

Seed laws that criminalise farmers

Resistance and fightback

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Accompanying web resources

(for download only or online consultation:

www.grain.org/e/5175 and viacampesina.org/es/index.php/publicaciones-mainmenu-30)

- Seed laws by country – Online map published by GRAIN
- Trade agreements that privatise seeds – Publication by GRAIN
- Take action! – poster published by GRAIN and La Via Campesina
- Additional country experiences: published by GRAIN and La Via Campesina
- Going further

Acronyms

ARIPO: African Regional Intellectual Property Organisation

CAFTA: Central America Free Trade Agreement

CFA: name of two currencies used in Africa, the West African CFA franc and the Central Africa CFA franc (in French – Franc des Communautés financières d'Afrique)

COMESA: Common Market for Eastern and Southern Africa

DUS: Distinct, Uniform and Stable

FAO: Food and Agriculture Organization of the United Nations

FTA: Free Trade Agreement

GMO: Genetically Modified Organisms

ITPGRFA: International Treaty on Plant Genetic Resources for Food and Agriculture

MCC: Millennium Challenge Corporation

OAPI: African Intellectual Property Organisation (in French – Organisation Africaine de la propriété intellectuelle)

PVP: Plant Variety Protection

SADC: Southern African Development Community

TRIPS: Trade-Related Aspects of Intellectual Property Rights

UPOV: Union for the Protection of New Plant Varieties (in French – Union pour la protection des obtentions végétales)

USAID: United States Agency for International Development

WTO: World Trade Organization

Introduction

Intro

Seeds are one of the irreplaceable pillars of food production. Farmers all over the world have been acutely aware of this throughout the centuries. It is one of the most universal and basic understandings that all farmers share. Except in those cases where they have suffered external aggressions or extreme circumstances, almost all farming communities know how to save, store and share seeds. Millions of families and farming communities have worked to create hundreds of crops and thousands of varieties of these crops. The regular exchange of seeds among communities and peoples has allowed crops to adapt to different conditions, climates and topographies. This is what has allowed farming to spread and grow and feed the world with a diversified diet.

But seeds have also been the basis of productive, social and cultural processes that have given rural people the resolute ability to maintain some degree of autonomy and to refuse to be completely controlled by big business and big money. From the point of view of corporate interests that are striving to take control of land, farming, food and the huge market that these factors represent, this independence is an obstacle.

Ever since the Green Revolution, corporations have deployed a range of strategies to get this control: agricultural research and extension programmes, the development

of global commodity chains, and the massive expansion of export agriculture and agribusiness. Most farmers and indigenous peoples have resisted and continue to resist this takeover in different ways.

Today, the corporate sector is trying to stamp out this rebellion through a global legal offensive. Ever since the establishment of the World Trade Organisation, and almost without exception, all countries of the world have passed laws giving corporations ownership over life forms. Whether through patents or so-called plant breeders' rights or plant variety protection laws, it is now possible to privatise micro-organisms, genes, cells, plants, seeds and animals.

Social movements worldwide, especially peasant farmers organisations, have resisted and mobilised to prevent such laws being passed. In many parts of the world, the resistance continues and can even count some victories. To strengthen this movement, it is very important that as many people as possible, especially in the villages and rural communities that are most affected, understand these laws, their impacts and objectives, as well as the capacity of social movements to replace them with laws that protect peasants' rights.

Today's seed laws promoted by the industry are characterised by the following:

“No to seed privatisation... For a better world!” – Demonstration in Guatemala in defence of biodiversity and against control of seeds by industrial agriculture. (Photo: Raúl Zamora)



a. They are constantly evolving and becoming more aggressive. Through new waves of political and economic pressure - especially through so-called free trade agreements, bilateral investment treaties and regional integration initiatives - all the ‘soft’ forms of ownership rights over seeds were hardened and continue to be made more restrictive at a faster pace. Seed laws and plant variety rights are being revised again and again to adapt to the new demands of the seed and biotechnology industry.

b. Laws that grant property rights over seeds have been reinforced by other regulations that are supposed to ensure seed quality, market transparency, prevention of counterfeits, etc. These regulations include seed certification, marketing and sanitary rules. By means of these regulations, it becomes mandatory, for instance, for farmers to purchase or use only commercial seeds tailored for industrial farming. Or the regulations make it a crime to give seeds to your son or exchange them with a neighbour. As a result, seed fairs and exchanges - a growing form of resistance to control over seeds - are becoming illegal in more and more countries.

c. In strengthening privatisation, these laws have been disregarding basic principles of justice and freedom and directly violating the Universal Declaration of Human Rights. These seed laws have imposed the rule that anyone accused of not respecting property rights over seeds is assumed to be guilty, thus violating the principle that people are innocent until proven guilty. In some cases, measures can be taken against accused wrongdoers without their being informed of the charges. These seed laws are even making it an obligation to report alleged transgressors; they are legalising searches and seizures of seeds on grounds of mere suspicion (even without a warrant) and allowing private agencies to conduct such checks.

d. These laws are being drafted in vague, incomprehensible and contradictory language, leaving much room for interpretation. In most cases, the laws are being moved through legislative chambers in secrecy or by means of international agreements that cannot be debated nationally or locally.

Experience shows that people do not want these laws, once the misinformation and

secrecy used to push the laws through have been countered by information campaigns and mobilisation on the part of social organisations. Most people reject the idea that a company can take ownership of a plant variety and prohibit farmers from reproducing their seeds. They find it completely absurd. People also generally do not agree that the work that farmers do to feed the world should suddenly become a crime. Wherever resistance has been strong enough, the legal plunder embodied in these laws has been stopped.

Experience also shows that those who want to privatise, monopolise and control seeds on behalf of large transnational corporations have no limits. There is no possibility to negotiate, make concessions, or reach

common agreements on this in a way that would allow the different interests to co-exist peacefully. The corporate agenda is to make it impossible for farmers to save seeds and to make them dependent on purchased seeds.

Similarly, experience shows that it is possible to resist and dismantle these attacks. But doing so requires informative tools that can be widely shared, in order to blow away the smoke of false promises and nice words, so that people can see what really lies behind seed laws. This booklet aims to help to make this work possible.

How seed laws make farmers' seeds illegal

1

The displacement of peasant seeds is a process that has been gaining ground and speed around the world over the past decades. In the 20th century, when plant breeding and seed production became activities separate from farming itself, peasant varieties were gradually replaced by industrial varieties. In Europe and North America, this happened over several decades, spurred by new technologies such as the development of hybrids. In Asia, Africa and Latin America, it took off after the 1960s, when so-called development programmes pushed 'high-yielding' crops and the use of chemical inputs (the so-called Green Revolution). In the last 20 years, we have been witnessing a new situation in which an aggressive wave of seed laws is being unleashed, often in the name of liberalising trade, with the purpose of stopping nearly all activities carried out by farmers with their seeds.

Farmers who produce and exchange their own seeds within their own community or with neighbouring communities are not in need of laws to govern their actions. The collective rights to use community seeds, which are often oral, are established and respected enough within each community

for such use to be regulated. But once the seeds are commercialised on a large scale by companies who produce them with unknown methods and in unknown locations, often beyond national borders, then laws become necessary in order to combat fraud, counterfeiting, bad quality seeds that do not germinate or that carry diseases, as well as to regulate GMOs. Laws are also necessary to protect local seeds and the social and cultural systems which guarantee the survival of the population's chosen systems of food production. These laws for "Prevention of commercial fraud" and the protection of food sovereignty represent a conquest on the part of rural organizations. Unfortunately, however, once the pressure of mobilisation by popular organisations and farmers weakens, most of these laws are rewritten by the industry in order to promote their own industrial 'improved' seeds, and to ban farm seeds.

The term 'seed laws' often refers to intellectual property rules such as patent laws or plant variety protection legislation. But, in fact, there are many other laws pertaining to seeds, including those that regulate trade and investments; regulations related to the health of plants; certification and so-called

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In Asia, Africa and Latin America, the replacement of traditional seeds with industrial «high performance» seeds began in the 60s. These industrial seeds go hand in hand with the use of chemical products (Corn and sorghum farmer in Mali) (Photo : Tineke d'Haese – Oxfam)

‘good agricultural practices’ related to marketing; or so-called biosafety regulations (See box). As a whole, these laws often result in peasant seeds being decreed illegal, branded as inadequate, and treated as a source of risk to be eliminated.

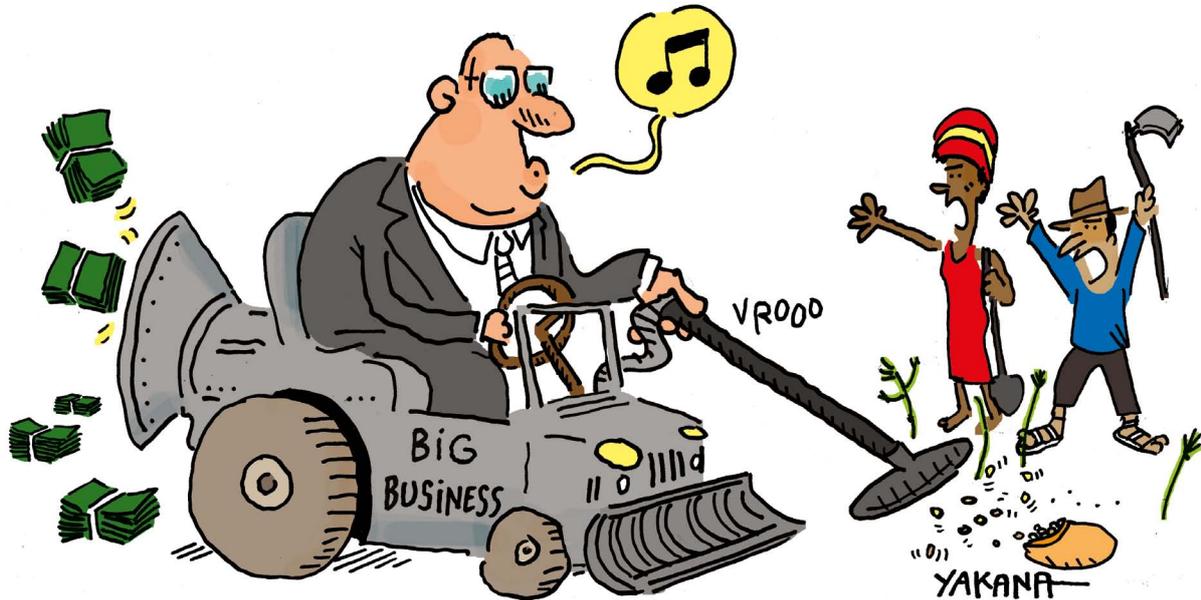
The new seed laws are a reflection of the increasing power of the food and agriculture

industries. Until the 1970s, new types of crop varieties were developed and distributed by state-run companies, small seed houses, and government research stations. Since then, we have witnessed a massive process of large companies taking over smaller ones and public programmes giving way to the private sector. Today, just 10 companies account for 55% of the global seed market. And the lobbying power of these giants – such as Monsanto, Dow or Syngenta -- is very strong. As a result, they have managed to impose restrictive measures giving them monopoly control.

Trade and investment agreements are a weapon of choice to impose seed laws where they did not exist before or to make existing laws more favourable to transnational corporations. The end goal is clear: to prevent farmers from saving seeds so that they buy corporate seeds on the market instead. And in that process, to get governments to pull out of plant breeding and seed production. In Africa, farmers’ seeds represent 80-90% of what is planted each season. In Asia and Latin America, they account for 70-80%. So, from the perspective of an agribusiness CEO, there is still a huge market out there to create and capture. Even in Europe, where industrial seeds already dominate farming, corporations continue lobbying for stronger enforcement of existing regulations in order to eliminate pockets of resistance and to restrict farmers’ abilities to reuse industrial seeds. When these laws are enforced, although that does not happen in all cases, the result has been very repressive: farmers’ seeds have been confiscated and destroyed; farmers are targeted and under surveillance; and some face criminal charges and jail sentences for simply continuing to work within their peasant systems and for using their own seeds.

At the same time, almost everywhere that we look, the power of the industry is also being contested. Challenging this power takes on many different forms, including:

GREEN REVOLUTION



organising and mass mobilisations; countering the false propaganda that these seed laws are necessary or are in the interest of the people; media work; education in schools and places of worship; street theatre; civil disobedience in defiance of unfair laws; and, most importantly, the daily work of continuing to develop peasant and small-scale farming systems. These systems include not only the native or local seeds and breeds, but also the land, territories, and rural peoples' cultures and ways of life. Experience shows that when this counterforce to defend peasant seeds is strong, then institutional challenges in the courts or in parliaments can force the suspension of bad laws - or at least call them into question. Given the power and interests that are at stake, overturning these seed laws is not achieved in a single battle. Rather, it is a continuous struggle in defence of peasant agriculture and food sovereignty as a whole.

In the following pages we present a snapshot of this mosaic of struggles.

