

Fertilizer Outlook & Technology Conference

South American Outlook

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November/2013

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1. Commodities 2013/14 outlook in Brazil

1. Soybean
2. Corn
3. Sugarcane
4. Cotton
5. Other issues

2. Commodities in others countries in South America

3. Fertilizer Market 2013/14 Outllok

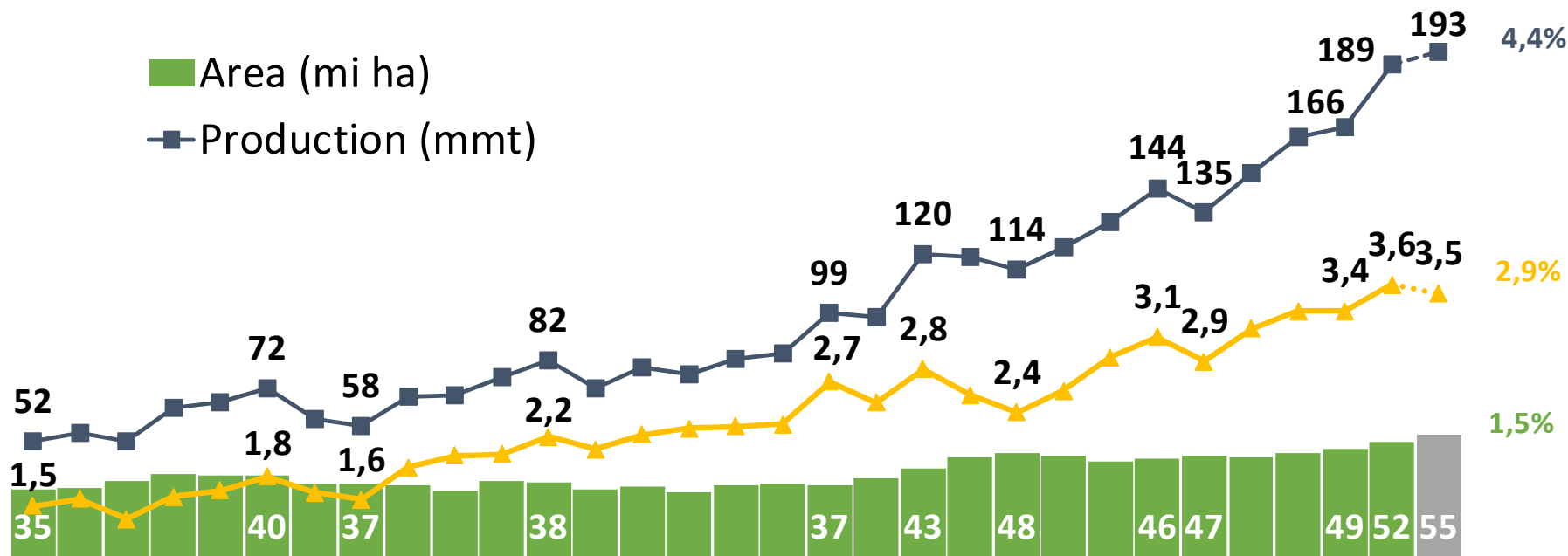
1. Balance – Production / Consumption by:
 1. Product / Nutrients / Crop / Region
 2. Main Raw Material
 3. Brazil Balance – Offer & Demand 2013/14
2. New Investments

Brazil – Grain Production (mmt)

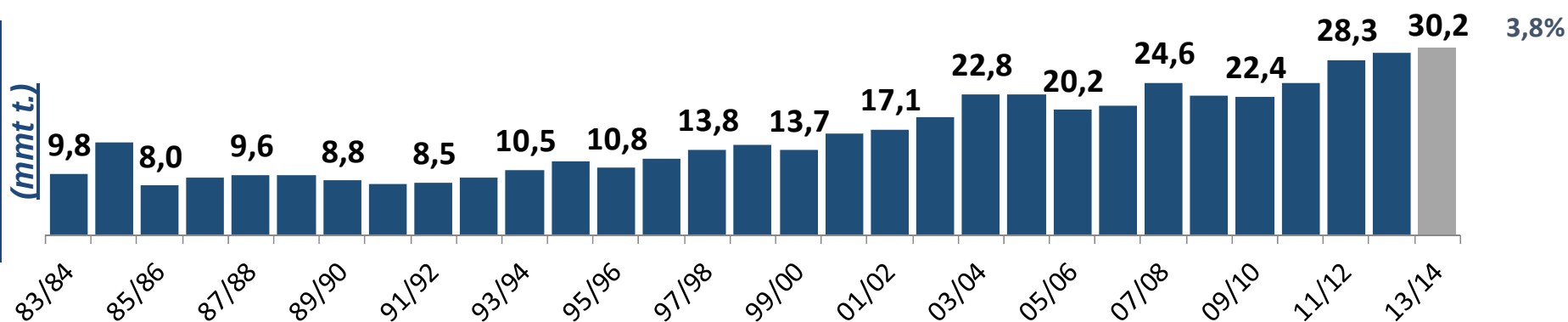
Last 30 years growth.

CAGR
30 years

■ Area (mi ha)
■ Production (mmt)

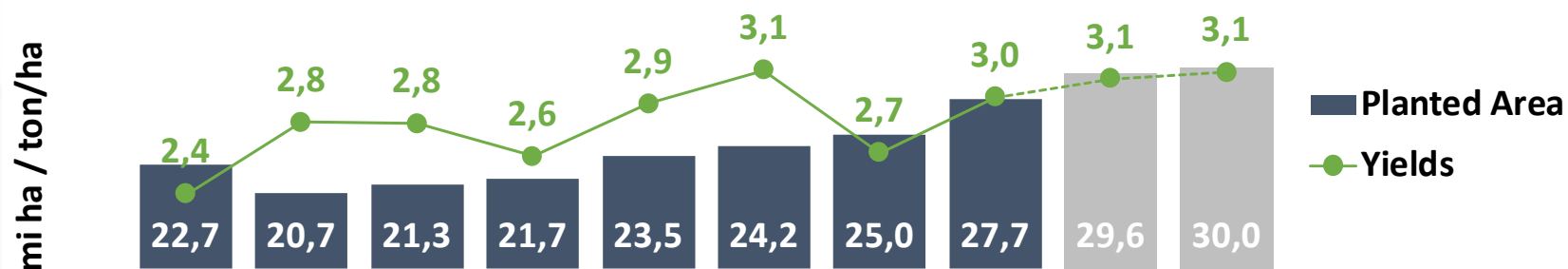
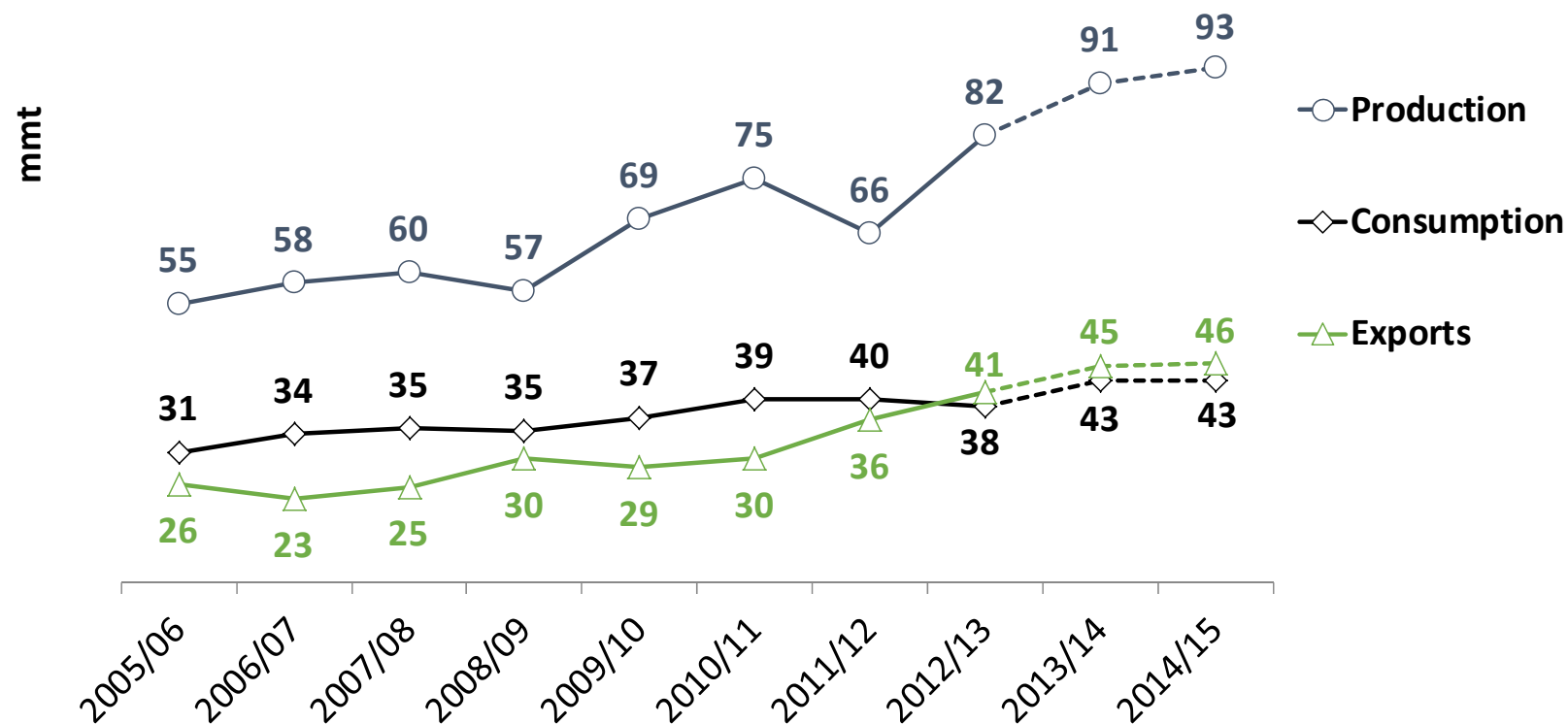


Fertilizers Sales
(mmt t.)



Source: CONAB, ANDA, Forecast Agroconsult.

Soybeans/Brazil – Supply and Demand



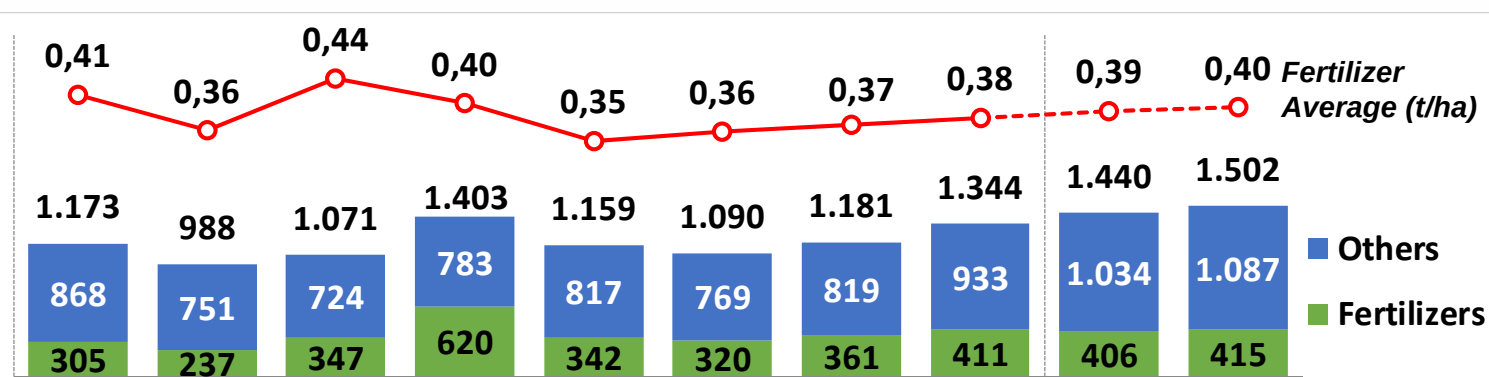
Source: CONAB, Forecast Agroconsult.

