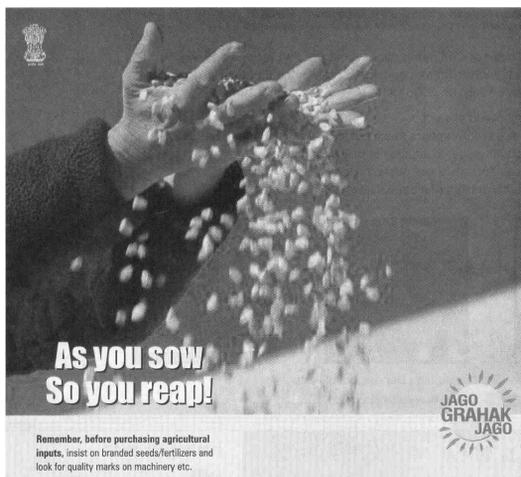


A new Indian Seeds Bill has been circulated by the government to overhaul the seed regulatory system. The stated objective of the proposed law is to regulate the seed market and ensure seeds of “quality”. With the proposed changes the seed law would be harmonised with other seed laws around the world and ensure the Indian seed market is open to big business. The losers will be the millions of Indian small-scale farmers, while the winners will once again be transnational corporations. There is enormous pressure on the Indian government to embrace this new law, and voices of protest are crucial.



Recent government advertisement in Indian newspapers telling consumers (“Grahak”) to wake up (“Jago”) to the importance of branded seeds

India's new seed bill

GRAIN, with DEVINDER SHARMA*

* Devinder Sharma is a New Delhi-based food and trade policy analyst

¹ The Seed Policy Review Group was an initiative of the Ministry of Agriculture. The Seed Association of India (SAI) is one of the major seed industry associations, and represents medium to large foreign and domestic firms. SAI actively engaged in debates with the Ministry on the new seed law.

² www.agricoop.nic.in/seeds/seeds_bill.htm

³ Section 13(1) of the Seeds Bill, 2004.

⁴ National Biotechnology Development Strategy <http://dbtindia.nic.in/biotechstrategy.htm>

⁵ Terminator Seeds - Plants genetically engineered to produce sterile seeds, forcing farmers to buy new seeds each year from a company.

In 1998, a Seed Policy Review Group¹ in India recommended a long-awaited shake-up and reform of the Indian seed laws; a new seed law would need to be passed that would replace the current 1966 Seeds Act (see box on p 26). In 2004, a new Seed Bill² was announced. Why the need for change? Proponents of the new Seeds Bill list a number of supposed deficiencies in the 1996 Seeds Act, including:

- Making the registration of varieties obligatory (previously voluntary)
- Creating a National Register of Seeds
- Regulating (make easier) the importing and exporting of seeds
- Accommodating new regulations on GM crops
- Improving market conditions for private seed companies

Ring in the changes

The proposed new seed law introduces the concept of mandatory registration of all seeds for sale.³ In other words, all marketed seed and planting material, whether domestic or foreign, will have to be registered. This is a significant change from the existing law, which sought to regulate the quality of only a limited number of varieties notified under the law. Now, however, any seed for sowing or planting cannot be sold unless it is registered.

All registered varieties will be recorded in a National Register of Seeds database. Registration will be granted for new varieties for a period of 15 years in the case of annual and biennial crops and 18 years for long duration perennials. As with registered varieties in other parts of the world, varieties need to be field-tested to determine their VCU (Value for Cultivation and Use). In addition, seeds



need to be correctly labelled on their containers, including genetically modified seeds. Furthermore, seed producers, seed processing units, seed dealers and horticulture nurseries all have to be registered with the State government where they operate.

The regulatory system governing GM crops is in the process of being revamped with the National Biotechnology Development Strategy.⁴ It is clear from the draft strategy that the government will be supporting the further introduction of GM crops. The new Seeds Bill does not prohibit the registration of GM seeds, though they are subject to environmental clearance under the Environment Protection law. However, in a gesture to keep critics quiet, the Seeds Bill does ban the use of Terminator⁵ seeds.

