



1ST EUROPEAN SORGHUM CONGRESS

WORKSHOP

CONGRESS INTRODUCTION

SNAPSHOT OF THE EUROPEAN AND GLOBAL STATE OF SORGHUM



CLASSIFICATION OF SORGHUM

LETS FOCUS ON SORGHUM FOR GRAINS !

Grain Sorghum



Forage Sorghum



Sweet Sorghum



SORGHUM VS CORN

A MATTER OF QUALITY

Figure : Typical nutrient composition of sorghum compare to corn

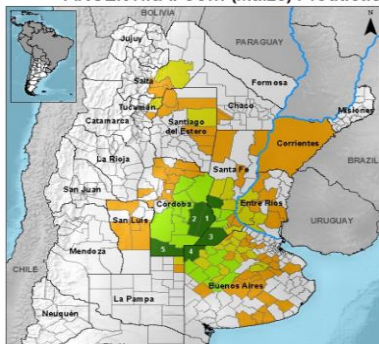
	Sorghum	Corn
Dry matter, %	89.0	89.0
Energy, kcal/lb.		
Digestible	1,533	1,598
Metabolizable	1,515	1,551
NE INRA ²	1,188	1,086
NE NRC	1,023	1,086
Crude protein, %	9.2	8.3
Calcium, %	0.03	0.03
Phosphorus, %	0.29	0.28
Available P, %	0.058	0.039
Crude fat, %	2.9	3.9
Linoleic acid, %	1.13	1.92
Crude fiber, %	2.4	2.15
NDF, %	18.0	9.6
ADF, %	8.3	2.8
Total amino acids, %		
Lysine	0.22	0.26
Isoleucine	0.37	0.28
Leucine	1.21	0.99
Methionine	0.17	0.17
Cysteine	0.17	0.19
Threonine	0.31	0.29
Tryptophan	0.10	0.06
Valine	0.46	0.39

- As much energy as corn but more:
- Protein
- Amino acids

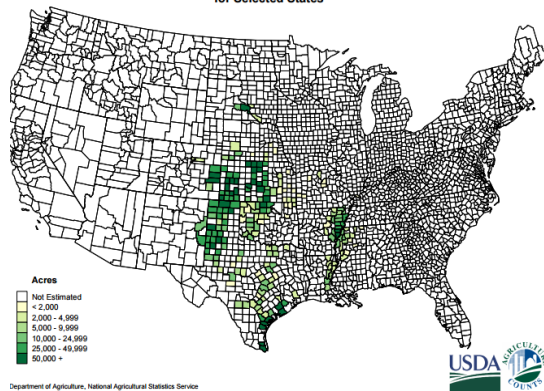
SORGHUM: AN INTERESTING ALTERNATIVE TO CORN

CORN

ARGENTINA: Corn (Maize) Production

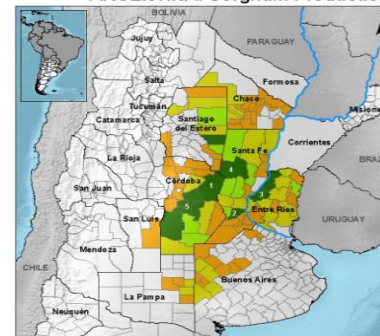


Sorghum for Grain 2015
Harvested Acres by County
for Selected States

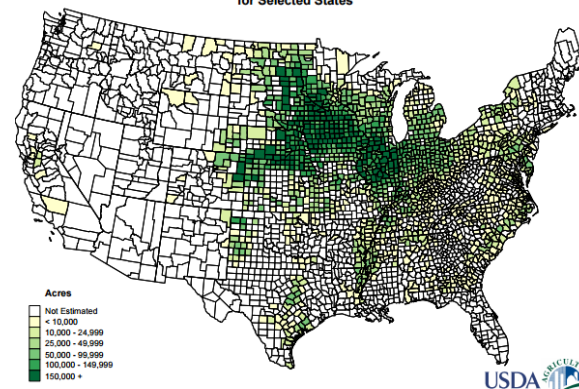


SORGHUM

ARGENTINA: Sorghum Production



Corn for Grain 2015
Harvested Acres by County
for Selected States



Water Scarcity

Marginal Land

Western US

Corn

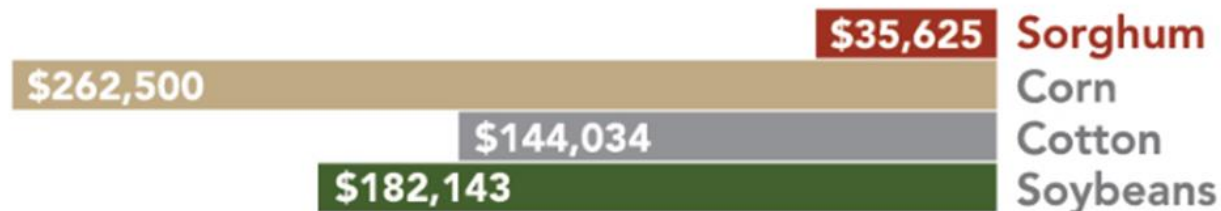
Sorghum



MORE BENEFITS TO GET WITH SORGHO THAN CORN IN DRY AREAS



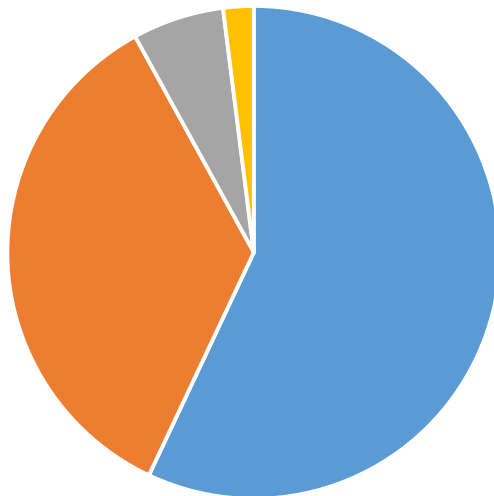
TOTAL SEED COST



NC Kansas Rainfed		
Category	Corn	Sorghum
Yield (bu/acre)	130	120
Price per bu	3.83	4.58
Total Revenue	497.90	549.60
Seed	93.60	18.90
Pesticides	50.01	49.30
Fertilizer	119.67	104.03
Machinery & Other	278.94	268.47
Total	542.22	440.69
Return over Costs	(44.32)	108.90

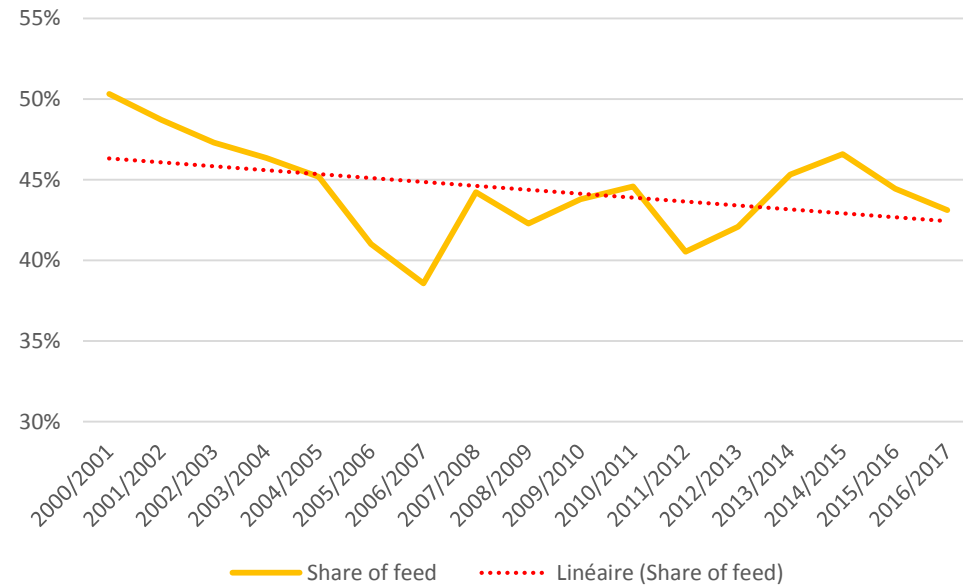
MOSTLY USED FOR HUMAN CONSUMPTION

Sorghum utilization (%)



