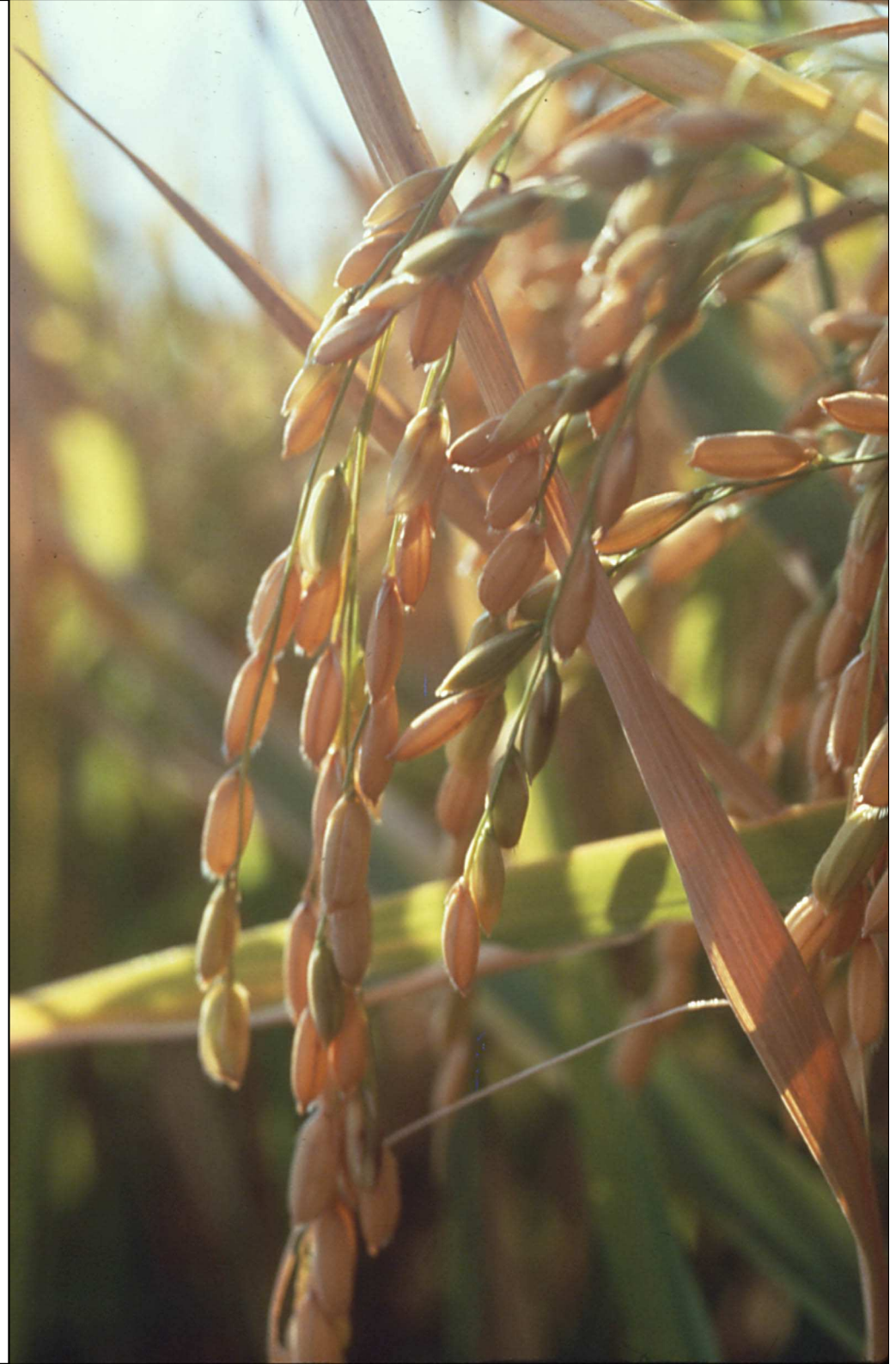




**The Marketing &
Regulatory Challenges of
Genetic Modification in
U.S. Rice**

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Key Choices and Conclusions



- U.S. industry caught by surprise. We assumed pledges of no GM rice commercialization were sufficient.
- No LLRICE601 approval except in the United States.
- *Farmer benefits vs. consumer resistance and regulatory requirements.*
- Poor regulatory oversight/industry stewardship.
- ***Our choices –***
 - Accept Liberty Link and go forward, or*
 - Focus on restoring marketability and competitiveness.*

Key Facts



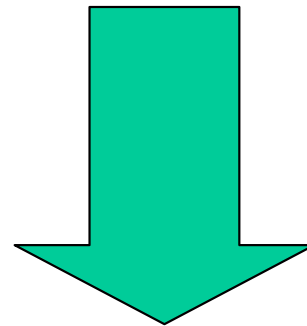
- **18 August 2006** – USDA announces LL601 presence in long-grain rice. U.S. government says LL rice is *safe*.
- **December** – U.S. rice industry launches “Seed Plan.” Cheniere rice variety banned.
- **3 March 2007** – USDA announces presence of LL604 in Clearfield 131 and forbids planting for 2007. BASF withdraws CL131 for 2007 & 2008 crops.
- **5 October 2007** – USDA publishes results of investigation.
- **Late 2007** – Test results on rice crop show no adventitious presence of Liberty Link traits. EU lifts mandatory destination testing requirement. (*Effective Feb. 2008.*)
- **Today** – Efforts and commitment continue to restore the marketability and competitiveness of U.S. rice.

