

GREENPEACE

Policy, market and supply chain Future scenarios for rice cultivation

Arnaud Apoteker^a and Janet Cotter^b

Potential disaster for Thai rice industry

There is ample evidence that experimental field trials and illegal plantings of genetically engineered (GE) rice have already contaminated global food supplies. This problem will undoubtedly increase if more field trials are permitted or if GE rice is ever authorised. Using the experiences of the 2006 US GE rice contamination, new modelling shows that similar contamination in Thailand would spell disaster for the Thai rice industry.

IN CRISIS - US rice industry

In 2006 a series of scandals erupted as world rice supplies were discovered to be contaminated with unapproved, experimental GE rice varieties from field trials. In the US, a GE rice variety - LL601, owned by Bayer CropScience - was identified in rice exports. The contamination has been independently confirmed in over 30 countries worldwide¹ and has led to US rice imports being halted in Europe, Japan and South Korea.

Effects were felt on the market, with rice future prices falling sharply by \$150 million US dollars, the biggest one-day decline in years. Rice prices were nearly 65% below the level forecast by the trend of prices prior to the LL601 outbreak. As shown in the Greenpeace report, *Rice industry in crisis*², the global rice industry issued statements that rejected GE rice.

AT RISK - Thai rice industry

The development and testing of GE rice would pose a risk for Thailand's rice merchandising system. If the US experience with LL601 rice is indicative, any unintended or accidental GE rice release within Thailand will have severe economic consequences for Thai rice exporters.

There are currently no GE rice field trials or commercial cultivation in Thailand. In order to keep Thailand's rice supply GE-free, the Thai government should immediately ban any GE rice from the country, including field trials, rice for import and, of course, cultivation.

Conclusion

A narrow vision of rice cultivation based on potentially dangerous technological fixes and highly dependent on costly inputs leaves our food future at risk.

The best protection against market and consumers' rejection to uncertain GE technologies is an ecological farming model that implements the policy options recommended by the Agriculture Assessment (IAASTD) for enabling social, environmental and economic multi-functionality.



Thousands of farmers and traders who refuse to bear the financial burden of a reckless GE industry are engaging in individual lawsuits. They are claiming that Bayer is responsible for the contamination of rice supplies and must repay the farmers and traders that have suffered as a result of Bayer's activities. Out of more than 6000, only 26 plaintiffs' cases had reached trial by the end of July 2010, and already over \$65 million US dollars have been awarded, through compensatory and punitive damages and one settlement.

The initial contamination is estimated to have cost the US rice industry between \$741 million (€591 million) and \$1,285 million (€1,024 million).³



In our new report ³, several scenarios have been calculated that estimate the potential economic losses to Thailand's rice industry in the event of GE contamination. The most likely scenario, based on the US experience following the LL601 contamination, would result in a short-term reduction of Thai rice exports by 2,369,059 tonnes, valued at 47,343 million Baht (€998 million), or a 27% drop in Thai rice exports.

Other long term export losses and testing and segregation of merchandising/processing systems would increase the total economic losses and costs to as much as 96,327 million Baht (€2,031 million). This is equivalent to 56% of the value of Thai rice exports in 2009.

a) Greenpeace France, 22 rue des Rasselins, 75020 Paris. arnaud.apoteker@greenpeace.org

b) Greenpeace Research Laboratories, Innovations 2, University of Exeter, Exeter, UK EX4 4RN. j.cotter@exeter.ac.uk

References

(1) See www.gmcontaminationregister.org for a history of GM rice contamination

(2) Greenpeace (2006) Rice industry in crisis. <http://www.greenpeace.org/international/en/publications/reports/rice-industry-in-crisis/>

(3) Greenpeace (2010) Thai rice industry at risk. <http://www.greenpeace.org/international/en/publications/reports/thai-rice-industry-at-risk>