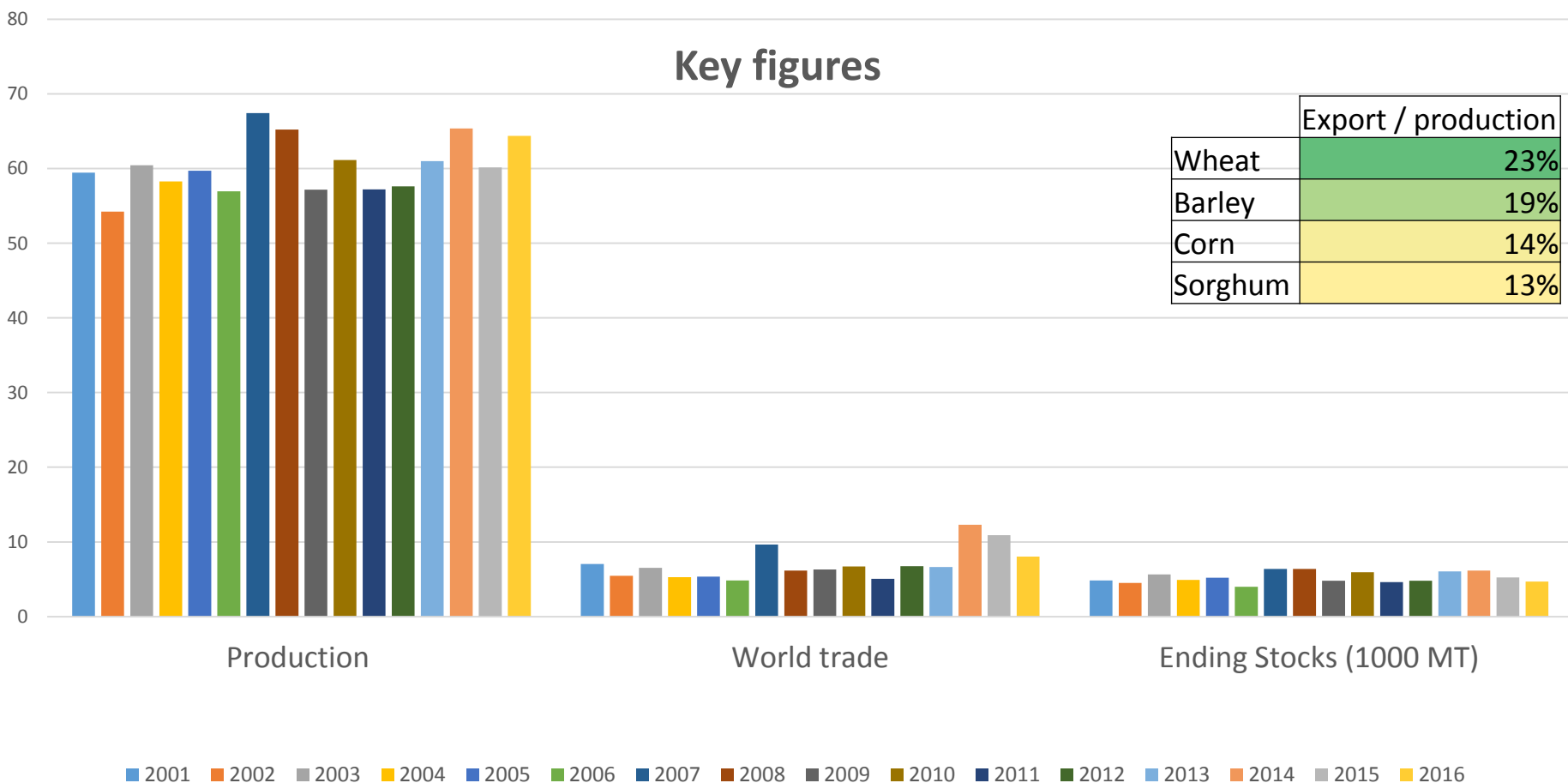
■ Human consumption ■ Poultry ■ Alcohol ■ seed

Share of feed use (% of total use)

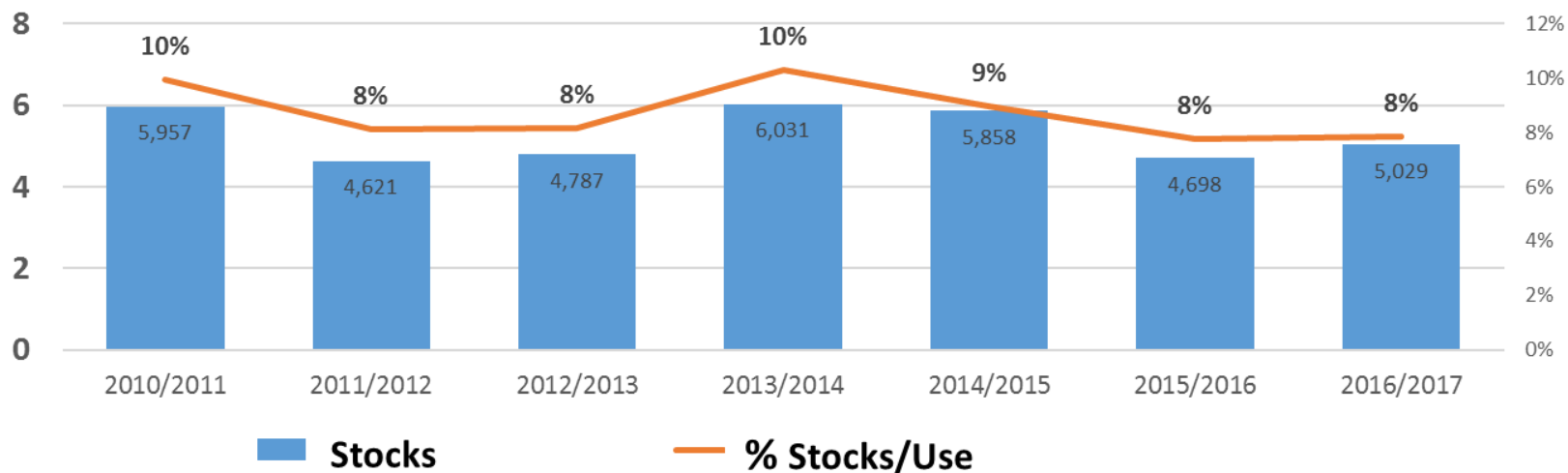
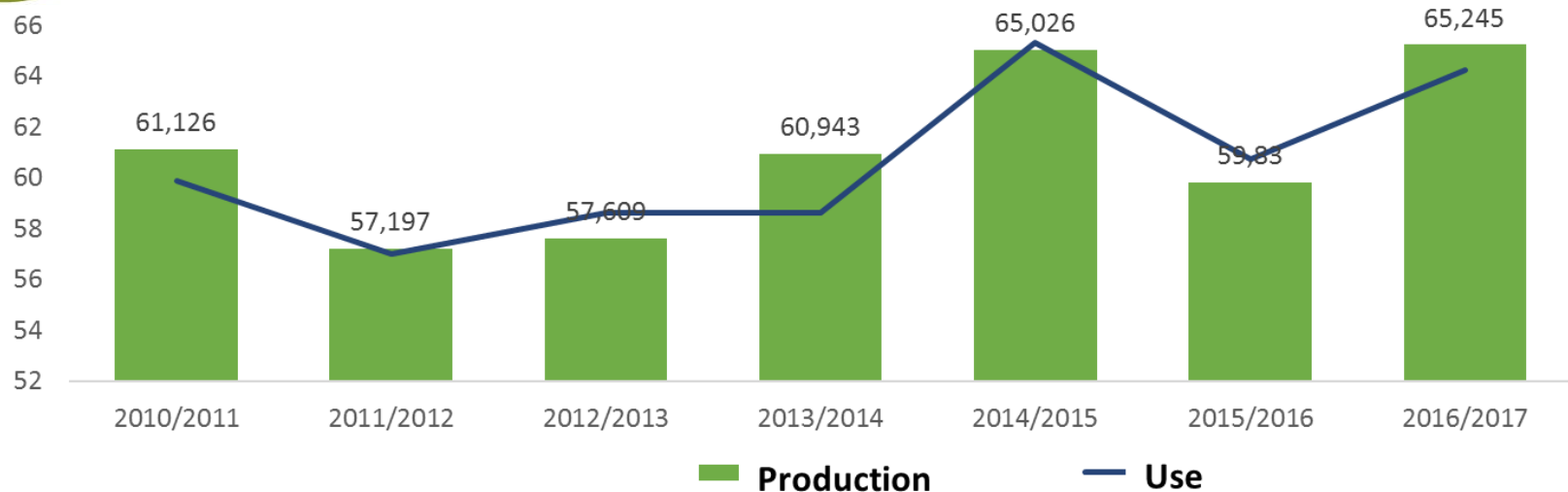