Under the new Seed Bill all imported seeds will also need to be registered⁶, though the government may allow the import of an unregistered seed for research purposes⁷. Apart from the registration of imported seeds, the new Bill does not make any other provisions, such as for phytosanitary standards, which still rely on other existing legislation (see box over page). However, the main basis for the registration of imported seeds is to support larger companies importing seed⁸, which has been increasing substantially recently (see box on this page). For example in 2001 to 2002, imports were around 860 tonnes, but within one year, this had increased to 1,766 tonnes, with a value of US\$ 18 million, 20% of which comes from the US. Exports of seed are even more valuable at around US\$ 21 million for the same year (2002-2003)⁹.

Does the Seed Bill benefit the farmer?

The official government line, when arguing in favour of this bill, is that *"if we don't know who is selling the seeds, we cannot control their quality"*. This, of course, is the same argument used by the seed industry around the world. So this new law is being presented as a "consumer protection" act for farmers. In the light of several reports of farmers' suicides and crop failure this has found favour with many unsuspecting civil society groups. So will this law be good news for farmers? What protection do farmers get if their legally-bought registered-varieties fail? Interestingly, farmers at this point can only turn to the Consumer Protection Act of 1986, an option which is available today without any new legislation. Meanwhile, the Indian Seed Industry is lobbying for the removal of seeds from the Consumer Protection Act¹⁰.

A cotton farmer from the state of Andhra Pradesh is currently fighting a case to get compensation for

Pressure for seed-potato imports

For several years now, the private seed industry with the support of the World Bank, have been exerting tremendous pressure on the Indian government to allow the bulk import of potato varieties, from the EU and US, for seed production. To this day such imports have been banned to protect India's own potato market from pests and diseases. Although the government was on the brink of caving in to the seed industry's demands to allow the imports of potato seed, the timely intervention from the Director General of the Indian Council of Agricultural Research (ICAR) has so far prevented such imports. The Director General had opposed such imports based on a committee report that concluded that potato imports would substantially increase pest and disease amongst local varieties of potatoes.

Source: D Sharma (2000): *Diversity No. 3*

very poor yields in the District Consumer Court, an option which is by its very nature a tedious one without any guarantee of success. His struggle has inspired activists to put together a legal manual for farmers seeking compensation for failed yields¹². Often, even if a government recognises that farmers' need to be compensated, the company might not be ready to pay up. In the State of Andhra Pradesh when farmers suffered losses from cultivating Monsanto's Bt cotton, Monsanto was only willing to pay for failure to germinate and for absence of the genetic purity promised by the company, and not for yield losses¹³. The Plant Variety Protection (PVP)¹⁴ law of India does make provision for farmers to claim, via a PVP Authority, compensation from the breeder of a variety if it does not perform as expected¹⁵, though such a body has not yet been set up. Such a body, when formed, would only rule on varieties which are PVP registered and such decisions would be on a discretionary basis.

The bill is essentially about seed registration and certification, but in mandating that only registered seed will be sold, it is not only about what it regulates but about what it does not. By mandating what the market will offer, it determines what it excludes. So what is in the Bill for the small farmer? Once again the proponents of the Seed Bill come rushing with their answer: *"Exemption for farmers to save, use, exchange, share or sell their seed without registration"*. Indeed the law does state that:¹⁶ *"[nothing] shall restrict the right of the farmer to save, use, exchange, share or sell his farm seeds and planting material"*.

But it continues with: *"except that he shall not sell such seed or planting material under a brand name or which does not conform to the minimum*

⁶ Section 36(1)(c) of Seeds Bill, 2004.

⁷ Section 36(2) of above.

⁸ The public notice issued by the Parliamentary Committee inviting suggestions on the Seeds Bill states that "(t)he proposed legislation aims to liberalise import of seeds and planting materials compatible with the World Trade Organisation (WTO) commitments". <http://pib.nic.in/release/release.asp?relid=8963>.

⁹ www.statpub.com/open/65830.html; www.fas.usda.gov/gainfiles/200410/146117690.pdf; see also www.fas.usda.gov/gainfiles/200312/146085513.pdf

¹⁰ Seed industry seeks infrastructure status, www.thehindubusinessline.com/2005/03/16/stories/2005031600941000.htm

¹¹ Of the Farmers' Commission of Experts on Agriculture in Andhra Pradesh, see *Done in by cash crops*, www.frontlineonnet.com/fl1926/stories/20030103004611200.htm

¹² How to sue a corporation, Greenpeace India's legal manual for farmers - www.greenpeace.org/india/press/reports/how-to-sue-a-corporation

¹³ *A lesson from the field* <http://flonnet.com/fl2011/stories/200306005912300.htm>

¹⁴ In this issue of *Seedling*, we have used both PVP and PBR (Plant Breeder's Rights) to mean the same thing.