Types of seed laws promoted by the industry

- **Marketing laws** are the oldest and most widespread type of regulations affecting seeds. They define the criteria that must be met in order for seeds to be put on the market. As such, they are often justified as a means of protecting farmers, as consumers of seeds, in order to ensure that they are only offered good seeds – both in terms of physical quality (germination rate, purity, etc.) and of the variety in question (genetic potential). But whose criteria are used? In the countries that have adopted the system of “compulsory catalogue”, seeds are allowed on the market only if they belong to

1. How seed laws make farmers' seeds illegal

a variety responding to three critical requirements: they must be “distinct”, “uniform” and “stable” (**DUS criteria**). This means that all plants grown from a batch of seed will be the same, and that their characteristics will last over time. Peasant varieties do not fit these criteria, because they are diverse and evolving. Marketing laws also typically require that your variety present a ‘value for cultivation and use’, usually referring to its yield under mono-cropping cultivation dependent on a large amount of chemical fertilisers. Another problem is how ‘marketing’ is defined. Under many countries’ seed laws, the definition of marketing is not restricted to monetary sales alone. Marketing can include free exchange, bartering, the transfer of seeds within networks or even just giving seeds as gifts.

- **Intellectual property laws** applied to seeds are regulations that recognise a person or an entity, most often a seed company, as the exclusive owner of seeds having specific characteristics. The owner then has the legal right to prevent others from using, producing, exchanging or selling them. The justification for this is to give companies a temporary monopoly so that they can collect a return on their investment without facing competition. But there are huge problems involved.

There are two main types of intellectual property systems for seeds: patents and Plant Variety Protection (PVP). The US started to allow patents on plants in the 1930s, when flower breeders demanded a kind of copyright on their “creations”; they wanted to stop others from “stealing” and making money from their flowers. Plant patents are very strong rights: no one can produce, reproduce, exchange, sell or even use the patented plant for research without the owners’

authorisation. To use patented seeds, farmers must make a payment to the owner of the patent. Farmers who buy patented seeds are also obliged to agree to a set of conditions: that they will not reuse seed from their harvest for the following season; that they will not experiment with the seeds; that they will not sell or give them to anyone else. The Monsanto Company even asks farmers to spy on their neighbours and report to the police anyone who is doing these things with ‘Monsanto seeds’. Today, patenting is standard for GMOs.

- **Plant Variety Protection** is a kind of patent developed in Europe specifically for plant breeders. It is accompanied by the same DUS criteria as those required by the catalogue and it initially granted less powers than a patent. In 1961, European states created the Union for the Protection of New Plant Varieties (UPOV), which harmonises rules through the UPOV Convention, which has been revised several times. UPOV gives



Demonstration in Thailand against « TRIPS+ », the intellectual property rights agreements which affect trade. They generalise intellectual property systems on a worldwide scale and limit peasants’ freedom to reuse their seeds.

breeders the right over their commercial varieties to prevent anyone else from producing seeds for commercial purposes. However, other breeders can use 'protected' (or privatised) materials for breeding programmes. In the first decades of UPOV's existence, farmers were still free to save and reuse their seeds from protected varieties. However, with the revision of the UPOV Convention in 1991, protection of plant varieties extends to prohibit the agricultural production of the protected variety, including harvesting and the post-harvest produce. Under UPOV 91, farmers are no longer allowed to reuse seeds of privatised varieties – except in rare cases and upon payment. If farmers infringe the regulation or are suspected of infringement, they can have their houses searched without warrant, their crops, harvests and processed products seized and destroyed, and they could be sent to jail for years. UPOV 91 also makes it much easier for seed companies to privatise farmers' own farm-produced seeds and to ban the use of local varieties.

- **Trade and investment agreements** are a tool used by corporations to force governments to adopt policies promoting corporate rights over seeds. For example, almost all countries of the world are members of the World Trade Organisation (WTO), which has an agreement on Trade-related aspects of intellectual property rights (TRIPS). The TRIPS agreement requires countries either to provide some form of plant variety protection or to face trade sanctions. In addition, many countries have been bullied into joining UPOV 91 – through bilateral free trade agreements, development aid, etc.

Trade agreements such as those required by the WTO, and FTAs, set

market rules that supposedly aim to prohibit discrimination but may also give agribusiness preferred access to certain markets. As a result, governments may no longer be able to implement procurement programmes under which state authorities buy seeds from local farmers. (The rationale is that, by restraining competition, local procurement requirements put transnational companies at a trade disadvantage.) These are harsh conditions that give preference to corporations rather than to the welfare of farmers or consumers.

Bilateral investment treaties, pushed by countries such as the US and members of the European Union, also contain a rule that intellectual property on seeds is a form of foreign investment that must be protected in the same way as an oil well or car factory. Thus, if such investments are expropriated or nationalised, or if the expected profits from them are jeopardised, then a US or EU seed company can sue the country in which the investment is located in an international court (investor-state dispute settlement).

- **Plant health and biosafety laws** can also limit farmers' use of and access to their seeds. Such laws are intended to prevent health or environmental hazards that can arise from seeds, including contamination through GMOs, and can, in that sense, be useful. Plant health regulations, for instance, are aimed at preventing the spread of diseases via seeds that are produced in one location and exported to another. The problem lies in the fact that these laws actually serve to protect the interests of industry. For example, sometimes small-scale exchanges of seeds among farmers are prohibited, or their seeds are confiscated and destroyed, because farmers are held to the same standards as

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multinational corporations, which sell seeds in far greater amounts and to more distant locations - with a corresponding increase in the chance of spreading disease. Under such laws, farmers' seeds may be viewed as a potential risk or hazard while industry seeds are hailed as the only safe ones, even though they play a huge role in spreading disease and contamination.

Similarly, biosafety laws often have the opposite effect of what they were intended to do. Instead of setting up barriers to the entry and spread of GMOs, which by their very nature are hazardous, they create a legal framework to manage risks and therefore facilitate the acceptance and spread of transgenic seeds. For example, biosafety laws often lay out formal procedures for planting GMOs that result in standards making these procedures legal without their being any safer. Such laws can also force farmers who do not want GMO and who produce their own seeds to have all their seeds analysed in order to guarantee the absence of GMO, which they obviously are unable to do, thus obliging them to buy industry-sold GMO seeds. In other instances, these laws make it

much easier to import or export GM crops, since the countries involved have the necessary legal mechanisms set up to oversee the crops. In yet other cases, such as that of Europe, there are good biosafety laws in place which do have preventive measures to stop the cultivation or import of GMOs, but these laws are under fire as the seed industry sees them as barriers to trade.

It should be noted that United Nations agencies such as the UN Food and Agriculture Organisation, the UN Conference on Trade and Development or the World Intellectual Property Organisation are today important proponents of all of the above laws. They draft model laws and train governments in how to implement them.

Box 1 **ITPGRFA, the International Treaty on Plant Genetic Resources for Food and Agriculture**

It is the only international text which recognises the fundamental rights of farmers to use, exchange and sell their farm-based seeds, as well as their rights to protection of their knowledge, to a share of benefits and to participate in national decisions on seeds. Implementation of the treaty is subject to national legislation, but most of the 130 states that have ratified the Treaty do not respect it. The Treaty aims to put in place a multilateral exchange system giving industry access to all the seeds, now saved in large global seed banks, that have been collected from the fields of all the farmers of the world - in exchange for a so-called "benefit sharing", which in practice is never paid for.

Box 2 New Threats

Whereas the first patents protected homogeneous and stable varieties, today's genetic technologies allow a patent to be placed on particular genetic traits (resistance to an insect, tolerance to a herbicide...). Such patents protect all plants and seeds that contain and show a particular trait that has been patented. This is the case with GMOs, and it is also the case with the numerous plants derived from genetic technologies other than transgenesis, such as mutagenesis, for example. These patents allow the industry to seize any farmers' seeds that have been contaminated by pollen from a plant with a patented trait or seeds which contain patented traits. Some of these patents even cover traits that occur naturally in plants that have been cultivated by farmers for generations; yet these too, one by one, become the property of seed multinationals.

The PVP is often presented as being preferable over a patent because it authorises free use of protected plant varieties for research and selection of other varieties. This is the main argument used in the effort to convince governments to adopt the laws of the UPOV Convention. However, there are no advantages whatsoever for farmers, especially since UPOV 1991. The exception for research and selection only benefits the industry and researchers and is no longer extended to farmers conducting selection in their fields.

Along with these new patents comes the involvement of the International Treaty on Plant Genetics for Food and Agriculture (IT-PGRFA) that paves the way for the privatisation of all seeds seized from all farmers' fields around the world, which are saved in large worldwide seed banks. Under the Treaty, there are plans to digitize and publish online all genetic sequences of all of these seeds – which will facilitate patenting by multinationals. Farmers and civil society organisations are trying to convince a majority of the governments that are party to the Treaty to oppose this global facilitation of biopiracy, which is completely contrary to the Treaty's original objectives of ensuring universal access to the worldwide seed banks and recognising “the rights of farmers to save, use, exchange and sell their farm seeds”.

African seeds: A treasure under threat



Africa is awash with foreign governments pushing new public-private partnerships and development programmes that aim to privatise seed markets, get the public sector out of plant breeding and turn farmers into dealers for the global agroindustry supply chain. In addition, foreign seed companies and private foundations are working to help African states rewrite laws to make trade and investment “fair” and “responsible”, meaning supportive of corporate interests. As a result, African farmers and civil society groups are fighting new seed laws every single day.

Ghana: Students and trade unions join farmers to oppose a restrictive seed law

In Ghana, students and trade unions have joined small-scale farmers organisations in mobilising against a Plant Breeders’ Rights (PVP) Bill. Currently under consideration in parliament, the Bill would establish a national seed law based on UPOV ’91. As has been the case in many countries around the world, the law is being used to introduce legal restrictions on farmers’ use of seeds that go above and beyond the already very restrictive provisions of UPOV ’91. For example, the draft Bill states that “in absence of proof to the contrary” the breeders can be assumed to be the owners of a variety in question, thus facilitating both biopiracy and the confiscation of seeds. Moreover, according to the Bill, if farmers use a protected variety in an illegal manner – such as reproducing the seeds of a ‘protected’ variety and sharing it with their neighbours – the farmers may be subject

to up to 2,000 penalty units and up to two years in prison.

Since 2011, the resistance movement has been successful in gaining broad support against the Bill by showing ordinary Ghanaians that it is not only farmers who will be affected. They have argued that the property protection in the Bill is simply the precondition sought by transnational corporations as a requirement for operating in Africa; preference is given to cash crops for export and the businesses of a few members of the elite rather than to feeding the Ghanaian people. The Bill has been popularly hailed as a ‘Monsanto Law,’ emphasising that industrial and commercialised agriculture, rather than the welfare of peasant farmers, is at the heart of the Bill. This is explicit in the Memorandum of the Bill, which states that it is “aimed at improving the quantity, quality and cost of food, fuel, fibre and raw materials for industry“. Passage of the law is a commitment of the Ghanaian government towards the G8 New



April 2014 demonstration against GMOs in Accra, Ghana. (Photo : Food Sovereignty Ghana)

Alliance for Food Security and Nutrition.

To mobilise against the Bill, booklets have been prepared in order to explain the consequences of the law to village chiefs and farmer leaders in their local languages. This social mobilisation emphasises that seeds belong to farmers collectively and that there can be no private owners. As an alternative, farmers in Ghana are demanding that public breeding programmes be put in place to ensure quality seed for indigenous crops such as cowpeas, cassava, rice and coconut. In addition, groups of farmers and their allies have plans to organise collective projects for access to seed in the villages. This will allow farmers to access varieties that have vanished locally but may still be being used in neighbouring areas or by farmers in other villages across Ghana.

Mali: Seed privatisation does not work for peasant farmers

It is not only international agreements such as UPOV which work for the direct advantage of the seed industry by pushing for

stronger intellectual property rights around the world. These efforts are supported by like-minded institutions such as the World Bank. In 2008, under the West Africa Agricultural Productivity Program, the Bank granted Mali 50 million CFA (76,000 euros) to develop and 'protect' fifty crop varieties. The idea was to wean farmers off traditional seeds, which are taken to be 'backward' and 'low yielding', by encouraging the breeding and production of improved seeds. These seeds would be protected and the ensuing royalties would translate into income for Mali's public research system.

But in a country where the vast majority of producers are peasant farmers who rely on their local seeds and breeds, initiatives like this are not a good fit. By 2012, Mali could boast PVP certificates on fifty crops, but their usefulness was unclear. The Malian government has to pay a yearly sum of 16.5 million CFA (25,000 euros) to maintain the property titles on these seeds, a situation that is problematic because Malian institutions are hardly receiving any income from the crops. On the one hand, there have not

been enough enterprises interested in reproducing and marketing the seeds. On the other, most peasants are not interested in paying high prices for high input-requiring seeds such as hybrids that do not fit in with their small-scale, low-input farms. Furthermore, in some cases the PVP titles can be considered as direct biopiracy since the crops are clearly peasant varieties, even still carrying their local names. (The PVP certificates were granted even though the DUS criteria - the varieties should be distinct, novel, uniform and stable - were not fully met.) Now, since the PVP titles are valid in all 16 African Intellectual Property Organisation (OAPI) member states, farmers not just in Mali but in the other OAPI member states may no longer sell or exchange the seeds of these peasant varieties. Farmers can still reproduce these seeds on their fields, but only for use on their own farm. This situation may become even worse for farmers as OAPI joined UPOV in 2014.