WHAT ABOUT FUNDAMENTALS?

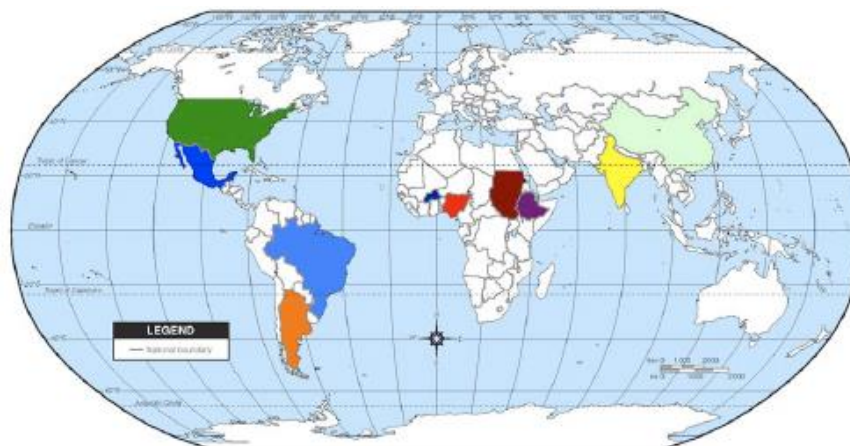
ONE KEY WORD = STABILITY



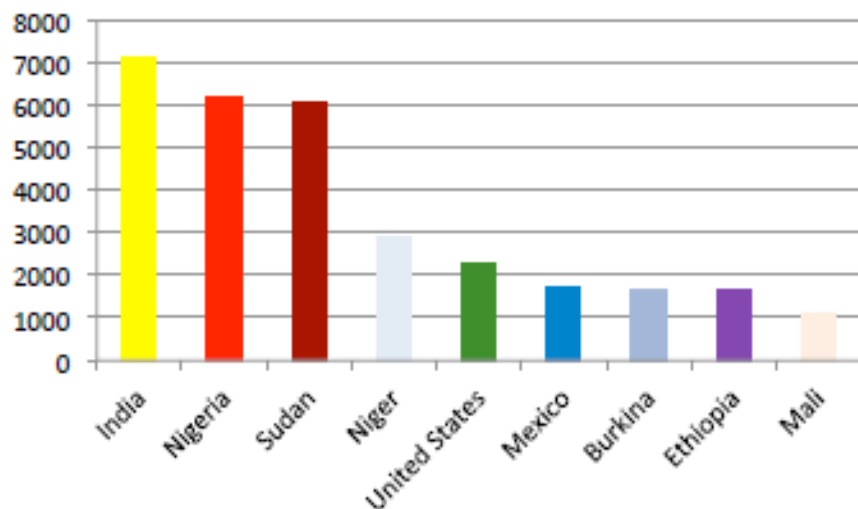
RECORD OUTPUT IN 2016



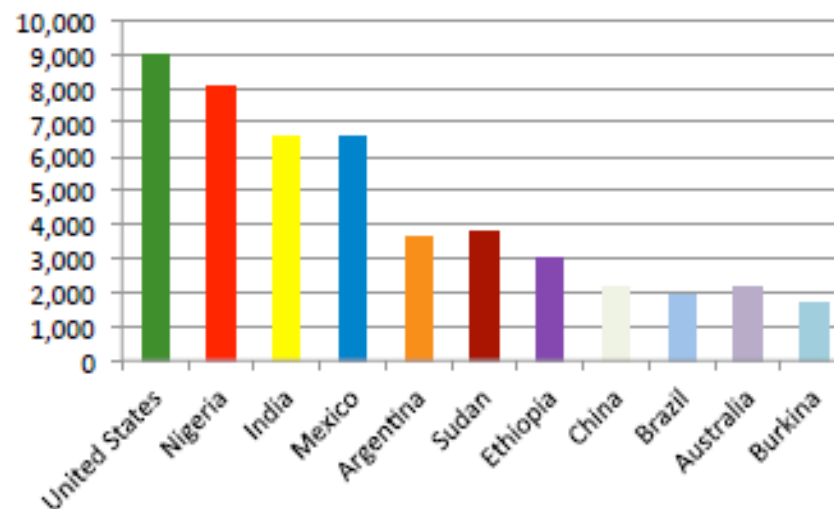
US AS THE MAIN PRODUCER



Harvested Area (1000 HA)



Production (1000MT)



CHINESE AS FIRST CONSUMER

IT SUGGESTS A SIGNIFICANT FLOW OF GOODS

Production (1000 MT)

1 <u>United States</u>	12,408.00
2 <u>Mexico</u>	6,500.00
3 <u>Nigeria</u>	6,500.00
4 <u>India</u>	5,500.00
5 <u>Sudan</u>	5,500.00
6 <u>Ethiopia</u>	3,700.00
7 <u>Argentina</u>	3,400.00
8 <u>China</u>	3,200.00
9 <u>Australia</u>	2,200.00
10 <u>Brazil</u>	2,000.00



Domestic Consumption (1000 MT)

1 <u>China</u>	8,800.00
2 <u>Mexico</u>	7,200.00
3 <u>Nigeria</u>	6,400.00
4 <u>United States</u>	5,588.00
5 <u>Sudan</u>	5,500.00
6 <u>India</u>	5,400.00
7 <u>Ethiopia</u>	3,650.00
8 <u>Argentina</u>	2,950.00
9 <u>Brazil</u>	1,900.00
10 <u>Burkina Faso</u>	1,800.00