Soybeans/Brazil – Production Costs

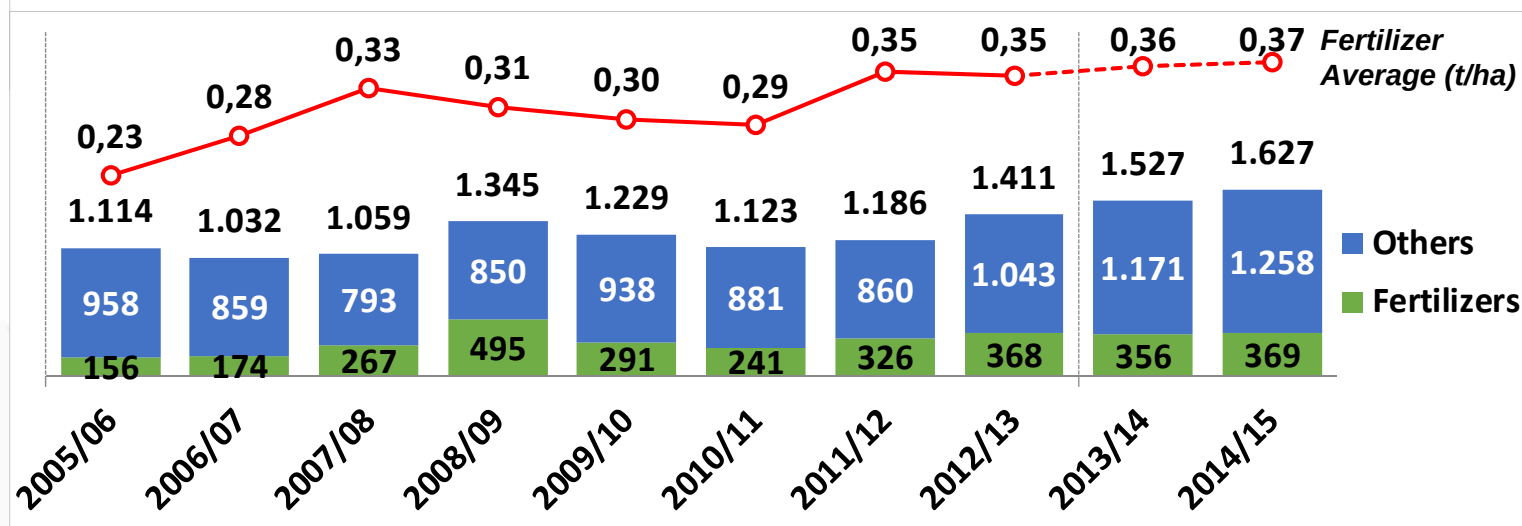
**Dolar
(BRL/USD)**



**Mato Grosso
(R\$/ha)**

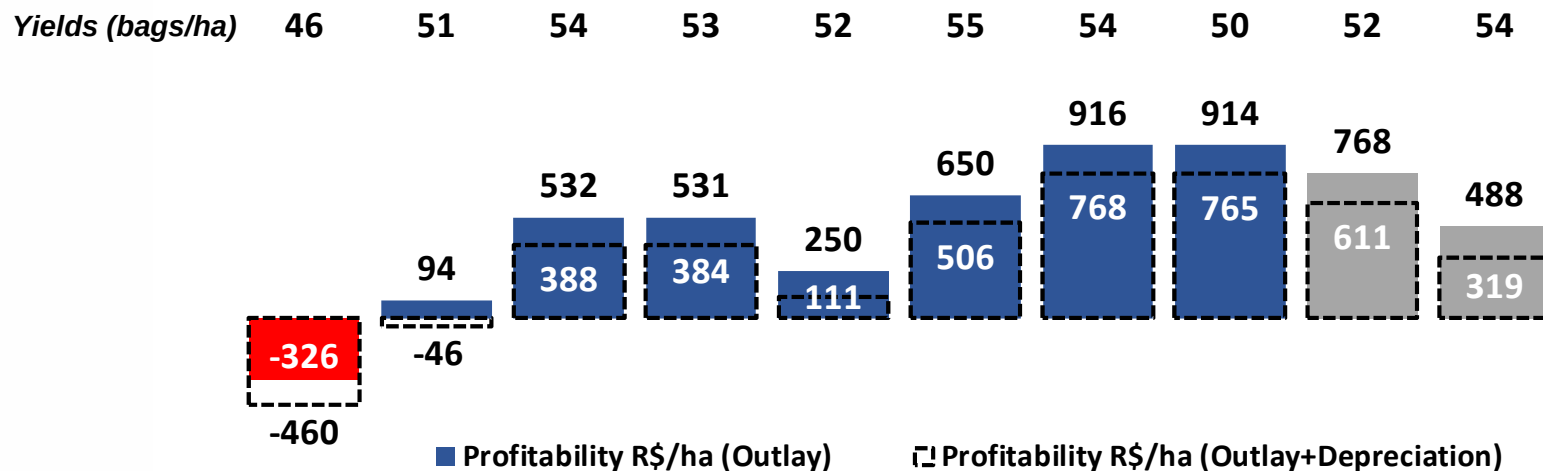


**Paraná
(R\$/ha)**

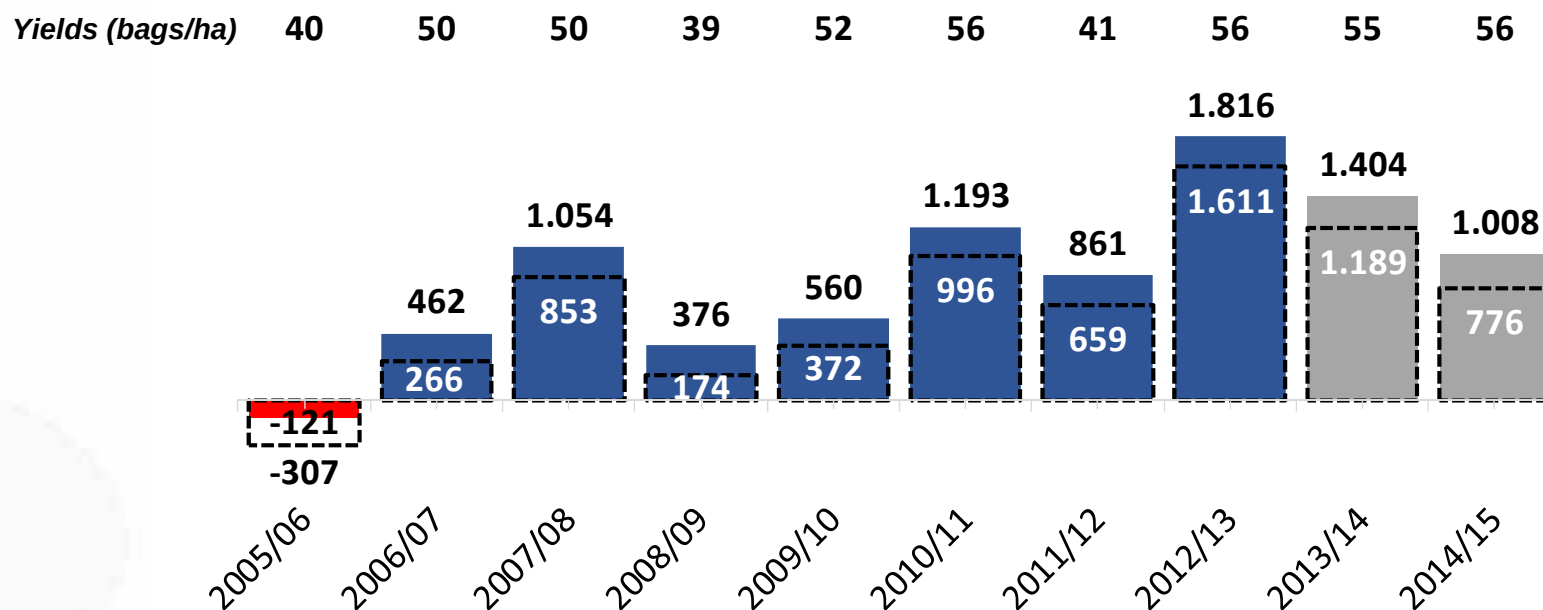


Soybeans/Brazil – Profitability

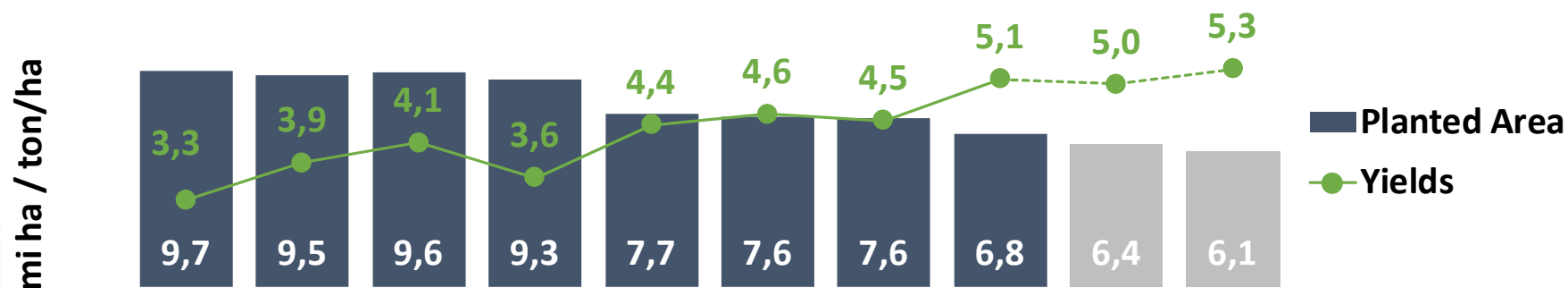
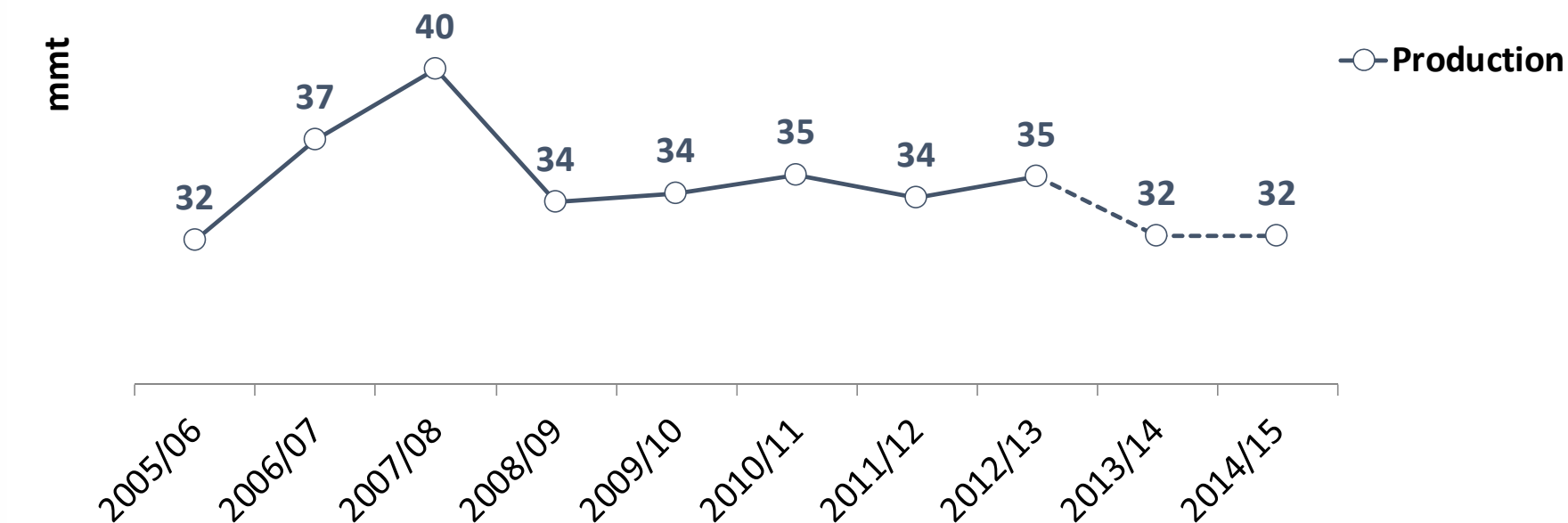
Mato Grosso (R\$/ha)



Paraná (R\$/ha)



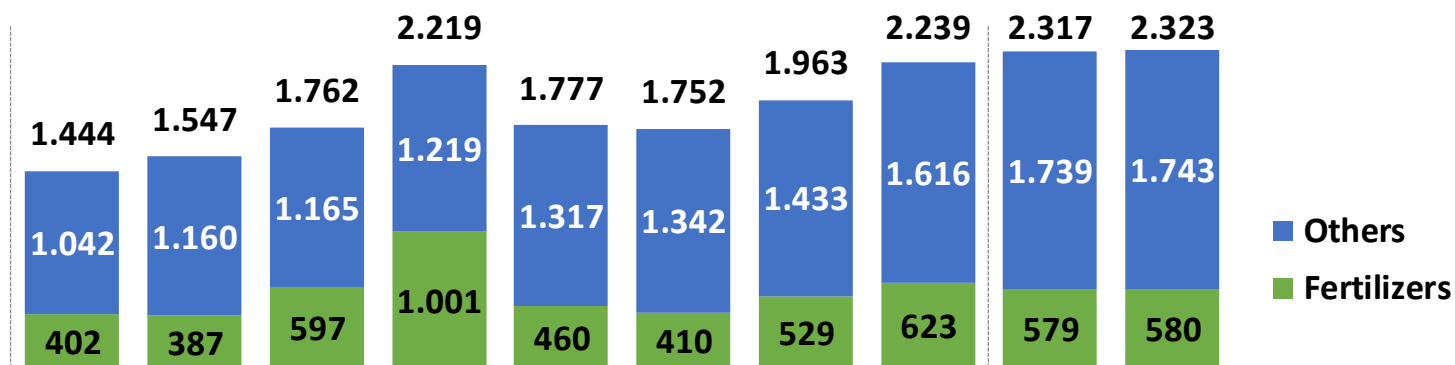
Corn 1st Crop/Brazil – Supply and Demand



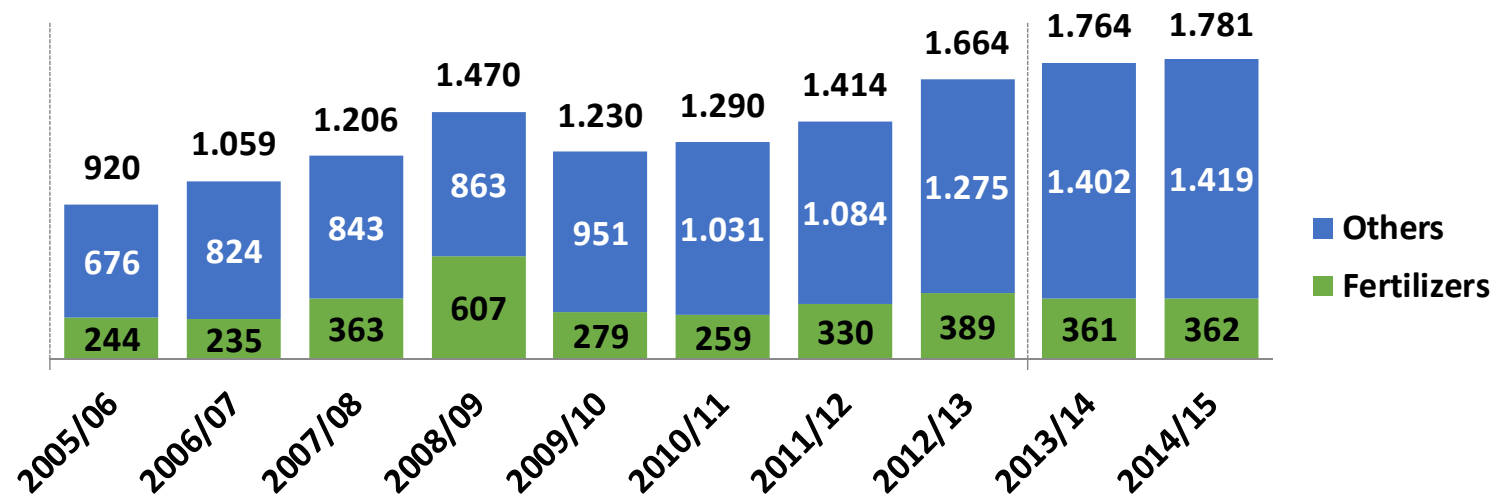
Source: USDA, Forecast Agroconsult.

Corn 1st Crop/Brazil – Production Costs

Paraná (R\$/ha) High Technology

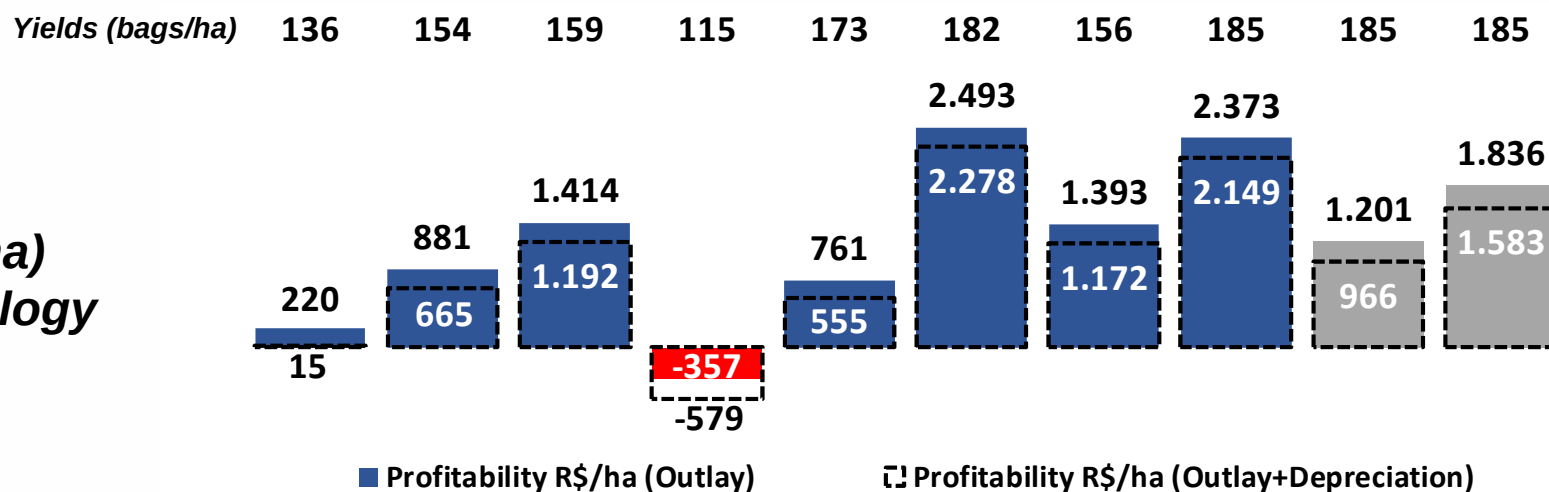


Paraná (R\$/ha) Medium Technology

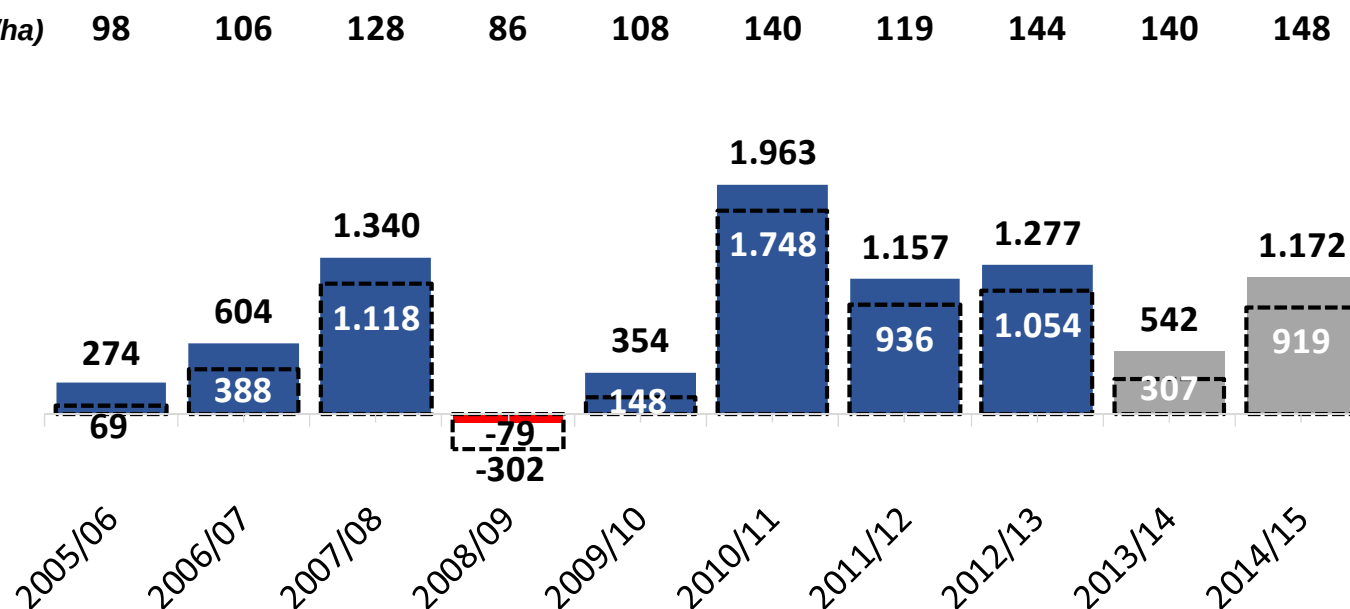


Corn 1st Crop/Brazil – Profitability

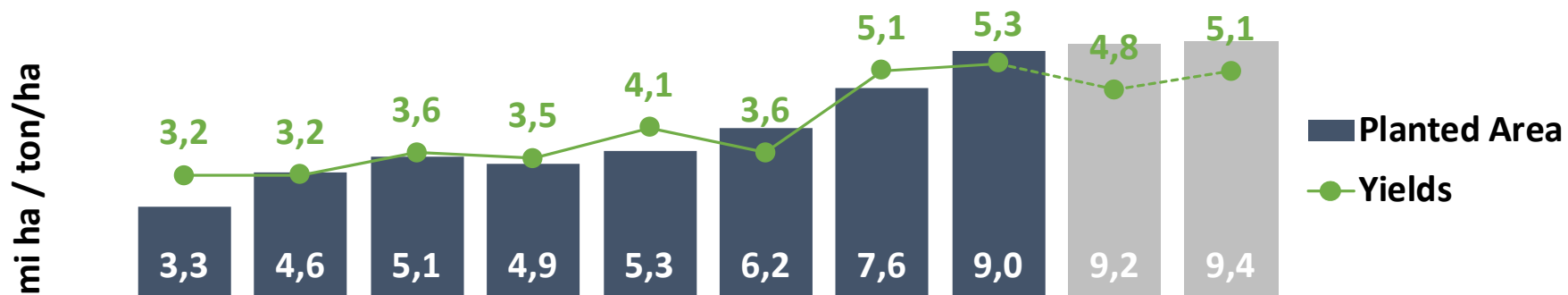
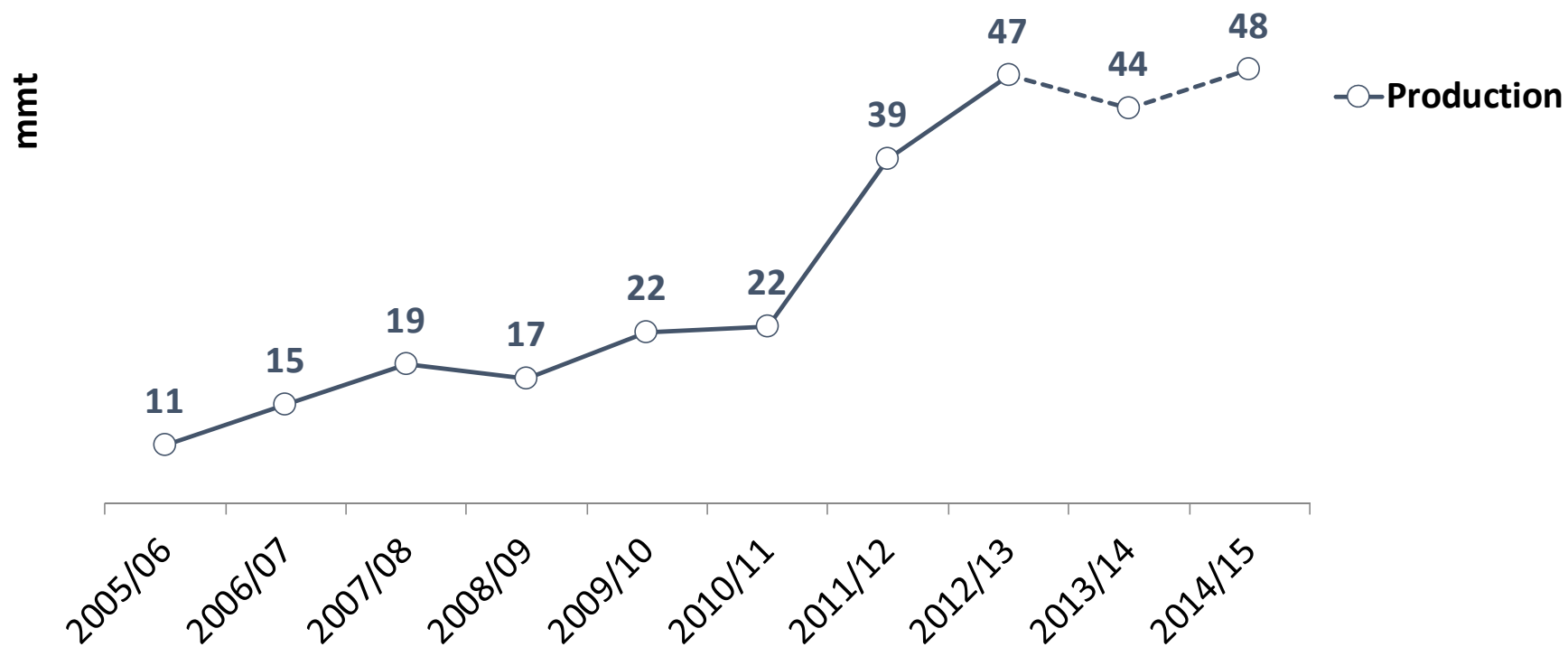
Paraná (R\$/ha) High Technology



Paraná (R\$/ha) Medium Technology



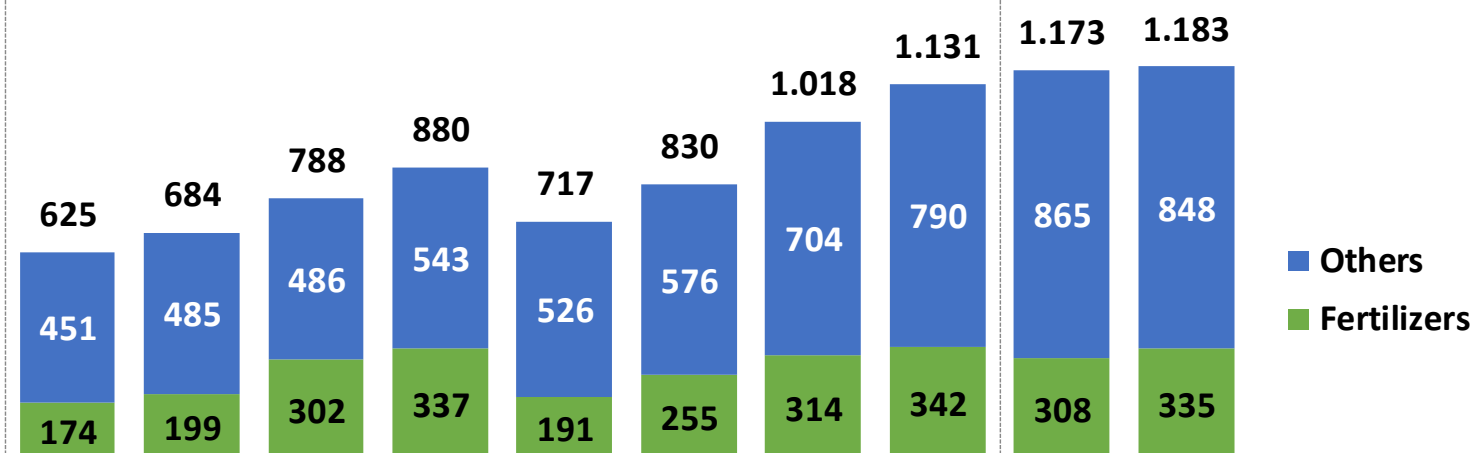
Corn 2nd Crop/Brazil – Supply and Demand



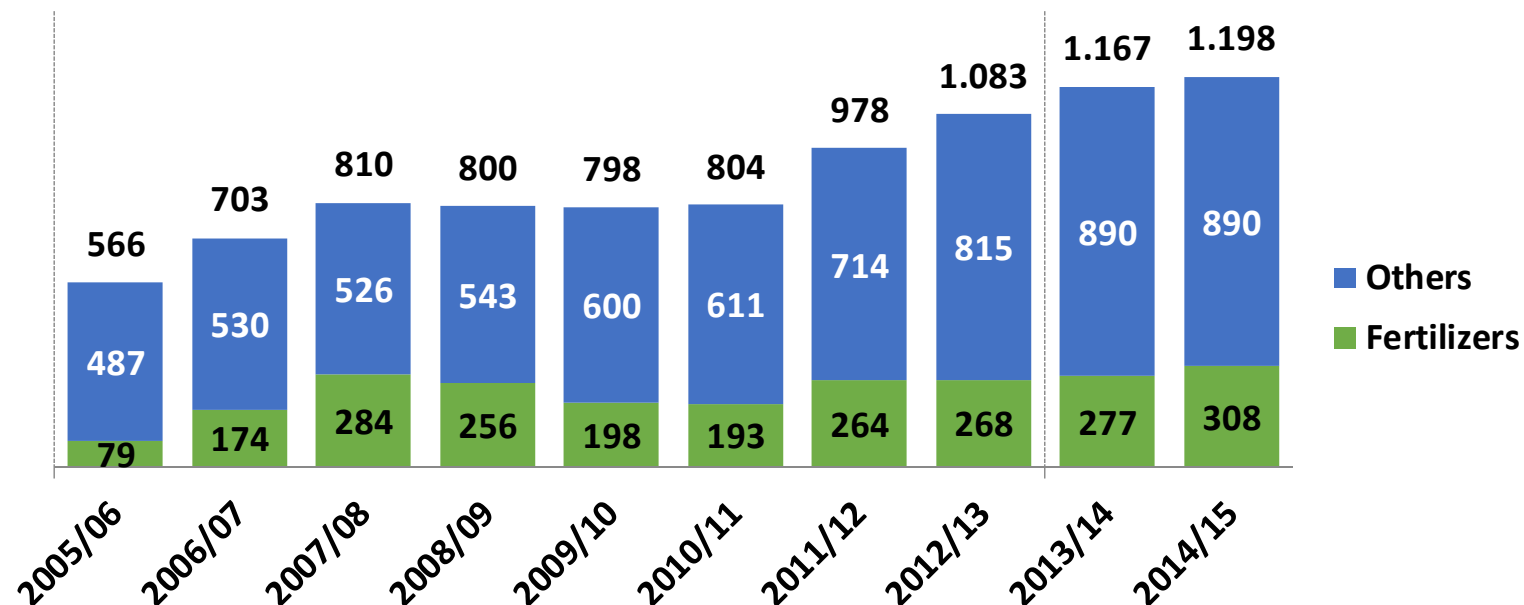
Source: USDA, Forecast Agroconsult.

