

Economic implications of the EU policy on GMOs

Coen van Wagenberg
LEI, part of Wageningen UR



Outline

- LEI
- Case unapproved GM maize in US soy in 2009
- Impact of asynchronicity and LLP-thresholds
- Conclusions

LEI (Agricultural Economics Research Institute)

- Part of Wageningen UR
- Leading private organization in the Netherlands for economic and social research on:
 - agriculture, horticulture and fisheries
 - rural development
 - agribusiness & food industry
- Divisions: International Policy, Natural Resources, Consumer & Behaviour, Markets & Chains, Agriculture & Entrepreneurship, Regional Economy & Land Use
- 300 employees
- www.lei.wur.nl

Case unapproved GM maize in US soy

- EU relies on US soy in October 2009-March 2010
- Since July 2009 traces of unapproved GM maize (MON88017, MIR604) in soy from US
- Drought in South America in 2008/2009 year
 - World production: 221 to 211 mt (-5%); stocks: 53 to 41 mt (-23%)
- Lower availability for EU
 - Additional price of soybeans, soybean meal and soybean oil
 - Additional costs for crushing industry, feed industry, livestock sector, food industry
- What are expected costs for EU industry if no soy could be imported from the US from October 2009 to March 2010?

Case unapproved GM maize in US soy

Industry	Type of costs	Estimated additional costs (million €)
<i>Crushing of soy beans remains in the EU</i>		
Crushing industry	Sourcing costs soy beans	160 - 650
Compound feed industry	Sourcing costs soybean meal	290 - 700
	Sourcing costs other protein rich feed stuffs	210 - 1,010
Food sector	Sourcing soybean oil	40 - 150
	Sourcing other vegetable oils	380 - 1,460
Total		1,090 - 3,980
<i>No crushing of soy beans in the EU</i>		
Crushing industry	Foregone margin	230 - 260
Compound feed industry	Sourcing costs soybean meal	420 - 1,010
	Sourcing costs other protein rich feed stuffs	210 - 1,010
Food sector	Sourcing soybean oil	170 - 650
	Sourcing other vegetable oils	380 - 1,460
Total		1,420 - 4,390

Cost transfer to feed €640-€2,250 million; food €460-€2,100 million

Van Wagenberg (2009). "Economic consequences of EU-unapproved GM maize in US soy." Memorandum 09-071, LEI, The Hague, available from <http://www.lei.wur.nl/NL/publicaties+en+producten/Notas+en+brochures/>

Impact asynchronicity and LLP-thresholds

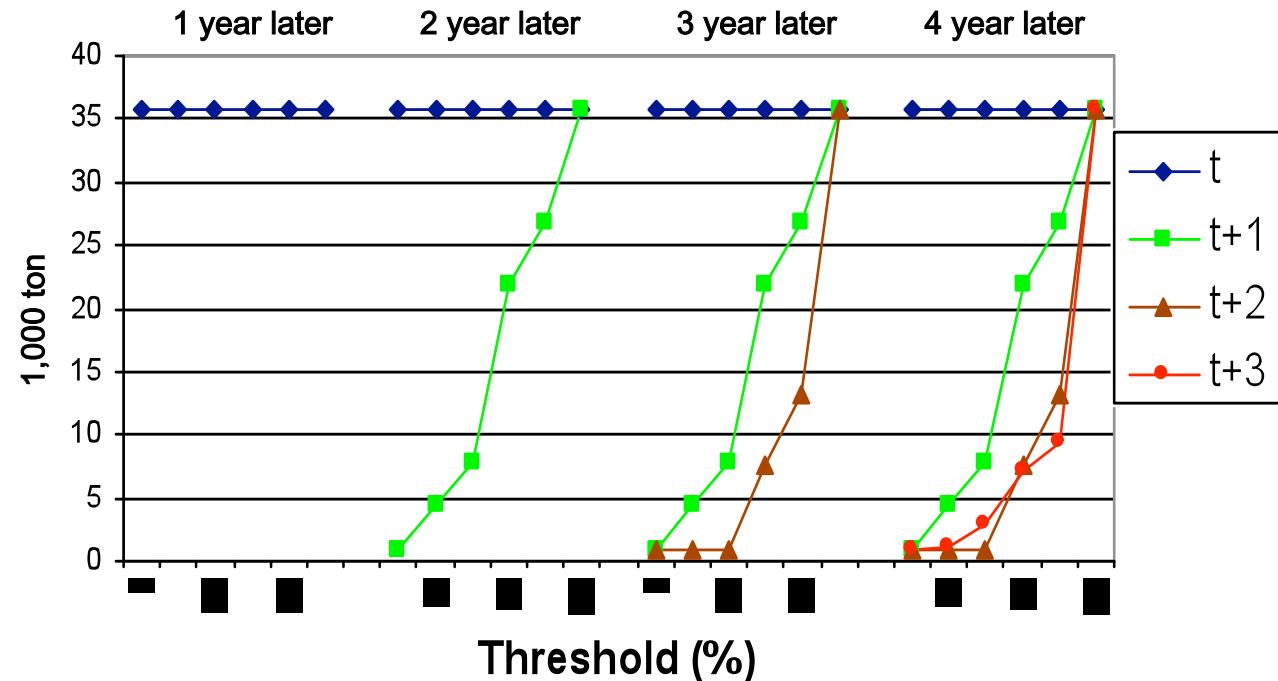
- What is quantitative impact of EU GM-policy on possible trade problems with the EU import of GM soy?
- US, Brazil, Argentina
- Asynchronicity: commercial cultivation in exporting countries <-> use in feed and food in EU
- Cultivation new GM soy event starts year t (2009) in US; scenarios for further development in BR and ARG
- Admixture unapproved in approved soy: expert judgment
- Price premium approved GM based on non-GM premium
- Exogenous world supply