A BIPOLAR ORGANISATION

73%

Rank Country

- 1 United States
- 2 Argentina
- 3 Australia
- 4 Ukraine
- 5 Nigeria
- 6 India
- 7 Kenya
- 8 Ethiopia
- 9 Brazil
- 10 South Africa

Exports (1000 MT)



69%

Rank Country

- 1 China
- 2 Japan
- 3 Mexico
- 4 EU-27
- 5 Chile
- 6 Kenya
- 7 Sudan
- 8 Taiwan, Province Of China
- 9 Ethiopia
- 10 Pakistan

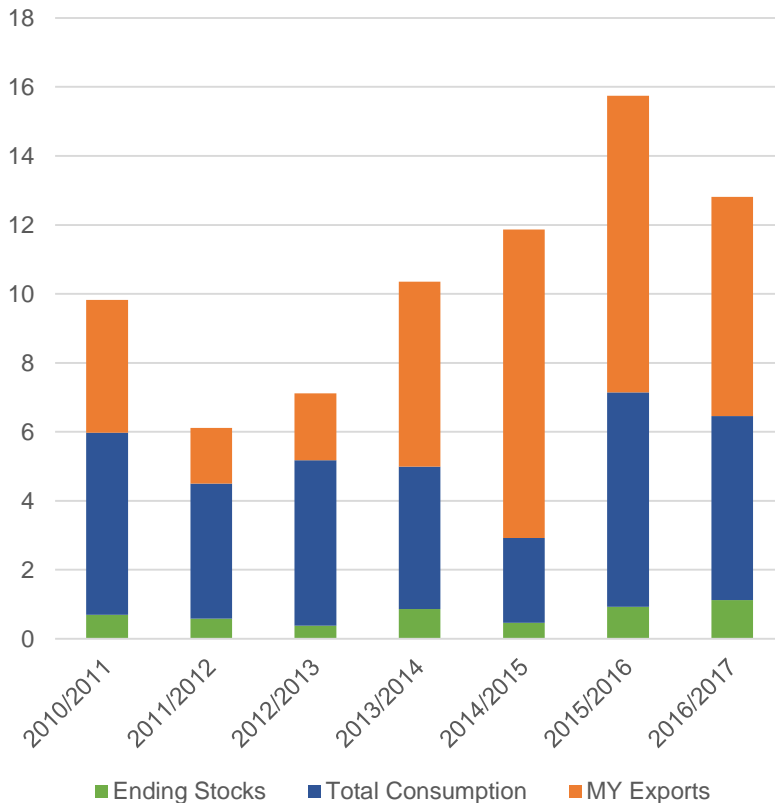
Imports (1000 MT)



US: BUSINESS ORIENTED!

READY TO SACRIFICE THE CONSUMPTION FOR EXPORT

US Sorghum use

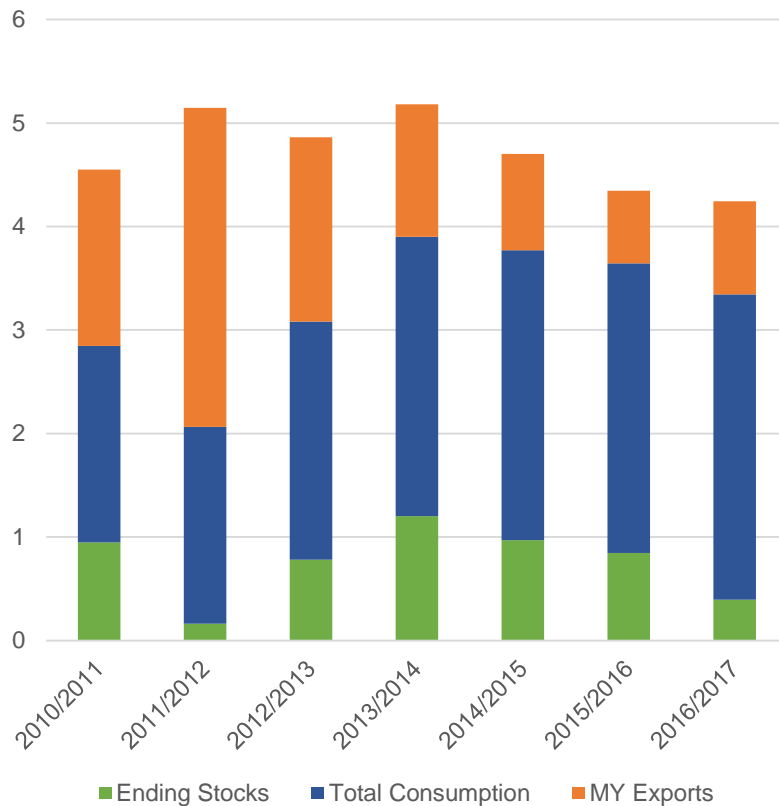


- Export oriented production
- Capacity of the US to switch for other coarse grain when the demand for export is increasing

ARGENTINA: LESS PRESENT

REDUCING ITS SHARE ON THE INTERNATIONAL SCENE

Argentinian Sorghum use

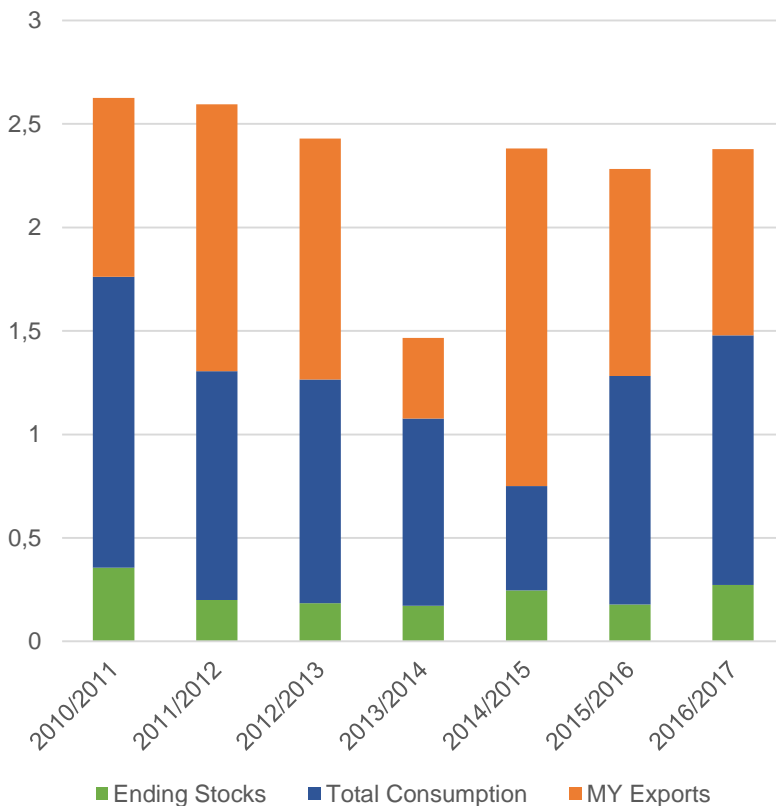


- Export volumes are weaker than 1Mt/year
- Stable internal consumption
- Production decline as a explanation for export reduction

