

Sustainable Strategies for GM-Free Livestock Production

7th Conference of the GMO-free
European Regions Network

Urbino, Italy

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Soy—Relevant Questions

- Is sufficient supply available?
- Can supply expand to meet future demand?
- Does supply meet quality requirements?

Requirements?

- Quality
- Non-GMO
- Socially Responsible
- Environmentally Sustainable

Supply—Core Message:

The tonnage of *Non-GMO* soy available from Brazil, India, China & NA is more than sufficient to assure sustainable, long-term and growing production of *Non-GMO* animal feed.

**Supply of
Non-GMO Soy Meal
for Animal Feed**



**ASSOCIAÇÃO BRASILEIRA DE PRODUTORES DE GRÃOS NÃO
GENETICAMENTE MODIFICADOS**
Fones - 06 (11) 2092-7101 Fax 1 973 1112 2092-9101 abrango@abrango.org

São Paulo, December 16th 2009

New York

TO WHOM IT MAY CONCERN

The Brazilian Association of Non-GMO Grain Producers, ABRANGE, declares that through its members it is able to originate or produce and crush or trade about 6.2 million tons of Brazilian Non-GMO beans or its products. Also through its members it handles its members' sales. Brazilian traders or exporters are able to trade or crush, under regular programs, about 2.9 million tons of Non-GMO soybeans or its products totaling about 10 million tons of Brazilian NON-GMO soybeans or its products (about 7.5 million tons of soy meal and 1.8 million tons of soy oil and meal). All thousands tons of soybeans, whether or not, are known that the Brazilian Production of Non-GMO soybeans is estimated to be about 16 million tons, which includes the total volumes used traders to expand the current offer of Non-GMO soy products.

Planning ahead is required in order to meet the existing production or to expand the current capacity. In several instances shall contact directly the ABRANGE members for via ABRANGE to negotiate the desired volumes and products.

Planning implies in anticipating the desired volume and delivery program in order to allow the supplier to plan ahead the acquisition of the needed soybeans which includes covering the production of the required Non-GMO soy needs that will be further planned by the farmers. This planning shall be done 10 to 12 months ahead of the first delivery for increasing the current production, or 12 to 24 months if expanded production is required.

The negotiation implies on volume definition, delivery schedule, specific provisions, pricing and other terms of the trading which usually are enclosed in a frame contract covering a period of one year supply.

Yours faithfully,

Marcelo Tufano de Jesus
Executive Secretary
ABRANGE

César Borges de Jesus
President
ABRANGE

Soy Meal from Brazil ABRANGE

- ABRANGE Cert ID Certified 6.7 million MT
- Another 3.7 million MT non-GM not ABRANGE
- Total: 10 million MT Available immediately
- 16% of total EU soy meal usage

All Non-GMO Soy Products from Brazil

2008

- Total: Over 10 million MT
 - Meal
 - Beans
 - Lecithin
 - Soy Protein Isolate and TVP

There are other certification programs.
If Cert ID certifies 16% of EU soy meal,
the others certify another 20% to 35%.

Total 35% to 50%.

Conclusion:

Non-GMO soy is not “niche.”

Year to year fluctuations in volumes reflect:

- Shifts among certifiers
- Commercial decisions of our clients & their clients.
- Not decreases in the availability of certifiable non-GMO soybeans.

There is Plenty of Non-GMO Soy Meal for Growth

- 40% of 2008 Brazilian crop was Non-GMO (25 million MT).
- Total EU soy meal usage ~36 million MT.
- Brazilian production alone is more than enough to meet EU needs.
- India, China and specialized North American suppliers add their volume, as well.

GM soy production has been increasing in Brazil BUT:

- **Strict non-GMO specifications**
 - Still highly feasible both operationally and economically
 - It has been necessary to
 - Increase stringency of IP procedures
 - Increase premiums to growers
- **Cost increase**
 - Not prohibitive
 - Well within the range of the typical fluctuations in commodity prices

Brazilian GM soy production now retrenching at 50%.

- Increasing petroleum & energy costs
 - Increased glyphosate costs
 - Result: costs of non-GM and GM soy production are now EQUAL
- No savings to farmer to use RR soy
- Non-GM soy performs better in adverse weather conditions
- Non-GM soy production stable
- If energy costs increase further, non-GM soy production will increase further

Quality—Does it meet specifications?

Cert ID—ProTerra Certified Soy

- **Environmental Sustainability**
 - Management of agricultural and manufacturing operations
 - Preservation of ecosystem
 - Local development of ecosystem

- **Social Responsibility**
 - Fair labor
 - Fair trade
 - Ethical land use
 - Local development

- **Non-GMO 0.1% Threshold**



Other certifiers too:

Specifications:

- **0.1% to 0.9%**
- **Some: assurance of “non-Amazon”**

What is needed to assure supply? Communicate Your Needs!

