The International Treaty
ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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Views, Experiences and Best Practices on the Implementation of Farmers' Rights Submitted by Contracting Parties and Relevant Organizations

Note by the Secretary

This document presents the views, experiences and best practices on the implementation of Farmers' Rights, as set up in Article 9 of the International Treaty submitted by Biowatch on 11 October 2012.

The submission is presented in the form and language in which it was received. Minor editorial changes include the full rendering of acronyms and the correction of spelling.

RELEVANT ORGANIZATIONS

Biowatch

Policy Brief: South Africa

Securing Farmers' Rights and Seed Sovereignty in South Africa

This policy brief draws from fieldwork conducted with small-scale farmers of Ingwavuma and KwaHhohho in the KwaZulu-Natal province, whom we gratefully acknowledge. We also thank all those who were willing to speak to us about the constraints facing small-scale farmers conserving plant genetic resources for food and agriculture in South Africa. Debbie Collier and Robert Lewis-Lettington provided legal opinions and reviews to support the study, for which we are grateful. Discussions held with policy-makers, farmers, researchers and NGOs at a Farmers' Rights meeting in Cape Town in April further helped to enrich the contents of this brief. Our thanks to two external reviewers and Peter Munyi who suggested improvements to the draft. Regine Andersen of the Fridtjof Nansen Institute, Norway, is especially acknowledged for her inputs and improvements to the draft.

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Cover photo: Ntombenhle Sithole from Zimele Rural Women's Empowerment Organisation in KwaHhohho, with her Jugo bean crop.

1 Farmers' varieties and landraces are vital for livelihoods: they enhance food security, strengthen social cohesion, maintain cultural integrity, and build climate resilience. At the same time a significant proportion of crop diversity has been lost and is increasingly vulnerable to continued erosion.

Small-scale farmers in South Africa have a rich body of knowledge and practices about traditional agriculture and agro-ecology, but these are under threat.

South Africa's policy framework for ensuring the conservation and sustainable use of landraces, farmer varieties, agricultural biodiversity and associated traditional knowledge is uncoordinated, unbalanced and sometimes contradictory. The national Department of Agriculture should spearhead a process to develop a coherent and supportive national policy for Farmers' Rights and agricultural biodiversity that involves small-scale farmers and includes the voices of the poor and marginalised. Particular attention should be given to reducing internal contradictions within the Department of Agriculture that lead to the contamination of traditional farming systems with genetically modified and hybrid seed.

Extension services and support remain weak and inappropriate for small-scale farmers practising agro-ecology and traditional agriculture. Government must, as a priority, strengthen

extension support systems and, in collaboration with training institutions, ensure the provision of more holistic and integrated training approaches supportive of agro-ecological practices.

Farmers have strong customary rights to their genetic resources but face threats from more restrictive statutory regimes to protect commercial plant breeders. Plant breeders' rights laws should give adequate recognition and protection to small-scale farmers and their unrestricted rights to save, exchange and develop seeds. South Africa should not ratify UPOV 1991 and should work towards realising Farmers' Rights through giving farmers the legal space to freely save, use, exchange and sell farm-saved seed.

Continued access to plant genetic resources for food and agriculture is vital. Different policies are needed to regulate different kinds of use. National access and benefit-sharing policies and laws should support and not impede the continued sharing of plant genetic resources for food and agriculture and related knowledge among farmers.

Recognition should be given to the strong customary rights communities have over varieties and landraces, the need for prior informed consent, and the use of incentives and agreements to enable equitable benefit sharing.

Key Messages:

- Securing Farmers' Rights; and
- Seed Sovereignty in South Africa

Ex-situ conservation of plant genetic resources for food and agriculture is highly fragmented and poorly coordinated. A coherent, needs-based and well-resourced strategy should be developed and implemented for the ex-situ conservation of plant genetic resources for food and agriculture at national, community and household levels.

Insufficient research is being undertaken on plant genetic resources for food and agriculture.

Research on these resources needs to be strengthened to support the development of appropriate and unprotected climate-resilient varieties for small-scale farmers. Links need to be fostered between researchers and farmers to ensure that research is needs-driven.

South Africa largely remains outside of international policy frameworks for the conservation and sustainable use of plant genetic resources for food and agriculture. It is vital for South Africa to be part of international systems of exchange, use and conservation for genetic resources, more especially as we move towards a climate-changed world. South Africa should sign and ratify the International Treaty for Plant Genetic Resources and Agriculture as a matter of priority.

