

GM Crops in Europe: Plantings and Benefits for Portugal

ICABR 10th International Conference

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PORTUGAL



Total area: about 270,000 Km²



Landscape 15 Km North of Lisbon



1Km (Pivots 70 -100 ha)



Maize production in Portugal – 2003

Production: 365.000 t
Consume: 1.525.000 t
Import: 1.160.000 t (EU 268.000 t; others 892.000 t).

89% used for feed production.

- The acceptance of GM maize and soybean for feed production is not questioned neither by the feed industry nor by the cattle and milk producers.
- Labeling is required by law, but no effect on the markets was identified

The remaining 11% were used for:

Starch - 65.000 t
Gritz (bear) - 65.000 t

Bread - 30.000 t (landraces – not hybrids)



Labeled feed for milk cows



Bt Maize production in Portugal – 2005

800 ha in the center and south of Portugal

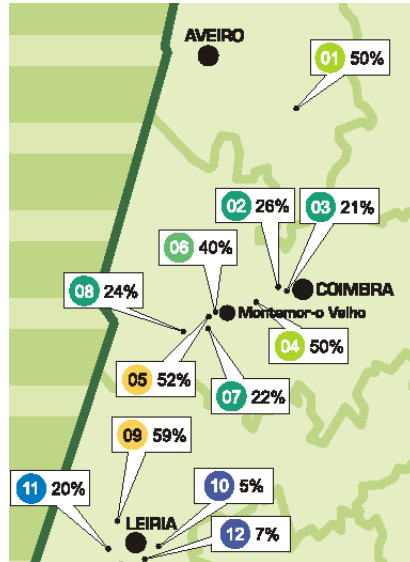
Expected Bt maize area for 2006

± 2000 ha

But a reduction of 20% in total sowed area is expected
due to the decoupling of subsidies from production.
(Common Agriculture Policy)



Corn Borer (*Ostrinia* and *Sesamia*) incidence 2005



Portuguese network trials - Pioneer

What is a Corn Borer attack?



What is a Corn Borer attack?



BT Maize (MON 810) was introduced in the European catalog by September 2004

Sowing transgenic varieties in Portugal is regulated by law (160/2005) since September 2005 (including co-existence measures).

Farmers must:

- Participate in training courses;
- Keep the GM seeds in separated places. Close and maintain labeled all bags used;
- Notify the Regional Agriculture Office about the areas and varieties of GM seeds to be sown and which co-existence measures to be applied;
- Inform of any change in their former plans;
- Communicate by letter to all neighbors (within 300 meters range) and to those sharing machineries the intention to sow GM seeds;
- Accept that this communication is made public;



- In the case of maize, take all the minimizing measures to avoid cross pollination.
(in fact in Portuguese the wording is “adventitious contamination”), including 12-28 circumventing conventional maize lines if conventional or organic maize (of the same FAO category, or sown with less than one week interval) are to be sown within 200-300 meters, respectively;
- Respect 20% refugee in the case of insect resistant maize;
- Facilitate access to the authorities for inspection;
- Accept the destruction of the crop if the Agriculture Office decides that the rules were not properly observed;
- Be prepared to pay fees in a maximum of 3.700 euros in the case of no conformity;
- Additional penalties regarding the access to subsidies may also be applied;
- Comply with the traceability law.



A practical case: the CADOMA cooperative Odemira –South of Portugal – a milk producing region



José Francisco Silva

This cooperative decided not to segregate Bt maize from the conventional one.

All the associate members accepted this decision.

All the maize is harvested and processed together and used by the associates to feed their milk cows.

(A funny story the President of this County publicly declared the County “free of GMOs”. Then the farmers went to talk with him. He told them that if he new that farmers were sowing transgenic maize he would never had made that declaration).



Another case

**José Maria Telo Rasquilha
(MBA – London)**

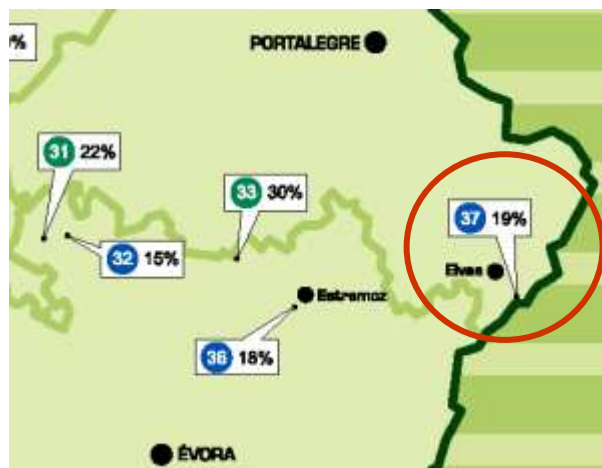
A large scale (for Portugal) farm at Elvas – near Badajoz
(Spain)

Total watered crop area: 1,000 ha

Maize – 350 ha;
Wheat/oat – 350 ha;
Permanent crops 300 ha.



Corn Borer incidence 2005



Accounting maize production 2005

	Bt Maize	Convencional Maize
Hectares (ha)	150	200
Production (t/ha)	13,2	10,2
Trading Price (€/t)	145 [200 (1995-2004)]	145
Net income/ha (€)	1.914	1,464
Costs/ha (€)		
Land preparation (no till)	120	120
Seeds	210	160
Fertilizers	200	250
Agrochemicals (3x)		160
Water (Pivot)	100	100
Electricity	100	100
Harvest	70	70
Drying	10	10
Total	810	920
Operational income/ha	1,104	544
Differential	<u>560 €/ha</u>	



Acknowledgments

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