Corn 2nd Crop/Brazil – Profitability

Mato Grosso (R\$/ha)



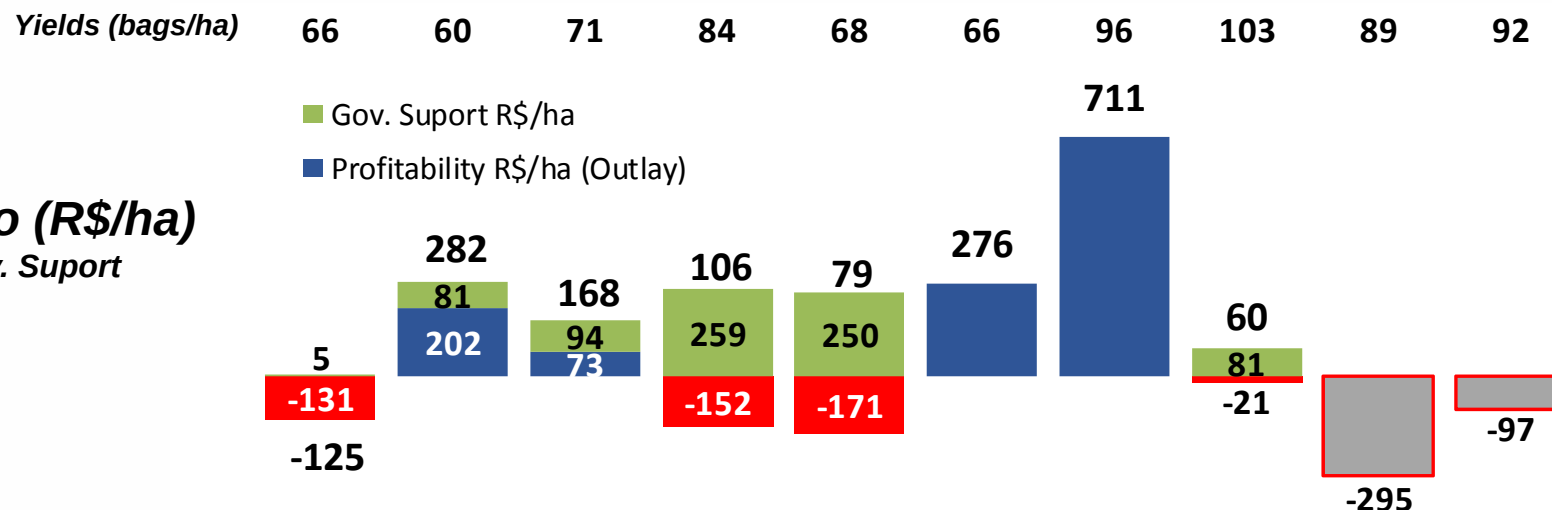
Paraná (R\$/ha)



Corn 2nd Crop/Brazil – Profitability

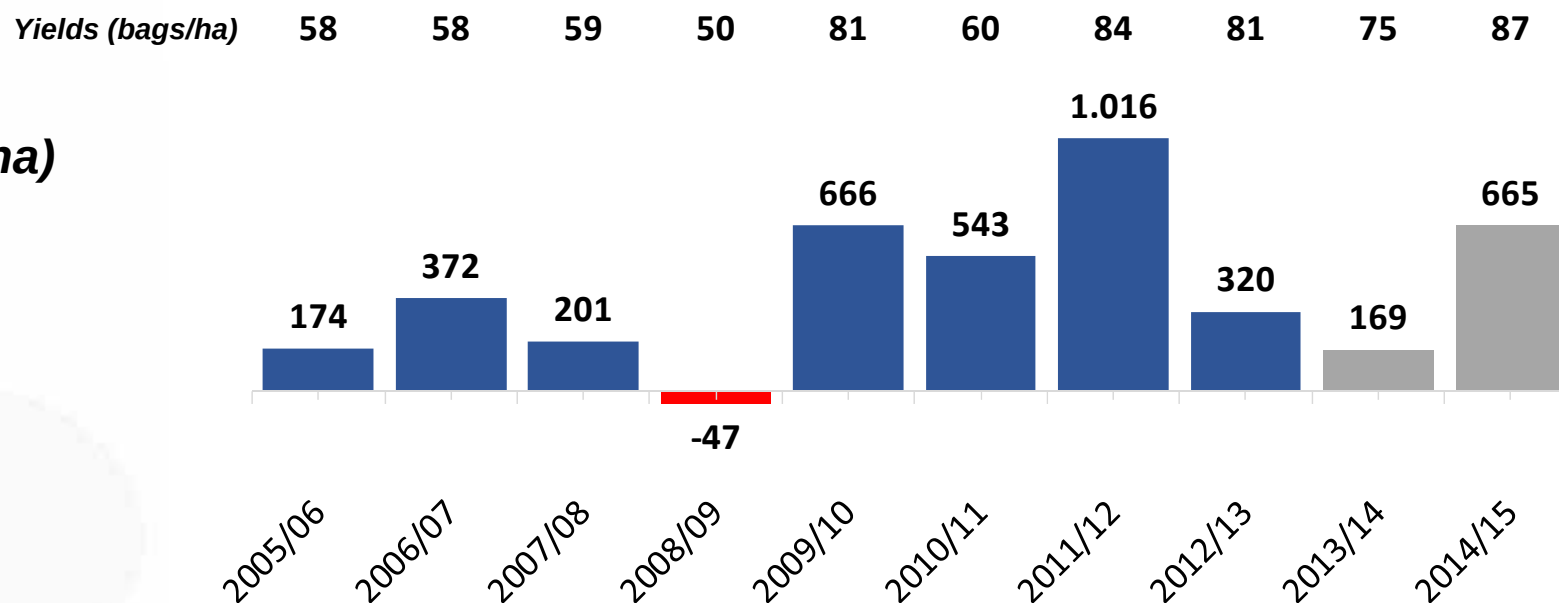
Mato Grosso (R\$/ha)

Profitability + Gov. Suport



Paraná (R\$/ha)

Profitability



Source: Agroconsult. *Profitability without Government support.

Logistics – Main Projects / 5 years

2014

Paving of **BR-163** from Guarantã do Norte/MT to Santarém/PA + River Port of **Miritituba/PA** + Port of **Santana/AP**

2013 (Auction)

Extension of **Norte-Sul** Railway to Vila do Conde

2016

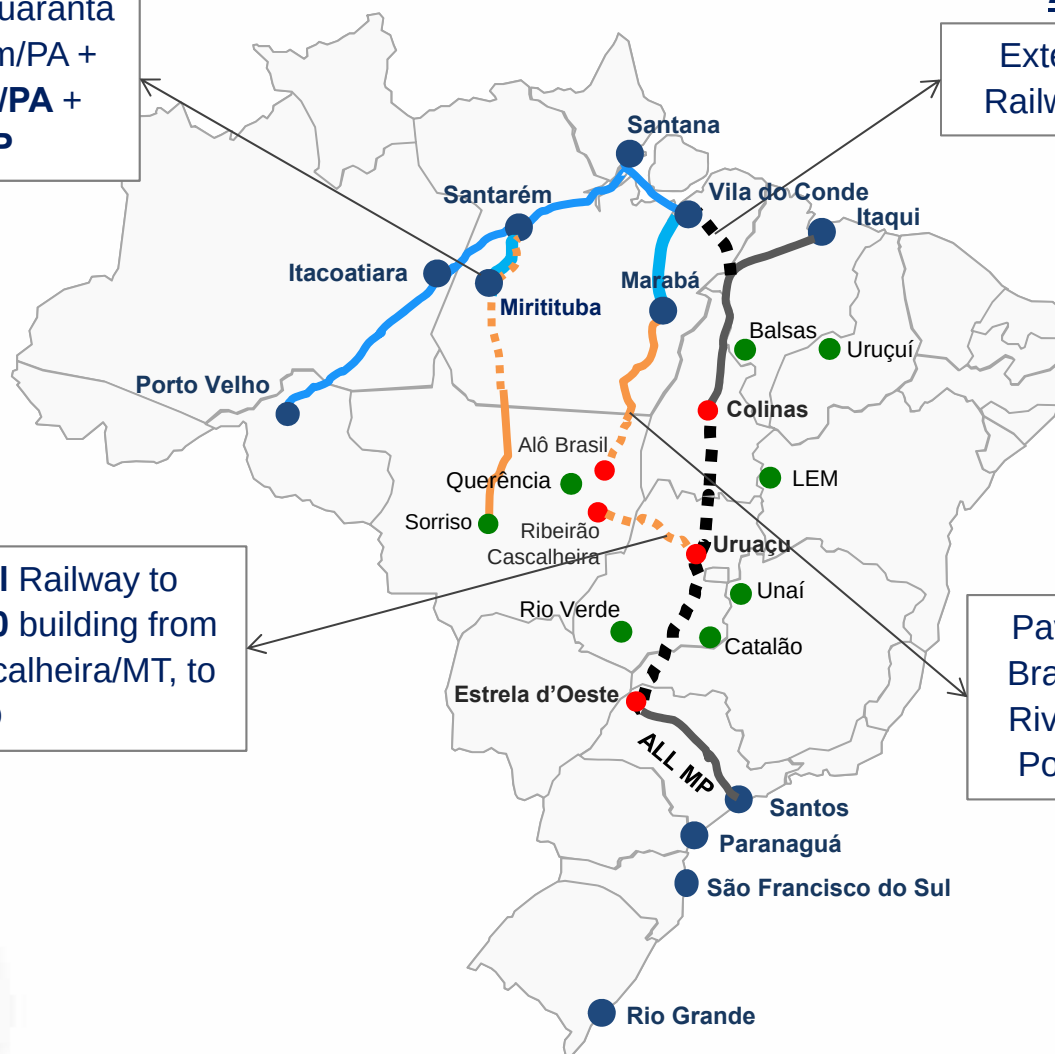
Extension of **Norte-Sul** Railway to Estrela d'Oeste + **BR-080** building from BR-158, at Ribeirão Cascalheira/MT, to Uruaçu/GO

2015

Paving of **BR-158** from Alô Brasil/MT to Vila Rica/MT + River Port of **Marabá/PA** + Port of **Vila do Conde/PA**

Legend:

- Highway
- Railway
- Waterway
- City
- Port
- Production Cluster



Corn 2nd Crop / MT – Competitiveness (BRL/sc)

Current Logistics

Highway

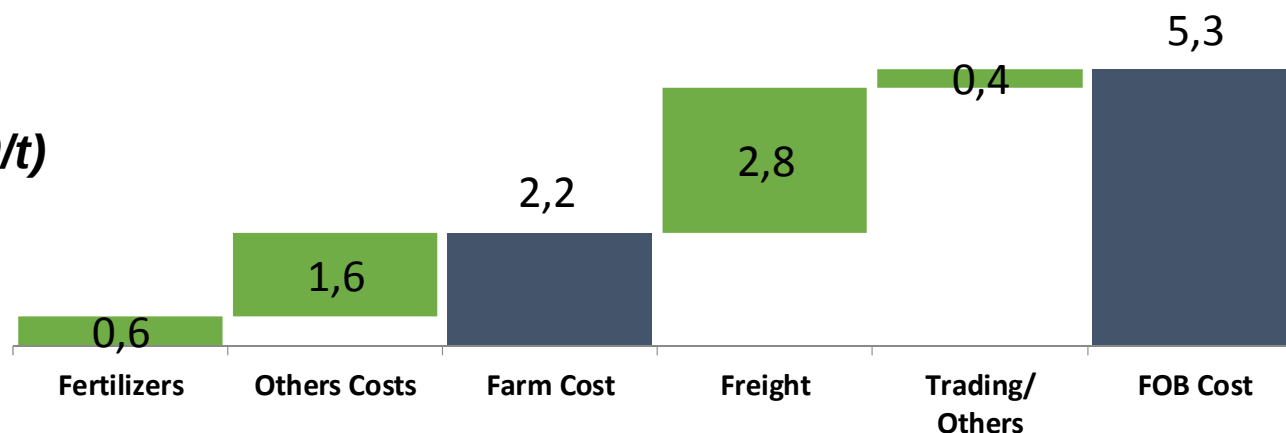
(Sorriso-Santos = R\$ 250/t)

Ex. Rate - R\$ 2,26/USD

CBOT (dec) – USD 4,2/bu

Yield – 100sc/ha (6 t/ha)

Costs – R\$ 1.173/ha



Future Logistics

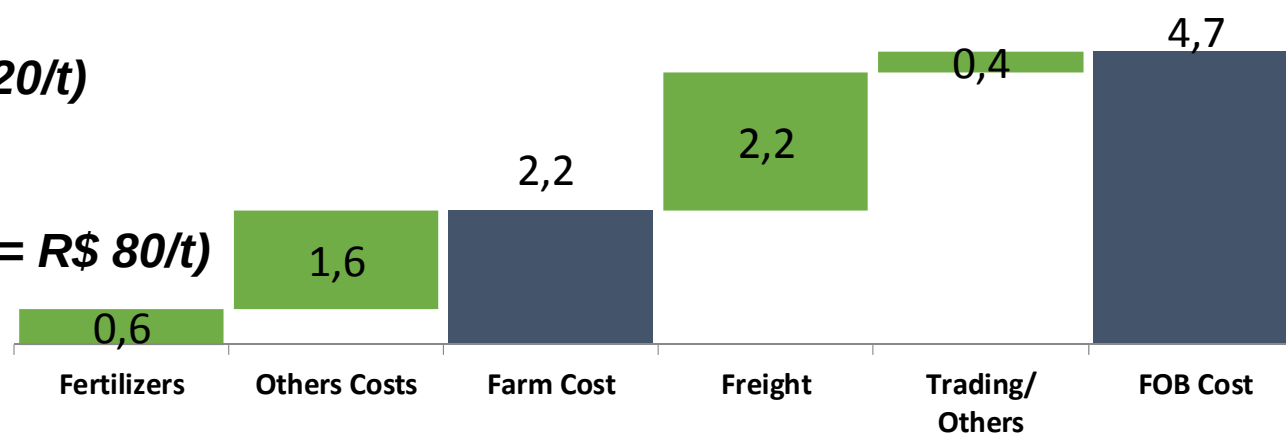
Highway

(Sorriso-Miritituba = R\$ 120/t)

+

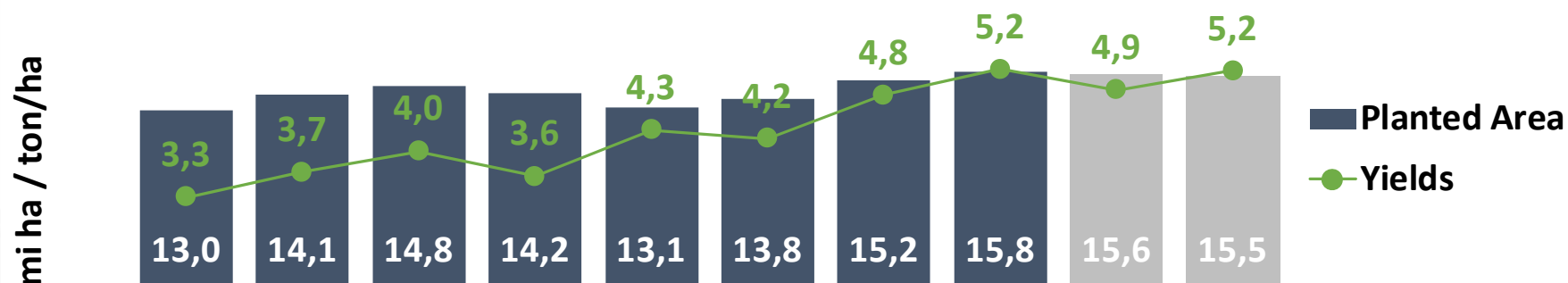
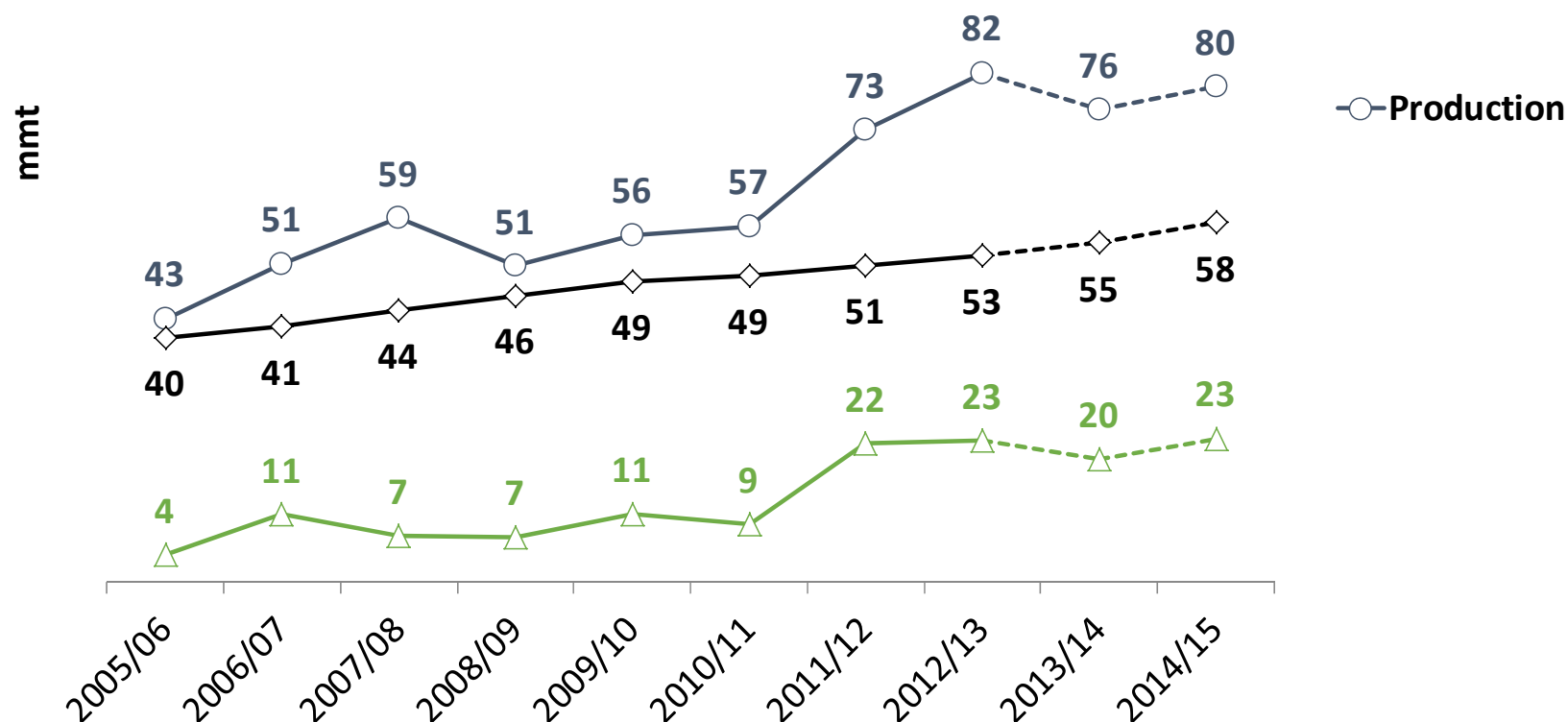
Waterway