¹⁵ Section 39 (2) of the PVP Act, 2001.

¹⁶ Section 43(1) of the Seeds Bill, 2004.



Registering and certifying a seed

A distinction needs to be made between registering a seed and certifying a seed under the Seed Bill in India:

Registering a seed: This is compulsory for all seed sold. The criteria for registering a seed are the Value for Cultivation and Use (VCU). This would involve growing the variety over a number of seasons (three seasons in the Seed Bill) and testing for their ability to be of commercial use.

Certifying a seed: This is an optional extra to the registering of a seed and the criteria are established in the "Indian Minimum Seed Certification Standards" from 1988. There are six phases of seed certification:

1. Receipt and scrutiny of application.
2. Verification of seed source, class and other requirements of the seed used for raising the seed crop.
3. Field inspections to verify conformity to prescribed field standards.
4. Post-harvest supervision, including processing and packing.
5. Seed sampling and analysis, including genetic purity test and/or seed health test, if any, to verify conformity to the prescribed standards.
6. Grant of certificate and certification tags, tagging and sealing.

¹⁷ A brand name is a name or symbol or design used to identify a manufacturer's or seller's goods, e.g. Monsanto's Bt cotton is marketed under the brand name 'Bollgard'.

¹⁸ The Seeds Bill differentiates farmers from those engaged in commercial seed activities. In Section 2(9) "Farmer" means any person who cultivates crops but does not include any individual, company, trader or dealer who engages in the procurement of seeds on a commercial basis.

¹⁹ www.ddsindia.com/anotherorganics.htm; www.masipag.org/news_india.htm

²⁰ Section 39(1) Proviso of the PVP law

²¹ For example, see Navdanya's "Alternative Agriculture Policy": www.navdanya.org/news/110305-1.php

²² www.organicconsumers.org/ge/india/women32505.cfm

²³ <http://economictimes.indiatimes.com/articleshow/1056293.cms>

²⁴ www.thehindubusinessline.com/2005/03/30/stories/2005033000240900.htm

²⁵ On the Concurrent List of the Constitution of India on which both State & Centre can make laws.

²⁶ On the Union List on which only the Centre has the power to make laws.

limit of germination, physical purity, genetic purity prescribed..." There is the catch - farmers cannot sell their seeds if they do not meet the standards of registration. Nor can farmers use a brand name¹⁷ and enter the seed trade.¹⁸ For the seed industry this is music to their ears; with this small piece of legislation all competition from non-registered seeds is done away with. Although farmer-to-farmer seed exchange can continue despite the proposed law, the ambiguity in the exception clause, coupled with wide powers given to Seed Inspectors, makes farmers anxious about how their small local sales, for instance in the village fairs, would be regulated. Even though today farmers produce around 80% of India's seed, selling their own seed is now being restricted. In reality, only formal breeders and big businesses can get their seeds registered.

So why don't farmers simply get their seeds registered? In this way, they could legally sell their home-grown varieties of seeds. However, under the proposed system it makes it impossible for farmers to register varieties. The process takes a long time, is extremely expensive for a farmer, and anyway farmers' seeds would probably fail to pass the required standards. A farmers' breeding criteria are very broad, incorporating ecological and social factors, rather than only yield; what is exchanged between farmers is determined by local needs and therefore farmers' varieties are best regulated by farmers themselves. As a result, there are some in India advocating for a community certification

process by, and for, small-scale farmers.¹⁹ So farmers can sell harvested seed which is a registered variety. But the problem here is that if the registered seed is also PVP-protected then the farmer is again prohibited by the PVP legislation from selling branded seed in the market²⁰.