Aramyan, L.H., C.P.A. van Wagenberg, and G.B.C. Backus (2009). "EU policy on GM soy; Tolerance threshold and asynchronic approval". Report 2009-052, LEI, The Hague, available from <http://www.lei.wur.nl/UK/publications+en+products/LEI+publications/?id=1018>

Impact asynchronicity and LLP-thresholds

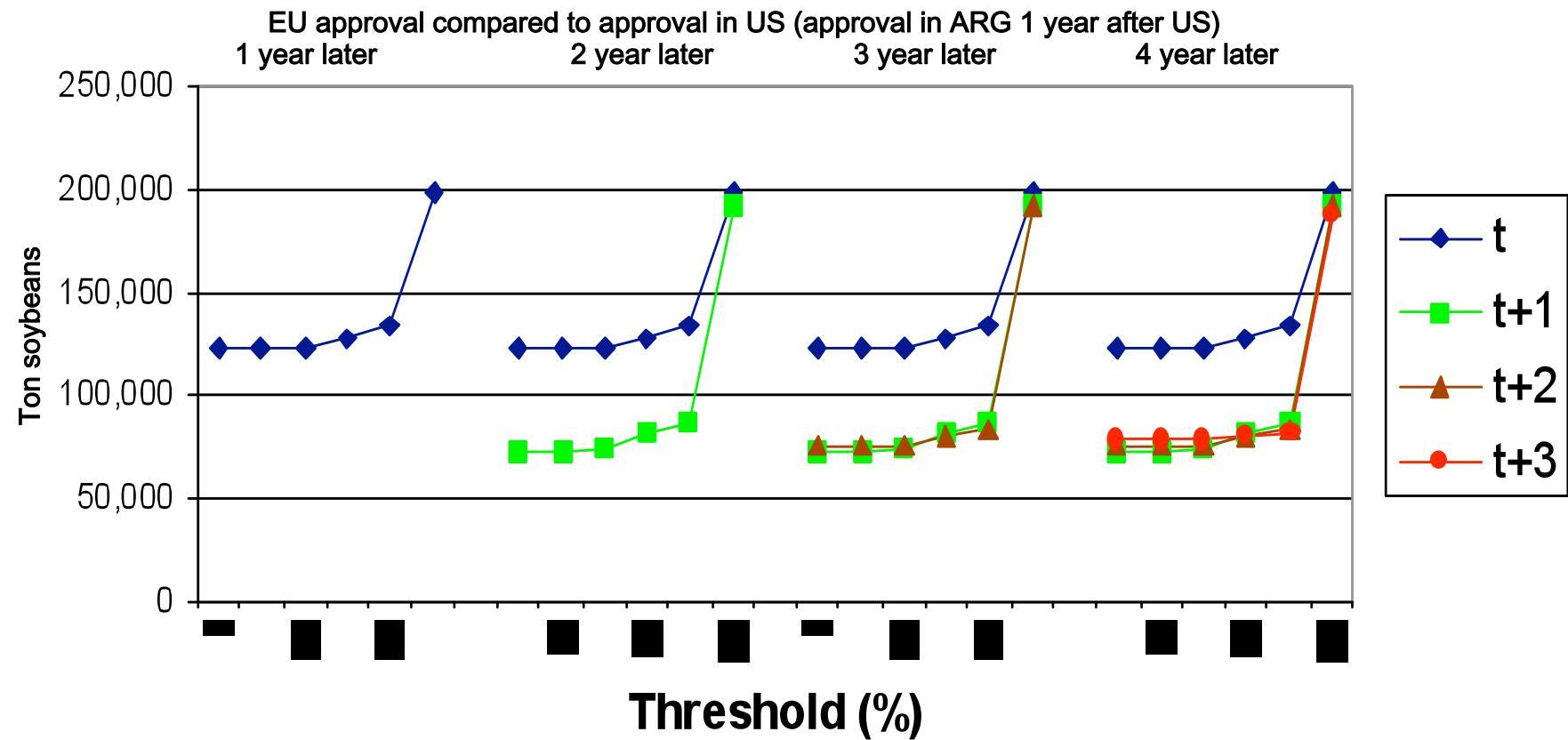
In EU available amount of soybean meal

EU approval compared to approval in US (approval in BR and ARG 1 year after US)



