POLICY BRIEF

MAKING FARMER-MANAGED SEED SYSTEMS WORK

Seed is food and therefore life. This is the fundamental premise governing how and by whom seed should be produced, bred, distributed and conserved. This principle further demonstrates the immense power of seed ownership. The regulation of capitalist agriculture in the decades since WWII has been marked by the continuous development and application of new technologies for seed breeding, the introduction of genetically modified seed, and the excessive use of artificial fertilisers, pesticides and other measures for the sole purpose of increasing agricultural productivity.

These developments were institutionally backed by programmes like the Green Revolution and international treaties regulating intellectual property rights and trade in agricultural products. Intellectual property rights on seeds and plants were introduced to establish a legal framework to profit from the ownership of a genetic resource. However, the tendency to centralise laws and policy related to seed disregarded the needs and rights of small-scale farmers who produce most of the world's food. Because commercial seed markets in the global North are largely saturated, the large agricultural corporates want to expand into countries of the South to artificially establish new seed markets and thereby new opportunities to generate profit. In return, they lobby governments to enact new laws favouring their own seeds as opposed to those of the farmers. Although farmer-managed seed systems have been neglected for many years, much of the seed in many Southern countries is still in the hands of farmers. National governments need to rethink their policies and support farmer-managed seed systems instead of aligning with the Green Revolution paradigm.

This paper highlights the importance for local communities and smallholder farmers having a say in seed legislation. It demonstrates the challenges posed by transnational agreements, strict intellectual property rights and others. Lastly, it will provide policy recommendations that have been elaborated on from an Indian and Tanzanian perspective.

The importance of farmer-managed seed systems

Farmer-managed seed systems are the alternative to corporate ones. They cannot coexist. The concept of farmer-managed seed systems acknowledges farmers as primary agents in the agricultural sector. Control by farmers over material resources and processes should be recognized, protected and extended. They and their representatives should be treated as valued and active partners in policy-making processes in the agricultural sector. Full recognition of farmer-managed seed systems also involves acknowledging the invaluable indigenous knowledge that women and marginalised groups possess in seed conservation and improvement: prerequisites for achieving food sovereignty.

Farmer-managed seed systems include diverse traditional seed practices. Practices that encompass in-depth knowledge of soil, weather and ecological change, which deserve to be conserved, continued, and appreciated for their contribution towards agricultural livelihoods. An important characteristic of a farmer-managed seed system is that it is location specific with seed suited to local climatic and ecological conditions. In the context of the

global challenge against climate change, with rising temperatures and unpredictable droughts and floods, a farmer's knowledge on seed characteristics in the context of climate-induced stress is vitally important. An increasing number of experiments over the years prove that old seed varieties offer solutions for farmers faced with unpredictable ecological circumstances due to climate change.[1]

Farmers usually use seeds from different sources depending on their availability and affordability. It is estimated that seeds from farmer-seed networks globally supply between 80-90% of crop seeds and planting materials. The considerable contribution by farmers in seed delivery indicates that they currently serve their needs rather well and can be favourable in terms of choice, accessibility, cost and non-economic utility (e.g. social values).[2] Farmer-managed seed systems often become a fall-back option since they are informally accessible and often not operated under highly regulated capitalist economic imperatives but rather on principles of sharing and exchange. Seed practices are an integral part of their livelihoods and have a significant impact on the social relationship between determining food cultures and local identities. The principle of farmer-managed seed systems is therefore by the farmers and for the farmers.

Keeping this culture of sharing and exchange alive in the context of the increasing power of the commercial seed sector requires strong support by the respective countries. But most states appear to follow a unidirectional model that fails to provide equal access and provision of seeds to farmers. It rather focuses on facilitating access to local planting material and seeks intellectual property right protection for varieties that are new to the industry and the market. Additionally, the planting material is being used for breeding or genetic modification, which later results in crops that require cost- and resource-intensive fertiliser and pesticides to produce the promised output because hybrid seed can only yield the expected output in near laboratory-perfect growing conditions. In many African countries, governments are increasingly setting up subsidy programmes for seeds and fertilisers (Farmer Input Subsidy Programme, FISP) to supply seed to farmers. This is mostly hybrid seed from (international) agricultural corporations. There is no benefit being derived from farmer-managed seed systems.

Seed enterprises register patents on heritage seed within an intellectual property rights framework that often prohibit a farmer selling his/her seeds. Farmers frequently face insurmountable debt as they are compelled to purchase seeds previously accessible through farmer-managed seed systems. Seeds regarded as outdated in terms of current consumption trends, or destined for large-scale farming, fall by the wayside and are no longer bred or conserved. This practice has already contributed to a significant decrease in seed diversity. Although about 7,000 species of plants have been used as human food in the past, only 150 crops are now commercially important, with rice, wheat and maize accounting for 60% of the world's food supply. The UN Food and Agriculture Organisation (FAO) estimates that 75% of crop diversity was lost between 1900 and 2000.[3] The genetic diversity within each crop has also been eroding fast. The deterioration can be tracked back to the dominant narrative and ideology of policymakers and the private sector relying on the principles of ownership, commercialisation, economic growth and profit maximisation. Formal plant breeders have been given economic rights while farmer-managed seed systems have been left behind without recognition or financial support – their very existence ignored.