As for farmers' varieties, the crops that they have been growing, exchanging and selling for many generations, evidence from around the world shows that these will die out. By following the letter of the law, there will be little incentive to grow and use farmer varieties and farmers will have no choice but to buy and use registered seed from a private company. On the other hand, stopping the sale of farmers' seeds will be very difficult to enforce. Indeed, the very survival of farmers' varieties may be very dependent on farmers simply ignoring this aspect of the law and continuing to sell and buy their own farmer varieties.

The Bill has come under severe criticism countrywide from all sectors of society, including farmers' groups and numerous non-governmental organisations. The demands range from a complete withdrawal of the proposed Seed Bill 2004²¹ to the recognition of farmers' absolute rights to indigenous seeds.²² Widespread campaigns and mass actions continue to be planned at the village and district levels.²³ Farmers are directing their ire at what they regard as restrictions on their time-honoured freedom to grow and sow as they please. They also see the Bill as an erosion of their rights to sell seeds and are dissatisfied with the lack of provision for corporate liability, be it for Indian or foreign seed companies. Other problems cited with the Bill include:

1. **Consolidation of the private sector:** Many fear that the Bill will hand over the seed business to seed transnational corporations.²⁴
2. **Introduction of GMOs:** There is growing concern that the Bill will ease entry of GM crops with the possible contamination of traditional varieties with GM agriculture.
3. **Prices:** Many believe that seed prices will go up. Private companies would pass on the costs of registration to farmers.
4. **Centralising power:** Many are concerned that the Seed Bill will move decision-making away from the state level. Under the Indian constitution, agriculture is under the jurisdiction of the state, with the exception of cotton and oil seeds,²⁵ and tradable commodities²⁶. The central government treats seeds as a "tradable commodity" to constitutionally justify its lawmaking on the subject.

A Seed Bill for the private sector

The main beneficiaries of this new law are clearly the private seed sector. With the opening up of the seed market only to those who are able to certify and register seeds, coupled with the suppression of the sale of farmer's varieties, it is in particular the transnational corporations that will benefit. Such corporations make up an estimated 30% share of the market (see table below).

Big Indian companies will also benefit through sales of exported seed. With an extensive and rich agricultural genetic resource base, coupled with the associated knowledge and cheap labour provides a fertile ground for seed production. Asia is becoming the largest seed market in the world and is the biggest agricultural trading partner for the US²⁷. The US Department of Commerce has identified India as one of the world's top ten "Big Emerging Markets". With China the largest seed producer, India is in second place. The US government is taking special interest in the economic and legislative "reforms" in this part of the world²⁸, as in India it is keen

Transnational seed companies in India

1	Monsanto
2	Bayer Crop Science
3	Syngenta
4	Advanta India Ltd (formerly ITC Zeneca Ltd)
5	Hicks-Muse-Tate Inc.
6	Emergent Genetics
7	Dow Agro
8	Novartis
9	Bioseed Genetics International Inc.
10	Tokita Seed Co.

to encourage conformity to US standards²⁹ and to simplify seed trade³⁰.

Seed legislation was originally meant to be about government being able to ensure good quality seed and safeguard farmers from bad seed distributed

²⁷ www.fb.org/views/com/boost_exports.html

²⁸ China's Food Import Standards Often Unclear, U.S. Officials Say, *Washington File*, <http://cayupply.notlong.com>

²⁹ E.g. pushing for amendments to India's patent law to allow patenting of GM seed.

³⁰ www.financialexpress.com/fe_full_story.php?content_id=59335

Seed regulation and certification in some South Asian countries

AFGHANISTAN: The National Law on "Seed and Plant Quality" is being finalised by the Afghan Ministry of Agriculture, Animal Husbandry and Food. The government has been asked by FAO & ICARDA to set up a system for Seed Certification, Seed Testing, and Plant Quarantine in addition to setting standards of seed quality. According to the ICARDA draft law, for the formal sector registration and certification are mandatory for all crops. But there is an exemption from government control on seeds of the informal sector, as long as advertising and promotion are not indicative of commercial activity.

KYRGYZTAN: As in other CIS countries, new seed laws are in the process of being drafted often with foreign aid and assistance. For example the Regulation on certification of cereals seeds in Kyrgyz Republic, 2002; the USDA with funding through USAID programmes encouraged adoption of seed certification standards and the FAO also implemented a Technical Cooperation Programme project on Seed Legislation and Plant Variety Protection.