- Not all non-GMO soy is automatically identity preserved.
- EU buyers need to indicate their requirements early in the year.
- Consistently, increased demand triggers expansion of Non-GMO certified soy volumes.

Why use Non-GM Feed?

- Consumer Demand = Marketing Opportunity
- Production Advantages = Cost Savings

Analysis of Feed Costs for Pork Production

GM versus Non-GM Feed Ingredients

Feed Costs Analysis UK Analysis Based On:

- DEFRA Data—Costs per Metric Ton for Soya Meal
- British Society of Animal Science Data—Nutritional Standards for Pigs

Cost analysis for feed are based on these two sources of data.

Cost difference between GM and Non-GM feed is smaller than the fluctuations in commodity costs.

Cost Differential per kg meat (75 kg meat = 100kg live wt)		
GM vs Non-GM	Sep-08 vs Jan 07	Sep-08 vs Apr-08
Sep-08		
p	p	p
2.2	9.8	2.8

This slide summarizes the data on feed costs. Conclusion is that the extra cost required to produce a kg of Non-GM pork meat is smaller than the fluctuations in costs of GM pork production due to fluctuation of the price of GM soy meal during the year 2008, and are VASTLY smaller than the differential in costs of GM pork production due to fluctuations in GM soy meal costs during the last two years. Thus although 1.8-2.2 p per kg is a significant cost when considered on its own, in the context of pork production over-all, just the fluctuations in commodity prices for GM feed ingredients are much larger.

Feed Costs Analysis

Cost Differential GM vs Non-GM Feed UK	
Milk	0.375p/lt
Pork	2p/kg
Chicken	3p/kg

This slide summarizes similar calculations carried out by a UK farmer. His calculations for pork correspond to those presented in the previous slides. His calculations for milk indicate that use of Non-GM feed for dairy production has a virtually negligible effect on milk costs. His calculations for chicken production indicate that the costs are in the same range but a bit steeper than for pork. This is because chicken feed contains more soy meal than pork feed.

Feed Costs Analysis Summary

Cost of Non-GM feed components
does impact production costs.

BUT

The market advantage gained from
using Non-GM feed can
compensate for this increase.

The following slides present data from Germany and the USA indicating that use of Non-GM feed in pig production may actually lead to higher efficiency with which the pigs convert feed into meat.

Feed Costs Analysis—Part 2

Impact of Feed Conversion Efficiencies on Cost of Production

The following slides present data from Germany and the USA indicating that use of Non-GM feed in pig production may actually lead to higher efficiency with which the pigs convert feed into meat.

Non-GM Feed used more efficiently than GM feed.

Greater Efficiency:

- German ~10%
- US 6.8%

The following slides present data from Germany and the USA indicating that use of Non-GM feed in pig production may actually lead to higher efficiency with which the pigs convert feed into meat.

Cost Savings Using Non-GM Feed:

Extra cost of Non-GM Feed: 2.2 p/kg meat
(Assuming equal feed efficiency)

Savings of Non-GM Feed: 2.8 p/kg meat
(Considering greater efficiency of Non-GM feed)

The following slides present data from Germany and the USA indicating that use of Non-GM feed in pig production may actually lead to higher efficiency with which the pigs convert feed into meat.

Feed Costs Analysis

Conclusions

- These data indicate that there are significant economic advantages to using Non-GM feed in addition to the well-known marketing advantages.
- The big open question: How accurate is the data?

Note: Biotech companies have done feeding studies, but they do not cover the full lifetime of the animal but are much shorter. Therefore, they would not likely disclose the same effects shown here. Also, the raw data for those studies have never been provided to regulators, only summaries of the data, which could obscure effects such as those shown here. Without that raw data, it is impossible to verify that the comparison has been done in a manner that would impartially disclose the differences in feed efficiency shown here. In addition, studies presented by the biotech companies is not independent research, but has been done by a highly “interested” party, namely the biotech companies that developed the GM feed ingredients.

Feed Costs Analysis

Action Steps

- Make use of the consumer preference for Non-GM—Marketing Program – Non-GM label for GMO-Free Regions
- Assess carefully the potential cost benefits of using Non-GM feed—Research Project

Summary

- Plenty of Non-GMO, Socially Responsible, Environmentally Sustainable Soy Available
- Advantages for using it?
 - Immediate—Marketing Advantages
 - Immediate—Stand behind principles of GMO-Free Regions
 - Longer term—Health and economic advantages for livestock production