At the same time that this is happening, many actors in Mali are working to strengthen industrial seed systems, in particular by encouraging laws that allow greater participation of private companies in various aspects of seed production and commercialisation. These efforts are supported by programmes such as the Alliance for a Green Revolution in Africa, which is supported by the Bill and Melinda Gates Foundation. Small seed companies are moving in, but they are paving the way for large multinationals such as Monsanto, Limagrain and Syngenta. Meanwhile, Malian peasant farmers' real concerns lie elsewhere; instead of the seeds of okra, onions, cucumbers, cabbages or eggplant for which they can only find a few varieties of hybrids, they want to diversify the types of crops that they need on a small scale. By working together in local networks, they have developed new varieties - and rescued old ones - of onions, lettuce and also native varieties of vegetables, in addition to local millets and sorghum.

Mozambique: Farmers resist by developing local seed systems

Behind the new Seed Law being drafted in Mozambique is the G8 New Alliance for Food Security and Nutrition, which seeks to create new opportunities for agribusiness in Africa. Typically, this means promoting cash crop production that meets the demands of the market rather than addressing the food needs of local communities. It also means promoting costly hybrid seeds that require agrochemicals and that only have a purpose in the context of commodity production for world markets. Although they have asked to be included in the drafting of the new law, organisations of peasant farmers have been regularly excluded. In other cases, such as that of the drafting of a PVP law, farmers organisations have participated by explaining to the government how Mozambique's peasant farmers will be negatively affected, although the government ignored their suggestions in that case. Intellectual property schemes such as PVP laws are important for the multinational giants' goal of expanding GMOs in Africa, where the industry wants to avoid the situation it has experienced in Latin America. There, it was only after the use of GMOs became widespread that companies tried to establish legal measures to collect royalties - with limited success. Additionally, Mozambique has recently passed a law that makes it easier for GMOs to enter the country.

In this situation, Mozambican farmers have turned to reinforcing their own peasant seed systems. Since 2012 they have been working with peasant farmers movements in Brazil, which has exposed them to the Brazilian experience in setting up seed systems (see Brazil). The idea behind this collaboration was for Mozambican farmers to learn to select and multiply seeds that they decide are important to have on their farms in large quantities. Given the success of this initiative, it was to have been expanded, with

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support from the Brazilian, Mozambican and South African governments. But as the expanded programme was set to start, only the Brazilian government had put forth the money and resources to support the farmers' seed initiative.

While developing their own seed systems, Mozambican farmers are also exploring the possibility of proposing a law in favour of peasant seed systems, following the experience of fellow farmers in Zimbabwe.



Malian peasants build crop diversity by participating in local networks. They have both recovered old varieties and developed new variants of onions and lettuce, as well indigenous vegetables, millet and local sorghum. (Photo: Tineke d'Haese – Oxfam)

Box 3

New seed marketing laws in Africa: the case of COMESA

The Common Market for Eastern and Southern Africa (COMESA) involves 20 countries, stretching from Ethiopia to South Africa. According to the COMESA treaty, all member countries must abide by common seed trade regulations. These regulations were drafted in 2013 and, if adopted, which would allow corporations to certify their seeds in one member country and automatically acquire the right to market them in all COMESA states. This is particularly useful for the seed industry as, by eliminating national rules, it will facilitate the marketing of seeds over a large part of Africa. A common catalogue listing the authorised varieties for all countries will be drawn up and all countries will adopt the same certification system. The COMESA seed laws contain no measures to foster local peasant seed varieties.

COMESA has also approved draft policy guidelines for GMOs, a step that bypasses national regulations on GMOs in trade, farming and food aid. Farmers organisations have complained that these guidelines did not come principally from COMESA member states but rather from a biotechnology policy initiative funded by the US government. Experts trained by USAID dominated the drafting process, and the voices of farmers and civil society groups have not been heard. Furthermore, like the seed marketing regulations, the GMO policies have immediate application in all COMESA countries, undermining the ability of civil society groups to fight these laws through national governments, many of which currently have relatively strict regulations in place.

Niger: Farmers' victory against the piracy of a local onion

The 'violet de Galmi' onion from Niger is a hugely popular variety, not only in Niger, where it is named after a village in the southwest of the country, but also across West Africa. For centuries, since their arrival in the region from Egypt, the red-purplish onions have been widely appreciated for their sharp flavour and for their excellent storage qualities (they keep over months of hot weather without spoiling). During the 1990s, 'violet de Galmi' quickly gained importance even beyond the local domestic economies, becoming Niger's second most important export product after uranium, and making Niger the largest exporter of onions in the entire region. Thus, if anyone claimed ownership of this variety, it would be a big deal. And this recently happened.

After its success in farmers' fields, in the 1960s the onion was further bred by public researchers. Then, in the 1990s, a private seed company in Senegal, Tropicasem, a subsidiary of the French seed company Technisem, further bred the onion with the aim of marketing it exclusively. Eventually, the company applied for a Plant Variety Certificate at the OAPI, claiming the popular onion as its own, and it obtained exclusive ownership rights in all OAPI member states (See map). Moreover, due to a FAO initiative that had resulted in a common catalogue for marketing seeds in West Africa, Tropicasem could now exclusively market the onion in nine countries. When farmers in Niger found out that a private company had claimed exclusive rights to their onion they were outraged; they asked the government to act on their behalf in this case of biopiracy. After the conflict that ensued, OAPI revoked the property rights on the onion under the name 'violet de Galmi', but allowed the company to maintain rights for the name 'violet de Damani'. This was a victory for the onion farmers against a company that was

seeking a monopoly over one of their most important crops.

At the same time, the large-scale commercial onion farmers and traders who were also affected remained concerned about how to protect 'their' onion and they applied for a geographic indication (GI), another form of intellectual property that resembles a trademark but is linked to a place of production. This means that despite the fact that 'violet de Galmi' has now extended to all areas of West Africa, only the farmers of the Galmi region can use this name to sell it. So far, this has not affected small peasant farmers because the law is not applied strictly. The large onion producers of Galmi are not coming to enforce 'their' GI in the neighbouring villages. But what if they decide to do so? Since 2004, small peasant farmers in the region have been organising to discuss issues such as this at a regional level. Farmers from Niger as well as Benin, Burkina Faso, Guinea, Mali, Togo, Guinea Bissau, Ivory Coast and Senegal are meeting to discuss alternatives for working together to respect the rights of all farmers to their seeds and crops without impinging on the freedom of others to use them.

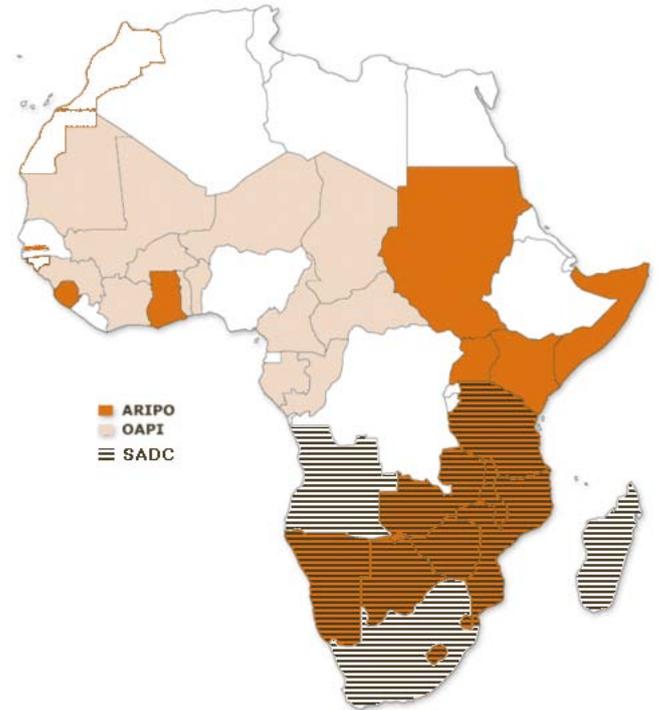
Tanzania: Farmers' seed sharing under criminal law

As part of its commitments with the G8 New Alliance (see box), in 2012 the Tanzanian government passed a Plant Breeders' Rights Act. The Act goes beyond the requirement of UPOV '91. If farmers use and exchange so-called protected seeds without the authorisation of the breeder, they face punishment under criminal rather than civil law. This means that on top of paying fines, they may be liable to imprisonment. Since the law applies to industrial rather than peasant seeds, the Tanzanian government is telling farmers not to worry, as the law does not concern them. Yet farmers' organisations argue that the law is part of a larger

2. African seeds: A treasure under threat

project directed against peasant farming and towards the privatisation of peasants' resources, including land and seeds. And as private seed companies promoting these protected varieties begin to attain dominance in the context of an increasingly industrialised way of producing, it will be difficult for farmers to avoid using industrial seeds. Currently, however, there are still 4.8 million peasant farmers in Tanzania - almost five thousand times as many as industrial farmers - making up more than half of the country's population.

In addition, the Seed Act of 2004 - a marketing law - is also in the process of being revised under the guise of bringing 'quality seeds' to the market. As in other countries, seed quality is a real problem in Tanzania. There are many people selling seed grains that have poor germination and that have not been properly selected. Yet this is primarily a problem for the seed industry whose market share is threatened by fake seed sellers. Peasant farmers traditionally keep their seeds within their own farms or villages. When someone in a village has the capacity to select and store larger amounts of seeds to share or sell, scams are not a problem because people in the village know each other, and they know where the seeds came from. Under the new revisions, it is precisely this type of local sharing and selling of small quantities of seeds that will become illegal, as only certified seeds will be allowed on the market. Under the current law, the government still allows farmers to sell uncertified seeds of a known variety within a restricted area of 2 to 3 villages. Furthermore, a government seed certification system also currently exists. Although the current system involves much bureaucracy, some farmers organisations and NGOs have used this alternative system to reintroduce varieties that are found in seed banks by bringing them back into farmers' fields. Under the new law, this option will most likely no longer be a possibility.



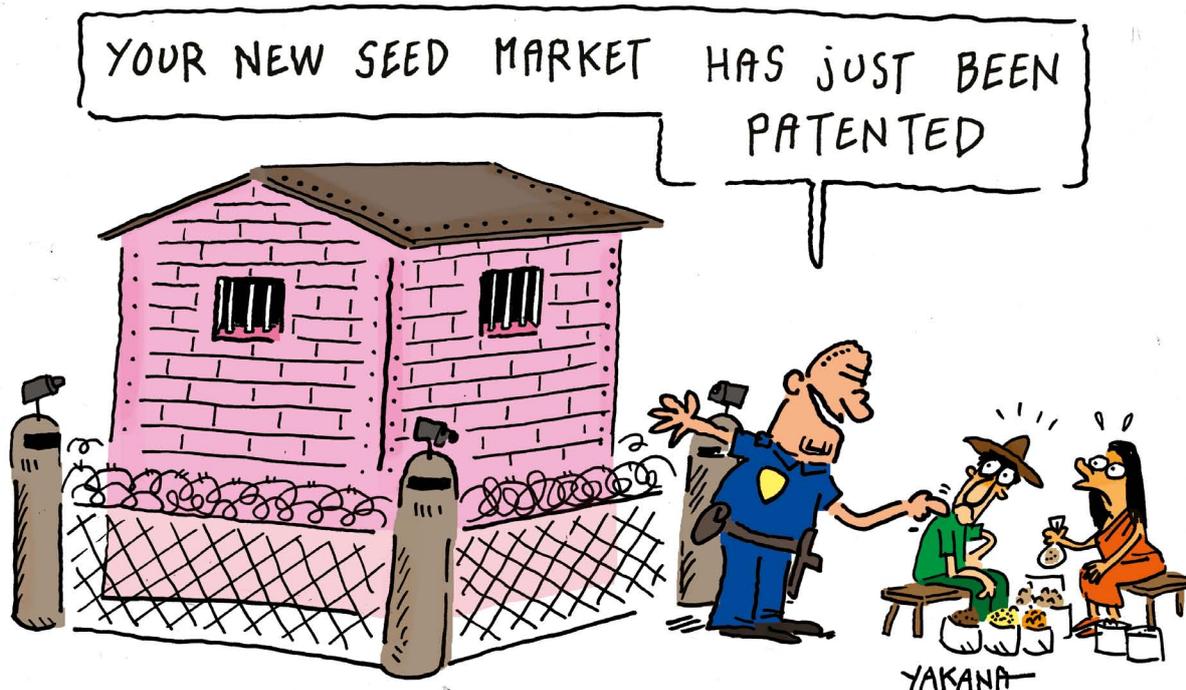
Farmers organisations in Tanzania are working together with organisations in other countries to counter this onslaught of laws. They are coming together to work not only on seed issues but also against the privatisation of farmers' resources, especially land.