PAKISTAN: As per the Seeds Act, 1976 notified varieties of crops have to be registered and their sale, exchange & barter is subject to regulation. For all other varieties certification is optional. The registration of varieties with DUS testing is done by the Federal Seed Certification and Registration Department. Over 350 crop varieties have been registered and released as of now. The seed law is currently under revision.

NEPAL: The Seeds Act of 1988 notified in 1989 & Seed Rules, 1996 prescribes limits of germination, purity, etc. for "listed" seeds and deal with the registration and release of 153 varieties of crops, vegetables, pulses and oil plants. The government can require minimum procedures for the barter, sale and exchange of seeds of specific varieties and species, just like Pakistan. Otherwise, people are free to do what they want. Amendments to the seed law are under discussion.

SRI LANKA: The Seed Act of 2003 requires anyone "causing a seed to be placed in the market in Sri Lanka" to be registered with the Director of Seed Certification in the Department of Agriculture. Any locally produced seed has to conform to the rules of production of certified seed before its description and sale as "certified seed". Even though there is a blanket exception for farmer-to-farmer seed exchange and sale, if the farmer wishes to sell seed in the open market s/he too would have to produce and sell certified seed. FAO's rehabilitation project post-tsunami focuses on certified seed production and upgradation of seed testing and certification procedures.

INDIA : The Seed Act of 1966, which only regulated notified varieties, is proposed to be replaced by the Seed Bill, 2004; according to the Bill all seed for sale must be registered on VCU criteria. Certification is optional. Transgenic varieties may too be registered subject to environmental clearance but there is a terminator ban. Express mention is made for the farmer's option to invoke consumer protection laws for liability on non-performance of seeds.



A history of Indian seed regulation

The formal seed sector in India throughout the 1960s was dominated by the public sector. In 1961 the National Seeds Corporation (NSC)³¹ was established under the Ministry of Agriculture. The NSC was at the centre of seed production of breeders, foundation and certified seeds and their quality control. In 1967 the Indian government put together a *National Seeds Project* (NSP) with the assistance of the World Bank.

The NSP set up huge seed processing plants in 17 states that were supposed to provide 'certified' seeds of food crops, mainly self-pollinating crops, to farmers³². These processing plants operated mostly below capacity, and for all practical purposes, turned into white elephants. It was primarily for the lack of demand for the certified seeds that a majority of the seed processing plants were in debt and often burdened with carryover stocks. These seed plants were a classic example of a faulty technology being pushed onto India.³³

Instead of dismantling the National Seeds Project, the government continued to push certified seeds on to the market. And since there were few takers, the blame was shifted to the inefficient public sector. This also justified the need to bring in the private seed industry. It is however another matter that the so called 'efficient' private seed industry is in the business primarily because of hybrid seeds which need to be purchased every year.

Meanwhile the World Bank continued to fund other seed projects intended to increase the production of Green Revolution varieties,³⁴ to coordinate the efforts of the State Farms Corporation of India (SFCI) and emerging private companies and in addition to create and modify the infrastructure for seed testing, research and certification. At this time there were relatively few private companies involved with seeds (mainly small enterprises confined to the production of some vegetable and ornamental flower seeds) and government policies focussed on the public sector with limited private-sector participation.

The *New Policy on Seed Development* of 1988 heralded a new era of private enterprise in the seed sector in India. This coincided with the fourth loan the World Bank gave to India's seed sector to make it more 'market responsive'. The US\$ 150 million loan aimed to privatise the seed industry and open India to multinational seed corporations.³⁵ The most significant impact of the new seed policy was an increase in collaboration agreements between domestic and foreign companies, aiming at the import of technology and parental material. Under the 1988 policy, vegetable seeds could be imported freely while seeds of oilseeds, pulses and coarse grains like maize, sorghum and millet could be imported for two years by companies which had technical and financial collaboration agreements for production of seed with companies abroad. Import was allowed subject to the provision that the foreign supplier agreed to supply parent line seeds or breeder seeds to the Indian company within two years of the date of first commercial consignment.

