GlobalResearch
Center for Research on Globalization

Bayer-Monsanto's Trojan Horse: Criminal Prosecution Required To Stop GM Food Crops Fraudulently Entering India

By Colin Todhunter
Global Research, October 01, 2016

Region: Asia
Theme: Biotechnology and GMO, Law and Justice

The decision whether to allow the commercialisation of the first genetically modified (GM) food crop (mustard) in India is close. Serious conflicts of interest, sleight of hand and regulatory delinquency – not to mention outright fraud – could mean the decision coming down in favour of commercialisation.

The bottom line is government collusion with transnational agribusiness, which is trying to hide in the background, despite much talk of Professor Pental and his team at Delhi University being independent developers of the GM mustard (DMH 11) in question The real story behind GM mustard in India seems to be that it presents the opportunity to make various herbicide tolerant (HT) mustard hybrids using India's best germ plasm, which would be an irresistible money spinner for the developers and chemical manufacturers (Bayer-Monsanto).

Campaigner Aruna Rodrigues is petitioning India's Supreme Court (view the petition), seeking a moratorium on the release of any genetically modified organisms (GMOs) into the environment pending a comprehensive, transparent and rigorous biosafety protocol in the public domain conducted by agencies of independent expert bodies, the results of which are made public.

If at first you fail… try collusion and fraud?

In order to understand the GM mustard issue in India, it is important to appreciate the history behind it, as outlined in the writ petition:

> In 2002, Proagro Seed Company (now Bayer), applied for commercial approval for exactly the same construct that Prof Pental and his team are now promoting as HT Mustard DMH 11. The reason today matches Bayer's claim then of 20% better yield increase (than conventional mustard). Bayer was turned down because the ICAR [Indian Council of Agricultural Research] said that their field trials did not give evidence of superior yield.

The petition says that, some 14 years later, invalid field trials and unremittingly fraudulent data now supposedly provide evidence of a superior yield of 25%. It continues:

> HT DMH 11 is the same Bayer HT GMO construct – an herbicide tolerant GMO of three alien genes. It employs, like the Bayer construct, pollen sterilisation

> technology BARNASE, with the fertility restorer gene BARSTAR (B & B system) (modified from the original genes sourced from a soil bacterium) and the herbicidal bar gene in each GMO parental line. The employment of the B & B system is to facilitate the making of hybrids as mustard is largely a self-pollinating crop (but outcrosses at rates of up to 20%). THERE IS NO TRAIT FOR YIELD. HT DMH 11 is straightforwardly an herbicide tolerant (HT) crop, though this aspect has been consistently marginalised by the developers over the last several years.

In basic terms, as mustard tends to be self-pollinating, in order to produce a hybrid, two parent lines had to be genetically modified. Barnase and barstar technology were used in the parent lines. And the outcome is three GMOs: the two parents and the offspring, DMH 11, which will be ideal for working with glufosinate (Bayer's 'Liberty' and 'Basta').

> … the plan is that the OFFICIAL ROUTE FOR THE FIRST-TIME RELEASE OF AN HT CROP AND A FOOD CROP, WILL BE THROUGH HT DMH 11 AND/OR its TWO HT PARENTAL LINES by STEALTH. Since the claimed YIELD superiority of HT DMH 11 through the B & B system over Non-GMO varieties and hybrids is quite simply NOT TRUE…

In other words, GM mustard is both a Trojan horse and based on a hoax.

Whatever happened to science and proper procedure?

Various high-level reports (listed here) have advised against introducing GM food crops to India. In a press release (ar-mustard-press-release-sept-26-2016-2), Aruna Rodrigues notes the abysmal state of GMO regulatory oversight in the country and the need for the precautionary principle to be applied without delay.

GM mustard (DMH 11) is a HT GMO with three alien genes. DMH 11 and its two GM parental lines, which have suddenly emerged in the line-up for commercial approval as part of the DMH 11 'package', are HT crops designed to be used with glufosinate (notably Bayer's market brands), a neurotoxin that will be banned in the EU from 2017.ar-mustard-press-release-sept-26-2016-2

Rodrigues asserts that the two parent lines and the hybrid DMH-11 require full independent testing, which has not occurred. And it has not occurred because of a conflict of interest and regulatory delinquency. The Department of Biotechnology is an active partner with Prof Pental (and his team at Delhi University, who have been developing GM mustard). The institutions of GMO governance in India see no problem in regulating DMH11, which they are also invested in and promote.