"Without seed security, there is no food security."Richard Farm

Seed selection, saving and exchange are at the heart of traditional agricultural systems for millions of African farmers, contributing significantly to livelihoods and the conservation of agricultural biodiversity. Enabling farmers to maintain and develop this diversity, along with their rich knowledge of and practices in traditional agriculture and agro-ecology, is vital for ensuring present and future food security and sovereignty.

Recognising and rewarding farmers for this crucial contribution is equally important. In a changing and changed world, however, these farming systems, and the genetic diversity, landraces and farmer varieties they nurture, are under increasing threat. Loss of this diversity not only undermines the ability of households to cope with external shocks, but also diminishes social cohesion, leads to increased reliance on the cash economy and reduces the ecological resilience of ecosystems.

This policy brief provides a review of Farmers' Rights in South Africa, and the extent to which existing policies, laws and practices support seed security and the conservation of agricultural biodiversity. Its objective is to help inform the policy debate on these matters and so enable small-scale farmers to freely use, exchange and sell their seeds and have greater control over their food production and security. It also aims to stem the imposition on small scale farmers of inappropriate, costly varieties that cannot be replanted from year to year due to intellectual property and technology restrictions.

The focus of the brief is on small-scale farmers, their indigenous agricultural knowledge and practices, and the traditional varieties that they grow.

The policy brief is a collaborative effort between the Environmental Evaluation Unit at the University of Cape Town and Biowatch South Africa. It draws on recent research conducted by the University of Cape Town; Biowatch's long-term work with small-scale farmers in the Eastern Cape, KwaZulu-Natal and Limpopo provinces; and the ongoing engagement of both organisations in the policy arena.

53 Farmers' varieties and landraces are vital for livelihoods: they enhance food security, strengthen social cohesion, maintain cultural integrity, and build climate resilience. At the same time a significant proportion of crop diversity has been lost and is increasingly vulnerable to continued erosion.

Small-scale farmers in South Africa – and women farmers in particular – rely on a range of traditional crops for their staple food. These include grains such as maize, sorghum, and millet; a variety of legumes such as mung beans, cowpeas, peanuts and jugo beans; cucurbits such as pumpkins and melons; indigenous leafy vegetables such as morogo; and other crops such as sesame, Zulu potatoes and amadumbe. These traditional crops are often preferred over commercial varieties because of their hardiness, good yields, drought resistance and high nutritional value.

Not only do traditional crops provide food security to extended families, but they also lead to better nutrition and improved immune systems, both of which are critical in areas with

high HIV infection rates. Traditional crops are also valued because they save money; by saving and replanting seed, farmers do not have to buy seed, and traditional agricultural methods reduce the need for costly inputs such as pesticides and fertilisers.

Saving seed thus means precious cash reserves can be set aside for necessities such as clothing, school fees and health care. But traditional crops go beyond food security, forming an integral part of culture, heritage, identity and sense of community. Seed is often inherited, and strong beliefs exist as to the importance of its safeguard for the ancestors and for future generations.

Exchanging seed with relatives, community members and other farmers strengthens social bonds and networks and builds community resilience. This becomes all the more significant with increased urbanisation, the deterioration of the social fabric of communities, the weakening of traditional seed systems, and the decline of indigenous knowledge transfers to the next generation.

Small-scale farmers in South Africa have a rich body of knowledge and

practices about traditional agriculture and agro-ecology, but these are under

threat.

Traditional farmers in South Africa are active plant breeders, conserving traditional varieties, continuously selecting seed with characteristics such as hardiness, drought resistance, good storage qualities and taste in mind, and using seed preservation and storage techniques which have been passed on orally for generations.

Besides traditional agricultural knowledge related to seed and crops, farmers also have insight into a suite of ecologically sound farming practices such as natural pest and disease control, soil preparation and water management.

Combined, these knowledge sets help small-scale farmers to deliver food security to their families and immediate communities. Strong promotion of the industrial model of agriculture in South Africa, however, along with externally driven interventions such as the Alliance for a Green Revolution in Africa (AGRA) model of small-scale production advocated elsewhere in Africa, means that traditional agricultural knowledge has been marginalised, and is at risk of being further eroded through the continued introduction of hybrid varieties or genetically engineered seed by multinational seed companies. The distribution of this seed through government programmes aggravates these threats.