Scientists opposed this policy on the grounds of relatively poor infrastructure available for testing imported seeds. They argued that the country might end up importing plant diseases along with the seeds. Still worse was the fear that the bulk of the seeds used in India would eventually be imported, as was the case with Mexico. This was denied by the government, which insisted that the seeds could only be imported for two years (except for vegetables and fruits). Although the industry first welcomed the seed policy, it later began to object to the two-year limit, saying that this was too short a period for effective production.

But what the designers of the seed policy overlooked at that stage of formulation was that it would, after sometime, raise the demand for more protection for imported varieties. This is exactly what happened. After some time, the seed industry began pressurising the government to provide adequate intellectual property rights protection, either in the form of plant variety protection or patents. The government thus began re-examining its policy on plant variety protection.³⁶

In the late 1980s government control on production of hybrids through licenses began to be relaxed. In the late 1990s the total seed market was estimated to be at \$500 million (The sector was still very low-tech, with 70% of sales coming from farmer bred seeds, 26% from public bred, and only 4% from hybrids) with expected sales of \$1.5 billion by 2001. At that time, out of an estimated 400-odd seed companies in the country, only 18 belonged to the public sector and 10 to the cooperative sector. The remaining units were established in the private sector, of which, about 25 to 30 are in the large private sector, while over 300 are medium and small size units³⁷. The Planning Commission of India for the current plan³⁸ envisages an increase in seed replacement ratio for crops with an increased role of the private sector in the production of certified seeds.

³¹ www.indiaseeds.com

³² Punjab, Haryana, Maharashtra, Andhra Pradesh, Karnataka, Rajasthan, Uttar Pradesh, Bihar and Orissa. Madhya Pradesh, Gujarat, West Bengal, Assam, Meghalaya and Arunachal Pradesh.

³³ D Sharma (1997): *In the Famine Trap*, UK Food Group and the Ecological Foundation, London/New Delhi, pp123-124.

³⁴ In 1969, the Tarai Seed development Corporation was started by a US \$ 13 million World Bank loan. This was followed with two NSPs, for which the WB gave US \$ 41 million between 1974-78. www.whirlwindbank.org/environment/agriculture.html

³⁵ World Resources Institute (1994): 'Second' India Revisited.

³⁶ D Sharma (1994): *GATT and India: The Politics of Agriculture*, Konark Publishers, New Delhi, pp 60-62.

³⁷ www.indiaibusiness.nic.in/knowledgesociety/biotech.htm

³⁸ 10th Five Year Plan (2002-2007) <http://planningcommission.nic.in/plans/planrel/fiveyr/welcome.html>





by industry. The trend however seems to show, among other things, how industry standards are being adopted by the seed laws, which themselves are becoming a means to facilitate the entry of transnational corporations into the seed sector rather than “protecting” the informal seed supply system. While the private sector supports minimal government intervention in their business, they also lobby hard to receive the necessary government protection to maximise and protect their profits: protection of their intellectual property rights over a variety or gene (PVP or patents) and, now with the Seed Bill, protection of their market to trade in seeds on their own terms.

As companies trade across the globe, they seek to harmonise seed laws across the board. This is what the Indian Seed Bill is - yet one more country harmonising its law with the EU and the US.

Turning a Bill into an Act

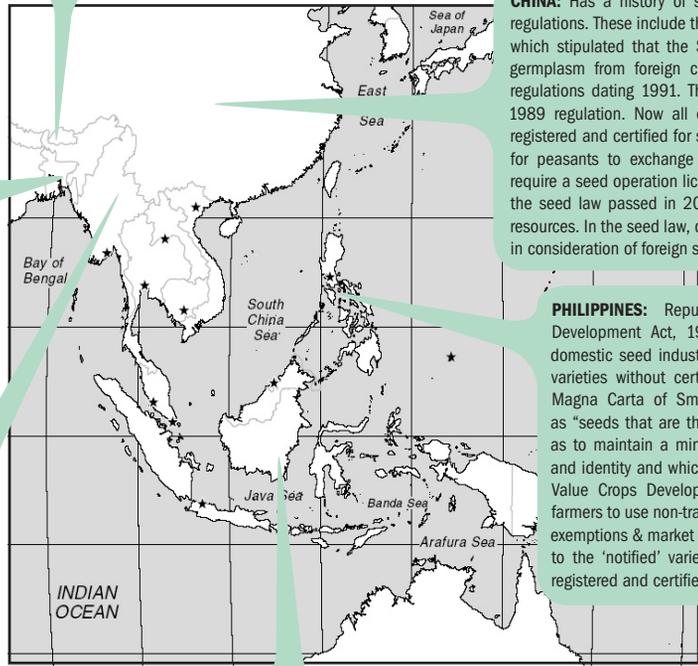
India is seen as one the biggest markets in the world and as a result there is huge pressure on the government to adopt the Seed Bill and turn it into an Act. The Seed Bill is just one of the legislative changes in India to open up its markets and harmonise its laws with rich countries. These include amendments to the country’s patent law and the model Agricultural Produce Marketing law. With the ongoing Parliament Session having concluded, the passage of the Bill has now been postponed to the next session (in July 2005). Meanwhile, the report of the Parliamentary Committee reviewing the Bill is awaited. Whenever the Bill is re-tabled, its rejection is unlikely without many voices of protest – the question is whether enough noise can be made about the Seed Bill, and whether these protests will go unheard.