Box 4
Patenting seeds pushed by regional organisations in Africa

Instead of dealing with the slow work of lobbying each African country, the agribusiness industry has been pushing regional bodies to adopt laws applying to several countries at once. Currently, there are two draft laws pending that would restrict farmers' rights over seeds in two parts of Africa. The first is the 'SADC Protocol', which would affect 15 countries of the South African Development Community. The second is an 'ARIPO PVP law' that would apply in 18 anglophone states belonging to the African Regional Intellectual Property Organisation. As we have seen, in West Africa, 17 mainly francophone countries belonging to the African Organisation for Intellectual Property (OAPI) have already had a plant variety protection law based on UPOV '91 since 2006. (See map)

The SADC and ARIPO proposals to strengthen and harmonise seed laws take UPOV '91 as a model. These proposals would outlaw farmers' exchange or sale of seeds that are protected by PVP certificates, even if it were only in small amounts and for local use. In the case of SADC, merely saving and reusing seeds of such crops on one's own farm would require paying a royalty fee to the breeder. Farmers in the ARIPO states would have to pay too, and this would only be allowed in the case of certain crops. If these laws are adopted, seed companies would be under no obligation to declare where they got the seeds that they register as 'new' varieties, thus increasing the chances of biopiracy.

While large coalitions including civil society groups are growing in the sub-regions and across Africa, stronger campaigns, solidarity work and actions are needed to stop these proposals from becoming law.





In Tanzania, if peasants use or exchange protected seeds without the breeder's authorisation, they will be judged by penal rather than civil law, which means they will be subject to imprisonment instead of fines. (Photo : Tineke d'Haese – LVC)

Box 5 **The G8 privatising seeds – and land – in Africa**

The G8 New Alliance for Food Security and Nutrition was launched in 2012. It aims to transform African farming by boosting private sector investment. Ten African countries are participating (Ethiopia, Burkina Faso, Côte d'Ivoire, Ghana, Mozambique, Tanzania, Benin, Nigeria, Malawi and Senegal), and almost \$1 billion from G8 countries and companies (including Yara, Monsanto and Syngenta) have been committed. As a condition for receiving this money, African governments are required to change their seed and land tenure laws in order to protect the investors. For example, Mozambique is required to “systematically cease distribution of free and unimproved seeds” – meaning peasant varieties – and instead to pass a PVP law in order to “promote private sector investment in seed production”. Similar radical changes are being pushed in all the participating countries. Moreover, farmers' seeds are not the only target. Agricultural land held under customary law is also being privatised, by means of new land titling regulations, and leased to participating corporations. For example, the government of Malawi has committed to making 200,000 hectares of prime farmland available to participating investors by 2015.

The Americas: Massive resistance against “Monsanto laws”



Latin America is probably the region where social mobilisation to stop the criminalisation of farmers’ seeds through seed laws is the most dynamic right now. In country after country, campaigns are growing to block what inevitably get identified as “Monsanto laws” and instead to promote indigenous and peasant seed systems. Sometimes, as in Venezuela, these efforts translate into counter legal initiatives (alternative laws). In all cases, seeds are never the sole focus. These struggles are part of the growing efforts to actively defend territories and food sovereignty against an onslaught of pressure from agribusiness corporations and governments supporting their agenda.

In North America, where industrial agriculture is the norm, farmers organisations and social movements are also vigorously working, both to prevent the further strengthening of laws that impose seed privatisation and to build support for local community-based food systems where farmers’ seeds can flourish.

Brazil: Large-scale development of creole seeds

As a result of decades of farmers’ struggle in Brazil for access to land and for food sovereignty, a National Policy for Agroecology and Organic Production was adopted in 2012 that explicitly recognises the role of peasants’ own ‘creole’ seeds. Furthermore, since 2003, a national Program for Food Acquisition has given Brazilian farmers an important avenue for developing their own seed systems. Although it is illegal to sell seeds in Brazil unless they are certified,

through this programme the government buys creole seeds directly from farmers and then provides them to other farmers at no cost, thereby bypassing the market.

As a result, some of the country’s largest peasant organisations have been able to develop their own seed systems. In addition to promoting families’ selection and use of peasant seeds, and developing community seed houses, these organisations have also developed large-scale programmes that provide seeds to hundreds of thousands of families. In addition to the 7,000 tonnes of

maize, beans and forage crop seeds produced by over 2,000 small-scale farmer members of one movement in 2013, 800 tonnes of black bean seeds were produced and sent to farmers in Venezuela. Although there has been a major advance in securing the creole seeds needed by small-scale farmers, the defence of these pro-peasant policies is a constant struggle. The US government has complained, for instance, that the food acquisition programme goes against WTO rules because it provides a subsidy to Brazilian farmers.

Another major struggle for Brazilian farmers is the one against GMOs and the toxic chemicals associated with them. Brazil is the second largest producer of GMOs in the world, with, in 2013, over 40.3 million hectares under production. In October 2013, 5,000 Brazilian farmers occupied a seed production facility belonging to Monsanto in the northeastern state of Pernambuco. They replaced the varieties of GM maize being grown there with creole seeds. As a result, some of the farmers have been prosecuted and are now banned from Monsanto's premises throughout Brazil. Brazilian farmers are also fighting against a law currently under consideration by Brazilian lawmakers which would lift the country's moratorium on a very dangerous type of GMO known as 'Terminator'.

Chile: Victory against the privatisation of seeds

After four years of mobilisation, in 2014 Chileans celebrated a victory against a PVP law that would have privatised peasant seeds in accordance with UPOV '91. Since 2010, farmers organisations and social movements had worked hard to counter the claims of government and industry in favour of this law – especially the assertion that without it food security for Chileans was under threat. Farmers and environmental organisations explained the consequences of this 'Monsanto law' and how it was being



Brazilian peasants demonstrate against GM maize and "TERMINATOR" seeds. These seeds are genetically modified to become sterile after the first germination, forcing peasants to buy new stock each season. (Photo: Douglas Mansur - Curitiba)

promoted, and also resisted, in other countries, from Colombia to France.

The battle in Chile was a long one. Industry lobbyists tried several times to push the law through the national parliament. Successfully stalling the bill and winning over public opinion against it, the network of social movements continued to grow and reached a national level. The forms of resistance included: demonstrations; media campaigns via internet, radio and television; workshops in the cities and in rural communities; and meetings with church leaders and with government officials, several of whom came to oppose the law. Despite their success in getting the bill withdrawn, farmers organisations and social movements remain on alert. Because of its location and climate, Chile is a major site for the production and export of industrial seeds. That means that there is substantial pressure from the United States and Europe to have strong laws in place to protect the interests of the seed industry.

Colombia: Mass protests for farmers’ seeds and food sovereignty

In August 2013, Colombian farmers’ organisations initiated a massive nationwide strike. They blocked roads, dumped milk on cars and essentially stopped producing food for the cities. The problem? Farmers are being driven out of existence by the government’s policies.

The state provides almost no support for the small-scale farming sector. Instead, it embraces a social and economic model that serves the interests of a wealthy elite minority. Recent free trade agreements (FTAs) signed with the US and the EU are undercutting Colombian producers, who cannot compete with subsidised imports.

The farmers’ strike was soon supported by thousands of people from other sectors of society: oil industry workers, miners, truckers, health sector professionals, students and others. The government’s response was chaotic and contradictory. Police forces violently repressed and injured many protesters, not to mention journalists.

Seeds emerged as one highly visible issue in the strike. Under the FTA signed with Washington, as well as that signed with Brussels, Bogotá is required to provide legal monopoly rights over seeds sold by US and European corporations as an incentive for them to invest in Colombia. Farmers who are caught selling farm-saved seeds of such varieties, or simply indigenous seeds which have not been formally registered, could face fines or even jail time.

In 2011, the Colombian government authorities stormed the warehouses and trucks of rice farmers in Campoalegre, in the province of Huila, violently destroying 70 tonnes of rice which it said were not processed in accordance with the law. This militarised intervention to destroy farmers’ seeds shocked many people, and inspired

one young Chilean activist, Victoria Solano, to make a film about it. The film is called “9.70”, after the number of the law that was adopted in 2010, which gives the state the authority to destroy farmers’ seeds if they do not fulfill the requirements of Colombian law.

Social pressure was so strong that the government declared that the Resolution would be suspended for two years. However, it was not suspended and it is merely being amended. Some of the harsh language has been replaced with more subtle wording, but it remains the same in content. The central demand of the people of Colombia has yet to be granted: the outright repeal of the resolution and of any attempt to impose UPOV 91 through other channels.

Moreover, a new national policy that is supposed to promote “family farming” is also a wolf in sheep’s clothing. The farmers who will be supported are those who change their production methods in order to “become competitive”, which means that they must purchase industrial inputs such as seeds, fertiliser and pesticides.

Costa Rica: Major mobilisations make UPOV a household name

In 1999, the Costa Rican government was considering how to change its laws to comply with the WTO requirements concerning intellectual property rights. Civil society groups, which were aware of the negative effects of the privatisation of seeds in other countries, put pressure on their government to avoid implementing such changes to Costa Rican laws. For a few years they were successful in this endeavour and they even came up with a proposal for an alternative law that would recognise the work of plant breeders without impinging upon the rights of peasants and indigenous peoples. Instead of the DUS criteria, new varieties would need to respect the needs of peasants and indigenous agriculture (indicated via a

3. The Americas: Massive resistance against “Monsanto laws”

special label). And any measure preventing farmers from freely reusing seeds that they had purchased would be prohibited.

But the situation changed drastically a few years later when the US-Central America free trade negotiations took off. As part of this agreement, the Costa Rican government was required to align its laws with several intellectual property treaties, including UPOV '91. This and many other provisions of the proposed FTA provoked enormous resistance in Costa Rica. Farmers groups and their allies managed to turn UPOV '91 into a household name by organising hundreds of small meetings in communities, churches, schools and universities in order to explain the consequences of UPOV '91. The resistance was so strong that, even after all other Central American states had already ratified CAFTA, Costa Rican social movements managed to obtain a referendum to decide whether the country would sign or not. Unfortunately, when the referendum took place in 2007, those in favour of CAFTA unfairly manipulated it, and a year later Costa Rica joined UPOV.

The legal aggressions have continued in Costa Rica, but so have the struggles. As a result of mobilisation by farmers and civil society organisations, a proposed seed marketing law that would have made it illegal to commercialise seeds that do not satisfy the industrial DUS criteria was stopped. Under the proposed law, although peasants' varieties might have been exempted, they would nevertheless have had to have been registered with the National Seed Office. Farmers objected to this, believing that their communities risked being subject to further controls and to biopiracy. Although this law was averted, organisations remain on the alert, in the knowledge that all over Latin America there is a strong push for changing seed marketing laws in order to suit industry.

Finally, another important battle in Costa Rica is that against GMOs, which have been



Indigenous peasant populations are the first in line to defend the traditional seeds that they have selected and developed throughout centuries. Demonstration during a Convention on Biological Diversity in Curitiba in March 2006. (Photo: Douglas Mansur)

planted in Costa Rica for the past 15 years. Although today GMOs cover ‘only’ 3,000 hectares, the impact of this production is increased by the fact that the land in question is used to produce GMO seeds that are sold to other Central American countries. However, thanks to resistance by farmers and other social movements, by now 77% of the national territory has declared itself GMO-free, meaning that 63 out of 81 municipalities have used the legal autonomy existing at the municipal level to prohibit GMOs. Furthermore, social organisations are currently pushing for a law that would declare a moratorium on GM crops at the national level.

El Salvador: Free trade agreements in favour of Monsanto

In recent years, El Salvador embarked on a Family Farming Programme (*Plan Agricultura Familiar*) which includes a policy of distributing local maize and bean seeds to small-scale farmers. 400,000 farmers benefited from this popular programme in 2013.

However, the initiative led to difficulties with the US government, which felt it ran afoul of the US-Central America free trade agreement.

In 2014, El Salvador was to receive US \$277 million from the Millennium Challenge Corporation (MCC), a US government foreign aid agency. But the US Trade Representative, who sits on the MCC board, blocked the money, claiming that El Salvador was breaking the rules of CAFTA by procuring seeds for the Family Farming Programme without a transparent and competitive bidding process. In short, the US wanted Monsanto to get a slice of the action. Earlier on, the government of El Salvador had indeed been buying seeds from Semillas Cristiani Burkard, a subsidiary of Monsanto, but more recently it had turned to national farmers’ cooperatives instead.

An outcry ensued both in El Salvador and the US. People were upset that the US was bullying El Salvador in order to make money for Monsanto – at the expense of depriving local farmers of a source of support. Suddenly, everything that social movements opposing CAFTA had said about the trade deal’s being against the country’s interest appeared to be true.

