







## SWITZERLAND 2004: BASEL CRITERIA FOR RESPONSIBLE SOY PRODUCTION



Agriculture in South America is in general well developed, mainly in Brazil, Argentina, Paraguay, Uruguay, Colombia.

Export model is based on industrial agriculture highly mechanized and technical.

Brazil: South – family agriculture, coops  
Center-West – industrial agriculture

Production costs lower than in America or Europe.

#### BRAZIL

Logistics is still less efficient, quality and scale compensate.

2-3 crops per year – soy, maize, cotton.

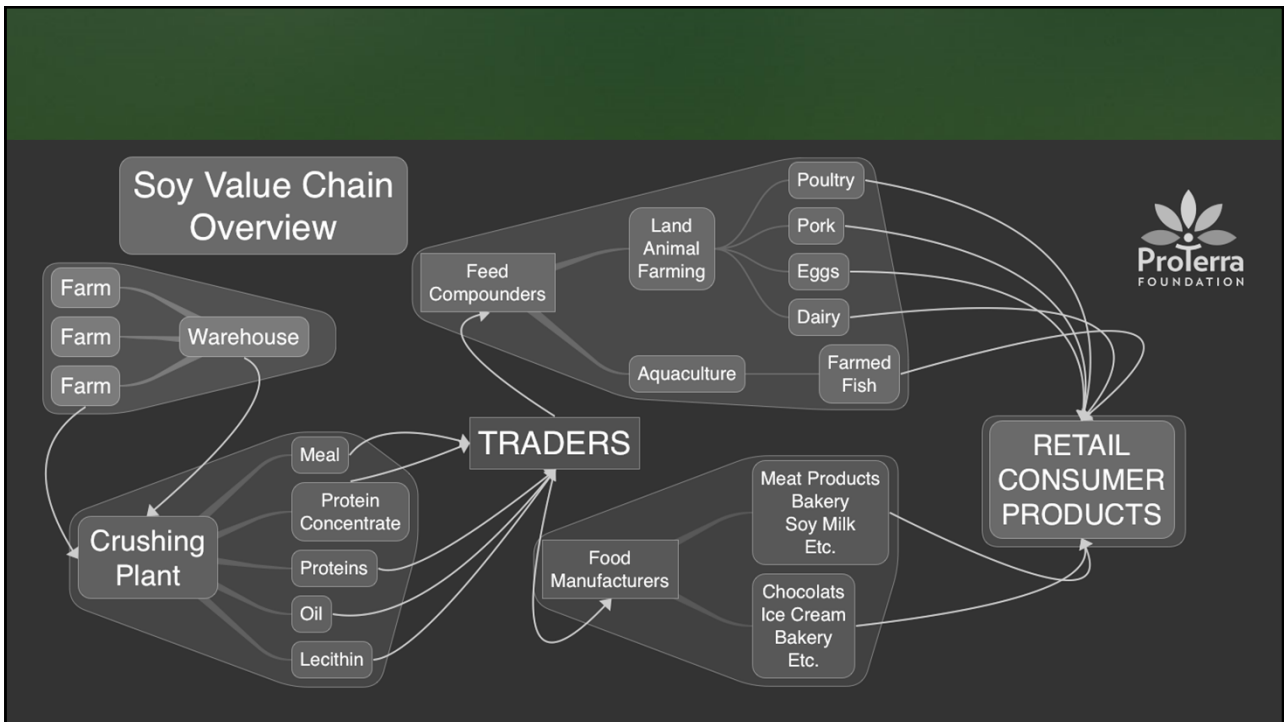
Non-GMO + GMO soy total 99 million MT 2015-16

about 10% **Non-GMO ≈ 9.9 million MT:**

Corruption and political instability across the continent, with centre-left parties being replaced by right-wing parties - and in some cases ousted (Paraguay).

Political and internal economic crisis in Brazil has NOT affected agriculture and the export industry materially.

Commodity prices have fallen, following oil, but \$ has appreciated against local currencies such as the BRL.



## Market conditions in Europe

Requirements: regulatory, social aspects, sustainability, Non-GMO market requirements, GMO Labelling regulation.

How will the market change in Europe?

New restrictions to South American soy based on assumptions and marketing directives not always realistic for all producing regions.



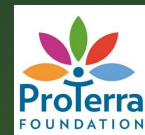
Local soy higher cost in general lower protein.

Substitution is not proven to same efficiency.

No Board of Trade and futures market for peas, lupines, fava beans, etc.

Yield Intacta X Non-GMO premia – producers of GMO and Non-GMO state costs of production of GMO varieties including Intacta are more expensive.

Problem is post-harvest handling of Non-GMO. Farmers must sell their Non-GMO productions fast, they will not afford costs of segregation for too long and might eventually commingle Non-GMO with GMO.