Seed regulation and certification in some Southeast Asian countries

BHUTAN: Under the Seeds Act of Bhutan, 2000, the Royal Government of Bhutan regulates the seeds of notified kinds and varieties and certification is optional. The system is voluntary and there are no DUS criteria.

BANGLADESH: First seed law was passed in 1977. Like India’s existing law, Nepal, Pakistan, Sri Lanka and Thailand, only varieties notified by government are subject to regulation. Five notified crops (rice, wheat, sugarcane, potato and jute) are mainly handled by public institutions. Greater participation of the private sector is planned. Under the SAP & ESAP agricultural input markets were substantially liberalised. By the 1997 amendment act and the 1998 Seed Rules the private sector can import and market any non-notified seeds, while seeds of notified crops may be brought in for trials, tested for suitability and then multiplied and sold. More amendments to the seed law are being discussed in the Ministry of Agriculture.

THAILAND: The Plant Act, 1992 envisages the regulation of notified kinds and varieties through a licensing system for “controlled seeds”, apart from the varieties and species that are controlled the rest are free from government control. Transgenic seeds are dealt with under the Plant Quarantine Law of 1964 amended in 1999, under which the Ministry of Agriculture has prohibited the import of GM seeds for use, import of transgenic material after due approval is only allowed for research & experimental purposes.



CHINA: Has a history of several national & provincial level seed regulations. These include the regulation of seed management, 1989 which stipulated that the State protect germplasm resources and germplasm from foreign countries be registered, and quarantine regulations dating 1991. The Seed Law of 2000 has annulled the 1989 regulation. Now all commercial seed production has to be registered and certified for sale. Though there is a blanket exception for peasants to exchange and sell their seeds and they do not require a seed operation license to do so. It is important to note that the seed law passed in 2000 asserts State sovereignty over seed resources. In the seed law, changes were issued on August 28, 2004 in consideration of foreign seed companies in China & ASTA.

PHILIPPINES: Republic Act No. 7308 Seed Industry Development Act, 1992 was enacted to help develop the domestic seed industry. Farmers can exchange and sell their varieties without certification. As per Republic Act No.7607 Magna Carta of Small Farmers, “good seeds” are defined as “seeds that are the progeny of certified seeds so handled as to maintain a minimum acceptable level of genetic purity and identity and which is selected at the farm level”. The High-Value Crops Development Act of 1995 gives incentives to farmers to use non-traditional crops such as low-cost credit, tax exemptions & market linkages. Recommended varieties (similar to the ‘notified’ varieties of South Asian countries) must be registered and certified.

INDONESIA: The Government Regulation on Plant Seed Management was passed in 1995. It importantly says that farmers’ varieties do not fall under the regulation (they are considered ‘natural varieties’ and as such not controlled by the government). The commercial use of GM seeds is regulated by Government Regulation No.44 of 1995 on Seeds for Crops dealing with import/export, breeding & release of new varieties, while Decree No.737 of 1998 deals with the testing, evaluation & release of new plant varieties. Biosafety aspects and requirements for the use of transgenics for food & fodder are dealt with under Decrees number 856 of 1997 & 998 of 1998.