The fact is that Monsanto had bid for the contract to supply seeds in 2013. However, in 2014, there was too little time before the planting seasons to conduct a full bidding process. The temporary decree governing that year’s purchase only stipulates that the seeds needed to be produced in El Salvador. So it appeared that the US Trade Representative’s opposition was baseless. In the end, Washington withdrew its objections to the MCC grant’s going through.

While the Family Farming Programme is not promoting the production and distribution of peasant varieties, the \$300 million conflict with Washington was a wakeup call about how free trade agreements can be used to

undermine national decision-making about seed policies and choices.

Mexico: People struggle against GM maize

One of the most serious attacks Mexican farmers are currently facing is the push to introduce GMOs into the country, in particular maize. Maize is by far the most important crop for Mexicans, not only because it is the staple of their diet, but also because it is central to the culture and life of peasant and indigenous communities. Although Mexico is presented as an outstanding example of agricultural modernisation brought about by the Green Revolution, 80% of the maize which is grown in the country comes from the native seeds that Mexican farmers continue to use. This is despite 20 years of the North America Free Trade Agreement’s having gone far in imposing an industrial model for agriculture and the privatisation of resources.

Since 1999, at the federal level, a de facto moratorium had blocked any permits to plant GMOs in the country. However, in 2005, a negative biosafety law was passed which legitimises GMOs by setting out a series of bureaucratic procedures for companies wanting to plant GMOs for commercial purposes. Known popularly as ‘the Monsanto law’, the biosafety law was followed, in 2007, by a Federal Law on Seed Production, Certification and Trade. In reality, this latter law served to criminalise the free exchange of native seeds. In 2009, a presidential decree ended the moratorium and announced the granting of permits. This led to the granting of 155 permits for experimental maize planting to the multinational corporations Monsanto and Dow.

Mexicans have been fighting on all fronts to defend their maize. Since it was proven, in 2001, that imports from the US had already contaminated native Mexican maize, farming communities have paid greater attention

3. The Americas: Massive resistance against “Monsanto laws”

to the seeds that they use and to where those seeds come from. They are careful to avoid contamination from GM varieties, which they fear could come in through government seed programmes, such as those that encouraged farmers to trade in their native seeds for commercial hybrids. These efforts amount to an on the ground moratorium.

through agreements at the community and ejidal assembly level (ejidos are the collective landholdings that are the legacy of the land reform process which took place after the Mexican Revolution). The Mexican constitution recognises that such agreements can be used to protect the land and resources on the 31,000 large-scale collective landholding communities and ejidos in



When it was announced that corporations would seek to plant GMOs on a large commercial scale (on an area of over 4 million hectares – as large as the country of El Salvador), a broad mobilisation began. Alliances were formed among peasant communities, indigenous peoples, trade unions, academics, urban groups and others to alert the public about the threat of contaminating maize in its world centre of origin. As a part of this mobilisation, farmers organised a hunger strike in the spring of 2012. Finally, since 2013, a coalition of farmers organisations and their allies have been pursuing a legal action. Their efforts have resulted in a court ruling that has, at least for now, stopped the commercial planting of GM maize.

Many peasant and indigenous communities have decided to defend their maize

Mexico. But above and beyond the possibility of their being used as a formal legal tool in the future, these community and ejidal agreements mainly serve as a process of discussion and organisation, strengthening local defence of local peasant seeds, which are valued as inseparable from the life of the peoples, their knowledges and cultures. The latest step in the Mexican mobilisation in defence of seeds was a three-year trial against the Mexican state held before the Permanent Peoples Tribunal (2012-2014).

United States: A cocktail of restrictive laws and intimidating practices

The legal system in the US makes it possible to claim private property rights over seeds by means of various tools, with patents being the most common. A seed can

even be subject to various different patents plus Plant Variety Protection plus exclusive licensing agreements – all at once! Today, popular new varieties of crops are even covered by trademarks. And, if this were not enough to guarantee monopoly payments, there are also new schemes such as ‘clubs’ in which products such as apples can only be grown by members of such a club, thus keeping the prices high and a tight rein on the market. Given this situation, it is not surprising that farmers are intimidated from doing anything other than purchasing industrial seeds every year, fearing that they might be charged with breaking the law. Moreover, this is a problem not only for farmers, but one that extends to breeders, researchers and seed organisations wanting to do further work with seeds.

Upon purchasing seeds, farmers are required to sign lengthy contracts known as “technology use agreements”. These contracts prohibit farmers from saving seeds and, among many other intrusive provisions, allow companies to access the farmers’ records that are held by third parties, such as the US government. As early as 2003, Monsanto had a department of 75 employees with a budget of \$10 million dedicated to the sole purpose of pursuing farmers for patent infringement. By December 2012, Monsanto had filed 142 lawsuits alleging seed patent infringement involving 410 farmers and 56 small farm businesses in 27 states, and it had received over \$23.5 million from patent infringement lawsuits against farmers and farm businesses.

But Monsanto is not alone in its scaremongering tactics. DuPont, the world’s second largest seed company, hired at least 45 farm investigators in 2012 to examine planting and purchasing records of Canadian farmers and to take samples from their fields for genetic analysis. In 2013, DuPont expanded this operation to the US, hiring approximately 35 investigators, many of them former police officers. The US, with its restrictive

laws and the aggressive behaviour of its corporations, is fast on the way to become a ‘big brother is watching you’ police state controlling everything farmers do with their seeds.

When it comes to seed marketing laws, the United States is an exception. Seeds do not have to be certified to be sold there, contrary to the case in almost all other countries. As a result, despite the tremendous concentration of the industry serving large-scale US agribusiness, small seed initiatives and companies are able to develop non-hybrid varieties. However, given the aggressive intellectual property culture in the US, there is no easy way to distribute these seeds and to keep them free for reuse and exchange without risking that they will be patented by third parties. One approach to solving this problem has been to create licencing agreements setting the terms under which these seeds can be used commercially, making it explicit in the agreement that claiming the seeds as private property, to the exclusion of their use by others, is prohibited. Another approach is the development of closed-circuit seed networks and library systems.

Venezuela: A bottom-up law to defend farmers’ seeds

A national seed law will soon be up for vote in the Venezuelan parliament. Yet this law is very different from most of the laws proposed in other countries in that it was promoted and agreed to by hundreds of social movements, including farmers, seed savers, environmental organisations, community collectives, researchers, and agroecology networks. The project began in 2012, as the movement against GMOs saw the need for a stronger law in order to prevent the entry of transgenics into the country. Over time, their vision expanded to include the defence and promotion of peasant seeds as part of a strategy for moving towards a new production model based on sustainable farming and food sovereignty.

The proposed new law is to replace the existing law of 2002. It is the result of a series of popular consultations (*consulta popular*) – a formal process for creating a new law that is recognised in Venezuela. A total of five national consultations were held between October 2013 and June 2014, in addition to many local ones, with the participation of some 250 organisations.

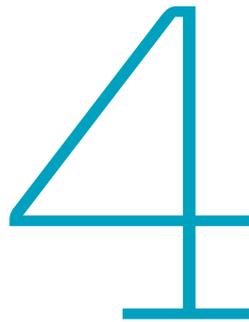
The proposed bill states that seeds are living organisms whose rights should be recognised. In accordance with the Venezuelan constitution of 2009, it prohibits patents and also plant variety protection on seeds. Strict marketing regulations are foreseen for ‘agroindustrial seeds’ but not for local varieties, and “agroindustrial varieties shall be rejected should they present a risk to food sovereignty or the environment”. Moreover, the bill proposes a central role for local seeds in the hands of the people (*poder popular*) as the guardians (*garantes*) of “local, peasant, indigenous and afrodescendant seeds”. The traditional knowledge and practices of selecting seeds are explicitly recognised and cannot be privatised. The bill also recognises *conucos* – a polycropping system of farming – as the place for the conservation of biodiversity. Finally, the bill provides clear mechanisms for prohibiting GMOs, establishing how their presence can be detected, as well as sanctions against their use.

In order to defend seeds in the hands of local communities, the bill establishes a system of “licences for free seeds”, on the basis of a legal framework of “social” (i.e. collective) property. The bill grants the user of a seed the right to know where the seed came from and how others are using it. Under this licence, the seed can continue to be selected or bred as long as it does not endanger the health of humans or biodiversity. Yet, anyone who wants to breed new varieties based on the “free seeds” must publicly explain what processes she or he carries out and any consequences these

may bring. The licence also defines seeds as a public good, the use of which by others should be without charge and in conformity with the principle that seeds are the collective heritage of the knowledge and practices of peasants, indigenous and afrodescendant peoples, and, additionally, that they cannot be privatised. The bill provides that local councils should oversee the use of peasant seeds, and that they should take decisions and implement policies in favour of local agricultural diversity and agroecology. The bill also includes a People’s Seeds Plan (*plan popular de semillas*) to rescue and develop peasant varieties as well as new quality standards based on agroecology and high levels of biodiversity.

It is unclear how the proposed bill will be written into law in the coming months. There are many large federations representing Venezuelan agribusiness which are denouncing its intent to restrict private property rights over seeds and to prohibit GMOs. But there is also a strong movement in favour of the law, which is capable of mobilising a large coalition. Due to the broad societal participation and the consultative process, the proposed law has gained significant legitimacy and visibility, bringing seeds to the centre of wider discussions about the well-being of all people. Beyond the law itself, the movement is working for a complete reorganisation of production, aiming towards agroecology and food sovereignty more generally, and thus making rural life a viable alternative for young people in cities, and increasing local food production while decreasing food imports.

Asia: The struggle against a new wave of industrial seeds



A *Asia has been hard hit by the Green Revolution, which from the 1960s to the 1980s replaced farmers' seeds with so-called high yielding varieties for a number of crops. Since the 1990s, the region is being targeted by Western GM seed producers, as well as hybrid rice companies from China, attempting to go further in taking control of the seed supply. The governments, corporations and foundations pushing these seeds have also been pressing the region to change its seed laws. This involves trying to get Asian countries to adopt patent and PVP legislation for seeds, as well as seed certification systems. However, resistance has been quite strong. As a result, not many Asian countries are members of UPOV and not many permit the use of GM seeds. Nevertheless, the pressure to give corporations property rights over seeds and to allow GMOs is continuing, especially by means of free trade agreements.*

India: Defending seeds sovereignty

Multiple attacks on peasant agriculture in India have led to massive mobilisations over the past years. Indian farmers have protested against GM cotton seeds that have been imposed on them through aggressive advertising, and that have led to fraud and indebtedness. Farmers have protested against a 2001 PVP and Farmers' Rights Act penalising farmers' seed exchanges. For the past 10 years, they have also stalled a Seed Bill that would penalise the local marketing of seeds by farmers and force them to register all varieties. More recently, farmers

have been active against the establishment of local biodiversity registers, to be set up by the government under the Biological Diversity Act of 2002.

In theory, establishing a Peoples' Biodiversity Register could be a good idea to support local communities in efforts to preserve knowledge about their local seeds and the uses of them. However, many farmers see problems with the registers, citing the focus on documenting farmers' knowledge and their seeds without their control and on putting the use of electronic databases in the hands of 'experts' outside the villages.

Others have voiced concerns that the registers present a risk of biopiracy, giving researchers and industry access to farmers' seeds and to their knowledge that could be used as a basis for the creation of industrial varieties or patented medicines. As a result, in 2004 there were popular protests, and several thousand *gram panchayats* (village government authorities) have refused to participate in the registries.

The Biodiversity Act also includes a controversial rule about access and benefit sharing. It says that farmers who give their seeds or the plants that they use to researchers, for further development and commercialisation, may claim payments. While some communities have agreed to this, others disagree, arguing that if they refuse the privatisation of their seeds, they must also refuse any money that is a result of such privatisation.

Apart from the struggles with these laws, however, farmers continue with their own ways of caring for and defending their seeds. For example, there is a network of seed savers at the national level which meets every year and organises caravans that distribute seeds. Because of the Green Revolution, only 1% of the 200,000 peasant Indian rice varieties remain, which is why many initiatives focus on cultivating local varieties of rice. Another key crop is millet, which the Green Revolution had displaced with cash crops such as wheat, rice and sugar cane. Today, in dryland areas, millets are in danger of being displaced by maize, a seed that in India is largely controlled by international corporations as a commodity crop. South Indian farmers are focusing on the richness of *raagi*, a type of Indian millet. Although there is no commercial market for the thousands of *raagi* varieties, farmers value it for its high nutritional and medicinal qualities. The defence of seeds is part of the defence of traditional ways of farming, showing that seed sovereignty is a key part of food sovereignty.

Indonesia: Farmers jailed for producing seeds

For more than ten years, Indonesian farmers in East Java have been criminalised for allegedly infringing the rights of a company called BISI, the subsidiary of Thai seed company Charoen Pokhpand. Although BISI has produced no evidence, farmers have been summoned to court and fourteen of them have been prosecuted; there have even been short jail sentences. In most cases, these farmers did not have a lawyer to represent them and they did not understand what they had done wrong.