Seed struggles at an international level

Neoliberal trade policies have increasingly bolstered the seed industry over the last decades aided by the Green Revolution push and the distribution of certified/improved seed by public extension service systems and development agencies. Its growth has taken place within a political context where farmer-seed varieties have been discredited. Current food regimes are mostly characterised by measures aimed at harmonising international markets and guaranteeing access to them by transnational corporations without market share limitations.

In the seed sector this process was facilitated by the founding of the International Union for the Protection of New Varieties and Plants (UPOV[4]). The 1991 version of UPOV is regarded as the gold standard for plant breeders' rights as it regulates the privatisation of plant material. In addition, UPOV 91 offers developing countries a shortcut for compliance with the World Trade Organisation (WTO) requirements and its intellectual property rights prescripts contained in the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). A farmer's main challenge with UPOV 91 is that it could potentially limit his/her seed freedom in terms of what and how much seed can be saved when using intellectual property rights-protected varieties. National Governments in Africa have increasingly aligned national seed and agriculture policies with UPOV 91 whilst neglecting farmer-managed seed systems.

UPOV 91 is serving as a prerequisite for entry into international seed markets and symbolises how farmers' rights and seed practices are being traded off for the ability to compete in international markets and attract investment in the seed and agriculture industry.

Experiences with the Green Revolution in India, with drastic soil erosion due to pesticide overuse among others, the suicide of hundreds of indebted farmers and the still high number of people suffering from hunger and malnutrition should serve as a warning that its ideology and structures have failed to ensure food security. Still, the Government of India is currently participating in African Green Revolution Forums discussing the advantages of vast public private partnerships.

International farmers' movements, like La Via Campesina, have strongly opposed TRIPS and UPOV 91 from the very beginning. Their engagement is paying off: they managed to place agroecology as a meeting discussion topic within leading UN entities such as the FAO and the Committee on World Food Security (CFS). Agroecology builds upon farmers' seed practices to conserve old varieties and develop others that can adapt to changing climatic circumstances.

There is also international legislation supporting the farmers' demands, like the International Treaty on Plant Genetic Resources for Food and Agriculture (Seed Treaty) and the UN Convention of Biological Diversity. This legislation recognises the farmers' connection to seed and their right to save, use and exchange, farm-saved seeds as well as the importance of seed conservation for biological diversity. The problem is that agreements such as the Seed Treaty have only been ratified into national law by a few countries. At the same time, there is great political pressure on African countries by regional economic institutions, such as the Common Market for Eastern and Southern Africa (COMESA), to implement UPOV 91 regulations.

Recently an important step in recognising the rights of farmers over seed was the adoption of the Declaration on the Rights of Peasants and Other People Working in Rural Areas (Peasant Rights declaration) by the UN General Assembly in December 2018. Article 19 of the declaration formalises a human right to seed for the first time. Like land or water, seed is an important means of production and is recognised as a basic human right to access food. The article highlights the relevance of own seeds, farmer-managed seed systems and the freedom of farmers to cultivate the species they wish to grow. However, this legislation has not yet been adopted at national level.

Policy recommendations

Participation & transparency at various levels

Farmers are severely underrepresented in discussions about seed legislation at local, national and international level when compared to the powerful lobbying structures of the seed industry. National governments find themselves having to choose between complying with international agreements to attract foreign investment and creating structures that identify the needs of the local population. Lessons from India show that initiatives in support of farmer-managed seed systems are only effective if farmers mobilise. They introduced community assemblies and

farmer juries at local level and organised a parallel parliament where they drafted legislation on debt relief and price politics for agricultural products. These examples show that there should be a great deal more consultation using democratic structures at local, district and even national level to compensate for the lack of farmer representation in legislative processes. Political decisions need to be representative of small-scale farmers and their organisations.

Recognition & financial support by the state

The above-mentioned democratisation of seed legislation must be accompanied by recognition of the value of farmers' seeds and financial support for its structures. The public sector must invest in the safekeeping of seed and planting material because small-scale farmers do not have the resources to store all germplasm. Decentralised, area-specific collections of seed are needed as well as control of plant genetic resources. Seed savers are reluctant to deposit their seeds in public collections as they are afraid of biopiracy. Therefore, they demand regulated access to these collections: seed supply chains must be protected through biosafety regimes in order to preserve their seeds from genetic modification.

The public research sector is generally not supportive of farmer-managed seed systems. Non-extractive, collaborative research between the farmers and the scientists is the way forward to support farmers' seed. The seed multinationals will not conduct any research and development (R&D) on orphan or neglected crops and this is where the public sector has an important role to play. Collaborative research projects could focus public sector researchers and scientists towards the needs of farmer-managed seed systems.