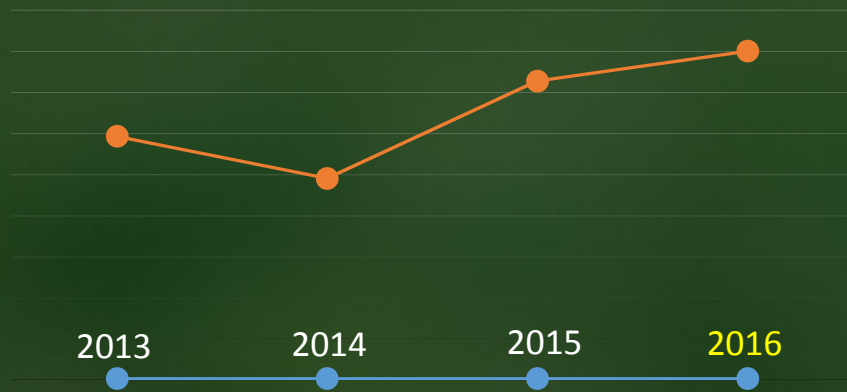
GLOBAL FIGURES – AVAILABILITY  
PROTERRA NON-GMO CERTIFIED

NON-GMO SOYBEAN SUPPLY (in MT) - GEOGRAPHIES						
	RU	FR	CA	BR	USA	TOTAL MT
2013	0	5,000	25,000	2,930,000	0	2,960,000
2014	20,000	5,000	20,000	2,400,698	0	2,445,698
2015	30,000	5,000	20,000	3,560,000	20,000	3,635,000

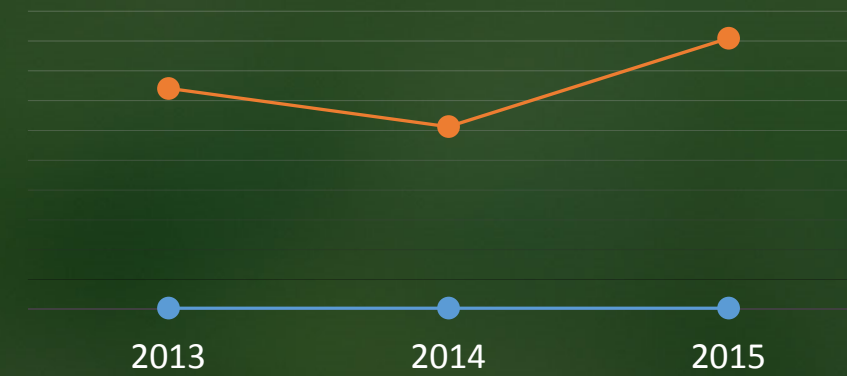




## GLOBAL AVAILABILITY AND FORECAST PROTERRA CERTIFIED








## GLOBAL AVAILABILITY AND FORECAST PROTERRA CERTIFIED





NEEDLE MOVERS FOR NON-GMO & SUSTAINABLE


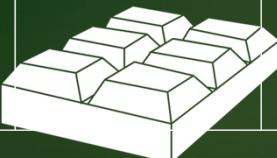


Sectorial Agreements		
<b>UPTAKE</b> 	<b>RETAIL FEED</b>	<b>POULTRY, EGGS</b> 
		<b>FISH</b> 
		<b>DAIRY</b> 
		<b>PIGS</b> 



NEEDLE MOVERS FOR NON-GMO & SUSTAINABLE



Sectorial Agreements		
<b>UPTAKE</b> 	<b>RETAIL FOOD</b> 	<b>LECITHIN, PROTEINS CONFECTIONERY, BAKERY, SOY PRODUCTS, MEAT PRODUCTS</b>



## NEEDLE MOVERS FOR NON-GMO & SUSTAINABLE



### Sectorial Agreements

#### AVAILABILITY



#### PRODUCTION



CONVENTIONAL  
GENETICS, SEED  
PRODUCERS, GROWERS,  
COOPS, CRUSHERS,  
TRADERS, LOGISTICS

Vast swaths of land under agriculture.

Brazil Center-West agriculture and Amazon Biome.

Sustainability – farm and not crop (added value).

Reduce use of pesticides and chemical fertilizers.

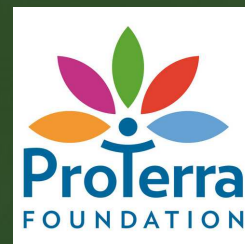
Reduce emissions, water pollution, decrease risk of scarcity of potable water.



## Why ProTerra ?

Protein production is the hub for  
global warming.

Need for sustainability globally.



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info@protterrafoundation.org  
Augusto.Freire@protterrafoundation.org  
+31 (30) 320-0228  
+55 (51) 9117-8541

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