

*Daycha Siripatra is an agriculturist, farmer, rice breeder and one of the leading grassroots activists in Thailand. He is also the founder of the Khao Kwan Foundation (KKF), an organisation involved in promoting sustainable agriculture and ecological alternatives. KKF is one of the founding organisations of the Alternative Agriculture Network in Thailand.*

**“Seeds should be in the hands of farmers”**

**Daycha Siripatra**



Why is the issue of GM contamination important to farmers?

The seed is the most important factor in farming. Contamination affects the seed and makes it alien to farming, especially when the seed is controlled by seed companies. Everything can be destroyed by contamination: the seed, the farming system, even the wisdom of the farmer. It is a very serious issue. Everything starts from the seed. In the Green Revolution, they changed from local varieties of seeds to high yielding varieties (HYVs). The gene revolution is doing the same: it introduces genetically modified seeds to replace local ones. Contamination will bring GM seed with or without one's consent. If you're an organic farmer and you get contaminated by a GMO, then you are no longer an organic farmer. The farming system is central to farmers' livelihoods. If you change something in it, the change can affect the rest of the system. So when seeds get contaminated, it can potentially change everything.

What are the other aspects/dimensions of contamination that should be prevented?

The most dangerous trend in the future is when policy makers themselves are the ones who bring GM seeds into the country. For example, Bt Cotton was brought in ten years ago and GM papaya (pawpaw) five years ago. Until now, we have not been able to solve the problem of contamination because government policy protects and promotes GMOs. For years we have tried to stop them experimenting with GMOs in the open field. But even the interim government tried to reverse the previous ban on open field trials of GMOs. So the policy makers could be the foremost, and most

dangerous, agent of contamination in Thailand's farming system.

Tell us about the current situation of papaya contamination.

The government says it's no longer a problem, that they have everything under control. But, of course, we know that that's not true. Nobody knows the true situation, except that the GM papaya continues to contaminate more. As a result, we cannot export papaya any more. It's a serious problem, especially for the papaya farmers. It will be the same for rice, for the farmers will be in big trouble once their rice seeds get contaminated.

So is it likely that rice will also be contaminated in Thailand?

It's very possible. We have GMO rice at an experimental stage. Our government sent some jasmine rice to the US to make GM jasmine rice resistant to diseases. Now they say that they've stopped the experiment. But, with genetically engineered (GE) rice in China, contamination can occur very easily. You can smuggle GM seeds – and it's very easy to do this in Thailand – by land, by air, by water. Anybody could just smuggle seeds and bring them here from China. The government will allow open field trials again soon, so it's possible that some companies will bring their GM rice for trial in Thailand. Contamination of rice will occur in the near future in Thailand.

How then could farmers prevent contamination?

Some groups with awareness can help promote the alternative way of farming. They can inform other farmers and at the same time protest against the government's policy. But that's not enough. It must be a collective effort, with mutual support.

**K** Joseph  
eve

**L** Laxmanma

**m** Lorenzo  
eulas  
Hurtado

**n** diogo  
Fall

**O** Sharif  
mar

**P** João  
edro Stedile

**Q** Darrin  
Qualman

**R** Ramón  
Vera

**S** Daycha  
Siripatra



### GM maize has “leaked” into Thai farms

In December 2007 GM maize was found at a local farm near an experimental station run by agribusiness giant Monsanto in Phitsanulok province in Thailand. The discovery, reported by the Bangkok Post, was made by BIOTHAI, a non-governmental organisation that works with local farmers to defend biodiversity.

BIOTHAI collected samples from local farms and sent them for testing at Chulalongkorn University’s food research and testing centre. Contaminated maize was found in samples taken from a farm just a few hundred metres from Monsanto’s plantations.

Although the commercial planting of transgenic crops is banned in Thailand, experimental cultivation is permitted in laboratories and in closed greenhouses. In 1999 Monsanto received permission to import from the USA five kilograms of GM maize to plant on an isolated farm for experimental purposes.

This is the third time that GM crops have leaked into the country. GM cotton spread in Loel province in 1999 and GM papaya escaped from the government’s experimental fields in Khon Kaen in 2004. After these incidents, the government imposed a ban on field trials of GM crops.

“This case is much more serious than the two previous leakages, because maize is one of the country’s top export products”, commented BIOTHAI director, Witoon Lianchamroon. “Its pollen can spread very far and easily breed with conventional maize varieties. Clean-up and containment operations are urgently needed to prevent the GM crop spreading further.”

The detection of GM maize comes as farmers’ groups and biodiversity activists are protesting against the agriculture and cooperatives ministry’s push to lift the ban on field trials of GM crops. “[The spread of GM maize] reflects flaws in the government’s control of transgenic crop plantations. Therefore, the ban should be maintained”, said Mr Witoon.

**A** Farida Akhtar

**B**enny Haerlin

**C**arlos Correa

**D**avid Quist

**E** Johnson Ekpere

**F**ranziska Rodriguez

**G**erman Velez

**H**ope Shand

**I**brahim Ouedraogo

**J**ack Kloppenburg

For example, non-exporting farmers should join forces with farmers exporting organic rice. There should even be solidarity between the importing and exporting farmers. However, this will not stop contamination completely, because contamination through illegal cultivation of GMOs is everywhere. So farmers must have another solution. We must do everything, not only to change policy, but also to develop technical capacity. Farmers must know how to identify contaminated seeds, and how to control or eliminate them. These are the techniques farmers must develop.