There are many popular initiatives such as the Participatory Guarantee Scheme (PGS) to ensure quality control of seed produced by smallholder farmers through more decentralised, community-based certification. The quality-declared seed models in Tanzania and the organic farming policies in India are steps in the right direction as a means in which the state can support farmers to produce seeds. However, the quality of the seed is a contentious issue. "Quality" as defined by UPOV 91 often serves as a tool of suppression of farmers' seeds and the myth that industrial seed delivers higher yield per se is widely accepted. Scientists like Debal Deb in India have shown that there are many farmers' varieties that can yield as much as industrial ones.[5] But these facts remain irrelevant because there is a lot less money invested in research on yields and pest resistance of farmers' varieties. Similar inequalities prevail between the resources made available for the promotion of industrial seed in comparison to the promotion of farmers' seeds.

Changes in discourse and new legislation

Regulating farmer-managed seed systems through policies different from those regulating industrial seed would be an important step in response to the needs of farmers and to define a new discourse on farmers' seeds. Legislation could stipulate that the same quality standards governing industrial seeds are not applied to farmers' seeds. It could also exempt farmers from having to protect their seeds from intellectual property rights claims. Protection could be in the form of responsibility and freedom rather than seed rights. On a practical level, having seed freedom would mean being free to produce and sell or exchange seeds, which has not yet been reflected in any law or policy.

International legislative requirements

Even if freedom of seed breeding, use and distribution is achieved and farmers' seeds are regulated under different legislation than industrial seeds, farmers require an institutional architecture where intellectual property rights in the informal seed sector can be governed. Laws on access and benefit sharing on an international level can be an effective way to ensure that farmers receive a fair share of the profits that are being made with plant genetic resources, which they initially developed.

Deriving benefit, whether monetary or otherwise, by seed keepers and smallholder farmers will

provide the motivation and necessary support to continue local conservation. In addition, more states need to ratify and implement the Seed Treaty. The same applies to the UN Peasant Rights declaration. The new abstract human right to seeds must be translated into practical policies.

There should be competition policies that stop large seed companies from abusing their dominant positions in the market. Having a greater number of actors within the international seed market could pay off in terms of the quality and pricing of seed. In conjunction with appropriate legislation, farmers could be placed in the position where they are able to take advantage of situations where the use of industrial seeds fail to meet the anticipated yield. These aspects are particularly relevant when negotiating additional bilateral free trade agreements. These agreements often contain the proviso that investors have the right to access local resources, without legal constraints, to protect the livelihoods of economically vulnerable people.

References

[1] See e.g. Ronnie Vernooy: Internet, http://www.cifor.org/publications/pdf_files/Brief/5896-GenderClimateBrief.pdf, Badusev Mahapatra, Internet: https://earth.org/how-indias-indigenous-farmers-are-successfully-resisting-climate-change/, Navdanya, Internet: https://www.navdanya.org/site/climate-change/seed-of-resilience.

[2] O.T. Coomes et al (2015): Farmer seed networks make a limited contribution to agriculture? Four common misconceptions, Internet: https://www.sciencedirect.com/science/article/pii/S030691921500086X.

[3] FAO (2005): Report of the Panel of Eminent Experts on Ethics in Food and Agriculture. Internet: http://www.fao.org/3/a0697e/a0697e00.htm and FAO (2010): Crop biodiversity: use it or lose it. Internet: http://www.fao.org/news/story/en/item/46803/icode/.

[4] These Guidelines (UPOV) were originally adopted by just 20 industrialised countries and are now to be imposed all over the world. The introduction of UPOV 91, with its strict rules on the sale, storage, reproduction, breeding and acceptance criteria of seeds, would marginalise traditional farmers and prevent them from freely exchanging or selling seeds as they have done in the past. If UPOV 91 is interpreted unilaterally, these activities could even be criminalised.

[5] Living Farms (2011), Where is our Oryza? Hybrid Rice in India and its impacts on Farmers' Rights over seeds. Internet: http://living-farms.org/wp/wp-content/uploads/2017/02/Hybrid-Rice-in-India-and-its-Impact-on-Farmers-Rights-Over-Seeds.pdf.

Imprint

Authors
Nadja Dorschner, Nokutula Mhene and Jan Urhahn (all Rosa-Luxemburg-Stiftung)

Published by
Rosa-Luxemburg-Stiftung Germany
Franz-Mehring-Platz 1
10243 Berlin, Germany

Rosa-Luxemburg-Stiftung Southern Africa
Jan Smuts Avenue 237
2193 Johannesburg, South Africa

Website
https://www.rosalux.de/en/dossiers/food-sovereignty/

Layout Designer
Smangele Sibeko

Proofreading
Barbara Hime

The Policy Brief is based on the study "Making Farmer-Managed Seed Systems Work. A Comparative Study between Tanzania and India" by Shalini Bhutani, published in August 2019.

This publication was produced with financial support from the German Federal Ministry for Economic Cooperation and Development (BMZ)

Berlin and Johannesburg, November 2019