AUSTRALIA: THIRD EXPORTER

+/- 1MT: STABLE EXPORT

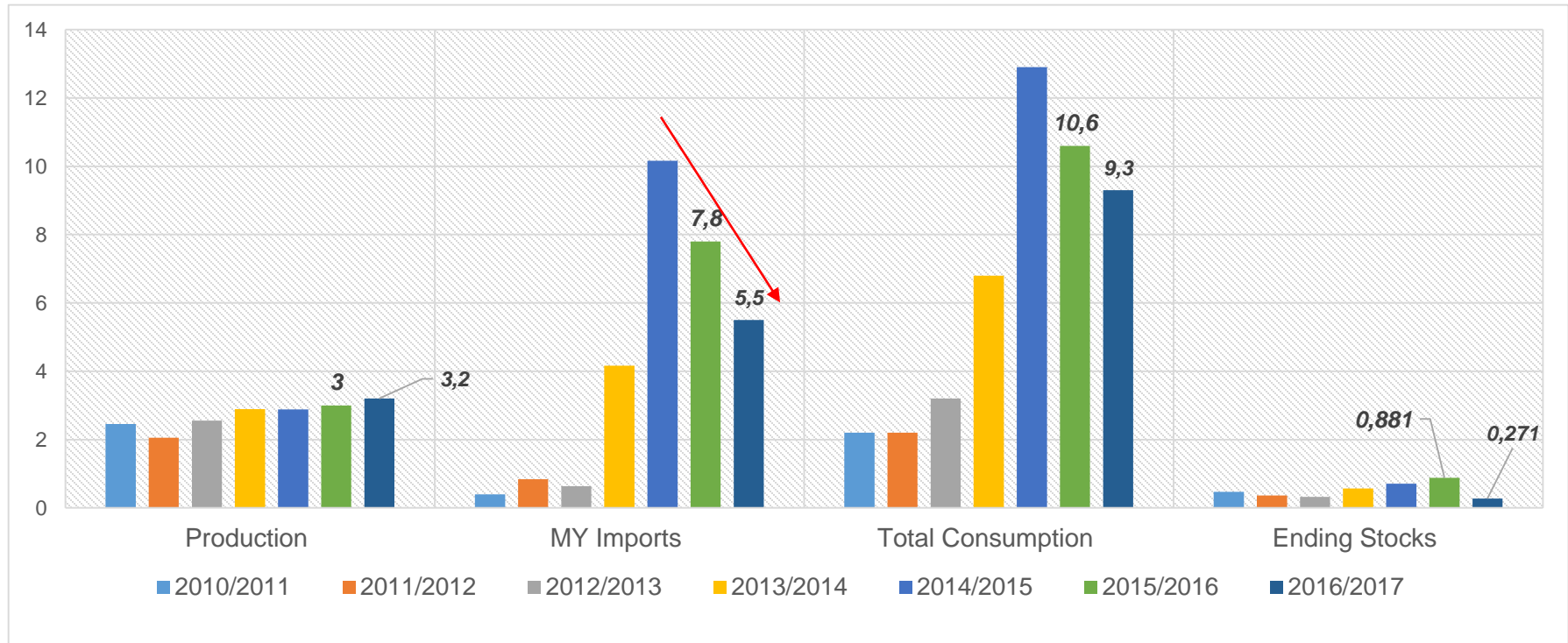
Australian Sorghum use



- Weak production
- Significant reducing in case of drought
- Ability to be always present on the international scene

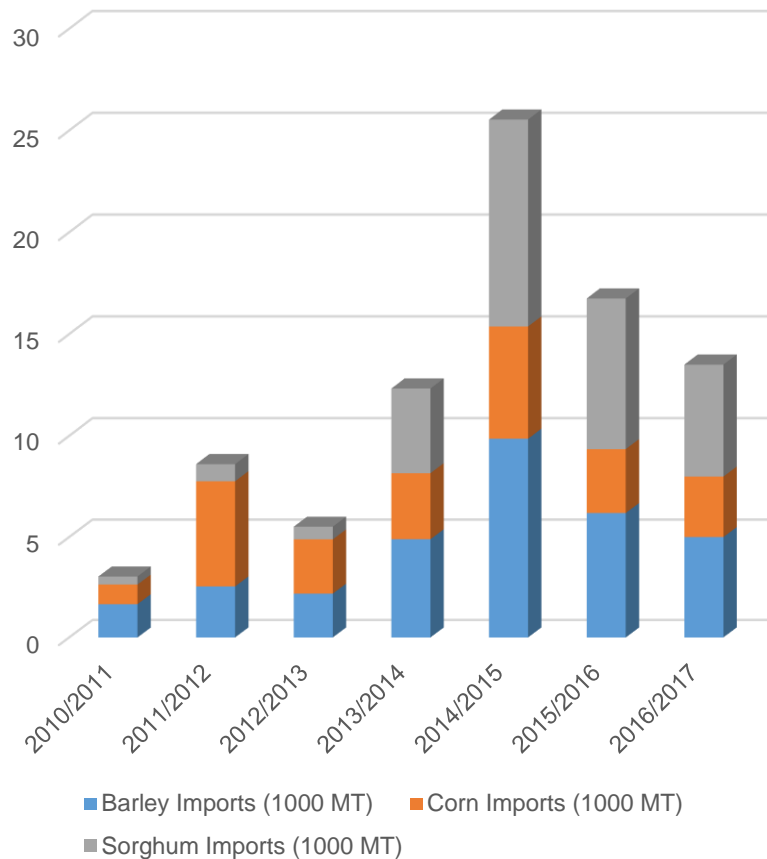
CHINA: IMPORT TO BE REDUCED?

REDUCTION OF IMPORTS FOR THE SECOND YEAR IN A ROW



- Weak production
- Significant reducing in case of drought
- Ability to be always present on the international scene

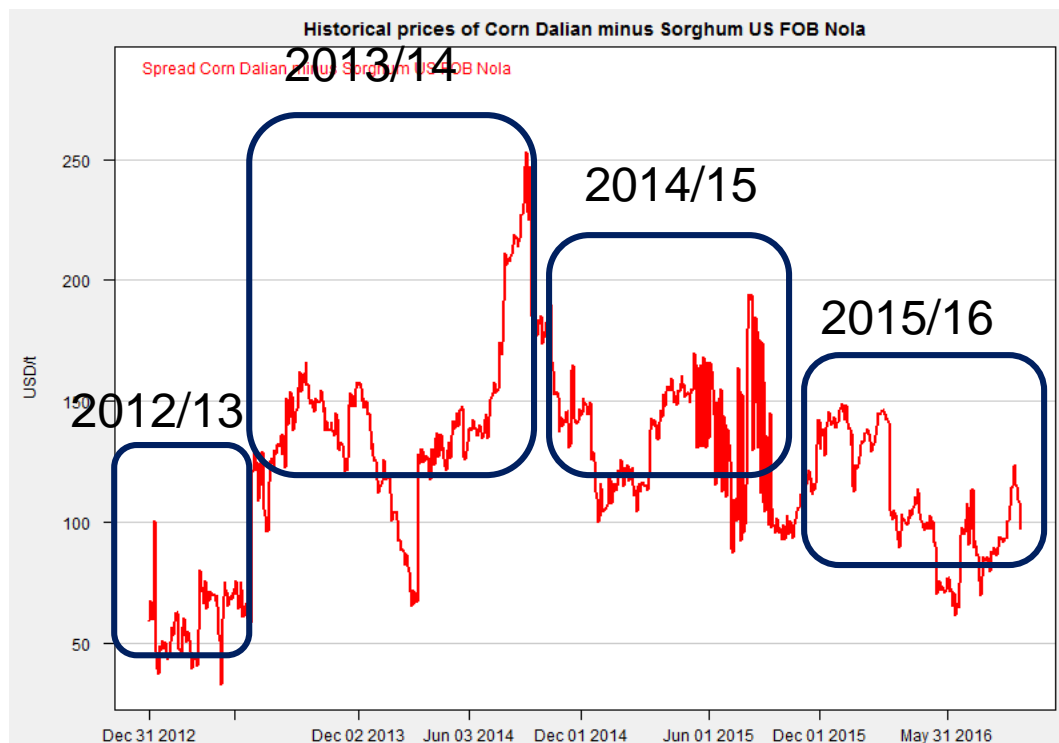
LOWER DEMAND FROM CHINA, NOT ONLY FOR SORGHUM



- The import of China is reducing because of their willingness to use their internal stocks in order to decrease import needs in feed grains. That's why import needs were voluntarily reduced.