(Miritituba-Vila do Conde = R\$ 80/t)



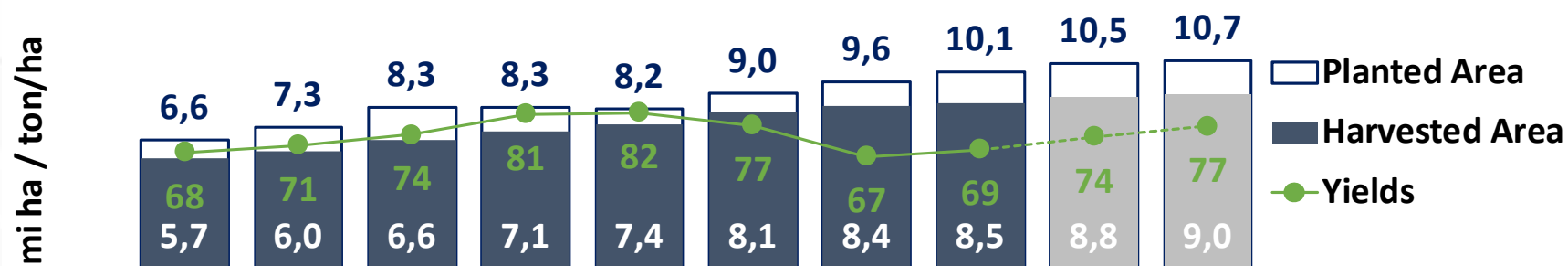
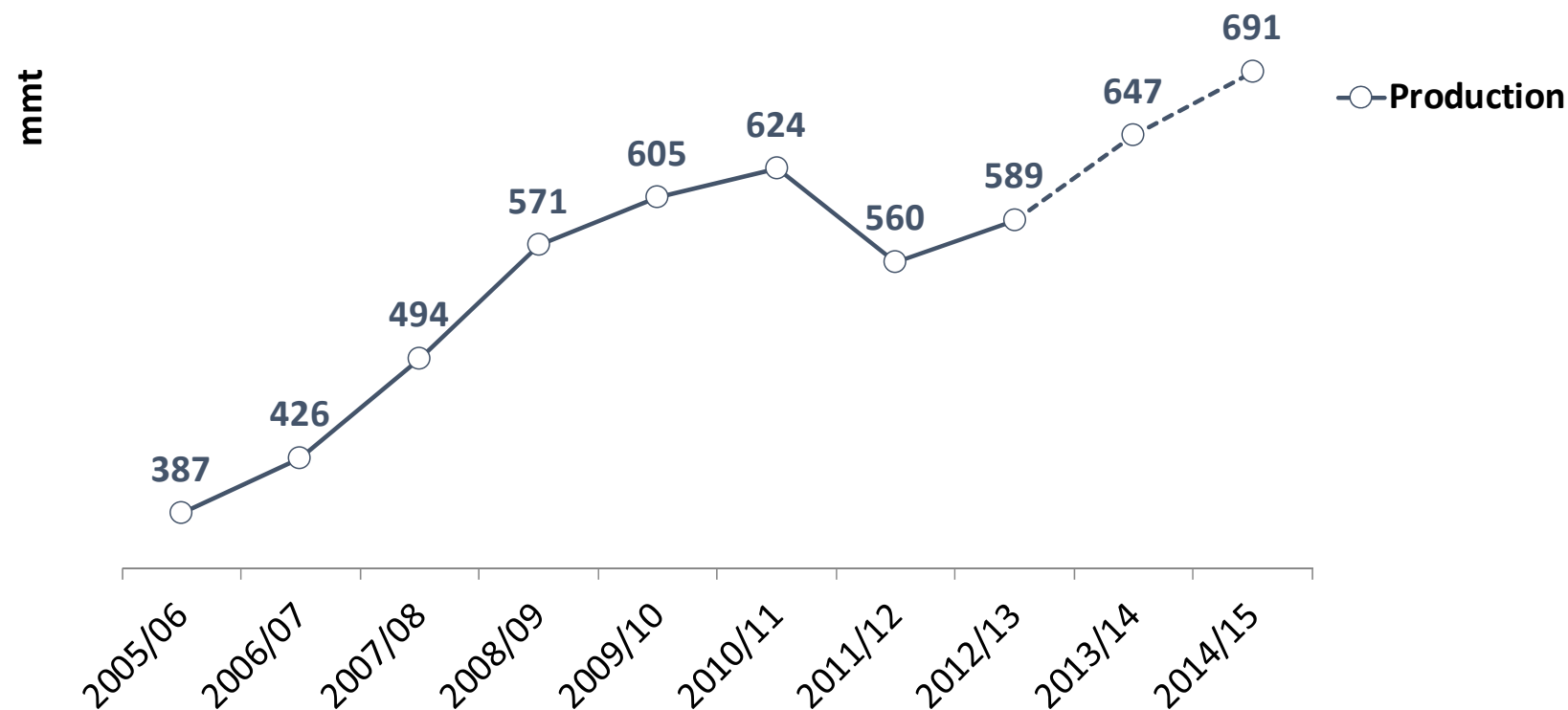
Source: Agroconsult.

Corn Crop/Brazil – Supply and Demand



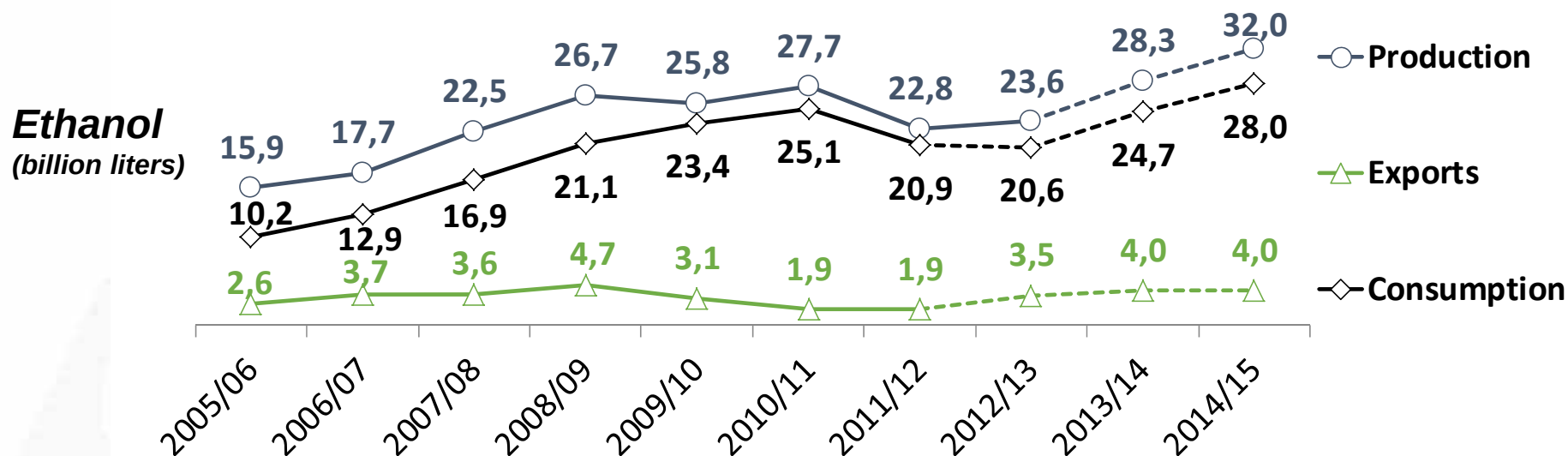
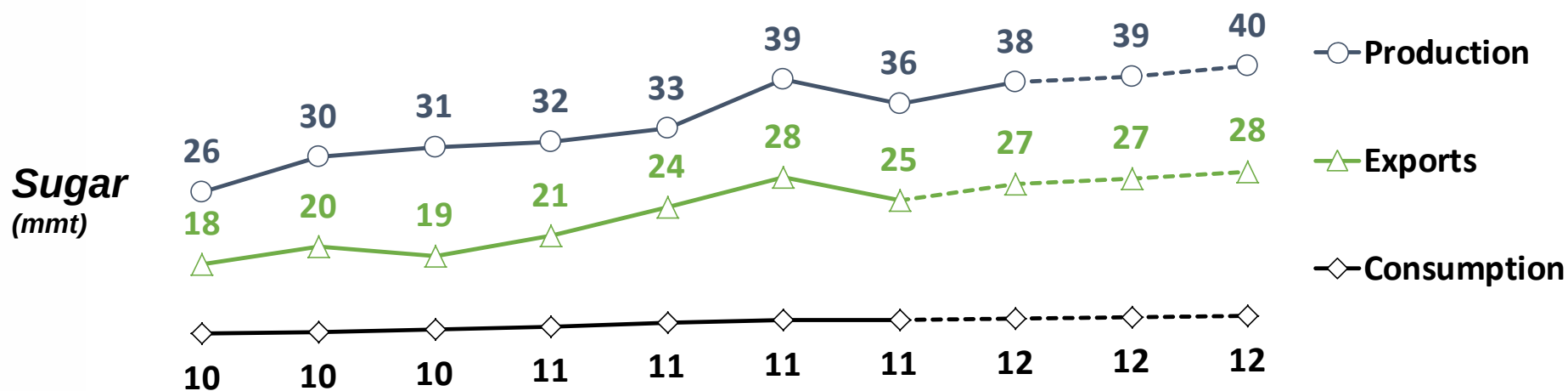
Source: USDA, Forecast Agroconsult.

Sugarcane Crop/Brazil



Source: USDA, Forecast Agroconsult.

Sugarcane Crop/Brazil – Supply and Demand

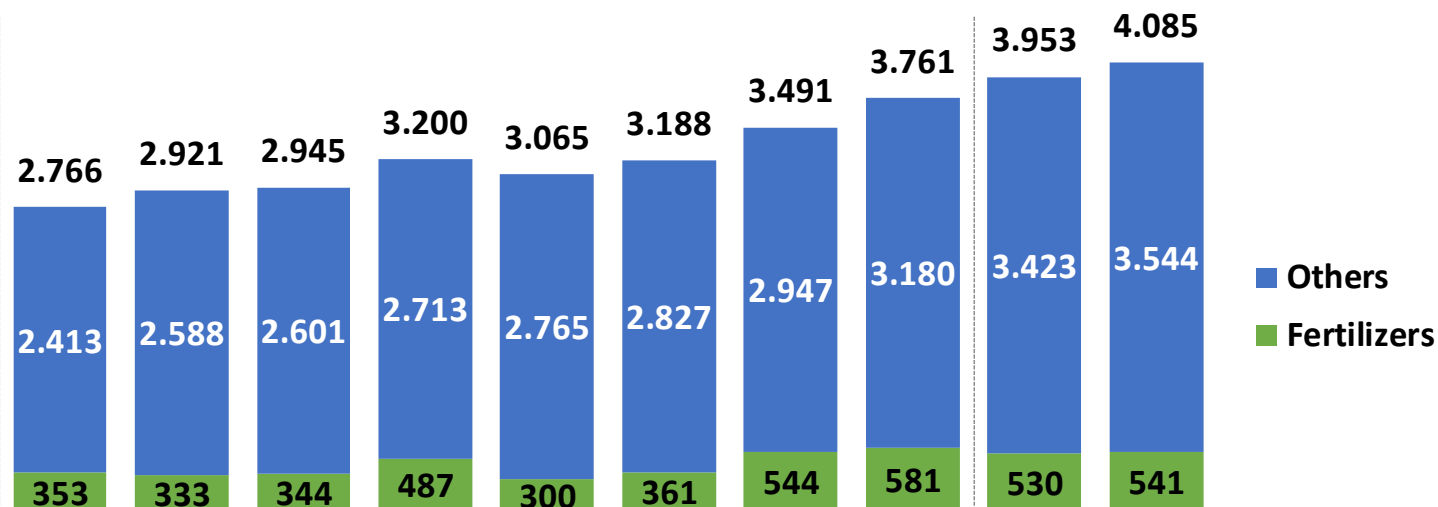


Source: USDA, Forecast Agroconsult.

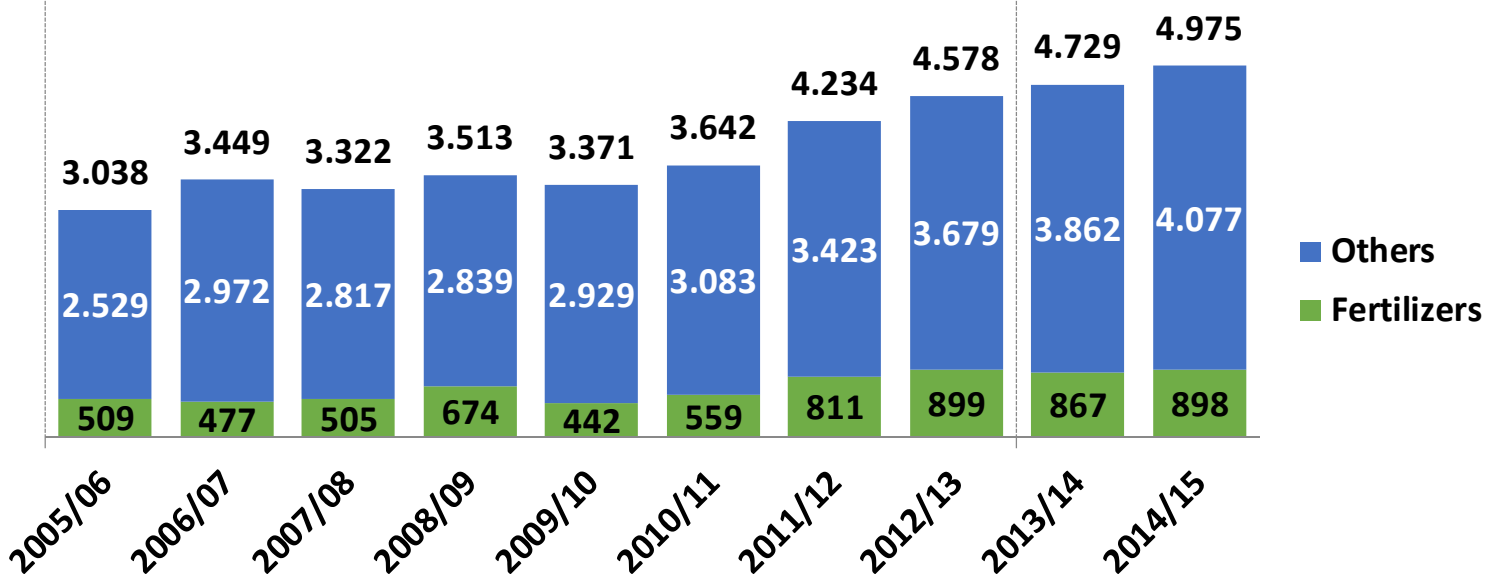
Sugarcane Crop/Brazil – Production Costs

Total Costs (R\$/ha)

(Planted ÷5) +
Ratoon + CLT

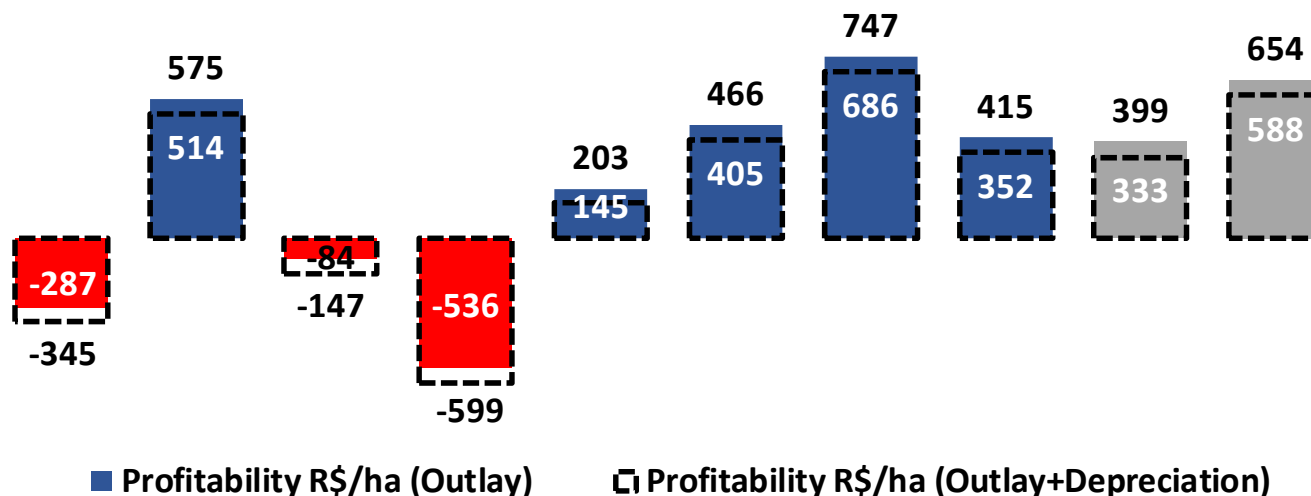


Planted Cane Cost (R\$/ha)

