

Protecting seed as a commons

The open-source strategy

Before agricultural industrialisation, plant breeding, seed propagation and cultivation were not separate disciplines. Farmers used a part of their crop harvest for replanting and, in the process, selected for desired traits. The farmers benefited directly from their breeding work through the improved quality of their produce. An additional remuneration solely for breeding was not necessary, and many people were involved in the process, making the seed common property. This is how a wide range of regionally well-adapted varieties emerged. In some parts of the world, such seed systems still exist.

After the Second World War, agriculture became increasingly industrialised. In the process, individual areas of agricultural work became professions, and plant breeding evolved into a discipline largely distinct from cultivation and even from seed propagation. In this division of labour, breeders working on the cultural asset “variety” rather than on the economic asset “seed” are left empty-handed, if they cannot recoup their cost from downstream economic sectors. It was in this context that the demand for intellectual property rights for new plant varieties emerged.

Plant variety protection and, later on, patents were supposed to make it possible for the developers of new varieties to claim the credit for their breeding work. As a consequence, however, former common property was transformed into private property.

In the meantime, the seed industry has experienced fundamental change: new farming methods and drastic market concentration through targeted mergers of companies holding exclusive property rights through patents and plant variety protection. Now, just three companies dominate over 60% of the global commercial seed market. The development of high-yielding varieties that can be grown over large areas and the development of agrochemicals are closely aligned with each another. Patents are actively used to expand the monopoly position and to prohibit seed reproduction – not only in developing countries.

However, a wide range of cultivated plants with many different varieties is needed for the very different soil and climatic conditions. Only in this way will it be possible to adapt agriculture to climate change, to move away from using high levels of chemical inputs and to attain food security for an expected 11 billion people. The private seed industry alone cannot achieve this.

Who owns seed?

Seed is the collective work of many – should it belong to only a few?



Seed: an economic good

Seed propagators produce seeds to sell to nurseries and farms. Their services are directly remunerated through the sale of the economic good seed. In some cases, seed propagation takes place on the same farm where the new varieties are bred.



New varieties

Breeders invest a great deal in the development of new varieties. This is essential for agriculture. Intellectual property rights are supposed to finance their work, but do so only insufficiently and at the cost of diversity and seed freedom. A sound financing model that remunerates breeders fairly and preserves seed as a common good is lacking.



Varieties: a cultural asset

In order to breed new varieties, breeders naturally take recourse to original varieties. However, each variety has been shaped by many generations in the past – often as a collective effort – so the seed cannot really belong to only a few. Seen in this light, varieties are a cultural asset and should therefore be a common good.

Plant variety protection and patents work against diversity, because they are profitable only if individual varieties are grown on a large scale. In contrast, varietal diversity means that a smaller area is planted per variety, generating only low income from licence fees. We need new concepts for financing plant breeding that promote diversity instead of restricting it.

Especially for breeders in organic agriculture, property rights to varieties are not suitable to finance their work. Many reject the privatisation of seed for ethical reasons. They make their new varieties available unprotected, which means that anyone can use them, but further developments of these non-profit varieties can be privatised without hindrance and put back under exclusive rights. Here, the open-source licence offers the possibility to protect the seed in the long term as a common good.

Conclusion

Exclusive property rights on seed promote monopolies and the standardisation of agriculture. This leads to a loss of diversity – diversity of varieties and of breeding enterprises. Therefore, common property-based plant breeding must be strengthened and seed must be developed and protected as a commons.

Plant variety protection is an exclusive property right in a plant variety. It is the product of a breeding process. The protection is usually valid for 25 years and involves considerable costs to obtain it. Only the holder of the plant variety rights can decide who may propagate and sell the seed of his/her variety and can charge fees for this. Privileges to protect the rights of farmers and breeders to reproduce seed for their own use or to have free access to breeding material have already been severely restricted.

Patents do not protect varieties but rather the technical innovations in the work process and the resulting products (e.g. GMOs) for a maximum of 20 years. Patents therefore cover not only the seeds but also the food produced from them. In the European Union, no patents are allowed on “essentially biological breeding processes”, but this phrase is often interpreted in favour of patent applicants. For example, organisms have already been patented that were not, or only slightly, modified by molecular biology. The patent holder can prohibit others from using the product commercially or can charge fees for this, which gives them a strong competitive advantage.

OpenSourceSeeds

Protecting seeds as a commons – the open-source strategy

1. We protect seeds as a commons

With the open-source seed licence, we give plant breeders the opportunity to protect their new varieties from privatisation. This protection also covers all further developments from open-source seeds. Open-source seeds can be reproduced and bred by anyone, anywhere, so that new diversity can emerge!

The open-source licence is based on three rules:

- 1. Anyone may use the seed freely.**
- 2. No one may privatise the seed or its further developments.**
- 3. Each user passes on the same rights and obligations to future recipients.**

2. We strengthen plant breeding

The open-source licence secures long-term access to valuable breeding material. Making seed available to all strengthens the competitiveness of small and medium-sized breeding initiatives. We are also engaged in seeking new financing and business models for non-profit plant breeding. In research and pilot projects, we are investigating the market potential of open-source seed in cooperation with companies along the value chain. We are cooperating with important players in the sector in an advisory role. Last but not least, we are bringing the issue to the attention of the general public so that all can have their say and the issue can find its way into policy.