The farmers had been experimenting with selecting and crossing different maize varieties, sometimes selling the seeds to their neighbours. They were singled out because some of them had worked under contract for BISI years earlier, thus making it plausible for the company to claim that the farmers had stolen its seeds and breeding techniques. Through the prosecutions, a clear message of intimidation was being sent to farmers – a warning not to select and share their seeds, and to buy them exclusively from the company. This same scenario is playing out in northern Thailand.

Under the Plant Cultivation Law of 1992, the first farmer was convicted of reproducing and distributing seeds in 2003. After years of struggle by farmers' organisations and addressing the government at local and national levels, a coalition of groups finally brought the case to the Constitutional Court. They argued that the law unfairly treated farmers as if they were a large seed company. Finally, in 2013, the court ruled that the 1992 law was unconstitutional. Under Article 33 of the Indonesian constitution, all natural resources essential for people's livelihoods, such as seeds, should be managed by the state, thus making privatisation illegal. The court ruled that, in consequence, farmers no longer need permission to collect local seeds, reproduce or distribute them.



For thousands of years peasants have shared their experience and expertise regarding their seeds. Here, an Indonesian farmer at an international peasant meeting in 2011. (Photo: LVC)

Despite this victory, there are other laws on the books that still uphold private property over seeds. For example, under Indonesia's Plant Variety Protection Act of 2000, farmers can be imprisoned for up to five years and charged up to one billion rupiah (65,000 euros) if they are found to be using companies' protected seeds without authorisation. As a result, Indonesian farmers organisations remain very critical of the PVP law, which is upheld by the government as part of Indonesia's obligations under the WTO TRIPS Agreement. So far, however, no farmers have been prosecuted under this law.

Philippines: The fake promises of "Golden Rice"

Biosafety laws are supposed to set up a framework for taking precautionary steps and regulating the use of GMOs. However, these laws have often had the opposite effect and have supported and legitimised the

advance of GMOs, or they have been implemented selectively. In the Philippines, this is evidenced by 'Golden Rice', a GM rice that has been modified to contain beta carotene which, when eaten, converts to vitamin A. In the case of GM eggplant, the Supreme Court of the Philippines recently decided that field tests cannot proceed, on the grounds that the country's biosafety regulations do not guarantee Filipinos' constitutional right to a healthy environment. However, different standards are being applied in the case of Golden Rice, which has received tens of millions of dollars in funding and is a poster child for the industry, which desperately wants to show that GMOs can benefit people by being nutritious.

Even after farmers tried to hold a discussion with the Department of Agriculture in order to voice their refusal of the crop, the Philippine government continued to support Golden Rice. Farmers argued that within

their diverse ecosystems there is plenty of access to foods that contain sufficient nutrients, including vitamin A, without the serious risks presented by GMOs. They said that what they needed was greater support for their diverse traditional farming systems, rather than crops that present risks for their ecosystems and their health.

On 13 August 2013, after farmers had got nowhere in their arguments with the Philippine government, they uprooted an experimental field of Golden Rice in Pili, Camarines Sur, where trials were taking place. By taking this action, they sent a clear signal that they would not tolerate the advance of GMOs. However, the Filipino farmers were outraged when the media, accusing them of ‘vandalism’, made it appear that the uprooting had been orchestrated by international NGOs which had supposedly made use of the farmers to uproot the rice. Farmers explained that it was their decision to turn to civil disobedience to defend rice, a crop that is central to their diet, their livelihood and their culture. While the funders and supporters of Golden Rice carry on with their goal of commercialising the crop in the Philippines, Indonesia and Bangladesh in the near future, Filipino farmers continue to mobilise and protest, vowing that they will go on opposing the advance of GMOs.

South Korea: Women farmers campaign for native seeds

One of the central aspects of women peasant farmers’ struggle in Korea has been to demand government support for native seed varieties. The first step was to get the public and government officials to understand why native seeds were so important. This process, involving public hearings and displays explaining the value of native seeds, eventually led to a demand for regional laws that would protect and encourage native seeds. The first such law came in 2008, and today six out of nine regions in South Korea have

these laws.

An exemplary law is that of Gangwon, which states that the government must develop a comprehensive plan to promote native seeds, the products that are made from them, and their consumption. The law also says that the region’s governor will promote research and seed collection, and draw up lists of the native seeds in the region. Moreover, in Gangwon the government does not implement this law alone, but rather as part of a council on which Korean women farmers play an important role, together with the head of the agricultural ministry, in drafting, reviewing and evaluating the policy. Only two out of the six regions where these laws are in place include the participation of farmers on the council, but this is something that the movements are demanding for the other regions. A common aspect of all the regional seed laws is direct support for peasant seeds, through the free distribution of native seeds, as well as subsidies to farmers who are using them. In addition to these regional laws, the women farmers continue to demand the special promotion of local seed varieties at the local level, in order to preserve the historical seeds of a particular village.

Thailand: Resisting free trade agreements in order to protect local seeds

For years, farmers in Thailand have been resisting pressure from the United States and Europe to adopt strong intellectual property laws on seeds. In 1999, in the wake of joining the WTO, Thailand passed a PVP Act. The Act was a partial solution in order to avoid succumbing to stricter laws, such as UPOV, which would severely threaten Thailand’s 25 million peasant farmers. Although less restrictive than UPOV, the 1999 law places some restrictions on what farmers can do with varieties protected by a PVP certificate. Farmers are allowed to reuse protected seeds, but there are many

4. Asia: The struggle against a new wave of industrial seeds

requirements for doing so: they must have purchased the original seeds themselves; they can only re-sow them on their own farm – meaning the seeds cannot be shared or exchanged; and in some cases there are also quantity restrictions.

In the context of negotiating free trade agreements (FTA) with Thailand, the US and Europe have been putting pressure on the country to provide stronger property rights and revenue streams for the seed industry. In the context of the US FTA, the seed industry wanted Thailand to adopt UPOV '91 and allow full-fledged industrial patents on plants. In response to this, Thai farmers and other social movements built strong coalitions which successfully disrupted the FTA process. In 2006, 10,000 farmers and their allies faced the police and besieged the seat of the US-Thailand FTA negotiations, which since that time have

collapsed.

In 2013, once more thousands marched in the streets of Chiang Mai where FTA talks with the European Union were being held. According to leaked drafts of the agreement, Brussels was demanding that Thailand implement UPOV '91, a demand that farmers staunchly opposed. The EU-Thai FTA talks have since been put on hold, but talks with the European Free Trade Association (Iceland, Liechtenstein, Norway and Switzerland) are to be finalised soon. The vigilance of farmers therefore remains strong.

Europe: Farmers strive to rescue agricultural diversity

5

The European Union, with its brutal and highly exported seed marketing legislation, a ruthless corporate seed sector and a totally industrialised farming landscape, is home to both UPOV and seed patenting. But it is also home to strong peasant and social movements that are struggling to defend and promote peasant seeds, to confront the laws that make it illegal to save and exchange them, and to build alliances with consumers, organic agriculture associations and others in order to put peasant seeds at the centre of a more diversified, people-controlled and locally-based European food system.

In Europe, the European Union plays a dominant role in defining the region's seed laws. These are applied in the EU member states and are also exported to neighbouring countries of Eastern Europe and the Mediterranean through trade or association agreements. There is a 1994 PVP regulation (seed companies can get rights over seeds nationally or at the EU level), based on UPOV 1991. There is a 1998 patenting directive making it possible to patent genetically modified plants or animals in the EU states. There is very draconian set of seed marketing regulations. For the past few years, Brussels has tried to amend these regulations but the proposals were rejected and for now the process has stopped. There is also a European Patent Office, which is not an EU institution but which delivers Europe-wide patents on plants, based on the European Patent Convention. All of this means that national governments in the region tend to implement European law and can be limited in their own national manoeuvring spaces.

Recently, moves were made to reform EU legislation on seeds in terms of commercialisation, sanitary standards and controls. Farmers, seed savers and social movements fought hard to oppose the worst aspects of these changes. Needs and strategies have varied, as in the cases of Austria and France. But the end goal remains the same: to have diversity thrive under the control of farmers, gardeners and communities.

Austria: Fighting for legislation in favour of biodiversity and farmers' rights

The current Austrian seed marketing legislation is not very favourable, but it does leave some spaces open which make it possible for farmers and gardeners associations to exchange and to sell certain amounts of traditional seeds. This is a result of the fact that EU law leaves member states some leeway for their own implementation, and Austrian seed savers and farmers organisations have successfully fought for a non-exclusive way of registering traditional seeds at the national or at the European level. Although selling these so-called 'conservation varieties' is restricted to a particular geographic area – the territory of Austria – the result is that many seed-producing farmers, rather than only one, can register the same traditional variety and sell it legally.

In view of this space that they have carved out for themselves, Austrian seed savers, consumers and farmers have been working very hard in recent

years to oppose a proposal by the European Parliament to revise the EU's seed marketing legislation which would have had the effect of making it more difficult for farmers in several countries to make peasant seeds available for sale. After protest actions, the scope of the proposal was modified to exclude the seed savers networks. A small victory for sure, but not for the gardeners and peasant farmers outside these networks! Also, although certain seeds could be exempt from the typical DUS industrial seed requirements or from any obligation to register with the catalogue, there were other hurdles: historic and geographic restrictions (Official Recognised Description); registration of seed traders as professional traders; registration of niche market varieties; and recordkeeping requirements that would be too costly and bureaucratic for most peasant farmers.

One of the central demands of the Austrian seed savers and farmers is that all kinds of seeds – DUS and non-DUS, certified and non-certified, industrial and peasant – should be allowed to be marketed on an equal basis. They argue that farmers can decide for themselves what kind



Peasant and citizen demonstration outside the European parliament in Brussels demanding the defence of peasant seeds in January 2014. (Photo: ECVC)

of seeds they need. For example, some farmers may want to purchase DUS seeds guaranteed to meet certain standards such as germination rates, purity or yield, while others may want to have access to usually cheaper non-certified and non-uniform seeds. For Austrian seed savers and farmers, this would mean being able to sell their seeds without costly and lengthy DUS-testing and certification, thus helping to restore diversity to their fields and gardens. In order to avoid cases of biopiracy, they demand an institutional databank for voluntary registration of peasant varieties. Their aim is to link the traditional name and the specific characteristics of peasant varieties, with as little bureaucratic complications as possible. Such a databank would help to avoid instances in which the seed industry appropriates names of popular seed varieties, benefiting from their good reputation, while at the same time making it illegal for farmers to sell the original variety under the original name.

In opposing EU marketing regulations, the Austrians built large coalitions not only among farmers, gardeners and seed savers' organisations in Austria and other countries, but also with consumers, chefs, journalists and some politicians. They invited people to plant potatoes in a field, they made video clips and presented them to school children, and they joined forces with the environmental movement and the Green political party to collect more than 800,000 signatures against the legislative proposal.

In 2014, after intense lobbying activities, the European Parliament finally rejected, by a large majority, the proposal for revisions to the seed marketing law. The Austrian organisations that had led the campaign see this rejection as an important victory that will allow them to advance in their promotion of farmers' rights to save, reuse and sell their seeds, while moving towards to visionary seed legislation.

France: Strict property and marketing laws imposed on seeds

As in most European countries, seed laws in France are very restrictive and they are strongly enforced through the efforts of seed industry lobbyists and their organisations. On the one hand, there are property laws that prohibit farmers from saving seeds of protected varieties. Farmers are allowed to reuse protected seeds for only thirty species and they have to pay royalties to the breeders. In the case of bread wheat, a fee is levied when farmers deliver their harvests, and only those who present a receipt for having purchased the wheat seeds are reimbursed. On the other hand, for the majority of other varieties, French farmers continue to produce their own seeds without paying royalties, as the industry does not have the means to force them to pay. This is why, in 2013, the seed industry proposed a new law that would brand farm-saved seed as 'counterfeit'. Under the terms of this



proposed law, seed companies would have been able to demand that farmers' harvests be destroyed – without needing to present evidence that the farmers were reusing the company's seeds. Some French farmers went on a hunger strike to oppose this proposed law, which was finally withdrawn as a result of their mobilisation.

Whenever farmers wish to sell their seeds, they must be members of a professional association of seed producers and they must

register the varieties in question. In the case of cereals, they must also certify the seeds. A legal action brought against an association selling heirloom non-registered seeds has been making the headlines among social networks for a number of years. In this context, French peasant seed networks have been active in the struggle against European proposals that are aimed at facilitating the commercialisation of patented seeds as well as privatising seed health control measures and sanitary standards. The peasant networks did give their support to certain parts of the proposals concerning seed marketing, which they felt would have greatly improved the existing situation. Unfortunately, the industry was powerful enough to have those parts of the proposals rejected by the European parliament.

In the last ten years, small enterprises producing and distributing traditional seeds have joined an important network of farmers who, in collaboration with public researchers, select and make these seeds available to their members. The associations and small enterprises working together have enabled several thousand French farmers to stop using industrial seeds for many of their crops. They have initiated 'peasant seed houses' where communities select, reproduce, and preserve peasant seeds collectively. The networks organise workshops and seed exchanges from farmers to farmers, and develop new ways of processing crops on their farms, including breadmaking.