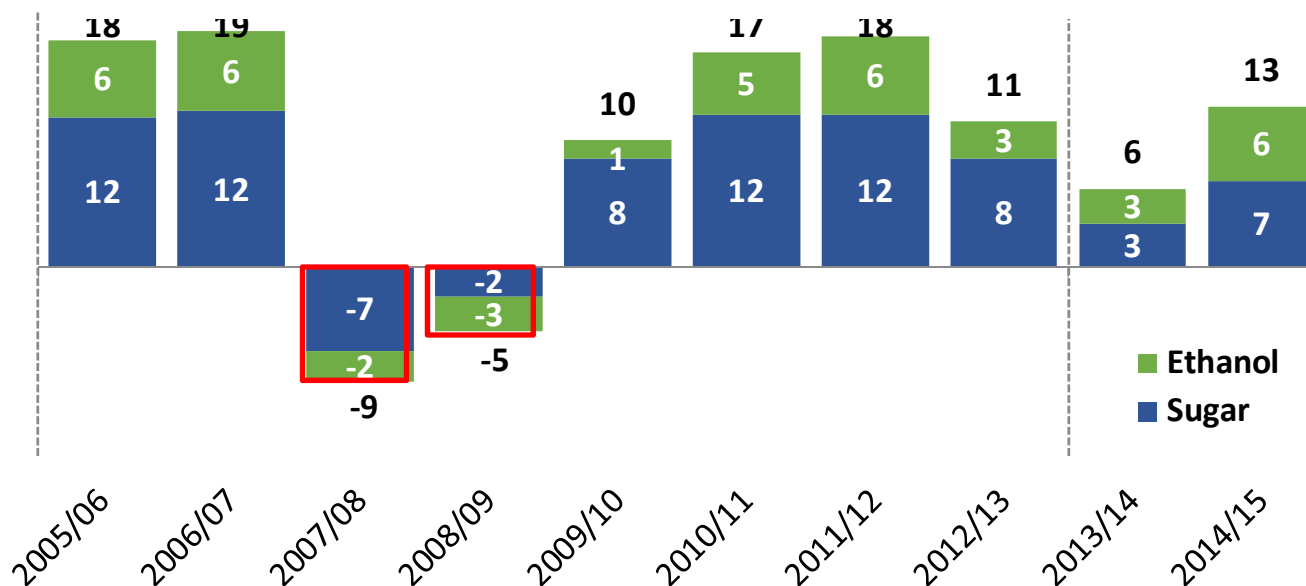


Sugarcane Crop/Brazil – Profitability

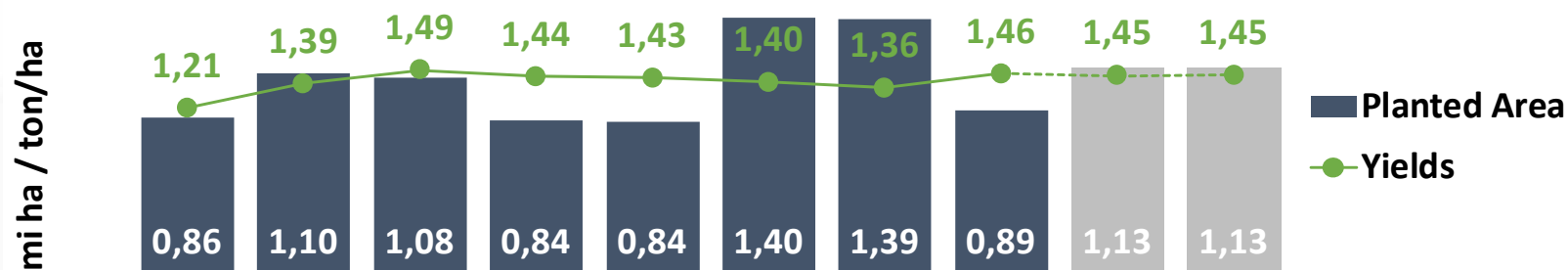
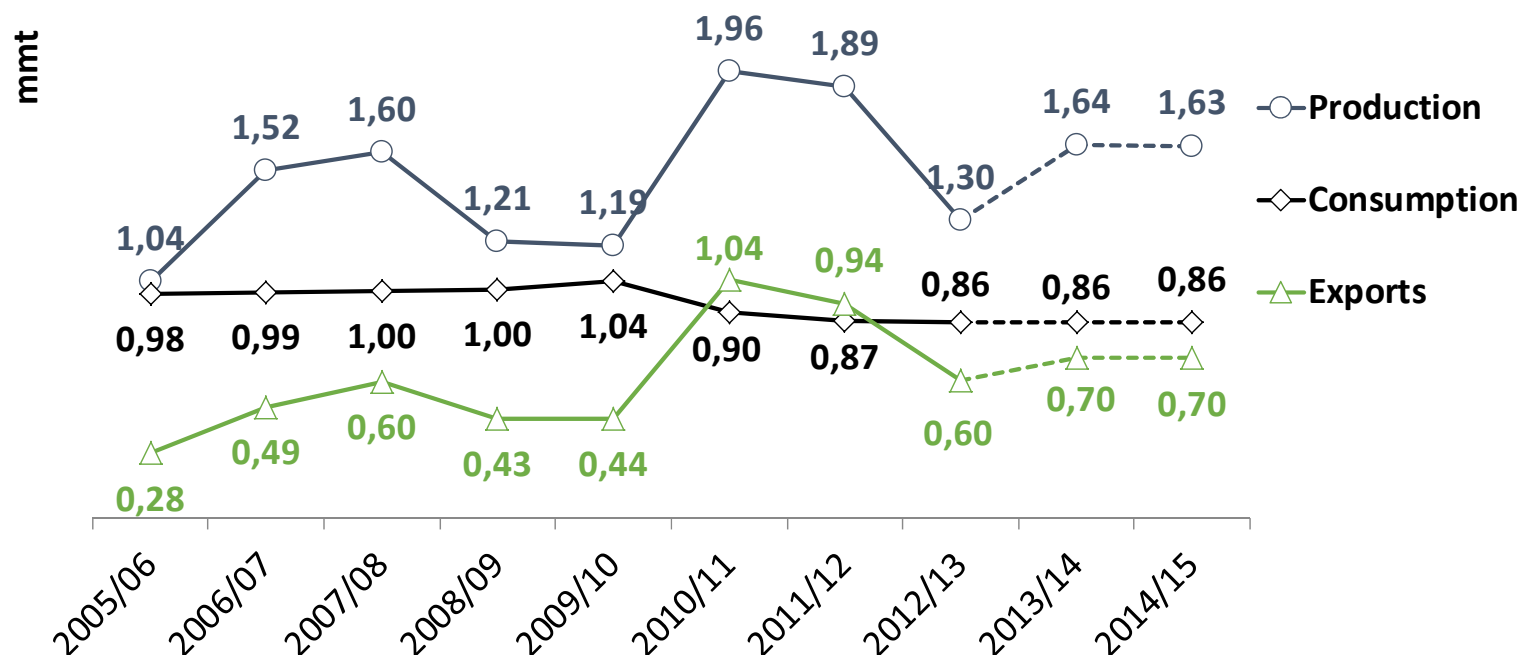
Suppliers (R\$/ha)



Mills (R\$/t)



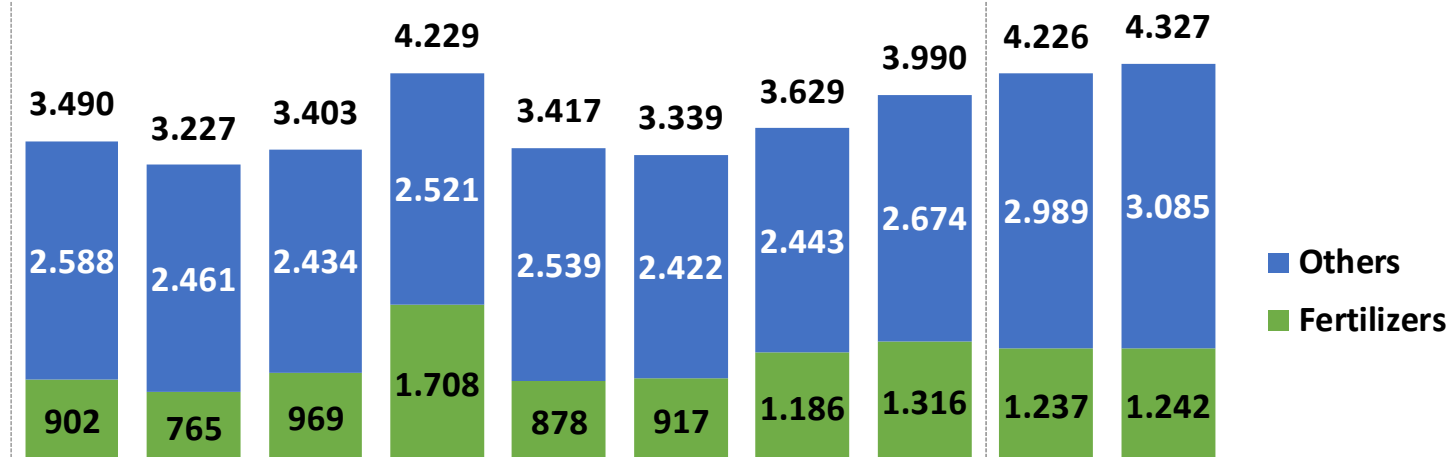
Cotton Crop/Brazil – Supply and Demand



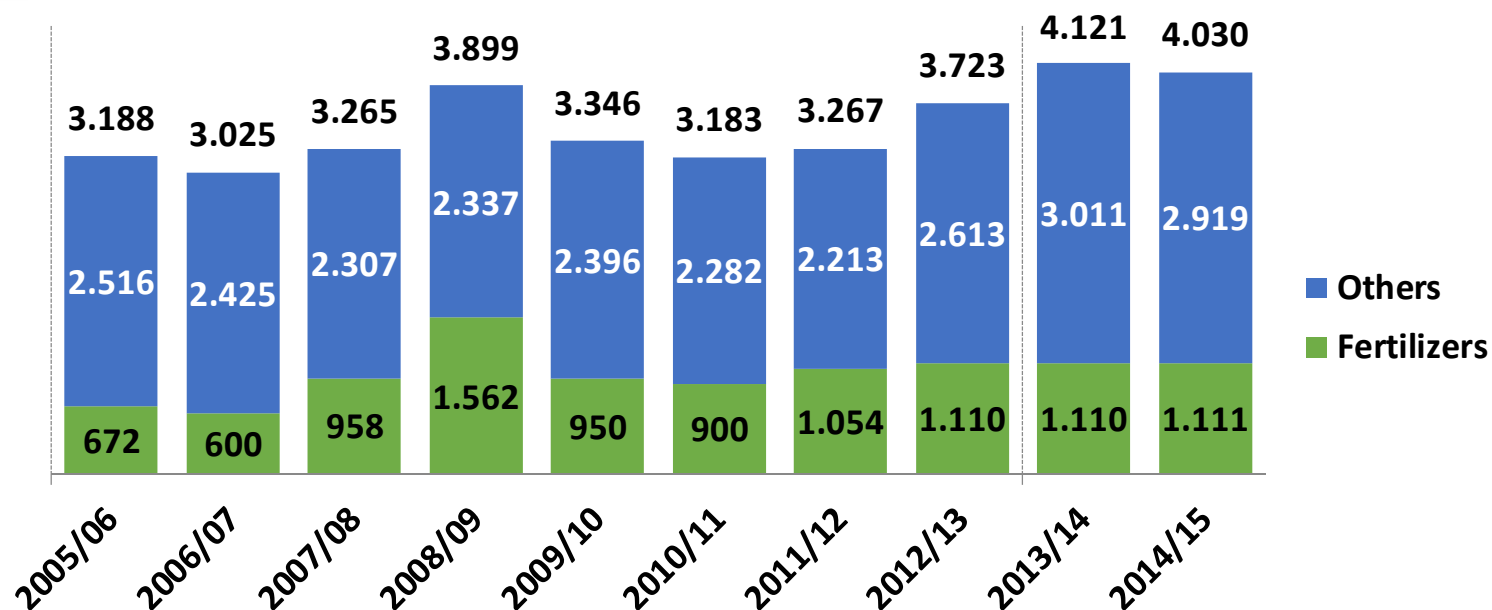
Source: USDA, Forecast Agroconsult.

Cotton Crop/Brazil – Production Costs

Mato Grosso (R\$/ha)

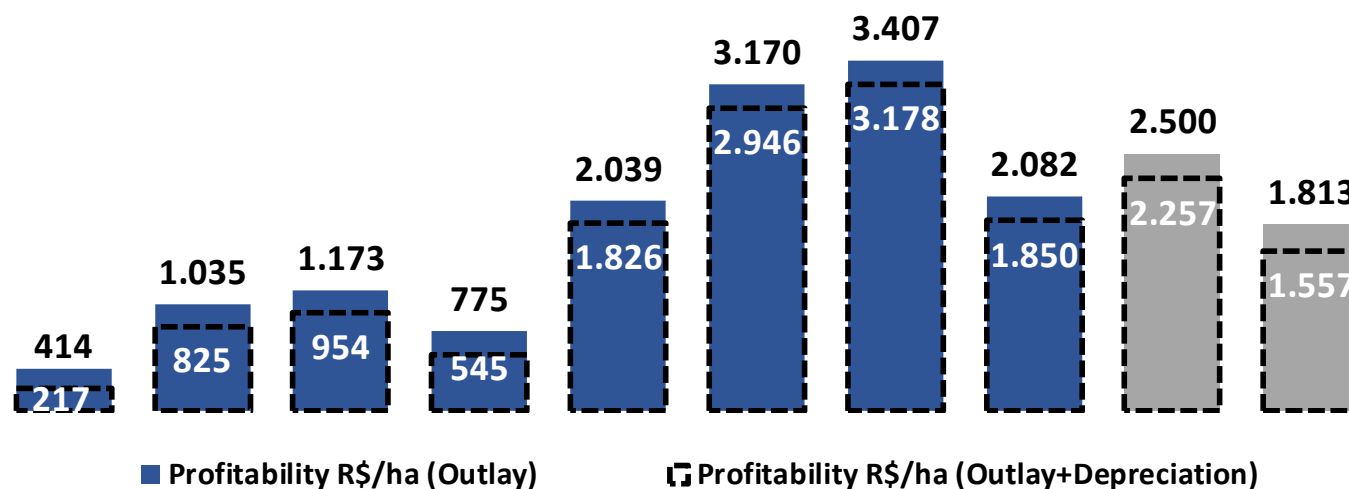


Bahia (R\$/ha)

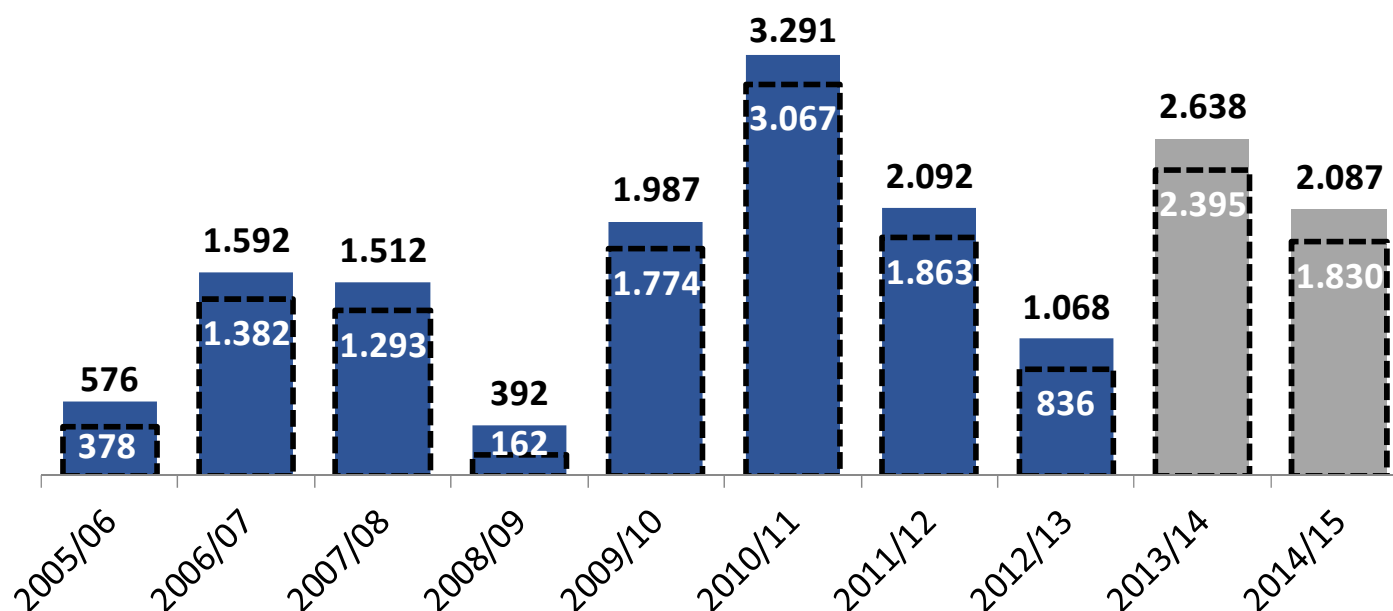


Cotton Crop/Brazil – Profitability

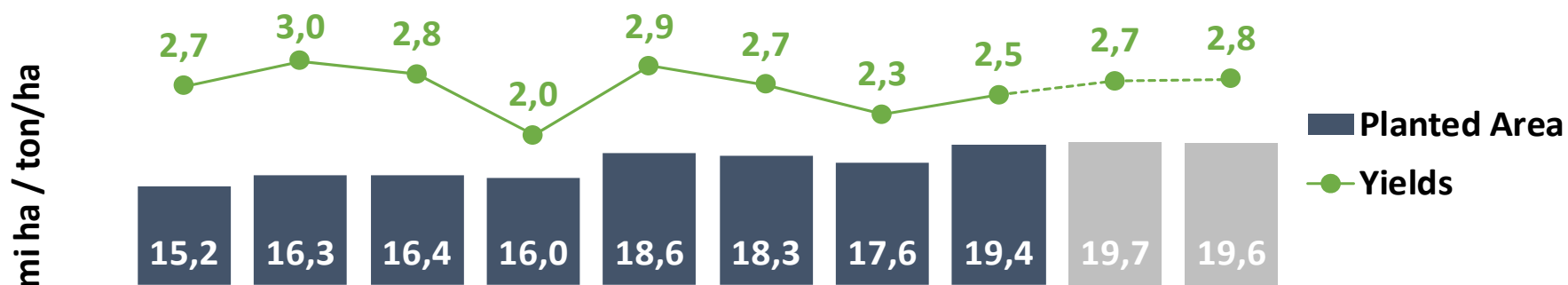
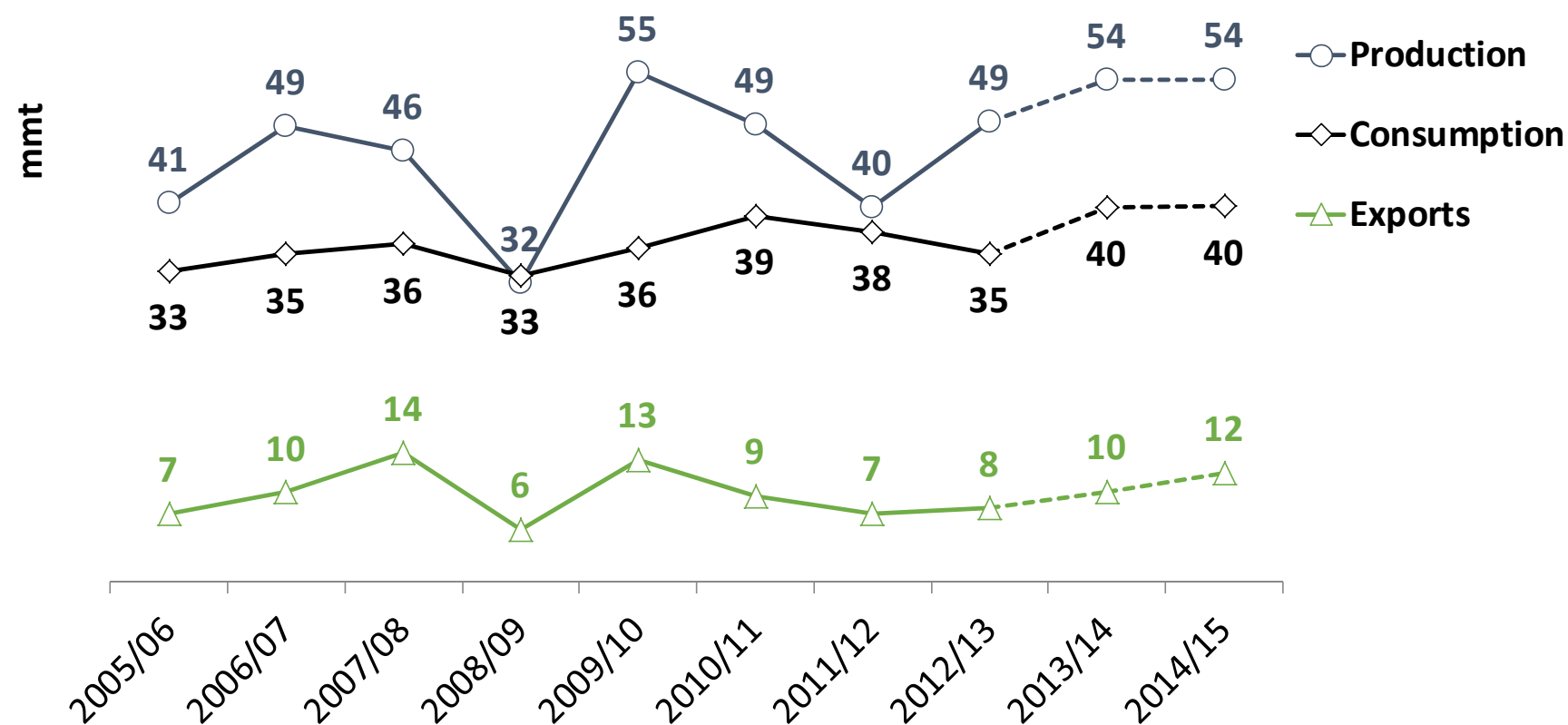
Mato Grosso (R\$/ha)



Bahia (R\$/ha)

