Sprouting Up...

Push for GM papaya continues in Thailand and Sout-East Asia

A new programme for biosafety might usher further contamination

GRAIN & BIOTHAI

In July 2004, Greenpeace accused the Thai government of illegally distributing GM papaya seeds after it found out that a local farmer's plantation in Khon Kaen province was contaminated with GM papaya. It was reported that 2,600 farmers had bought papaya seedlings from the Department of Agriculture's (DoA) research station where field trials of GM papaya were being conducted. The papaya is genetically engineered for ring-spot virus resistance and therefore known as PRSV papaya. At first the government denied that GM crops were being grown in Thailand, having a ban on GM crop field trials since 2001. In August 2004, the Thai Prime Minister Thaksin Sinawatra reversed this ban allowing the entry of GM crops in Thailand. This however was met by immediate public opposition from the general public, farmers' groups, NGOs, Bhuddist communities and the Thai organic business groups. Within 10 days, Sinawatra had to retract his decision and called for a creation of a national panel of academics to look into the matter. This came after the Commission on Human Rights ran its own test and confirmed GM contamination of papaya crops. What was supposedly a 'contained' field trial in the DoA's Khon Kaen research station turned out to be an open field, the only barrier to other papaya plantations being banana trees and a barbed-wire fence. Contamination was widespread even reaching another nearby province, Ubol Ratchatani.

Eventually Sinawatra himself ordered the DoA chief to do a clean-up operation, which included removing all GM papaya trees in affected plantations. At the same time, an investigation committee was set up to determine whether the GM seeds were smuggled out of the station or had been simply the result of cross pollination. Current law in Thailand forbids the sale of GM seeds. So far the committee has found that at least 90 farms which received seedlings of papaya from DoA are contaminated. And although the committee has yet to officially conclude on the cause of contamination, evidence points to human errors by those working on the GM papaya project.

The development of PRSV papaya in Thailand started in 1996 when genes from unique Thai strains of ringspot virus were taken to Cornell University and inserted into papaya cells. The papaya seeds were then taken back to Thailand to be grown and field tested, without public knowledge, in the DoA's research station in Khon Kaen.

Over the course of this process, several patent claims over papaya on wide range of aspects have been applied for by Monsanto, Seminis and Cornell University in the US Patent and Trademark Office (USPTO). Just recently USPTO granted a new patent on GM papaya assigned to Cornell Research Foundation covering a broad range of DNA constructs and methods used to create ringspot virus resistance in any kind of GM papaya. This makes Thailand's GM *Khaek Dam* and *Khaek Nual* papaya varieties, technically a property of Cornell even if its development is done in Thailand and by Thai agencies.

Thailand is a member of the Papaya Biotechnology Regional Network of Southeast Asia (PBRNSA) organised by the International Service for the Acquisition of Agri-biotech Applications (ISAAA), and also includes Malaysia, Philippines, Vietnam and Indonesia. The network receives technical and financial assistance from Monsanto and Syngenta, which also fund field trials. Under this network, countries negotiate individually with the private sector in using the licensed technologies. These rights are limited to research use and the license needs to be re-negotiated if a country decides to commercialise GM papaya.[1] In Thailand's case, the drafted terms of agreement between Cornell University and DoA specifically states that the fee could rise to 30% of the selling price if the value of exported papaya reach 1 million Baht (US$ 25,000).

That is if Thailand would be able to export at all. Since the papaya scandal, Thailand started losing its papaya markets. Several European Union importers stopped importing canned fruit products containing Thai papaya.

The main problem is contamination. Whether this contamination was an honest mistake or a cynical and deliberate attempt to contaminate Thailands production of papaya, further contamination from field trials is all too likely. In Thailand, it has been shown that it is impossible to contain GM papaya field trials. Yet there are those who are pushing to reduce the regulations on field trials, to streamline and simplify the process of field-testing and approving GM crops. Foremost behind this push is USAID and their Programme on Biosafety Systems (PBS)[2]. The argument goes that this would unburden national research institutions from an expensive and time-wasting regulatory approval. At the heart of their argument is the assumption that field trials are contained, which of course is flawed. Yet USAID, with the backing of the US government, is a powerful body and national governments find it difficult to resist the constant pressure.

Meanwhile in the Philippines, field testing of GM papaya is expected to commence by the end of 2005, pending approval by the National Committee on Biosafety of the Philippines (NCBP). The NCBP is the same body that cleared Bt maize for commercialisation in 2002 despite nationwide protests.

1- Michelle Luijben and Joel I. Cohen, *Developing countries forge ahead in crop biotechnology for the poor*, http://www.isnar.cgiar.org/ibs/NextHarvest.htm

2 - See the article on page 28 or see http://grain.org/go/usaid