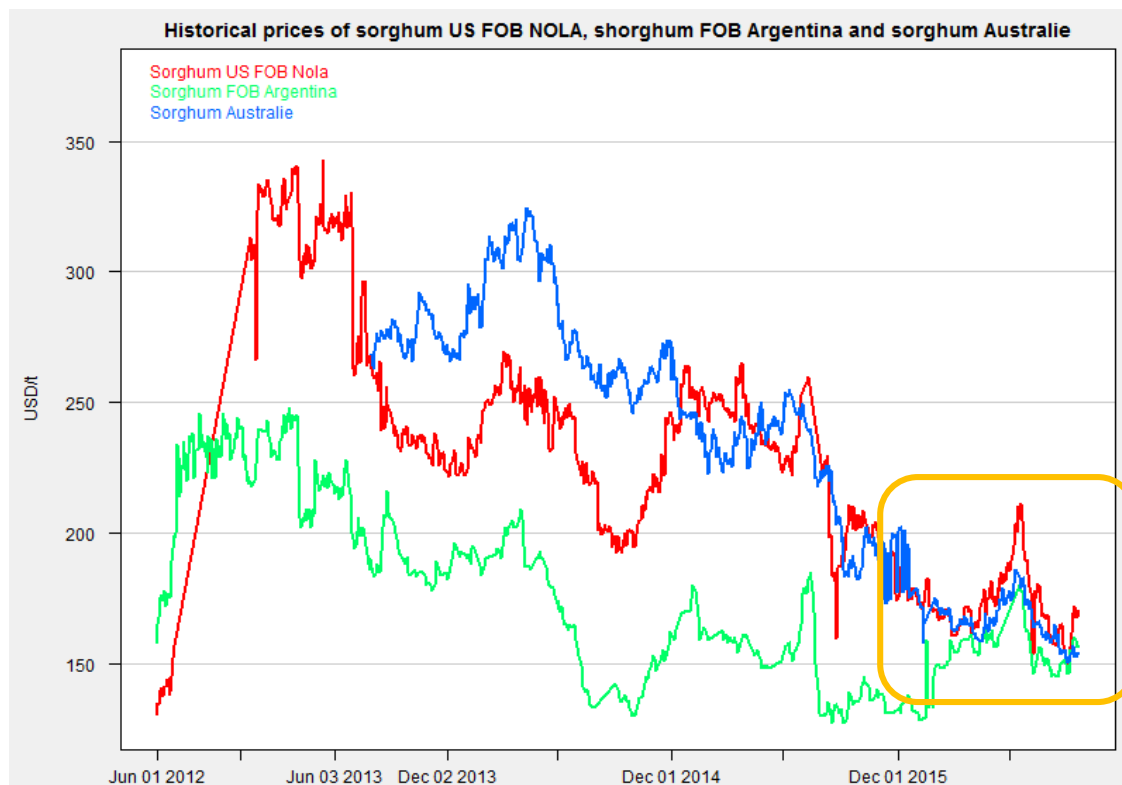
REASONS TO IMPORT RALLY

SPREAD EVOLUTION (CHINA CORN-US SORGHUM)



- High import of sorghum took place during the seasons when price difference stood at high level.

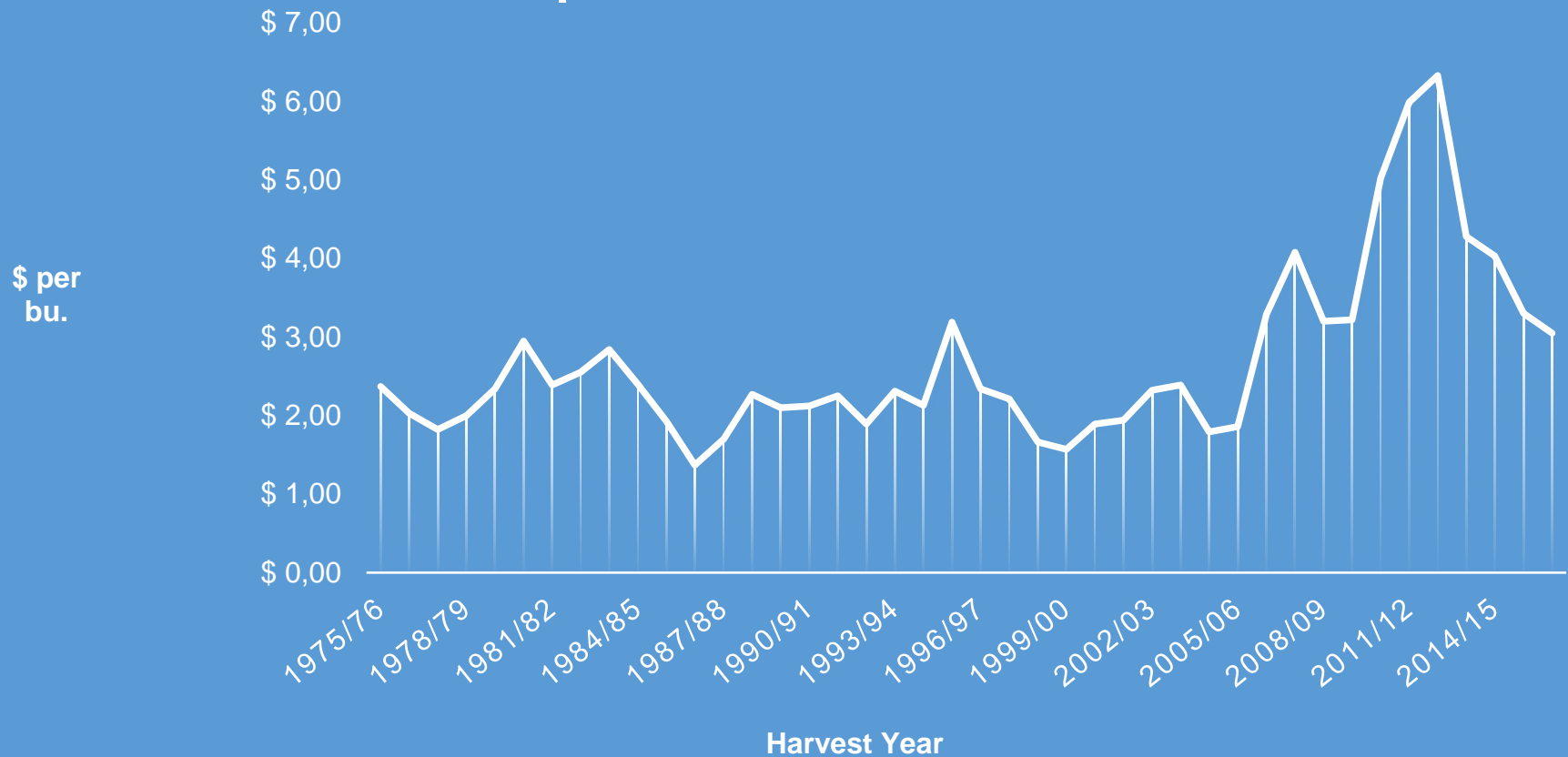
PRICE COMPARISON AMONGST MAJOR ORIGINS



● Sorghum price (fob basis) of different origins converged since the removal of export tax in Argentina.