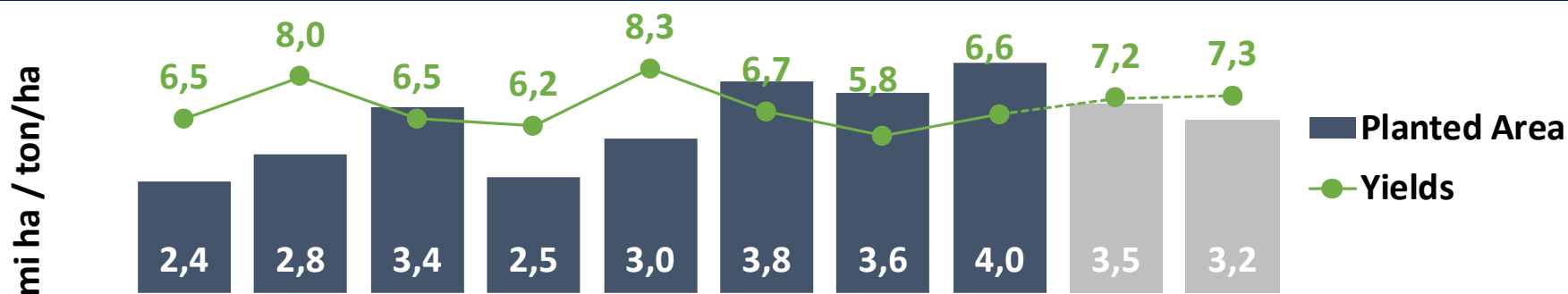
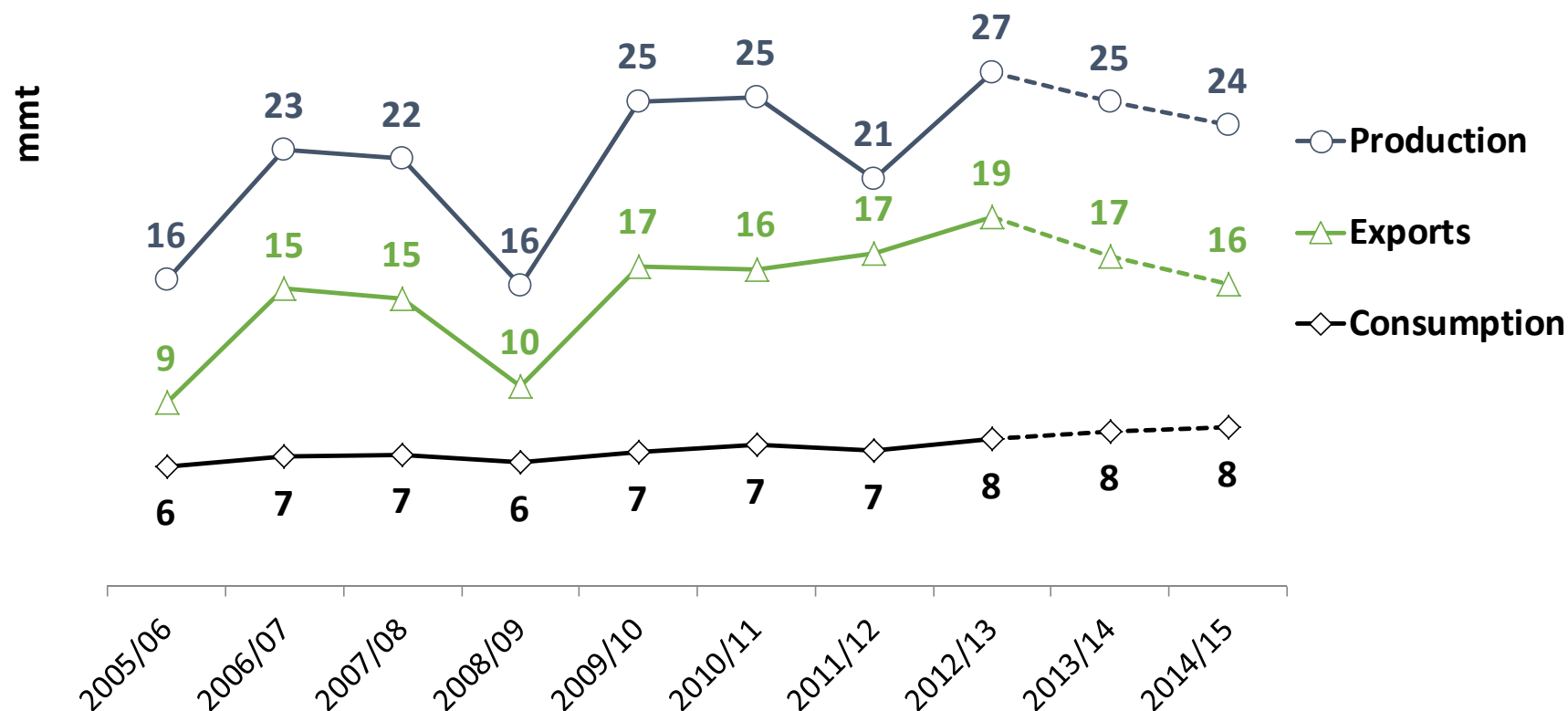


Soybeans/Argentina – Supply and Demand



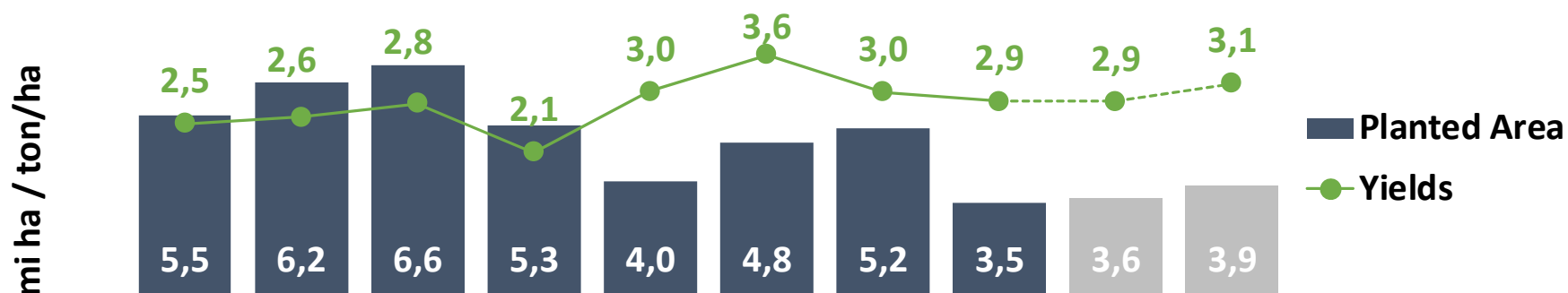
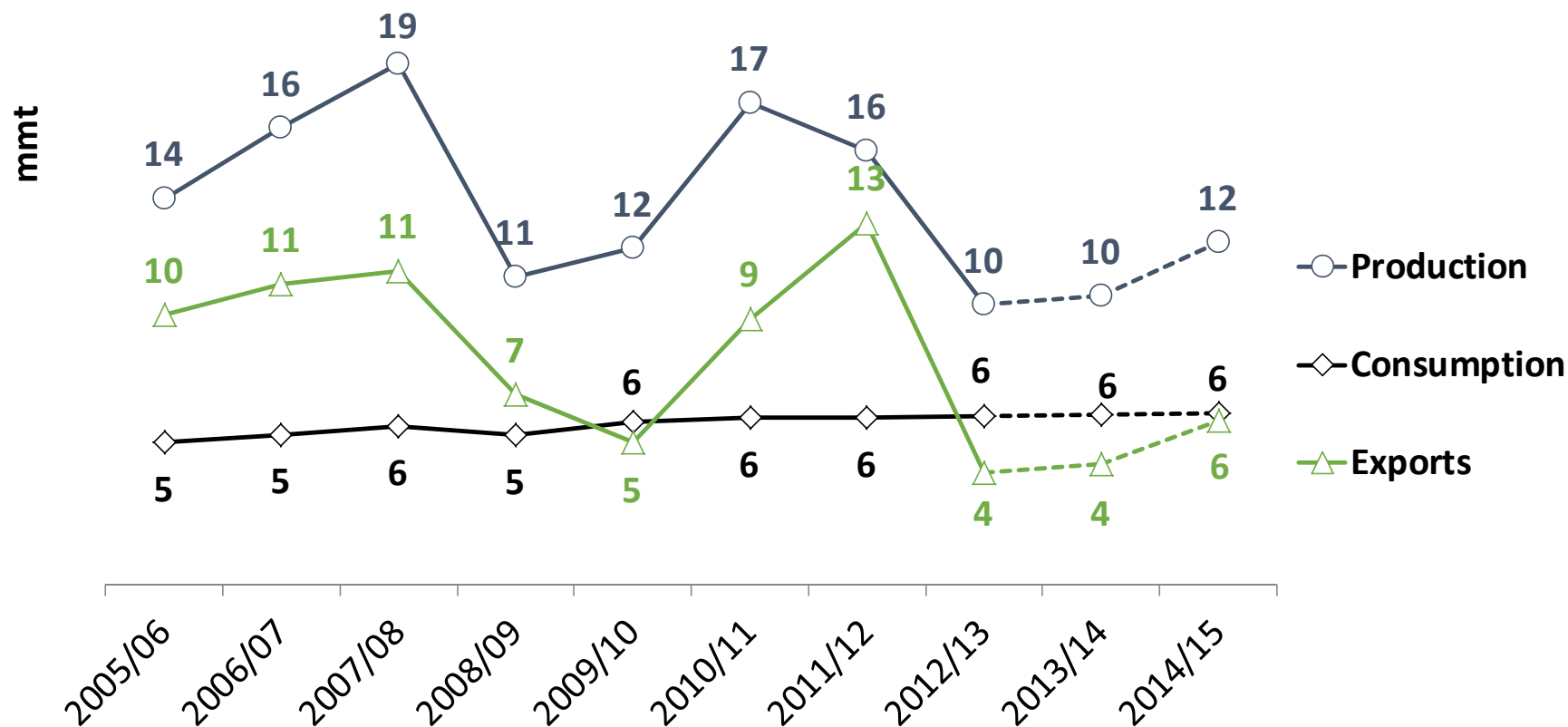
Source: USDA, Forecast Agroconsult.

Corn/Argentina – Supply and Demand



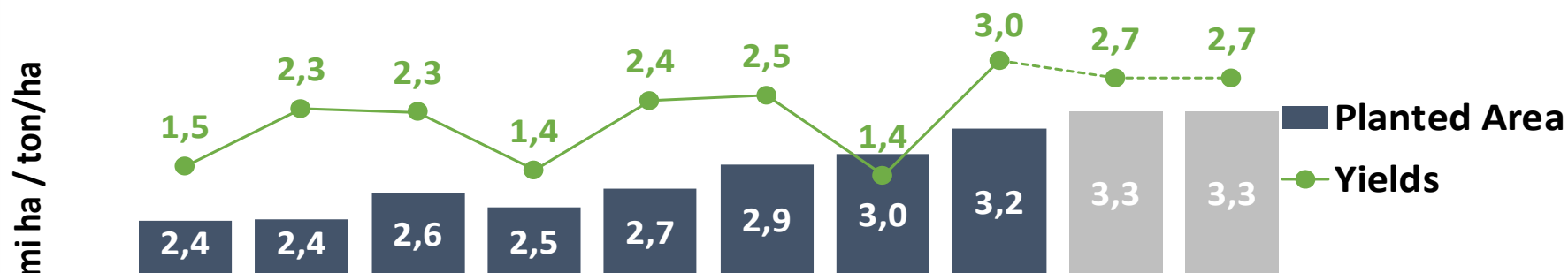
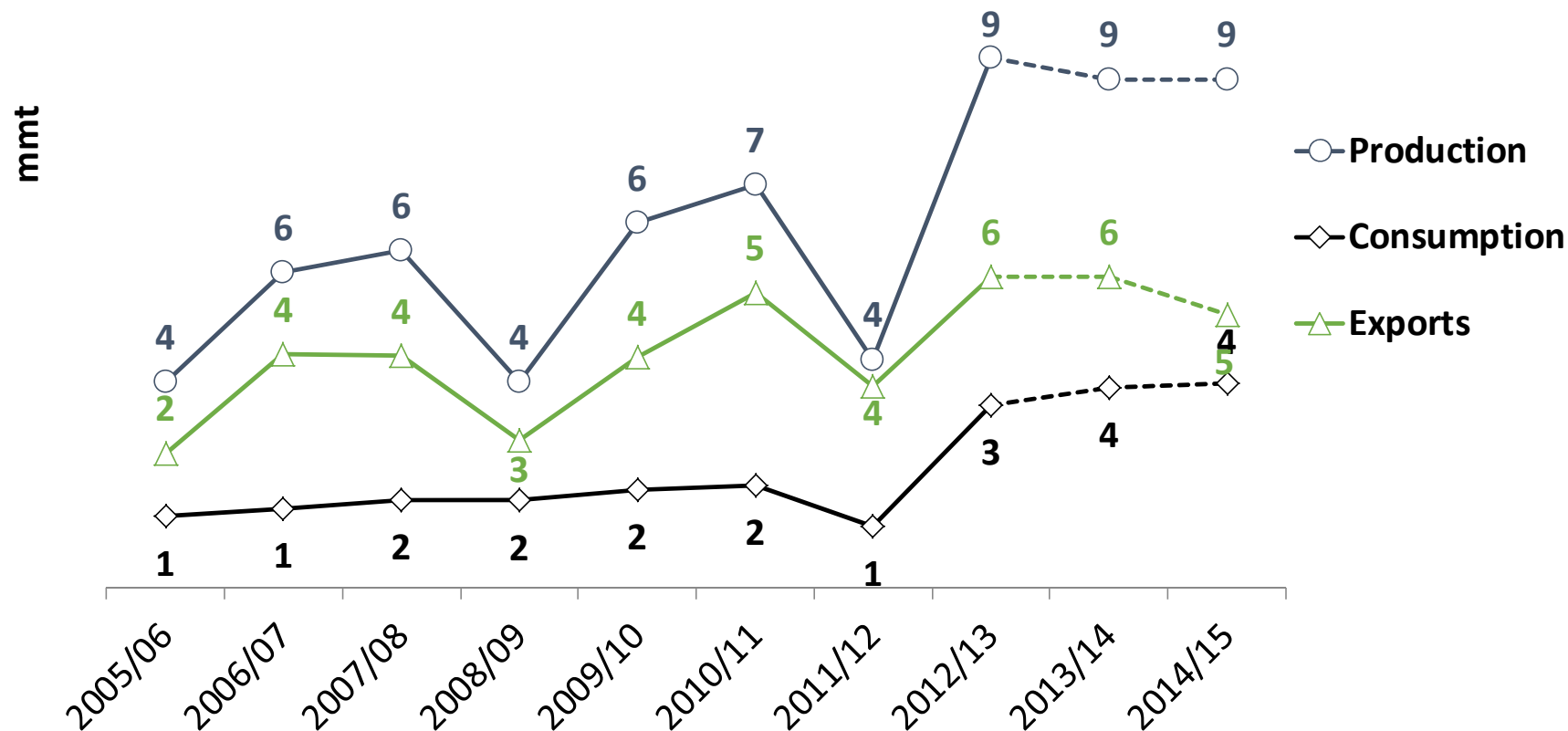
Source: USDA, Forecast Agroconsult.

Wheat/Argentina – Supply and Demand



Source: USDA, Forecast Agroconsult.

Soybeans/Paraguay– Supply and Demand



Source: USDA, Forecast Agroconsult.

Outlook for the Fertilizer Market in South America: 2013-2014

Fertilizer Consumption in SA: a Snapshot (2012)



Nutrient	Consumption (Mt nutrient)	% World	Main Countries
Nitrogen	5.62	5.2%	1. Brazil (60%) 2. Argentina (15%)
Phosphate	5.59	13.5%	1. Brazil (77%) 2. Argentina (13%)
Potash	5.56	19.2%	1. Brazil (86%) 2. Colombia (5%)
NPK	16.77	9.4%	1. Brazil (74%) 2. Argentina (10%)

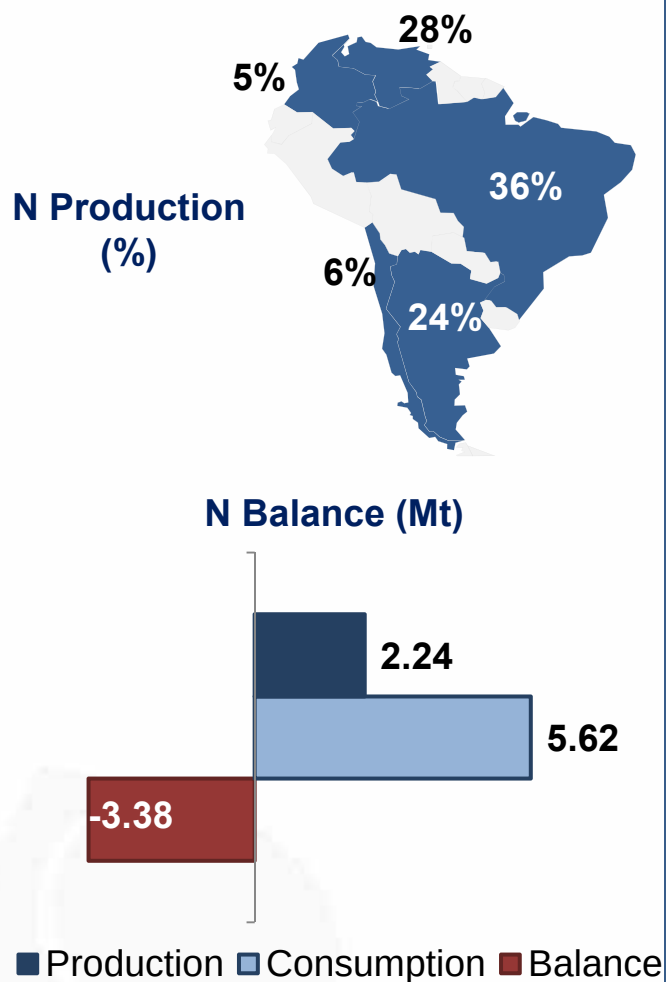
Source: Agroconsult and IFA

Note: South America data includes Argentina, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, Venezuela and Others Latin American & Caribbean Countries as defined by IFA.

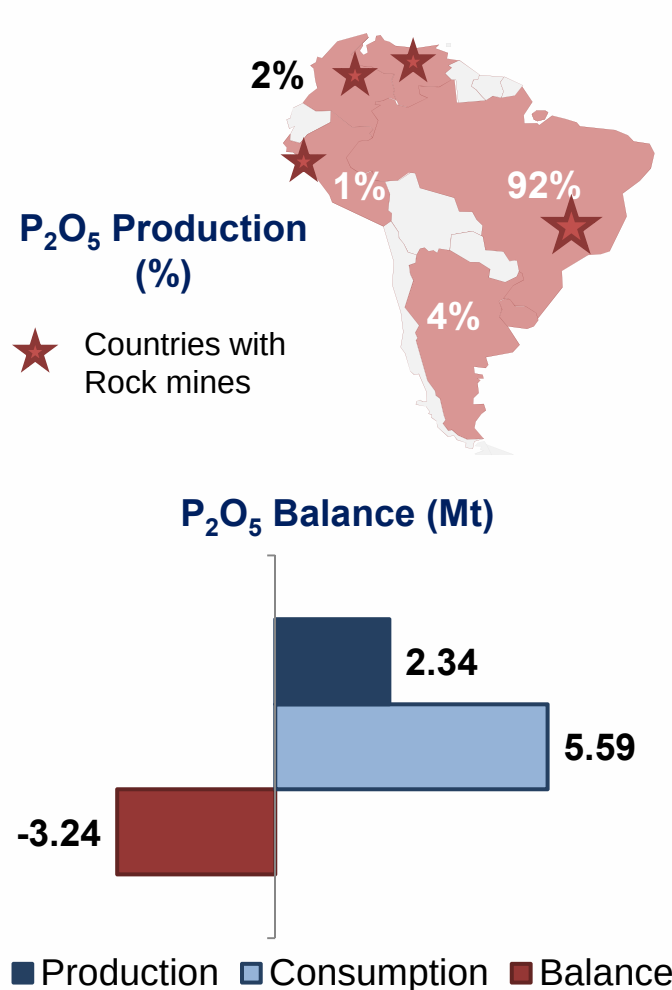
Fertilizer Production in SA: a Snapshot (2012)



Nitrogen



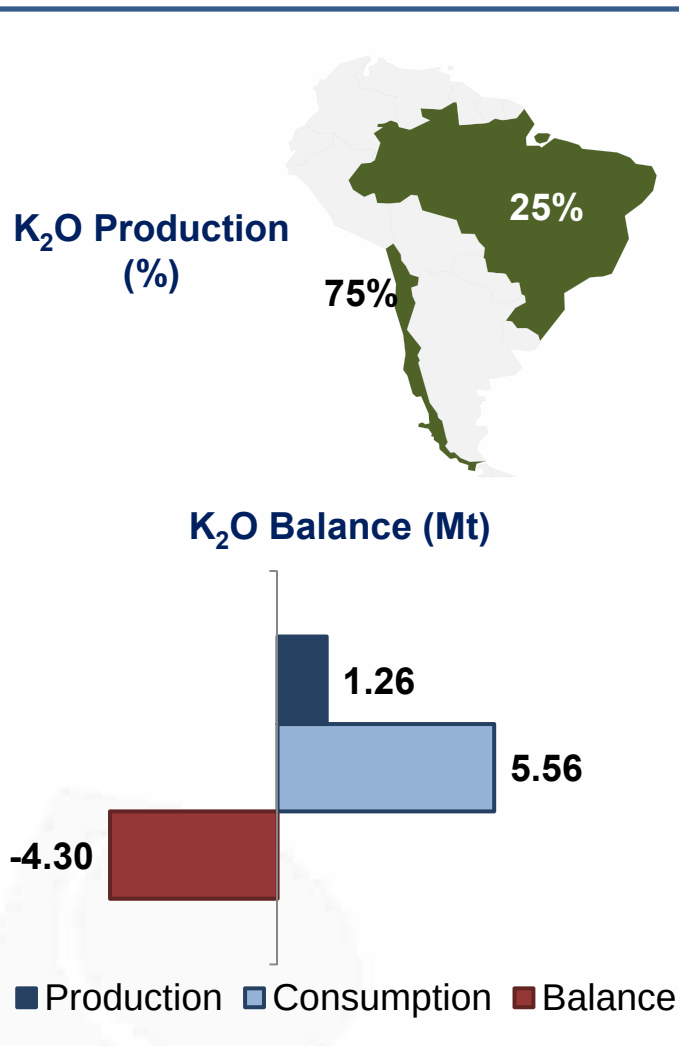
Phosphate (Processed Products)