The network also helps farmers to deal with legal issues and find ways to resolve problems. For example, after having publicly announced the decision to collectively defend all those who are obliged to break the law in order to save their farm seeds, certain organisations have found loopholes in European law whereby the exchange of seeds between farmers for the purpose of experimentation and the sale to gardeners of seeds non-registered in the catalogue are permitted. Despite the rejection of the more

favourable parts of the European proposals, in 2014 the network succeeded in having a new French law passed authorising the exchange of seeds within a farmer partnership without restrictions relating to experimentation. Today, they are preparing to refuse the industry standards that have resulted from the privatisation of sanitary standards and health checks.

In other instances, groups have opted to act in direct opposition to the laws, with the goal of transforming them. An example of this is the movement to prevent the cultivation of **GMOs**. In cases where the French government has authorised the planting of GM seeds, French farmers and activists have practised civil disobedience by destroying the GMO fields (a movement called the "volunteer reapers of GMO").

The work of these activists has been increasingly criminalised, as in France such acts can now be charged under criminal law. But at the same time, their actions, which have inspired similar acts in other countries, have played an important part in significantly reducing the commercial planting of GMOs in many parts of Europe.

Germany: A victory for the defence of farm-based seeds and a campaign to save the "Linda" potato

German farmers have organised a campaign of legal resistance against paying royalties for using farm seeds from varieties protected by a PVP certificate. They went all the way to the European Courts of Justice to have the right to grow whichever seeds they choose, whether these be of commercial or farm origin, without having to notify the breeders. Thus, the breeders have lost the only simple method at their disposal of demanding royalty payments.

The strict laws regarding what kinds of seeds can be sold have left farmers in



Action against the lobby of seed companies in Brussels which draw up legislation in favour of agribusiness. Gene patenting is an aberration resulting from the mercantile system imposed by these companies. (Photo: ECVV)

Germany with very little choice about what to sow on their farms, as they are limited to only a few industrial and uniform varieties. Sometimes farmers may like a particular variety, but it can quickly disappear when the variety becomes unprofitable to the company that bred it. This is what happened in 2004 when the German seed company Europlant took back 'Linda', a popular variety of potato. The thirty years of the company's exclusive property claims on 'Linda' through a PVP certificate had run out, and with it, the 10-15% licencing fees on the price that they could charge each time the variety was sold as seed. When the Europlant breeders asked that 'Linda' be taken off the catalogue, anyone who farmed it commercially would be acting illegally. 'Linda' was to disappear from the market, to be replaced by new varieties for which profitable licencing fees could be charged.

Yet thanks to farmers' organised resistance and a good media campaign, within months a strong 'save the Linda potato' campaign

was taking place all over Germany. German consumers, who generally know how to identify two types of crops reliably – apples and potatoes – recognised 'Linda' as a variety that they liked, and they supported the farmers. It was then settled through the courts that 'Linda' could remain on the market for two more years. After that, 'Linda' did not meet the strict requirements needed to remain in the German catalogue. Yet today it is again available to farmers all over Europe, because it was accepted for sale in another European country, this time in England. The 'Linda' potato is seen as a success story against the industry. But the incident also made farmers acutely aware of how much they depend on the market and on the whims of the companies which only market seed varieties that are profitable to them.

Greece: The crisis brings peasant seeds back to the fields

Greek farmers can apply to get certain subsidies for their crops, something known as a 'quality bonus'. But the standard of what is considered as high quality has increasingly been tied to the use of certified seeds, especially in field crops such as durum wheat, requiring farmers to show proof of purchase to receive support. Despite this, some farmers are still relying on older wheat varieties that are traditional to the areas where they farm. For example, in the Thessaly region, the increasing price of commercial wheat and the decrease in subsidies for competing commercial crops, such as cotton, have led farmers to experiment with older varieties that were popular fifty years ago and are still found in the national catalogue. Thus, fields that used to be sown with the industrial varieties are now replaced with older wheat plants such as 'mavragani', with their characteristic darker awns. The same is true for other crops such as grapes, melons, eggplant and fruit trees.

Furthermore, peasant seeds are making a comeback in Greece, especially thanks to a

Box 6 **Fighting GM seeds: legality vs legitimacy**

The fact that GMOs are currently prohibited in most countries in Europe is the result of two decades of work by farmers organisations, social movements and consumer organisations which have rejected them through protests, educational campaigns, and legal actions. Currently, only one type of GM plant is allowed to be cultivated in Europe – a variety of maize, and most of it, 70,000 hectares, is cultivated in Spain. (Much smaller areas are grown in Portugal, the Czech Republic, Romania and Slovakia.) However, field trials are still going on in many localities, often without the knowledge of the public. In Spain, where half of all GM trials are carried out, movements have protested against these experiments as well as against the laws that allow them. Acts of civil disobedience and the destruction of field trials have been organised in France, Germany and more recently, England, Spain and Belgium.

These activists are often portrayed as criminals in the European media. This attitude has been reflected in the laws, which have become more aggressive in their treatment of acts of civil disobedience, and people have lost their jobs as a result of their actions. The French movement that uproots GM trial crops has written in its charter: “When the law privileges particular interests against public ones (...) the only responsible choice is for citizens to confront this state of non-legality in order to re-establish justice, at the risk of fines and possible jail sentences.”

growing movement of young people returning to farming. In the wake of the financial crisis in which young people face unemployment rates as high as 50%, people are going back to the land. Many of them still have families in the rural areas and have found access to land in this way. They are interested in local production and many want to farm according to traditional peasant practices and with peasant seeds. In the past few years, reflecting this interest, seed savers organisations have been organising seed festivals and exchanges, with thousands of people showing up to exchange the varieties that are still used by their grandparents and to select the seeds, in order to increase the diversity in their fields and gardens. They see this work as rescuing part of the most valuable heritage of Greece, since it is estimated that only 1% of farmland in the country is still cultivated with older varieties of cereals and vegetables. In the national seed bank where many older varieties were

still maintained, a shortage of funding due to budget cuts has meant that 5,000 out of the 14,500 varieties that were kept there have been destroyed.

Most of the groups participating in the movement of seed conservation are small gardeners. But as people go back to the land and make their living through farming, the number of farmers who are participating is also increasing. One of the main challenges they face is that the knowledge about selecting seeds has not been passed on to the younger generations. As a result, in the last few years, the seed movement in Greece has focused on promoting education about seed selection through seed schools that take place across Greece. In addition to practical know-how and establishing community seed houses, the schools discuss the legal situation facing farmers, as well as the options available to farmers in order to sell and process their harvests.

Italy: A large diversity of regional laws

Italy has a unique situation in which each of its twenty regions has some autonomy in the creation of regional laws. This has led to interesting experiences in which Italian organisations have demanded regional laws favouring local seeds. For example, in Lazio, local farmers' seeds and animal breeds can be recognised as a collective heritage, making it illegal for others to declare them as private property or to monopolise their use. When local seed varieties in another Italian region, Abruzzo, were to be privatised by a Swiss bank, the law helped to stop the privatisation. Thus, at the regional level, some farmers organisations continue to push for an expansion of these laws to be extended beyond small niches in order to make a place for peasant seeds on a larger scale. At the same time, they are wary of how these laws may be interpreted. For example, collective use has also been interpreted in Lazio through the perspective of geographic indication schemes that keep other farmers out. Although it was initially welcomed by small-scale sheep farmers with respect to a breed of sheep that gave excellent milk for cheese, after several years the law had had the effect of keeping many farmers out and benefiting only a few. Nowadays, most sheep farmers in Lazio are against GIs.

Italian farmers have more recently been fighting against several laws that they see as clearly negative. One is a plant health law. Under the guise of sanitary measures, the exchange of seeds of certain species has been heavily restricted, affecting many wine grape growers. Moreover, Italian farmers are currently opposing attempts to weaken the law that has kept GMOs out of the country. In Italy, there is a strong coalition made up of consumer organisations, social movements, small farmers, and even larger commercial farmers, which opposes GMOs. (The larger industrial farmers are also interested in keeping out GMOs because they are

worried that GMOs could negatively affect Italy's agricultural exports.) However, strong national regulations can be weakened by supranational agreements. This could be the case with the Free Trade Agreement currently being negotiated between the United States and the European Union; it could also be the case with the new legal steps which are currently being debated in the European Parliament with regard to how GMOs are authorised.

There is also work being done to reclaim seeds by skirting the laws altogether. Farmers are organising in direct production and consumption networks and gardening collectives. One of their goals is not to become dependent on the seed industry. Their seeds are exchanged locally through large yearly exchanges. Whereas certifying their production as organic would oblige them to use certified organic seeds and to pay the certifying institutions, these farmers have chosen to sell their products directly in their local areas, making breads from all the varieties of grains and processing their own vegetables.

United Kingdom: Using loopholes to force a law change

In the UK, people wanting to farm on a small scale have a difficult time accessing not only land, but also non-industrial seeds. In recent years, they have organised many seed swaps and fairs where traditional varieties are exchanged and people learn about seed selection. Yet the seed groups in the UK work almost exclusively with vegetable seeds, rarely with cereals. Thus, new farmers who want to work with old varieties of cereals have not only a more difficult time obtaining the seeds in the first place, but once they have them, circulating them is also a problem. The older, non-DUS varieties of wheat, rye, barley, emmer or einkorn are not registered in the catalogue and therefore their seeds cannot be legally sold. Today's demand for these cereals did not

initially come from farmers, but from processors such as bakers who wanted to reclaim traditional ways of baking and were therefore looking for other types of flours. More recently, demand has also come from distillers of alcoholic beverages such as whiskey and even from roof thatchers. Unlike other parts of Europe where thatched roofs are made from water reeds, traditional thatching in the UK and Ireland uses straw from cereal crops. For this, however, the older, tall-stemmed varieties are needed, since the modern dwarf plants are not adequate for the job.

In order to overcome the legal impediments to the sale of these varieties of seeds, farmers who select and produce seeds have come up with some creative schemes. For example, they may licence, rather than sell, their seeds. In this way, they avoid a ‘transfer of ownership’ (selling or exchanging seeds), which would be forbidden by law. Although the industry does not like it and tries to stop it, farmers are taking advantage of these loopholes. They argue that as more farmers join them and as consumers

support them in the effort to bring diversity back to the market, the laws will eventually have to change in their favour.

At the same time, some farmers are cautious. They see that as the market for artisanal breads becomes more popular, there is also a new industrial initiative out there, eager to jump on the opportunity to make money with a new product. While these new products may be marketed as using ‘traditional’ or so-called ‘heritage’ varieties, in fact they often come from a cross of old varieties with new, and are grown on a large scale with chemical inputs. In order for peasant seeds to thrive, they must do so as part of a society that really embraces non-industrial production and consumption, in resistance to those who market the seeds as their newest commodity. In the UK, as everywhere else, the struggle for peasant seeds is inseparable from the struggle for peasant agriculture.

Box 7 Controversies

The tremendous efforts of farmers organisations, social movements and civil society groups to fight corporate seed laws all over the world have resulted, over the years, in some initiatives that have at times given rise to debate or controversy. We highlight a few of these here, because they are quite common. Debate and discussion are still going on. The challenge is to learn how to organise the sharing of seeds in ways that ensure that they cannot be privatised or destroyed by others.

- Asking for ‘**free seeds**’ seems natural, as farmers and gardeners want to use and exchange seeds freely. However, talking about free seeds without mentioning where they come from diminishes the role of peasant and indigenous communities in giving seeds life. This initiative can promote the free movement of seeds without the knowledge and responsibilities that go with the seeds. Often, it can be confused with a “free market” system, in which anyone, and especially large companies, can grab seeds wherever they want, and where communities lose all control. We need rules over seeds.





- Some groups are campaigning for ‘open source seeds’. As with open source software, it involves applying licences to seeds in order to impose the condition that no one can privatise them. However, such licences are tools of intellectual property - implying exclusive rights and working within the trade system - and they are not necessarily appropriate for seeds or for small farmers.
- **Community registries or catalogues** are lists compiled by communities that describe seed varieties: their characteristics; names; where they come from; how to grow them; what they are useful for. These lists are seen as a tool to prevent the privatisation, misappropriation or loss of seeds and of the knowledge related to those seeds, and to empower communities in their struggle to protect seeds. However, the capacity of registries and catalogues to prevent privatisation or misappropriation is questionable. Authorities that grant property rights over seeds to seed companies on the basis of genetic or biochemical data do not take into account the description criteria used by the community registries and catalogues. Consequently, the authorities will most probably not accept these registries or catalogues as proof of misappropriation of the seeds in question. At the same time, when information is centralised in a book, painting, database or other, this knowledge becomes easily accessible to governments, researchers, corporations, thus facilitating biopiracy.
- People sometimes want to organise **mass international seed exchanges** in order to counteract corporate greed and the uniformity of the market – putting diversity out there, getting it celebrated and used by the largest number of people. But by uprooting crops and trying to get them spread out into far flung corners of the globe, we can actually promote cultural degradation, the loss of local varieties, and even imperialism (e.g. promoting European tomatoes in Latin America).
- Various initiatives seek the **protection of people’s seeds in laws**. Farmers’ rights are inherent and inalienable rights, and this needs to be recognised nationally and internationally. But when translated into legal frameworks, they run the risk of being diluted, deformed or degraded. Farmers’ and community rights cannot be reduced to ‘exemptions’ or a ‘privilege’, cannot depend on a special legal permit, and have no place in intellectual property laws or trade agreements. Experiences in countries where these initiatives have moved ahead are not encouraging. Governments tend to make the recognition of community rights dependent on communities’ acceptance of corporate intellectual property rights over seeds. In the long run, this means that community rights are not respected.