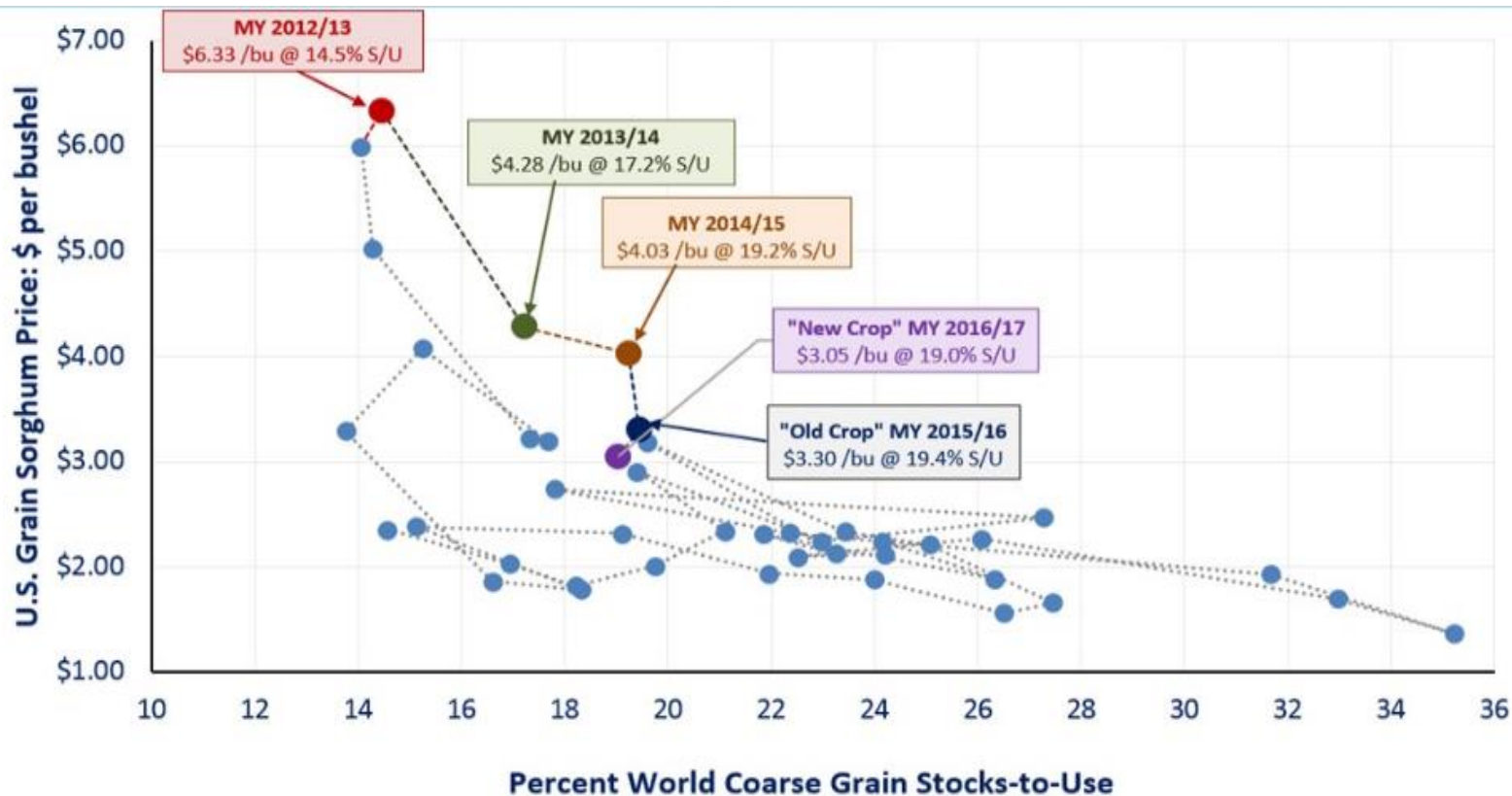
U.S. AVERAGE SORGHUM

A WELL-KNOWN DYNAMIC ...



PRICE FORMATION

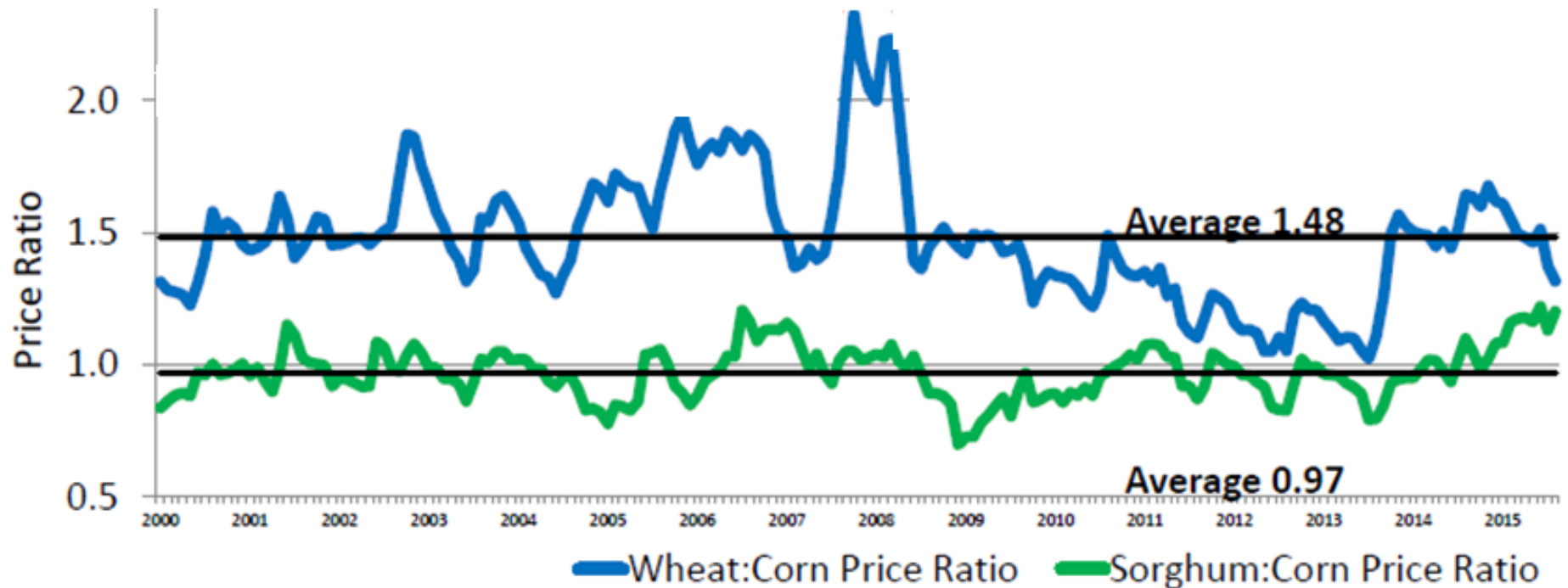
U.S. SORGHUM PRICE VS % U.S. FEED GRAIN STOCKS-TO-USE



