

Risky Business

Briefing on the report into economic and regulatory impacts from the unintended release of genetically engineered rice varieties into the rice merchandising system of the US

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Briefing on the report, "Risky Business",
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Greenpeace commissioned an independent agricultural economist to investigate the economic consequences of the rice contamination scandal. The report, "Risky Business", produced by Dr. E. Neal Blue of Neal Blue Consulting, Ohio, US and published by Greenpeace International in November 2007, identifies and quantifies the financial impacts on the rice industry and estimates that the costs of the incident worldwide are likely to be in excess of US \$1 billion. Bayer's liability could reach several billion dollars, depending on the outcomes of litigation and any punitive damages that may be awarded.

We present here in summary the main findings of this report.

The incident

In August 2006, the US Department of Agriculture issued a brief statement announcing that US rice supplies were contaminated with LL601 ("Liberty Link") - a variety of genetically engineered (GE) rice owned by Bayer CropScience.

That announcement was the beginning of the largest financial and marketing disaster in the history of the US rice industry. The tremors in the industry were felt globally. The costs have been enormous and the changes in the rice industry rapid and far-reaching.

Damage up to \$1.285 billion

Total costs incurred around the world as a result of LL601 rice contamination are estimated in the range of \$741 million to \$1.285 billion. Farmers who incurred direct and indirect losses as a result of Liberty Link rice contamination are attempting to recoup their costs through class action litigation against Bayer CropScience LP, Riceland Foods and Producers Rice Mill.

Bayer's contamination of the US rice supply had an impact on thousands of farmers and businesses around the globe. It is estimated that approximately 63 per cent of US rice exports were affected. From field trials alone, Bayer's GE rice contaminated rice supplies of farmers, traders, processors, millers and retailers. Contamination has been confirmed in at least 30 countries. The number of individuals and businesses bringing suit against Bayer is currently in the hundreds but this may yet extend into the thousands.

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Estimated Losses Arising from the LL601 Rice Event

| Loss Due to: | Cost Lower Bound \$ millions | Cost Upper Bound \$ millions |
|--|---|---|
| Farm cleaning | 2.172 | 3.259 |
| Seed testing | 2.088 | 2.088 |
| Producers foregone rice revenue in 2007 | 17.423 | 17.423 |
| Loss of government payments due to shift out of rice | 9.975 | 9.975 |
| BASF reported losses | 1.000 | 15.000 |
| Processor/elevator cleaning & testing | 87.584 | 90.968 |
| Direct export losses for 2006/07 crop year | 254.041 | 254.041 |
| Future export losses (EU + Philippines)* | 89.000 | 445.000 |
| Retail product recalls in the EU | 60.032 | 180.000 |
| Retail product recalls: Philippines & Ghana | 24.481 | 73.445 |
| Export shipping losses | 25.427 | 25.427 |
| Loss due to price drop on futures market | 168.000 | 168.000 |
| Total Losses | 741.223 | 1,284.626 |

Note: *Assuming closed EU and Philippine export markets from 1 year to 5 years.

US Rice Export Markets Impacted by the Presence of LL601

| 2006 Export Ranking | Country | 2006 Exports (\$ million) | Importer Reaction | Trade Impacted |
|-----------------------------------|--------------|---------------------------|--|----------------|
| 1 | Mexico | 205 | GE certification required: trade disrupted | yes |
| 2 | Japan | 169 | Testing required | yes |
| 3 | Iraq | 145 | Testing required; 1% threshold | yes |
| 4 | Haiti | 112 | Trade continues | no |
| 5 | Canada | 107 | Testing required; 5% threshold | yes |
| 6 | EU | 69 | Trade in long grain rice stopped | yes |
| 7 | Saudi Arabia | 42 | Trade continues; label for presence > 1% | no |
| 8 | Nicaragua | 40 | Trade continues | no |
| 9 | Cuba | 40 | Trade disrupted, situation is uncertain | yes |
| 10 | Honduras | 39 | Trade continues | no |
| 12 | Korea | 32 | Testing required; tender complications | yes |
| 16 | Philippines | 20 | Trade stopped | yes |
| 18 | Taiwan | 20 | Testing required | yes |
| Total Exports (\$ million) | | 1,289 | Share of global exports impacted: 63% | |

Note: Russia has banned all US rice imports.
 United Arab Emirates requires a GE-free status on US Rice.

Source: US Rice Federation

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The lesson: even limited field trials can cause enormous economic damage

It is important to emphasise that contamination of the rice stock occurred via field trials of genetically engineered rice rather than as a result of commercial cultivation. Furthermore, the field trials in question had ended five years before the contamination was discovered.

Any plans to commercialise LL601 were abandoned in 2001 when field trials ceased. Yet, the fact that field trials can lead to such widespread contamination must be of deep concern to all industries facing the threat of GE agriculture. The very planting of field trials poses significant risks to the food industry; risks that the industry has so far done little to avoid.

The Liberty Link scandal is not the only contamination case in which Bayer CropScience has been involved. The Starlink scandal in 2001, involving the release into the food chain of a GE corn not approved for human consumption, was, prior to LL601, the worst case of food being contaminated with GE.

Borders closed to GE rice

Countries acted quickly to protect national interests in the wake of the contamination scare, with many closing their borders to US rice. Markets have also responded strongly to protect their customers. Thailand and Vietnam, for instance, have agreed to produce only GE-free rice. Indian basmati rice traders have secured GE-free status for all basmati growing areas. Uruguay is now GE-free. Many companies, including the world's largest rice company Ebro Puleva, are now sourcing GE-free rice from outside the United States.

The US rice industry is therefore increasingly dependent on exports to the Americas. But these markets are neither secure nor entirely in support of having GE technology injected into their food supply chains. Both the narrowing of the US rice market and its uncertainty place US rice farmers in a difficult position.

Avoiding disaster: preventing field trials and staying GE-free

The immediate goal of the US rice industry is to completely eliminate GE contamination from every sector of the rice supply chain. However, its recovery and future development depends not only on producing GE-free rice but preventing all potential sources of GE contamination, including GE rice field trials and other experimental cultivation.

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