Impact asynchronicity and LLP-thresholds

Available world amount of EU-approved soybeans if approval BR follows approval EU



Impact asynchronicity and LLP-thresholds

Estimated GM soy prices by equal approval policy for the EU and Brazil

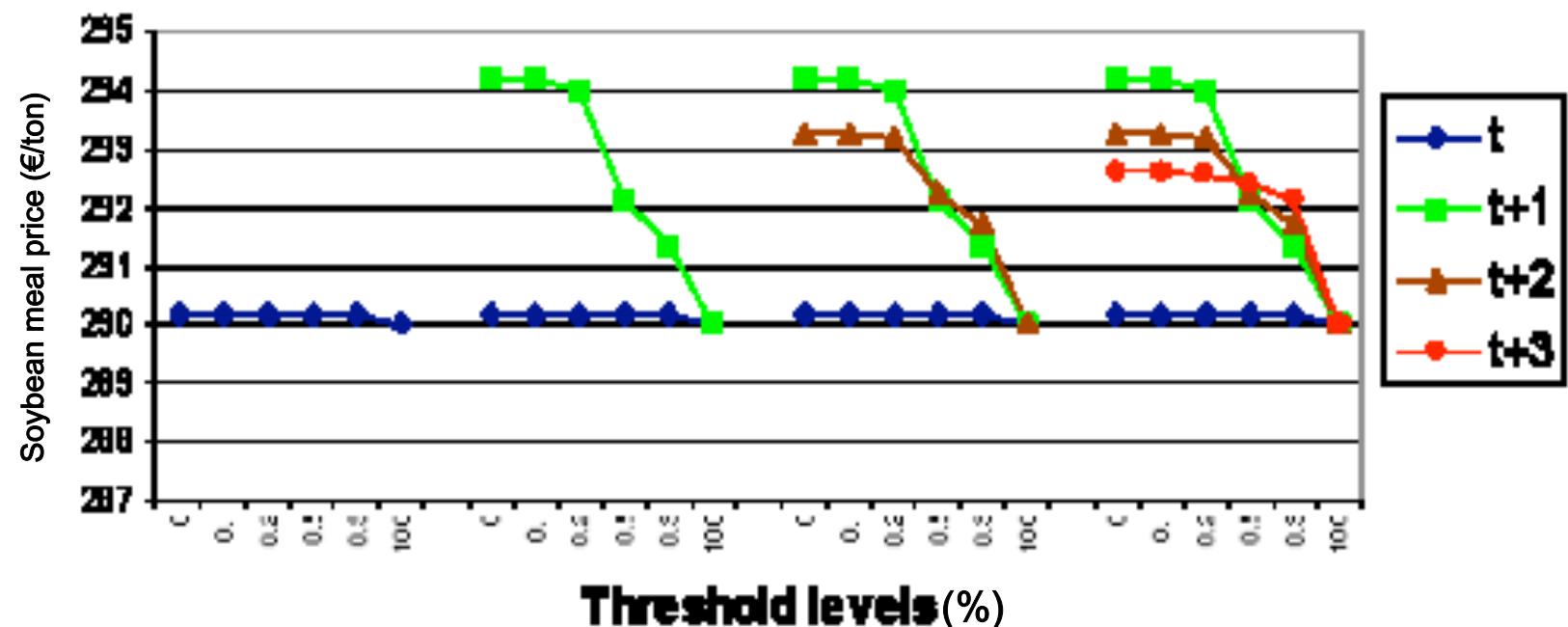
EU approval compared to approval in US (approval in ARG 1 year after US)

1 year later

2 year later

3 year later

4 year later



Conclusions

- Estimated additional first order costs of sudden import ban of US soy in EU winter €1,100-€4,400 million
- Length of EU approval process for new GM events has higher impact on soy availability and price than tolerance thresholds up to 0.9%
- Maximum delay in EU approval policy for new GM soy event is one year, a two year delay period leads to insufficient supply of soy
- If Brazil and EU have same approval policy, supply problems are expected to be relatively low

Thank you

coen.vanwagenberg@wur.nl

© Wageningen UR