*GM rice is said to be no different in appearance from non-GM rice, so wouldn't it be difficult to detect it?*

No, because in our group even the varieties of jasmine rice that we select have particular characteristics, and farmers can tell the difference between a common jasmine and a variety a farmer has selected. Our farmers’ groups have developed a very precise technique of selecting and identifying seeds. For example, when we select brown rice, we open the husk. If contaminated seeds are grown, our farmers will be able to identify them easily, because something will be different from common rice or the variety that they have carefully selected. The

farmers will notice anything different or abnormal, because of their in-depth knowledge of seeds and their skill in selection. Whether it’s the colour, the hardness, the smell – every variety has peculiarities that farmers who have been working with them know in detail. So any alterations will be easily detected, even before the plant starts flowering. This is the principle of local adaptability. We’ve made our seeds recognise their environment and use that environment to express their potential. An alien seed, like a GMO, will not automatically thrive in our area and, even if it grows, farmers will be able to notice it right away, just from its appearance.

*What are the big lessons for farmers from Thailand’s contamination experience?*

Despite the seriousness of the experience, the majority of farmers don’t know much about it. The government controls the media so the media can’t inform the people properly. The media often report only the good side of GMOs. The media are a problem. But it’s not only the government that controls the media. Journalists and reporters are also being supported by multinational companies, for example, to travel abroad, and to report about GM plantations (e.g. in Austria). The people then



get very wrong information about GMOs from the media.

*Do government policies and the work farmers do on the ground complement each other? Or is there a great divide?*

If the government were neutral, it would be much easier for farmers to influence it by showing examples, solutions to contamination, and the best way to farm. If the government were sincere in solving the problems, the farmers might even work with it. But the government is biased and supports the companies. This means the farmers have to confront the government. And there are lots of ways of fighting.

*Will the government change its position, given the slump in Thailand's papaya exports?*

We waited for years for the government's assessment of the contamination situation, but the government committee simply cleared it [that is, it says it's been dealt with and no longer a problem]. They are very open in their support of GMOs, genetic engineering, and hi-tech agriculture, without regard to the consequences. It's because they have a different paradigm. They don't see things the way farmers do. They see GMOs in a different light and thus see a different future for Thai farmers. They have a different language, which makes it difficult for us to communicate with them.

*In the Confronting Contamination workshop in 2005,\* you mentioned the idea of a "Noah's Ark" as a way of protecting seeds from contamination. What's the principle behind that, and can you tell us more about how it's done?*

The idea is that seeds – local, traditional seeds – must be in the hands of the farmers. Right now the seeds are practically in the hands of the government, which controls them. We have at least 6,000 varieties of rice in Thailand but almost all of them are kept in the government's seed bank. Fewer than 1,000 varieties are in the hands of farmers. If you want to control seeds, you must take them out of the seed banks and put them back into the hands of farmers, for the farmers to multiply and keep for themselves. That's the first step. Farmers can then select, improve and breed the seeds, adapting them to their farming system. Those seeds can then compete with hybrids and GMOs or HYVs. When farmers grow them, these seeds will mutate naturally, they'll adapt to climate change and so on. This means that there'll be diversity again. You can empower the farmers this way – by ensuring they have more choices. Then there will be strong grounds for refusing GMOs because there are plenty of other seeds. If you

have nothing, you have no choice but to accept what's being offered by seed companies and the government. So it's basically a case of taking back the seeds, improving them, and adapting them to local needs and conditions. Each farmer becomes a Noah's ark.

*You think every farmer has the capacity to absorb the seeds and keep them and improve them?*

Not every farmer. But there are specialists and experts in the farmers' groups and they can support the other farmers. Like a rice breeder, for example. It's not necessary that each farmer becomes a breeder. Maybe one breeder in each province is enough. The farmers must have their own breeders, seeds and technology, that they have control over. Not be dependent on the ones controlled by the companies and government.

*Can those seeds in the hands of farmers still get contaminated by GMOs?*

Yes. But, as I've said, we can develop the techniques to identify GMOs. It's not difficult. If someone has bred and selected seeds, they'll be able to do it. In the beginning they might need support from scientists and experts. But after that, farmers will develop the expertise themselves. The same thing happened with seed breeding. In the beginning, we asked for support from scientists to breed our own seeds, not in the scientist's way, but in the farmers' way. We learned from them and we adapted what we learnt to our own experience and environment. Eventually farmers have to develop their own techniques and not be dependent on scientists. Each one – scientists and farmers – can learn from each other.

*In your many years of experience, what is the best way to strengthen or empower farmers?*

From my experience I don't trust government policy. It just exists on paper. In practice, policy makers do nothing. For instance, we have a good law about seed contamination but even so people find illegal ways to contaminate. So the best way forward is to train the farmers, so that they can do everything by themselves without needing much help from anybody else. They must develop both the expertise and the consciousness. They must have both; they will not be successful if they just have one. 

\* An informal regional workshop organised by GRAIN and BIOTHAI in October 2005, in Bangkok, Thailand, to discuss the issue of contamination, and possible strategies around it.

**K** Joseph  
eve

**L** Laxmanma

**m** Lorenzo  
eulas  
Hurtado

**n** diogou  
Fall

**O** Sharif  
mar

**P** João  
edro Stedile

**Q** Darrin  
Qualman

**R** Ramón  
Vera

**S** Daycha  
Iripitira

