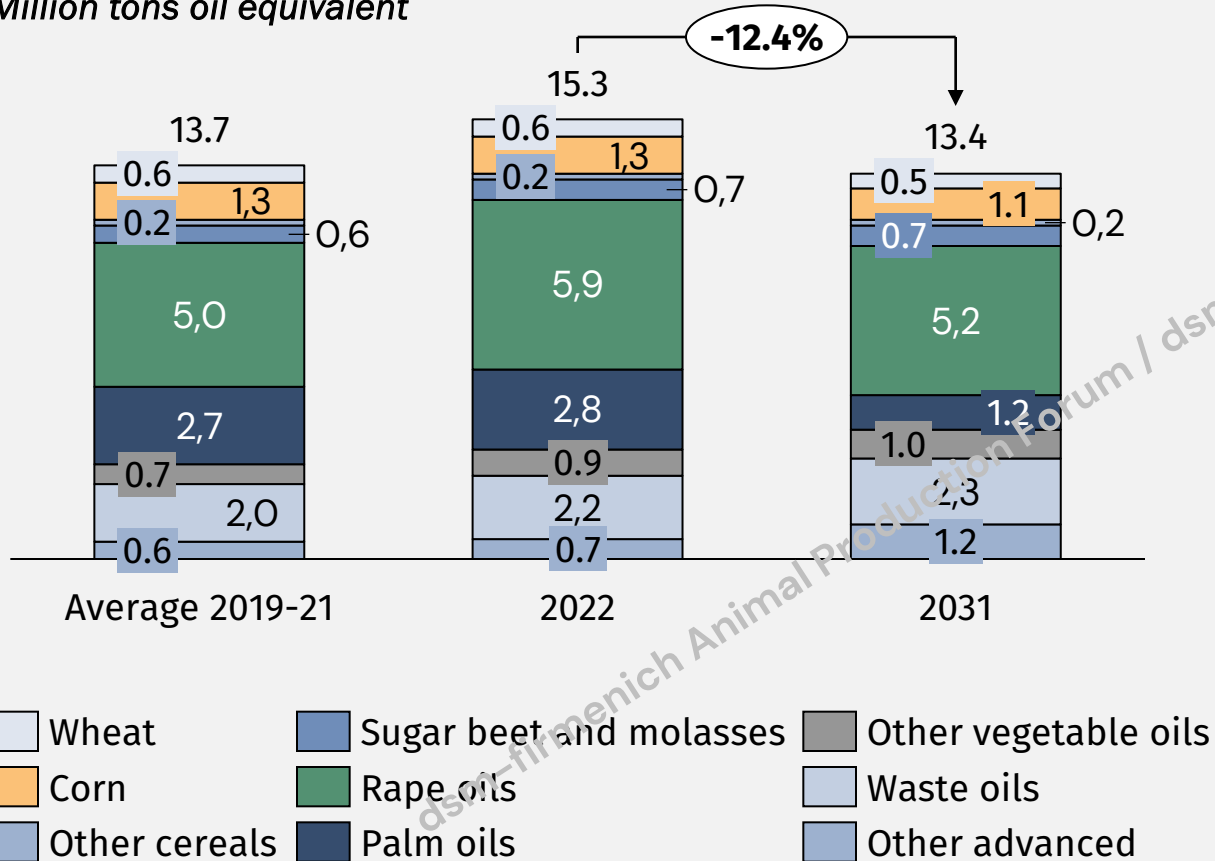
Source: USDA, Bloomberg  
 Note: (i) Future contracts on September 11<sup>th</sup>

# EU biofuel market

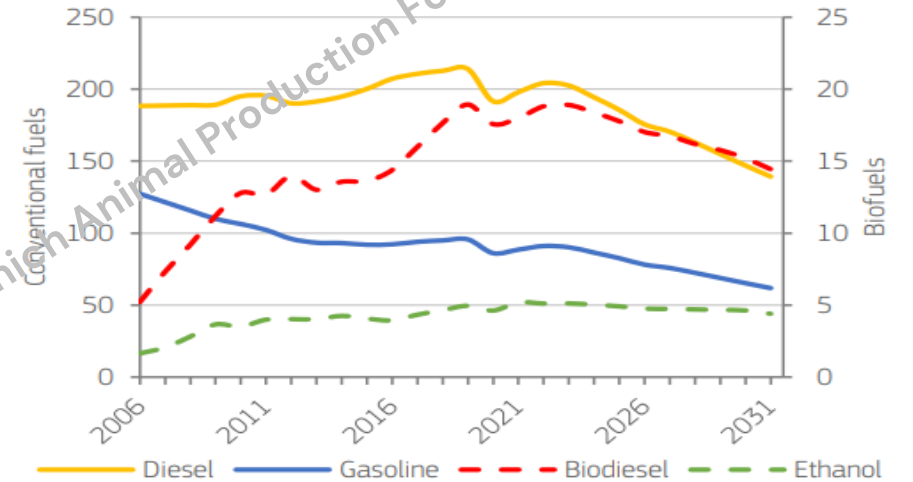
By 2030 around 40% of new cars sold globally will be electric

## EU biofuel production

Million tons oil equivalent



## EU conventional fuels and biofuels use (billion l)



## Highlights

- EU: GM Europe 100% by 2035, Ford Europe 100% by 2030 and VW 70% by 2030.
- USA: The Environmental Protection Agency proposed ambitious new car pollution rules that could require electric vehicles to account for up to two-thirds of new cars sold in the US by 2032.