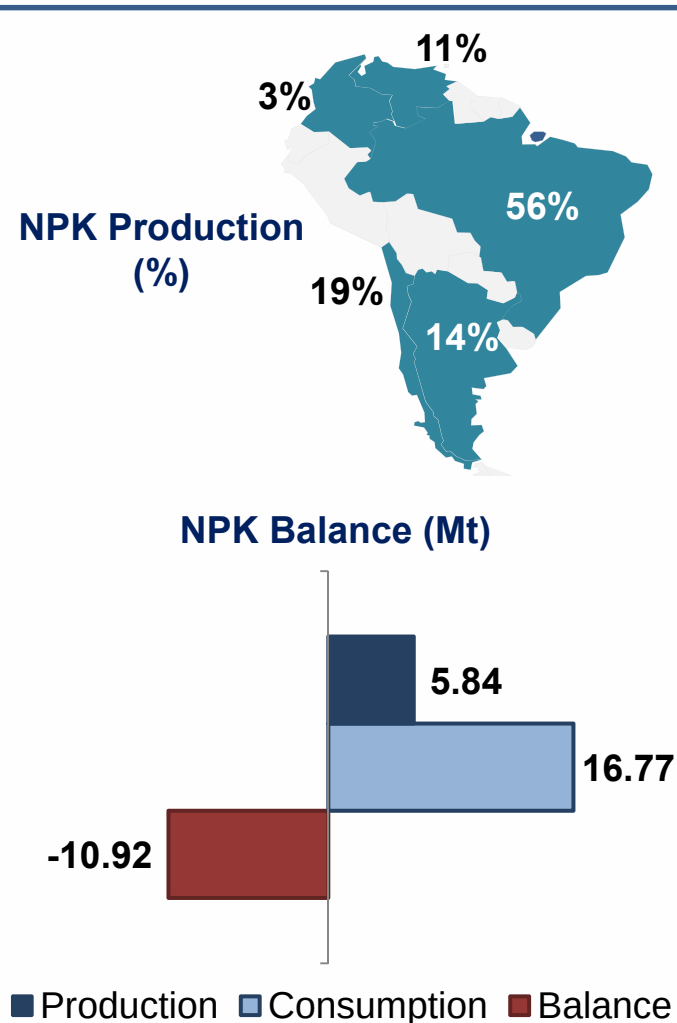
Fertilizer Production in SA: a Snapshot (2012)



Potash



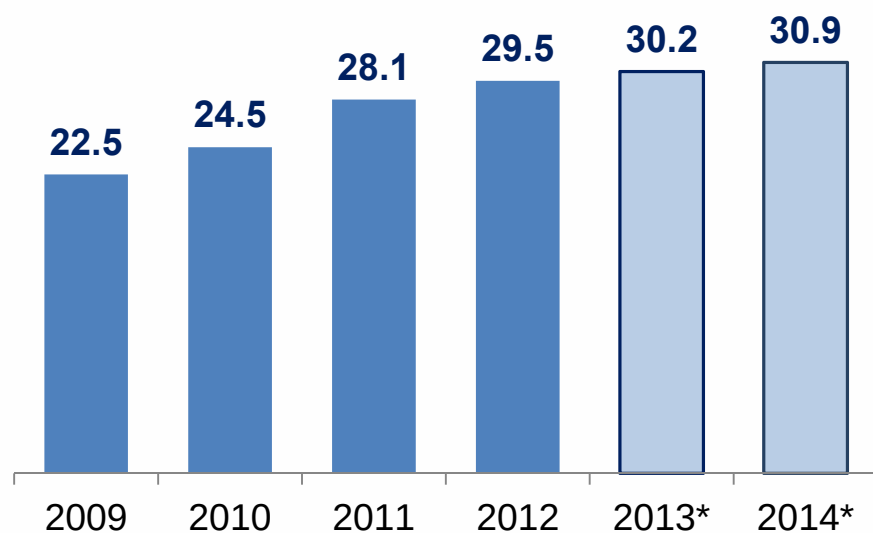
NPK



Brazil - Fertilizer Consumption: Product & Nutrient



Fertilizer Consumption 2009-2014 (Mt)

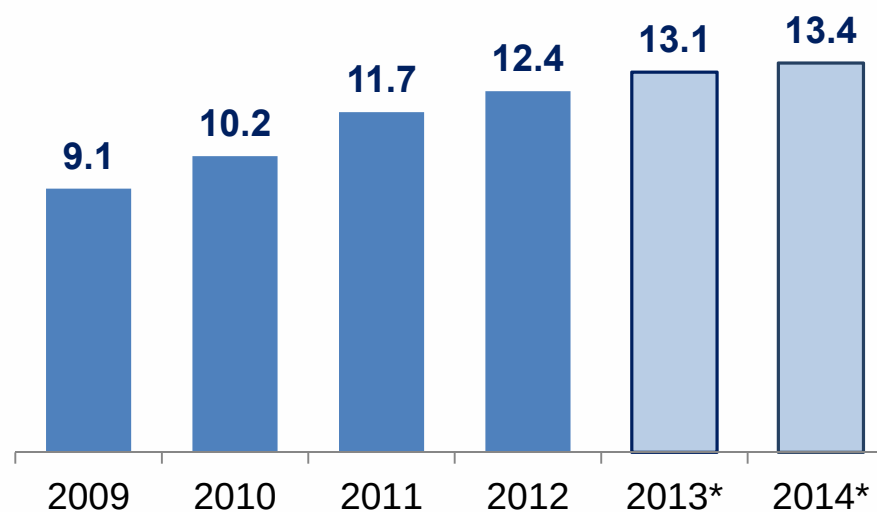


CAGR 09/12: 9.5%

Δ 13/12: 2.4%

Δ 14/13: 2.3%

Nutrient Consumption 2009-2014 (Mt)



CAGR 09/12: 11.1%

Δ 13/12: 5.3%

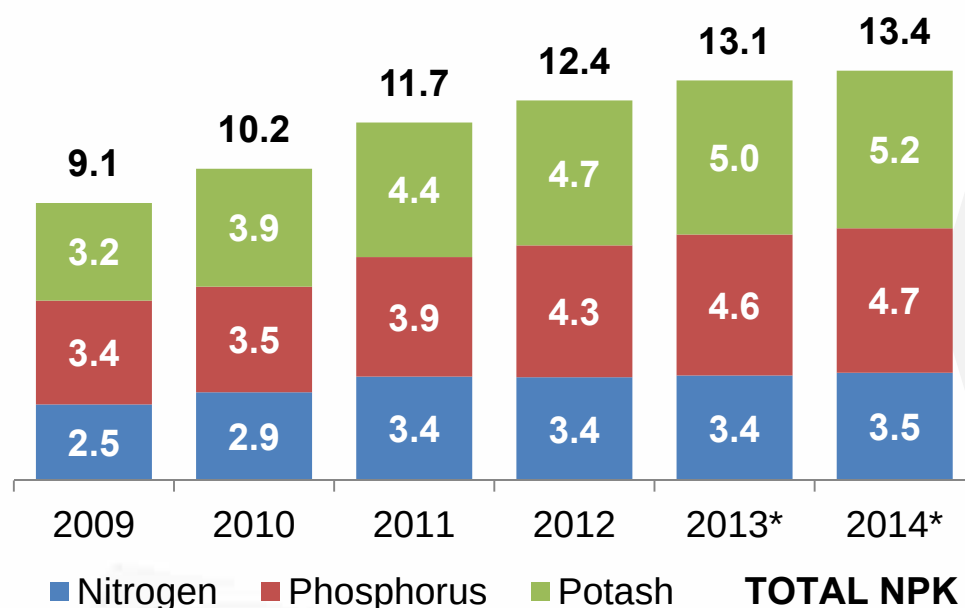
Δ 14/13: 2.4%

Source: ANDA. (*) 2013 and 2014 estimated by Agroconsult.

Nutrient Consumption



Consumption by Nutrient 2009-2014 (Mt)



Growth Rates:

	N	P	K
CAGR 09/12:	10.8%	8.3%	14.1%
Δ 13/12:	1.7%	6.9%	6.3%
Δ 14/13:	2.6%	2.5%	2.2%

Consumption Profile (% by Nutrient):

	N	P	K
2009	27%	37%	35%
2012	27%	35%	38%
2014	26%	35%	39%

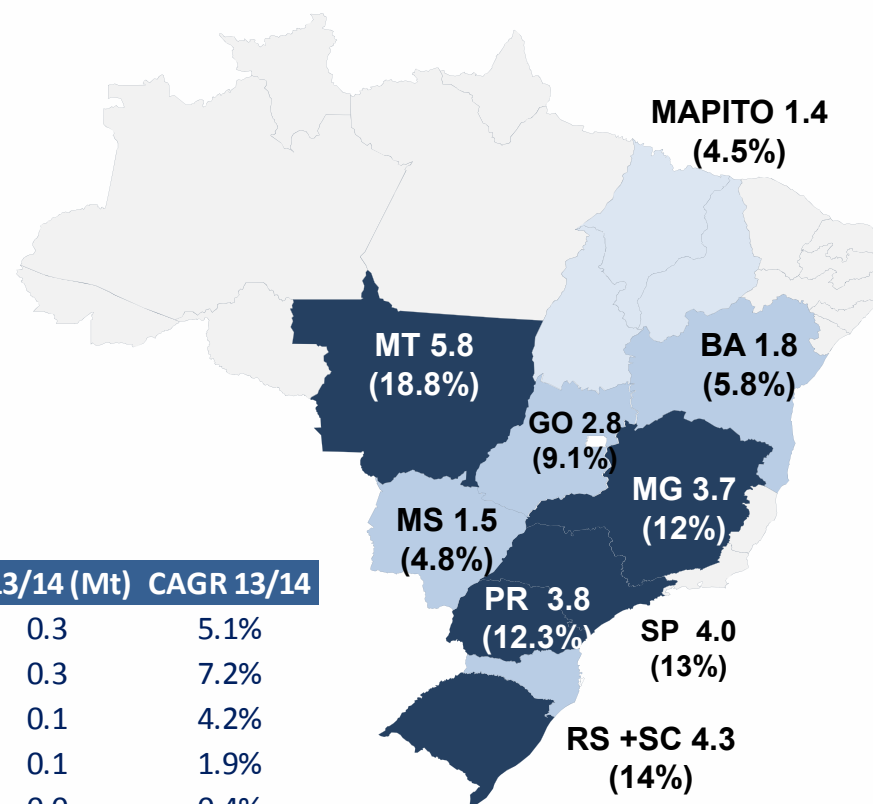
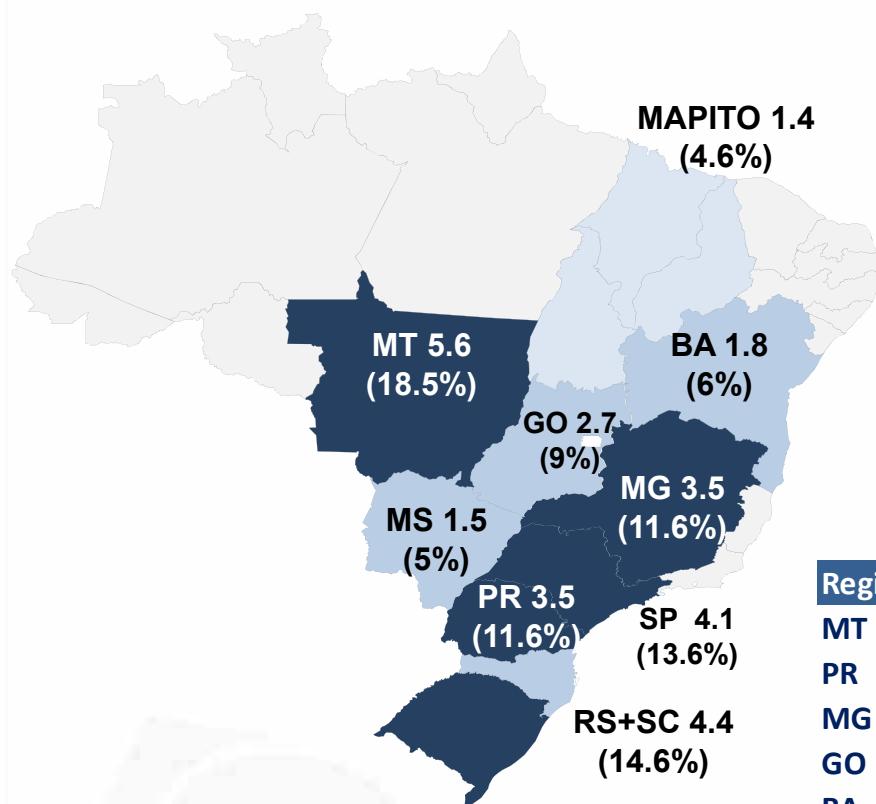
Source: ANDA. (*) 2013 and 2014 estimated by Agroconsult.

Brazil – Fertilizer Consumption by Region – Mt



Total Consumption 2013:
30.2 Mt

Total Consumption 2014:
30.9 Mt



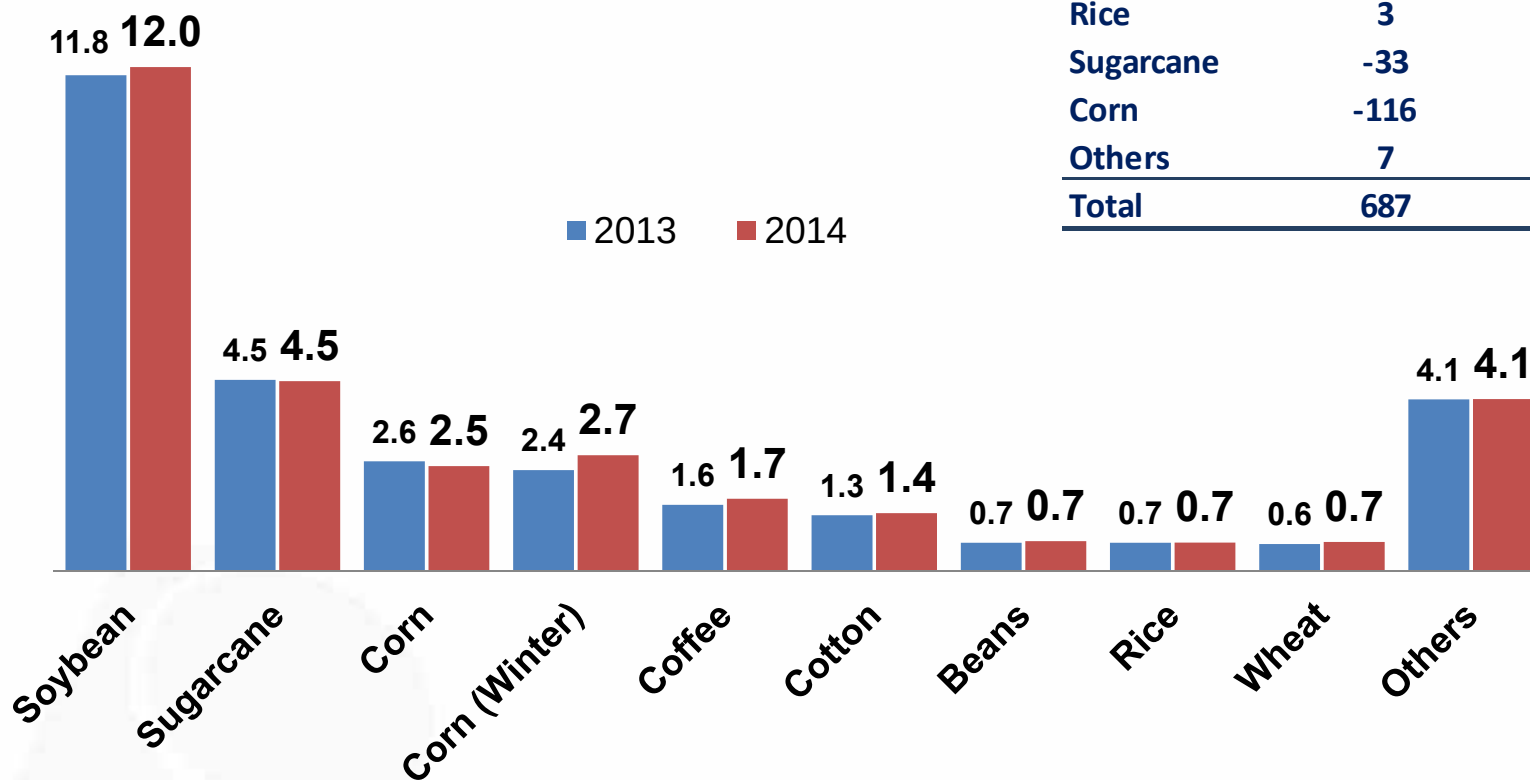
Region	Δ 13/14 (Mt)	CAGR 13/14
MT	0.3	5.1%
PR	0.3	7.2%
MG	0.1	4.2%
GO	0.1	1.9%
BA	0.0	0.4%
MAPITO	0.0	-0.5%
SP	0.0	-0,8%
RS/SC	-0.1	-1.4%
Others	0.0	1.3%
Total	0.7	2.3%

Source: Agroconsult

Brazil – Fertilizer Consumption by Crop – Mt



Nutrient Consumption by Crop 2013-2014 (Mt)

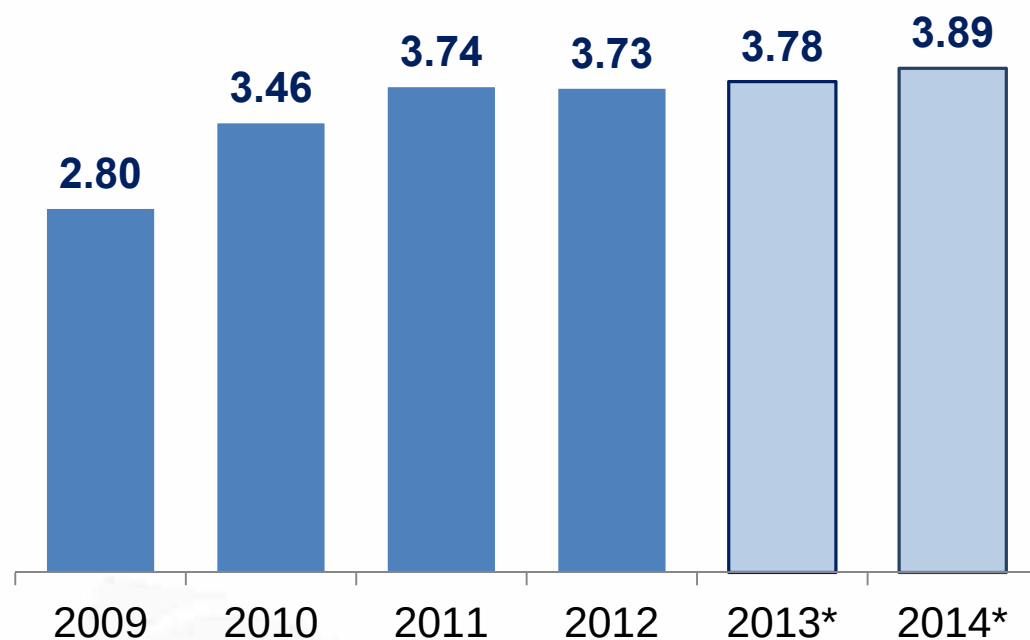


Crop	Δ 13/14 (Kt)	CAGR 13/14
Corn (Winter)	353	14.8%
Soybean	193	1.6%
Coffee	143	9.1%
Wheat	50	7.9%
Cotton	50	3.8%
Beans	37	5.6%
Rice	3	0.5%
Sugarcane	-33	-0,7%
Corn	-116	-4.5%
Others	7	0.2%
Total	687	2.3%

Urea: Demand



Urea Demand 2009-2014 (Mt)



CAGR 09/12:

10.0%

Δ 13/12:

1.5%

Δ 14/13:

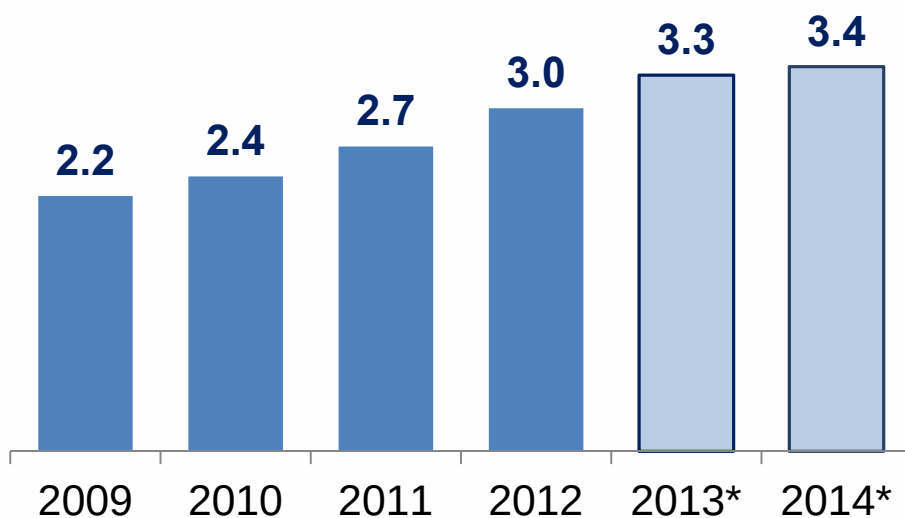
2.7%

Source: ANDA. (*) 2013 and 2014 estimated by Agroconsult.

