

Heirloom biodynamic seeds Network.

Rescue, conservation and multiplication of local seeds in Brazil.

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Author's Background

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Summary

Structuring a network organic and biodynamic seed involving farmers in the central- southern Brazil. Training, participatory breeding, edition of publications, fairs of exchange seeds, a processing unit and assessment of seed quality, commercial seed multiplication with emphasis on vegetables. This network has guaranteed the autonomy of farmers in seed production and enriched agrobiodiversity through exchanges of seed.

Background

Brazil is a signatory of the Treaty on Plant Genetic Resources for Food and Agriculture of the FAO - UN and the International Convention on Biological Diversity, which recognizes the enormous contribution that local communities and indigenous farmers of all regions of the world for the conservation and development of genetic resources guaranteeing farmers the right to participate in the sharing of benefits arising from the economic exploitation of biodiversity. Brazilian Law of Seeds and Seedlings recognizes the existence of local cultivars or land varieties (heirloom and native seeds) adapted by small family farmers and the possibility to exchange and trade among themselves. The use of seeds adapted to the management adopted by the farmer and local conditions are essential for organic and biodynamic farmers succeed, autonomy and less dependence on external inputs, however there are only few commercial varieties with these characteristics available in the market.

The seed market, in general, is focused on the production of hybrids within the intensive use of agrochemicals. The organic and biodynamic agriculture have grown in recent years, with the support of Organic Agriculture Law (Law 10.831/03). One of the requirements of organic production is the use of organic / biodynamic certified seeds and there are few options available. In the European and American market the use of conventional seeds in organic / biodynamic system was already banned. Unfortunately, it is still tolerated in Brazil, while there are not enough quantity and quality of seeds for the producer. Organic seeds produced today do not meet this growing demand. There is a deadline of December 2013 after which it will be forbidden to use conventional seed on organic agriculture in our country.

The genetic diversity of the species is crucial to maintain the natural ability to respond to climate change and all kinds of biotic and abiotic stresses, though what is observed recently is a marked loss of genetic diversity, mainly due to the action of man, replacing so overwhelming local varieties by modern varieties, hybrids and more recently by GMO. The irreversible loss of genes is a major problem in this subject. With the loss of local varieties, unique combinations of genes of particular value or immediate usefulness may disappear. Modern agriculture is considered the major cause of genetic erosion, and in addition to the loss of genes, one must consider the loss of indigenous knowledge and farming communities, causing what we call "knowledge erosion".

This country has 30.5 % of the agricultural area, family farming covers a universe with 85.2 % of rural properties in Brazil and contributes with more than 60 % of the production of staple food of the population, generating employment to 14 million people in our country (60 % of workers employed in agriculture). It is estimated that about 31 % of rice, 70 % of beans and 49 % of corn come from family farms.

Main chapter

The Network of biodynamic seeds aims to carry out the rescue, introduction, conservation, selection and exchange of food species and landraces of socio-economic importance, aiming to maintain their genetic variability and sustainability of agricultural production on family farms, working with agroecologic / biodynamic, municipalities in the states of Minas Gerais, São Paulo and Goiás prioritizing vegetables. Main cultures: carrot, lettuce, tomato, beans, corn, brocole, pupkin, onion and potato.

Activities carried out between 2009-2013:

- Training of 60 farmers aiming to conduct trials with genetic material collected, participatory breeding and multiplication of interesting varieties for farmers with emphasis on vegetables (Figure 1);
- Evaluation of the quality of seed produced by farmers through germination and purity tests;
- Creation of a processing and storage seeds unit;
- Creation of "Seed sponsorship" - financial support to farmers in each group more intensely engaged in the work with seeds;
- Creation of local seeds bank (Figure 3);
- Search for alternatives for seed conservation using thermotherapy and essential oils;
- Publications – edition of booklet of seeds and technical book;

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- Organization of 6 Seed Exchange Fairs in SP and MG (Figure 2);
- Registered Land varieties on the "National Register of Cultivars" which is where commercial seed are registered;
- Implementation of commercial production of vegetable seeds.



Figure 1 - participatory breeding and multiplication of corn varieties



Figure 2- Seed Exchange Fair



Figure 3- Seed bank

Core messages and conclusions

This network has guaranteed the autonomy of farmers in seed production and enriched agrobiodiversity through exchanges of seed in fairs. The challenge is to allow the insertion of more farmers and to achieve the commercial multiplication of these seeds in a larger scale.