First Impact -- Trade Disruption



- Almost one-half of U.S. rice exports impacted.
- Very limited domestic reaction – food companies more concerned than consumers.
- *Markets closed or disrupted:*
 - EU, Cuba, Korea, Russia
- *Testing requirements instituted:*
 - EU, Japan, Iraq, Canada, Cuba, Korea, Philippines, Taiwan

- Restore the marketability and competitiveness of U.S. rice.
- Comply with third country regulatory requirements.
- Provide confidence to customers.



- Remove Liberty Link from the rice supply.

Plan to Eliminate Liberty Link



➤ Three components of plan –

- *Seed Testing* – Documentation of seed for 2007 crop as negative for presence of any Liberty Link trait.
- *Certification for Mills* – Only 2007 crop rice grown from seed certified as negative will be purchased. Documentation from farmers required.
- *Education* – Extensive communications effort with producer and non-producer segments to support compliance.

The Seed Plan Worked!



- Test results for the 2007 crop show no adventitious presence of LL traits.
- Focus is on the long-grain crop because LL traits only found in long grain.
- Rice farmers produced a 2007 long-grain crop that overwhelmingly tests negative for Liberty Link traits.
- (California's rice also tested, and all results negative.)

Test Results of the 2007 U.S. Long-Grain Rice Crop 1/ (Final, 31 October 2007)



State	Samples Tested	Tons of Rice Tested	Tons with Negative Result	Tons with Positive Result	Positive Results as percent of Total Rice Tested	State's Share of U.S. Long-Grain Rice crop (2004-2006 average)
Arkansas	526	1,419,479	1,411,227	8,252	0.6 %	58 %
Louisiana	23	46,161	45,617	544	1.2 %	16 %
Texas	30	25,767	25,767	0	0 %	8 %
Mississippi	13	82,899	82,899	0	0 %	9 %
Missouri	16	46,320	46,320	0	0 %	8 %
Total	608	1,620,626	1,611,830	8,796	0.5 %	2/ 100 %

1/ Test results of harvested rice (also known as green rice) at the first point of delivery, usually a rice mill or rice drying facility. Testing performed on composite samples by one of the Bayer CropScience-approved laboratories using the 35S:Bar method and participating successfully in the USDA/GIPSA proficiency program. Sample size and testing procedure are in accordance with Recommendation 2004/787/EC as referenced in the annex to Commission Decision 2006/754/EC of 6 November 2006, amending Decision 2006/601/EC.

2/ Individual state percentages do not add to 100% because of rounding.

Results in Context



- These test results are a first look of the crop at harvest.
- The results are meaningful because all rice exporters to the EU participated.
- Sampling and testing procedures used were based on the protocol contained in the annex to Commission Decision 2006/754/EC.
- Testing under the Seed Plan is only the start for rice intended for the EU and other sensitive markets.

Additional Testing of Rice Exported to the EU



TEST when delivered from field.



TEST when moved from silo to milling operation.



TEST as rice is milled.



TEST as loaded on barges; barges sealed.

(USDA/GIPSA draws and seals sample which is forwarded to lab for testing.)



Negative test certificate and GIPSA statement accompany shipment to EU.

2008 – A Continuing Commitment



- USA Rice Federation has recommended extension of the industry Seed Plan into 2008.
- The extensive scope and reach of the Arkansas State Plant Board:
 - *Mandatory testing of seed extended for 2008 crop.*
 - *Cheniere & CL131 seed prohibited for 2008 planting.*
 - *Severe penalties for non compliance.*
- Louisiana extended seed testing regulations into 2008.
- BASF holding CL131 off the market until 2009.

Key Conclusions -- Today



- No other industry faced with the unintentional release of a GM trait has made the commitment and taken such comprehensive actions to meet the regulatory and consumer demands of its customers.
- Regulatory approval and consumer acceptance must go hand in hand if genetic engineering is to be allowed to benefit all segments in the farm-to-table chain.

Key Conclusions -- Future



- Unrealistic to expect a GM-environment.
 - U.S. rice will be “negative for LL traits, but not “*LL free.*”
- More effective regulatory oversight and *less* reliance on testing are necessary.
- A global LLP/Adventitious Presence policy is crucial to allowing ag trade to continue.
- A review of the EU’s regulatory and consumer attitude is necessary and overdue.

Key Conclusion -- *Again*



- Regulatory approval and consumer acceptance must go hand in hand if genetic engineering is to be allowed to benefit all segments in the farm-to-table chain.



Thank You.