- Sorghum prices formation largely depending on the availability of feed grains

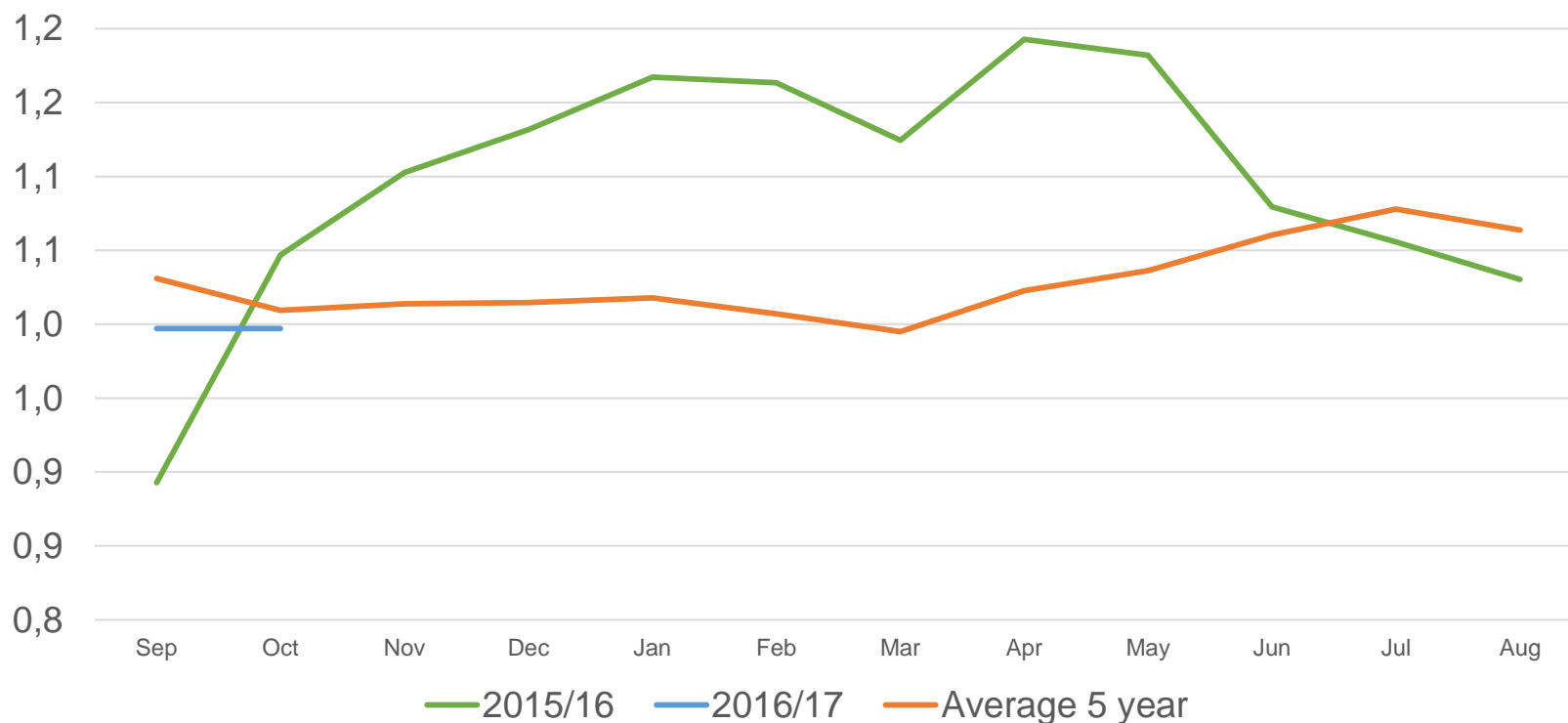
PRICE FORMATION

PRICE RATIO VS CORN



● Interesting dynamics for the past three years

SORGHUM MORE EXPENSIVE THAN CORN IN US

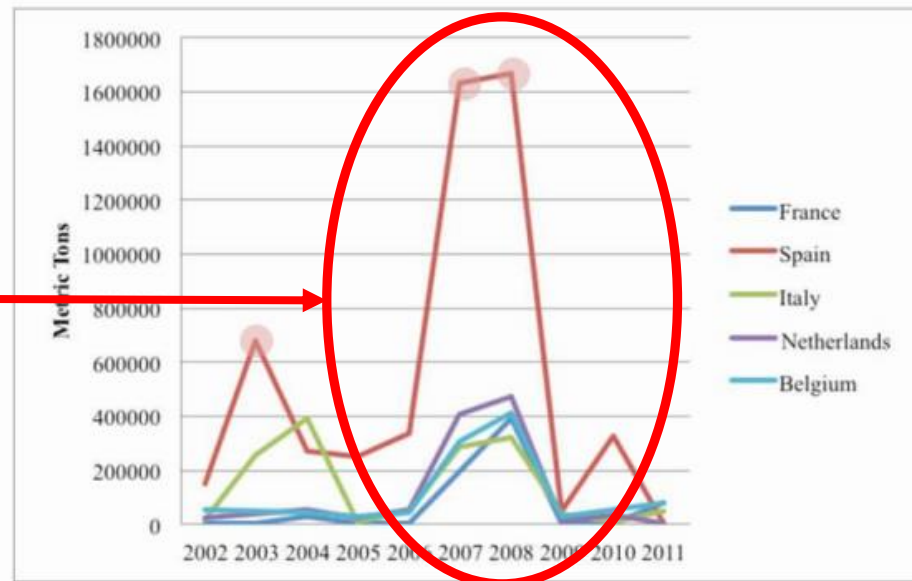
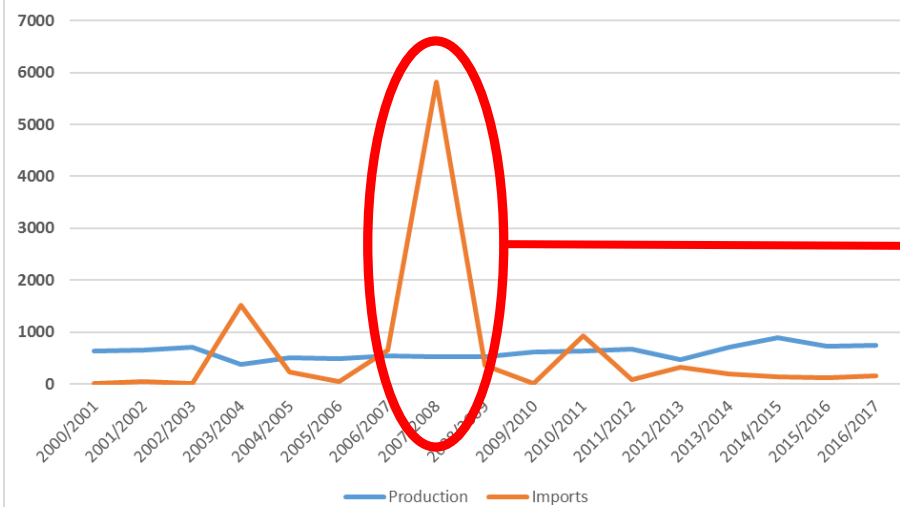


- In average, sorghum is more expensive than corn (average of US EXW prices)

EUROPE: NOT A KEY ACTOR BUT...

READY FOR OPPORTUNITIES

European Sorghum production and Imports (Kt)



- The 2007/08 event clearly demonstrated the opportunistic behavior of EU.
- Spain as a key importer indicates that sorghum is a good alternative of switch for the feed industry.
- It suggests possible new opportunities for this crop for the future !

CONCLUSION

- Europe doesn't appear so far to be a key actor in the production as well as in the world trade, but is listening for opportunities
- Sorghum grain production is concentrated in dry areas.
- The global trade is rather concentrated with 3 main exporters and China is from far the hugest importer.
- Good parallel between sorghum and corn prices
- With reducing demand from China, the outlook for prices in middle-term (2016/17) remains not so optimistic as for corn...

THANK YOU VERY MUCH FOR YOUR ATTENTION!

Olivier BOUILLET | Directeur Ukraine



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