Allowing for not one but three GMOs is a serious case of regulatory 'sleight-of-hand', permissible due to diluted rules to ensure easy compliance. According to Rodrigues, it effectively means that the system allowing for GMOs in India has been deregulated. From a biosafety perspective, both maternal lines of DMH 11 must trigger the need for new rigorous safety testing.

Rodrigues explains that the testing/regulatory system that has been used allows for three GMOs to be defined as a single 'event' under cover of a single safety dossier:

> They have slipped under the regulatory radar on a technicality, through a lacuna in the rules of an 'event-based system', which allows these three GMOs to come up for commercial approval without safety testing... India is suddenly faced with the deregulation of GMOs. This is disastrous and alarming, without ethics and a scientific rationale.

She goes on to highlight in some detail how the tests for GM mustard have been based on fraud. GM mustard is said to out-yield India's best cultivars by 25-30%. The choice of the correct 'comparators' is an absolute requirement for the testing of any GMO to establish whether it is required in the first place. But Rodrigues argues that the choice of deliberately poor 'comparators' is at the heart of the fraud of HT DMH 11.

In the absence of adequate and proper testing and sufficient data, no statistically valid conclusions of mean seed yield (MSY) of DMH 11 could be drawn anyhow. Yet they were drawn by both the regulators and developers who furthermore self-conducted and supervised the trials. Without valid data to justify it, DMH 11 was allowed in pre-commercial large scale field trials in 2014-15.

For an adequate basis for a comparative assessment of MSY, Rodrigues argues it was absolutely necessary for the comparison to include the cross (hybrid) between the non-modified parental lines (nearest isogenic line), at the very start of the risk assessment process and throughout the subsequent stages of field testing, in addition to other recommended 'comparators'. None of this was done.

Deliberately poor non-GMO mustard varieties were chosen to promote prospects for DMH 11 as a superior yielding GMO hybrid, which then passed through 'the system' and was allowed by the regulators, a classic non-sequitur by both the regulators and Dr Pental.

The fraud continued, according to Rodrigues, by actively fudging yield data of DMH 11 by 15.2% to show higher MSY. Again, she offers a good deal of evidence to show how it was done and why it was done: to justify the request for commercial approval.

A combination of fudged data and regulatory delinquency mean that DMH 11 and its two GMO parental lines are effectively forcing open the backdoor entry into India of herbicide tolerant GMOs based on non-GM traits.

Rodrigues concludes:

> It matters not a jot if HT DMH 11 is not approved. What does matter is that its two HT (GMO) parental lines are: HT Varuna-barnase and HT EH 2-barstar will be used "for introgressing the bar-barnase and bar- barstar genes into new set of parental line to develop next generation of hybrids with higher yields –" (Developer and Regulator). This extraordinary admission confirms that the route to any number of 'versions' of HT mustard DMH 11 IS INVESTED IN THESE TWO GMOs as parents. India will have hundreds of low-yielding HT mustard hybrids (as was contrived for failed Bt cotton, with a present count above 1500 Bt hybrids), using India's best mustard cultivars at great harm to our farmers and contaminating our seeds and mustard germ plasm irreversibly.

India will be forced to accept a highly toxic and unsustainable technology suited to monocropping. Herbicide tolerant GM crops would be particularly unsuitable for its agriculture given the large number of small farms growing a diverse range of crops

alongside mustard that contribute towards agricultural biodiversity and, in turn, diverse, healthy diets.

This unremitting fraud and unremitting regulatory delinquency is being protected by a subterranean process of regulation that has also broken India's constitutional safeguards by keeping the biosafety data hidden from the nation.

> India faces a three in one regulatory jugglery in a brazen display of collusion to fraud the Nation, by our regulatory institutions of governance... There is an on-going and accelerating down-sizing of precautionary regulation and rigorous and sceptical oversight of GMOs, even unremitting and clear fraud.

Rodrigues says:

> These matters require criminal prosecution. The Petitioners' Prayer to the Hon'ble Supreme Court is for HT crops to be barred and specifically HT (GMO) Mustard to be barred, and for an enquiry to be instituted into the regulatory process followed for DMH 11, amongst other Prayers.

It raises the question why are top officials seemingly hell-bent on driving GMOs into India. That, of course, is an issue in itself, one that is again related to collusion and deception.

Articles by: **Colin Todhunter**

About the author:

Colin Todhunter is an extensively published independent writer and former social policy researcher. Originally from the UK, he has spent many years in India. His website is www.colintodhunter.com https://twitter.com/colin_todhunter