As seen in the examples cited in this document, legal battles are not always successful. However, they are often indispensable in order to consolidate victories – which, in a legal and commercial system designed to destroy them, are always partial – and to guarantee the survival of small-scale farmers and their seeds.

Conclusion

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Without doubt, we live in difficult times, and what is at stake is the very basis of our ability to remain in the countryside. But, as is illustrated in many cases – including some of those that are presented here, practical experience shows that it is possible to resist and even to overcome.

The struggles that have been shared here teach us different things; they are lessons that are sometimes repeated.

For example, we have learned that, fortunately, most people readily understand that privatising seeds is an aberration. Governments and companies use strategies of secrecy and lack of transparency precisely because they know that an informed citizenry will clearly reject the privatisation of seeds. One of our basic tasks, then, is to break that secrecy and to inform people as much as possible. This booklet is intended to serve as an information tool, supporting the work of organisations and of each one of us by informing, explaining, informing, explaining. We therefore encourage everyone to use this booklet, as well as the accompanying poster and annexes, in all possible ways: selecting what is most useful, translating, adapting, extracting sections, adding local information, etc.

We have also learned that efforts to defend seeds succeed to the extent that they are based on broad and diverse mobilisations. The unified involvement of peasant and

indigenous organisations is fundamental to our efforts, if we are to have any chance of success. But support from student organisations, workers, urban farmers, consumers, environmentalists, small merchants, youth, artists, etc. is also very important.

The advocates of the privatisation of seeds seek their justification in a set of myths and falsehoods that are repeated again and again: new seeds are needed to improve production; without privatisation laws companies will not produce seeds, etc. This makes it important for us to stress that seed laws do not guarantee quality; on the contrary, they give companies more opportunities to sell junk seeds and to maintain other mechanisms of control. Sometimes it is not easy to deconstruct the propaganda, but there is an abundance of information material already available, which, like this booklet, can be used and adapted.

Around the world, communities and grassroots organisations understand that the best way to defend seeds – and to defend the practices of using and sharing that keep seeds alive – is to continue to grow them, look after them, and exchange them, in every locality. Keeping farming systems alive is the best way to keep seeds alive. Crop varieties thrive if we grow them and prepare foods with them, keeping them present in our festivals, our markets, and our social interactions. That is just what is being done by the countless groups that are organising seed fairs and food festivals, as well as

seed exchanges and community seed breeding processes, and by the groups that are struggling to protect, or to reactivate, local markets.

From these accounts of struggles, we have also learned that it is important to block the legislative process, because once the laws are passed, resistance becomes harder and more complex. It is a difficult task, because the private sector and most governments use all their capacity and all their power to push for seed laws; as a result of this pressure, many legislators vote in favour of the proposed laws, without even understanding their consequences. The dangers and legal aberrations of these laws are clear and undeniable – and it is crucial to make them known to the public and even to the lawmakers themselves. Ironically, it is to our advantage that most seed privatisation bills are not drafted by governments, but rather by WIPO,

by business lobby groups, or by UPOV. As a result, these bills are all very similar, and the traps and dangers contained in them become easy to perceive. The table accompanying this booklet identifies some of these threats, but there are also analyses that can be adapted locally (see Going further).

Finally, perhaps the most important lesson to be learned is that this is a long battle. Our common experience has been that, after the short respite following the defeat of a seed law, business and government return to the fray. And, if they win, they will always ask for more in the future. We must be constantly prepared for another round of resistance and struggle in the defence of our seeds.

Glossary

Biopiracy refers to taking away a community's seeds, plants or knowledge. In the case of seeds, there are many examples of companies taking popular farmers' varieties and using the names of these varieties to market a new and attractive product. But all of industrial plant breeding can be seen as biopiracy, because its starting point is always farmers' seeds.

Catalogue The catalogue system is a part of some countries' seed marketing laws which stipulate that only seeds that are listed and described in a catalogue can be marketed. The catalogue is similar to the register. This system started in Europe and became a model that has since been exported to many countries. In many instances seeds that do not conform to the DUS standards of the Plant Variety Certificate will not appear in the catalogue. In the countries concerned (most of which are members of UPOV), this assures an absolute monopoly of the market for those seeds which can be protected by intellectual property rights. Generally, varieties that are not listed in an official catalogue may be legally grown but their seeds may not be sold or exchanged.

Certified seeds Sometimes seeds can only be marketed if they are certified. Certified seeds have to be grown in a certain way and pass tests for physical qualities such as germination rate or purity, as well as varietal qualities.

DUS stands for distinct, uniform and stable. This is the basis of industrial crop breeding and production. Distinct means that the variety is different from another. Uniformity means that the plants within a variety have the same characteristics. Stability means that the variety's characteristics will be passed down to the next generation. Initially, DUS standards were developed to determine the kinds of crop seeds that could be registered in catalogues so that they could be marketed. Later, DUS also became the standard for establishing intellectual property rights over plants. Thus, PVP certificates are also based on DUS standards. Peasant seeds, by their very nature, are not DUS.

Free trade agreements (FTAs) are agreements between two or more countries that liberalise trade (eliminate tariffs and quotas) and harmonise regulations in favour of transnational corporations. They often contain requirements to privatise seeds through patenting or PVP. If these provisions are not implemented, companies of one country can sue the government of the other.

Geographic indication is a type of intellectual property right that is granted for a particular agricultural product that is produced in a specific location. Such products are often produced using traditional knowledge that is clearly defined by specifications. As a result, producers outside of that region are prohibited from using the name of the crop variety or product in question.

GMOs refers to 'Genetically Modified Organisms'. These are crop plants developed using new biotechnology techniques to develop plant types that are radically different from what would occur in nature. GMOs are developed in laboratories. Farmers' observations and many scientific studies have shown that this way of reproducing seeds is dangerous to farming ecosystems, and to humans. GMOs are usually protected by patents.

Green Revolution is the name of an agricultural 'modernisation' programme seeking to produce cheap inputs for industry and cheap food for cities. Under this scheme, which transformed Asia and Latin America in the 1960s-1970s, peasant seeds were replaced with those developed in research centres, leading to a severe loss of traditional varieties. The new seeds were hailed as 'high-yielding varieties', but in order to achieve high yields, they required chemical inputs and timely irrigation, and therefore, access to credit. This production model ruined soils, replaced farmers by machines, put farmers into debt and severely damaged the health of communities and their ecosystems. Today it is being pushed in Africa.

Hybrids are industrial seeds that, if grown with external inputs in recommended conditions, will produce a big harvest in the first year but not in the following years, making them unsuitable for seed saving. Some people call hybridisation a 'biological patent' because the guaranteed decline in yield means that people will not want to reuse the seed.

Industrial varieties refers to seeds that are developed for industrial agriculture. This usually means seeds that require high-tech growing conditions and external inputs such as fertilisers, pesticides and well-timed irrigation, which in turn require access to credit. Usually, these are varieties that are bred to be grown in monocultures, harvested by machine, to be shipped long distances and to be long-lasting on the shelf or in the warehouse. These varieties are generally developed by corporations, which patent them or claim plant variety protection on them, or by national research institutes which may also obtain property rights on them. Industrial varieties are the opposite of peasant varieties.

Intellectual property laws recognise seeds and plants as private property and give breeders a monopoly over their marketing. The two most common forms of intellectual property for plants are patents and PVP certificates. The purpose of declaring seeds as intellectual property is to let seed companies make a profit by licensing the seeds in question to other companies that multiply and commercialise them, and by charging farmers a royalty to use them and forcing farmers to buy new seeds each year. The rationale is that this would incentivise the development of well-performing agricultural industries. Instead, we get monopolies, monocultures and repression.

Patents are a form of so-called intellectual property. Patents are typically granted for new inventions and guarantee to the owners a period of several years in which they market the product exclusively. Although it is difficult to see living beings as inventions, it has become increasingly common to grant patents on crop seeds especially since the advent of GMOs. Similarly to many PVP certificates nowadays, patents recognise property rights not only over seeds but also over the crops once they have been harvested and even processed. Plant variety protection and patents developed as two different systems, but today complement each other in guaranteeing to the industry strong property rights over plants.

Peasant varieties or peasant seeds is a term that refers to crop seeds developed by small scale peasant farmers under local conditions to suit local needs. They are usually well adapted to being grown in polycultures, not needing external resources, faring well under local soil and climate conditions, and they are often selected collectively by communities, families, or associations of farmers. Peasant seeds are normally shared and exchanged. While they are never subject to intellectual property, they may be sold or bartered. They are the opposite of industrial varieties. The member countries of the UPOV have integrated in their laws a definition of a seed variety as homogeneous and stable: thus in these countries a peasant variety is not considered a variety; with no legal definition it becomes illegal.

Plant variety protection (PVP), sometimes called plant breeder' rights (PBR), is a legal system, similar to patenting, that gives property rights to plant breeders over new varieties. Under national or regional PVP laws, a PVP certificate will be issued to the breeder for a new variety that meet DUS (see above) requirements. This gives the breeder legal rights to prevent others from using, producing or reproducing the variety, normally for 20-25 years. Internationally, common principles for plant variety protection are drawn up and promoted by the members of UPOV.

Property rights refer to a legal granting of a private ownership over seeds. See 'intellectual property rights.'

Glossary

Protection A crop variety is said to be ‘protected’ when it is subject to an intellectual property title such as a patent or PVP certificate. This means that it cannot be freely used; it is privatised. (In reality, it is the rights of the owner which are protected.)

PVP certificate is the title of ownership that a seed company gets over a protected variety under the PVP system.

Registry (or register) A registry is a list or a dataset. Some countries require that seeds be registered in order to be marketed. This is the same as the catalogue system. Some farmers groups or networks also use registries to identify and control the circulation of local seeds (peasant varieties).

Royalty A royalty is a fee that the owner of a PVP certificate or patent can charge for using the seeds that she or he claims to have developed.

Terminator ‘Terminator’ is the popular name for a particularly dangerous GM seed that has been modified to be infertile after the first generation. Terminator does not exist on the market and is currently under a de facto moratorium.

Trademarks are a type of intellectual property recognising the exclusive use of a name of one or more products associated with this name and are sometimes used to privatise crop varieties.

TRIPS stands for Trade Related Aspects of Intellectual Property Rights. It is an international agreement of the World Trade Organisation (WTO), signed in 1994. All 158 countries belonging to the WTO must abide by TRIPS. The agreement says that states can refuse to patent plants or animals (apart from microorganisms), but that they must allow for some kind of intellectual property protection of plant varieties. In order to implement this requirement, many countries have adopted Plant Variety Protection laws that do not allow farmers’ to reuse their farm seeds. Under FTAs, which go further than the WTO, the US, Europe and Japan push other countries to join UPOV, sign UPOV ‘91 and/or allow patents on plants.

UPOV stands for International Union for the Protection of New Plant Varieties. It is a group of 72 countries that use common legal standards, written into a convention, of PVP. There are various versions of this convention. Earlier versions, such as UPOV ‘78, grant the company who developed a new variety the exclusive right to market it but allowed farmers to reuse the seeds. The latest revision, UPOV ‘91, prohibits farmers from reusing protected seeds except under certain circumstances. It also allows the seizure of seeds, crops, harvests and goods processed from harvests, as well as imposing prison terms in cases of infringement.

World Trade Organisation (WTO) The WTO is an international organisation whose members negotiate and implement global trade rules, subject to trade sanctions. Most countries in the world are members of the WTO and must follow its rules. For seeds, the most important aspect of WTO is the TRIPS agreement.



GRAIN is a small international non-profit organisation that works to support small farmers and social movements in their struggles for community-controlled and biodiversity-based food systems. For more information, visit www.grain.org



La Via Campesina is an international grassroots movement that defends small-scale sustainable agriculture as a way to promote social justice and dignity. It brings together millions of peasants, small and medium-size farmers, women farmers, landless people, indigenous people, migrants and agricultural workers and youth from around the world.

It strongly opposes corporate driven agriculture and transnational companies that are marginalizing people and destroying nature. It counts 164 member organisations in 73 countries around the world.

www.viacampesina.org and tv.viacampesina.org

A NEW SEED HAS GERMINATED