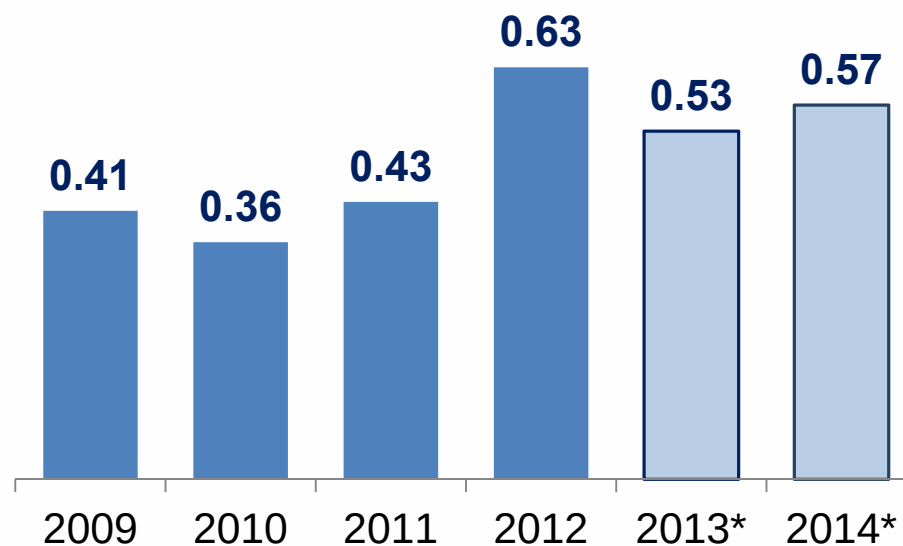
MAP/DAP: Demand



MAP Demand 2009-2014 (Mt)



DAP Demand 2009-2014 (Mt)



CAGR 09/12: 10.3%

Δ 13/12: 9.7%

Δ 14/13: 2.3%

CAGR 09/12: 15.3%

Δ 13/12: -11.1%

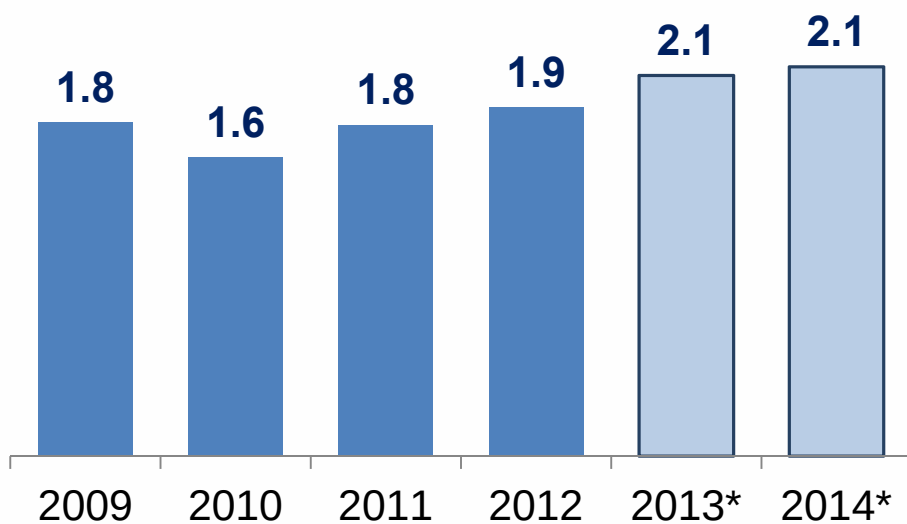
Δ 14/13: 1.1%

Source: ANDA. (*) 2013 and 2014 estimated by Agroconsult.

TSP/SSP: Demand



TSP Demand 2009-2014 (Mt)

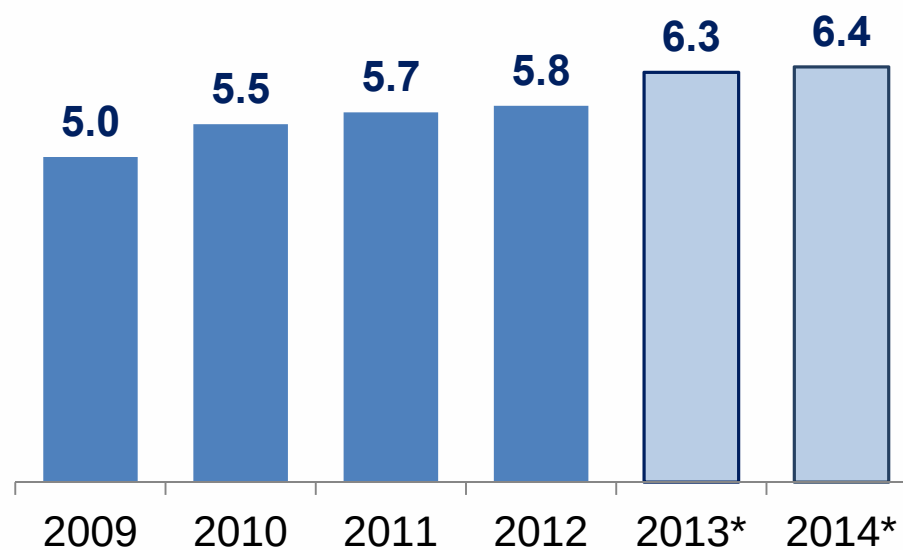


CAGR 09/12: 1.5%

Δ 13/12: 9.3%

Δ 14/13: 2.3%

SSP Demand 2009-2014 (Mt)



CAGR 09/12: 5.0%

Δ 13/12: 8.9%

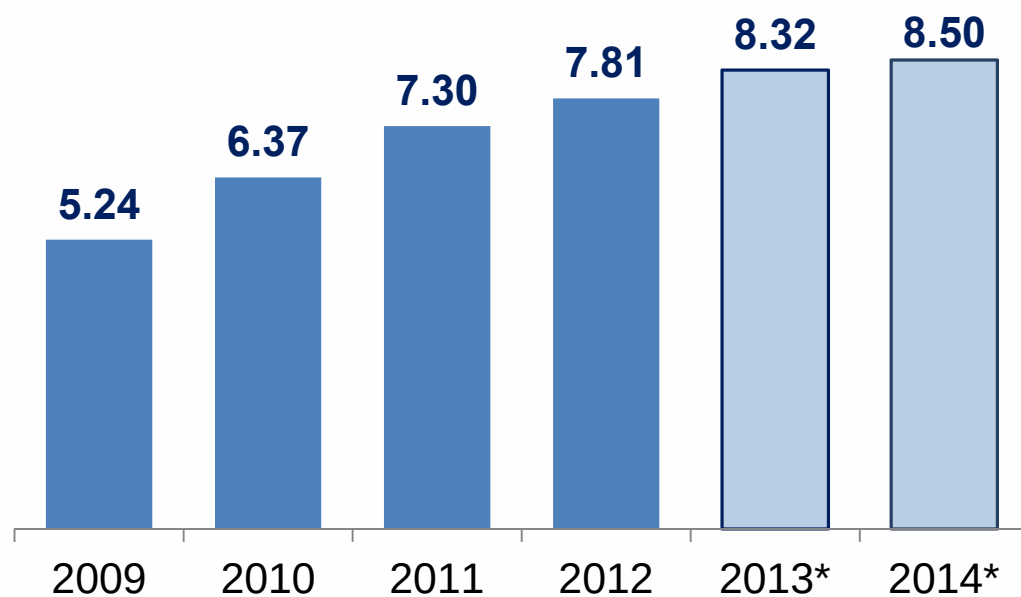
Δ 14/13: 1.3%

Source: ANDA. (*) 2013 and 2014 estimated by Agroconsult.

MOP: Demand



MOP Demand 2009-2014 (Mt)



CAGR 09/12: 14.2%

Δ 13/12: 6.6%

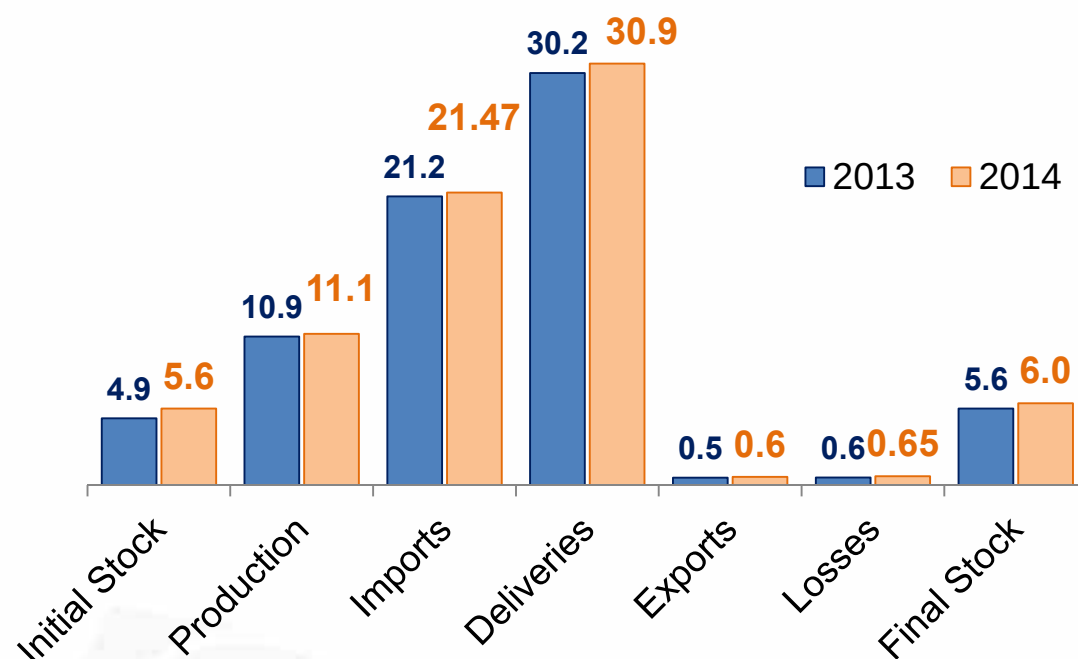
Δ 14/13: 2.2%

Source: ANDA. (*) 2013 and 2014 estimated by Agroconsult.

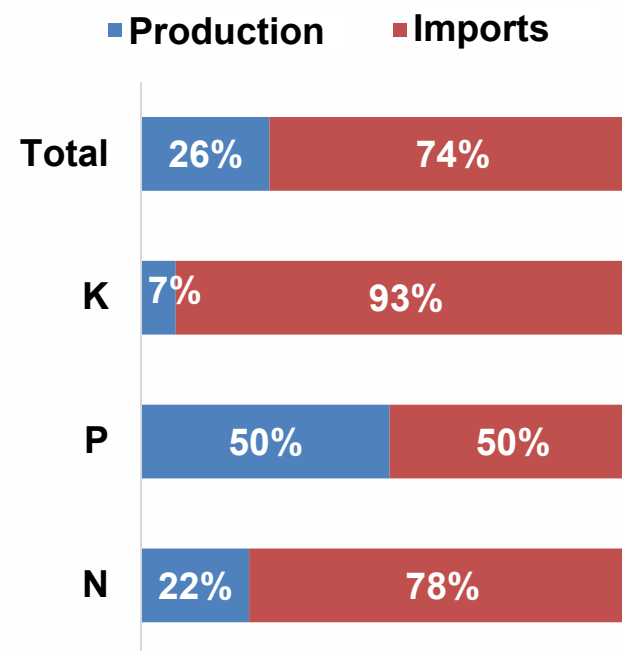
Brazil: Supply & Demand Balance



Supply and Demand Balance 2013-2014 (Mt)



Imports Share (%)



Source: ANDA. (*) 2013 and 2014 estimated by Agroconsult.

Logistics – Fertilizer Imports by Port

Consuming Region

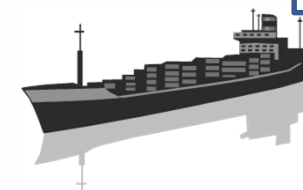
2012



North. Northeast and
Center-West:
13.68 MMT
46%

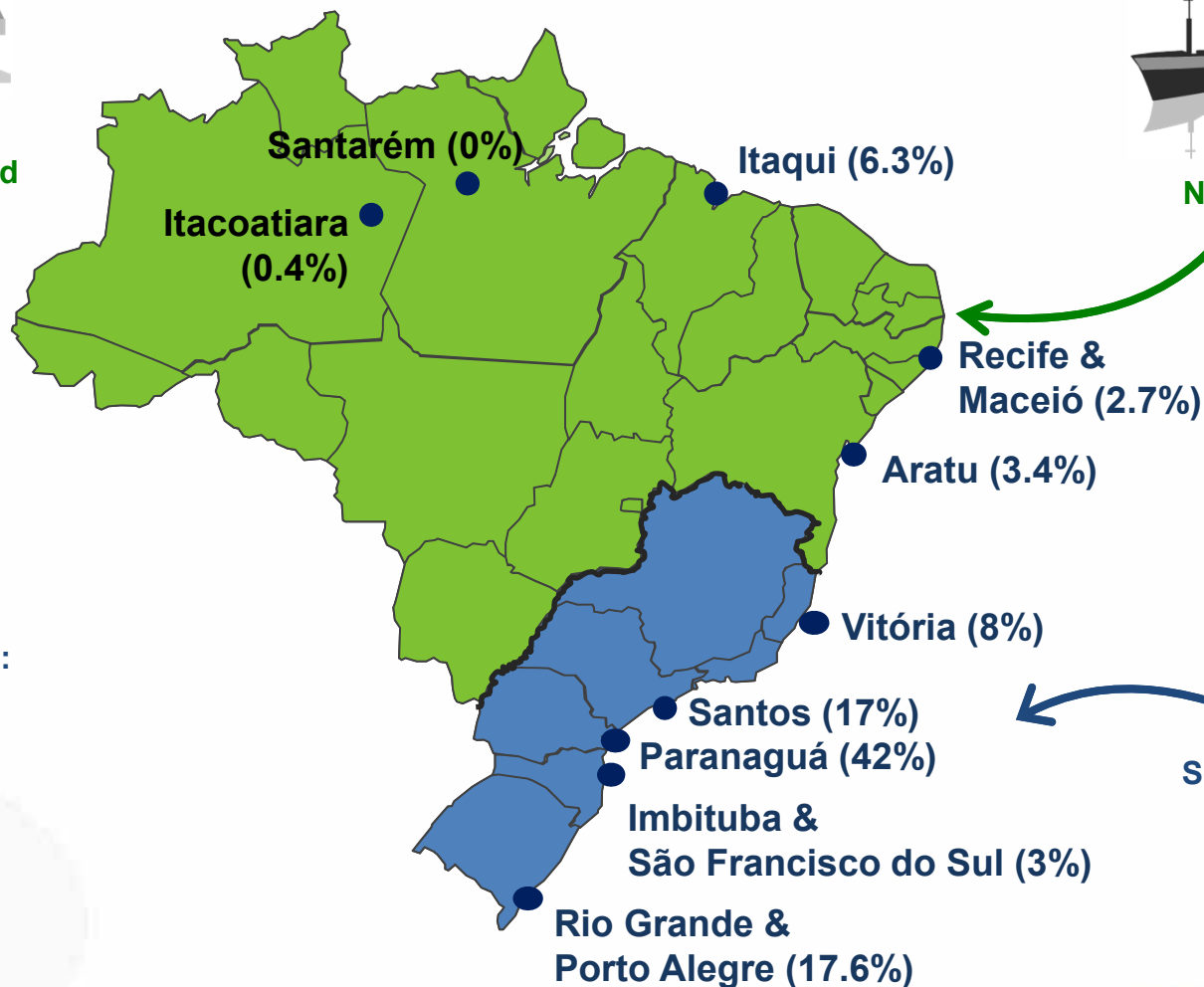
South and Southeast:
15.86 MMT
54%

Ports



North. Northeast and
Center-West:
2.5 MMT
13%

South and Southeast:
17.0 MT
87%



Main Fertilizer Investments in South America



Capacity Developments (Mt of product)

Nitrogen			
Country	Product	Capacity (Mt)	Start-up
Argentina	Urea	0.8	2016
Bolívia	Urea	0.7	2016
Venezuela	Urea	0.7	N.D
Brazil (Três Lagoas)	Urea	1.2	2014
Brazil (Linhares)	Urea	0.7	N.D

**Urea:
4.1 Mt**

Phosphate			
Country	Product	Capacity (Mt)	Start-up
Brazil (Arraias-TO)	SSP	1.0	2013/2017
Brazil (St. Araguaia-PA)	SSP, MAP, STP	0.8	2016/2017
Brazil (Patrocínio-MG)	SSP, MAP, STP	1.2	N.D
Brazil (Patrocínio-MG)	TSP	0.35	2016
Brazil(Catalão-GO)	N.D	1.9	2017
Venezuela	NPK/DAP	~ 0.3	N.D

**Total:
5.6 Mt**

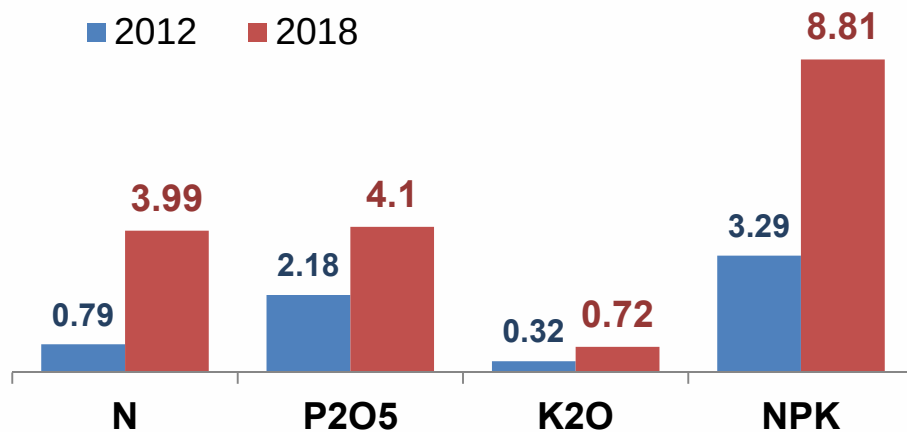
Potash			
Country	Product	Capacity (Mt)	Start-up
Brazil	MOP	1.2	2015

Source: IFA and ANDA.

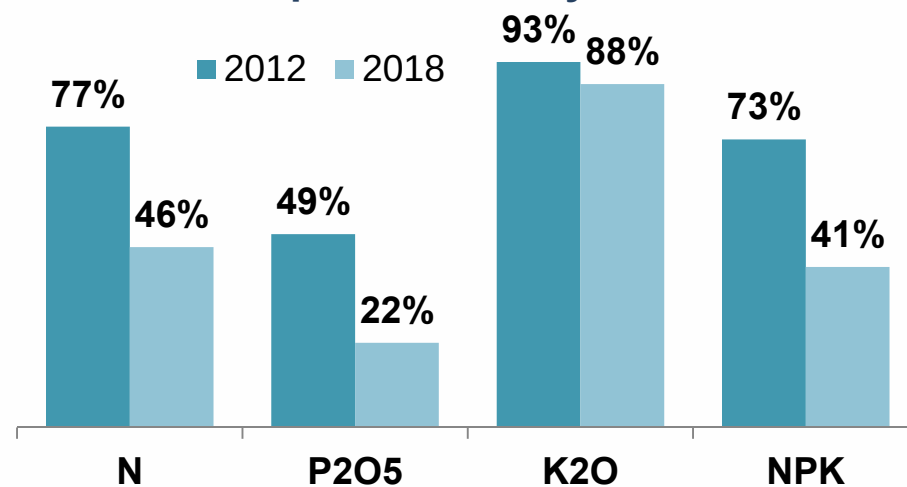
Brazil: New Investment Results



Brazilian Production by 2018 - (Mt nutrient)



Imports Share by 2018



Source: Agroconsult. ANDA – 3º Congresso de Fertilizantes. 2013.

Business Intelligence platform covering all fundamentals of the main agricultural commodities and fertilizers



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AGROCONSULT is one of the most respected specialized agribusiness consultancies in Brazil. Since 2000, the company has been serving clients throughout the industry: agricultural producers and cooperatives, agricultural input industry (seeds, fertilizers and agrochemical), agricultural machinery, tool and equipment suppliers, trading companies, the food and biofuel industry, logistics companies, financial institutions and international associations and agencies.

We have a multidisciplinary team of professionals including agronomists, economists, business managers and engineers. Our staff oversees a variety of agribusiness sectors and have the expertise required to produce market scenarios with long and short term trends. We also develop on demand studies and projects (market surveys, demand mapping, agronomic and economic investment feasibility analyses, technical reports, due diligence and valuation of agricultural and industrial assets). In addition to its market insight, the team is constantly out in the field, collecting information and creating strong relationships with farmers and other industry agents.