Other causes of the erosion of indigenous agricultural knowledge include a loss of arable land due to insecure land tenure or biophysical changes such as erosion; out-migration to urban areas, along with a loss of interest by the youth in traditional agriculture; reduced transfer of indigenous agricultural knowledge between generations; a weakening of customary governance of natural resources; and the extreme weather patterns attributed to climate change.

South Africa's policy framework for ensuring the conservation and sustainable use of landraces, farmer varieties, agricultural biodiversity and associated traditional knowledge is uncoordinated, unbalanced and sometimes contradictory.

South Africa's mix of commercial and small-scale agriculture, combined with its developed and developing economies, has spawned a convoluted policy and regulatory environment for Farmers' Rights and PGRFA. A dense web of international law instruments regulating trade, intellectual property, biosafety, food safety, human rights and environmental conservation has further shaped this context. At national level a complex set of laws has emerged to regulate genetic resource use and conservation – legislation that has, at best, little coherence and at worst, inherent contradictions.

Relevant national government departments that oversee legislation or programmes pertaining to genetic resource use and conservation include the Department of Agriculture, Forestry and Fisheries; the Department of Water Affairs; the Department of Environmental Affairs; the Department of Science and Technology; and the Department of Trade and Industry. In addition, the parastatal Agricultural Research Council and a range of provincial departments, research institutions, companies, and non-governmental and community-based organisations are also involved in implementing relevant national and/or provincial laws and programmes. Despite increased international awareness of the value of local seed systems in maintaining genetic diversity, and growing recognition of the importance of landraces and farmers' varieties, there remains little coherence or coordination between these initiatives, which are still extremely fragmented. A serious concern is the contradiction within the Department of Agriculture, which simultaneously promotes Farmers' Rights and traditional farming practices, along with the proliferation and distribution of genetically modified and hybrid seed.

The national Department of Agriculture should spearhead a process to develop a coherent and supportive national policy for Farmers' Rights and agricultural biodiversity that involves small-scale farmers and includes the voices of the poor and marginalised. Particular attention should be given to reducing internal contradictions within the Department of Agriculture that lead to the contamination of traditional farming systems with genetically modified and hybrid seed.

Extension services and support remain weak and inappropriate for small-scale farmers practising agro-ecology and traditional agriculture. Small-scale farmers need good, regular and unbiased advice about agro-ecological farming practices, about setting up and running household or community seed banks, about the rights they have over genetic material, and about the choice of seed they plant. Yet government extension services and support for small-scale farmers practising agroecology and traditional agriculture are severely limited, erratic, under-resourced and non-existent in many areas. Government programmes have also been criticised for not being needs-driven, and for disregarding participatory approaches to decision making.

A worrying trend is that seed companies, whose primary interest is to sell proprietary seed and associated herbicides and pesticides, have increasingly replaced government

extension services. A growing number of non-governmental organisations have stepped up to the plate to provide advice to small-scale farmers, but these efforts, although important, remain piecemeal and under-resourced.

The appropriate training of extension officers is paramount, yet continues to be sorely neglected. Agricultural training at tertiary level is largely skewed towards industrial and high-input agriculture, and this produces extension officers who promote inappropriate solutions for small-scale farmers, such as the use of chemicals, genetically modified crops and hybrid seed, rather than lowcarbon approaches to agriculture that obviate the need for expensive farming inputs and are better suited to small-scale farmers.

Government must, as a priority, strengthen extension support systems and, in collaboration with training institutions, ensure the provision of more holistic and integrated training approaches supportive of agro-ecological practices.

"Throw away your gogo seeds!"

Farmers have strong customary rights to their genetic resources but face threats from more restrictive statutory regimes to protect commercial plant breeders.

South Africa's Constitution provides strong recognition of customary law, and thus of the rights of farmers to save and exchange, and to claim proprietary rights over, seed of traditional crop varieties and any associated traditional knowledge.

In practice, however, small-scale farmers in South Africa operate in a plural legal system, where the existing statutory system, designed for the commercial seed sector, could well be prejudicial to their interests. At a broader level, the multiplicity of laws and institutions governing plant genetic resources are likely to create a disabling environment for the realisation of Farmers' Rights.

Farmers' Rights are increasingly under siege as escalating restrictions are placed on seed saving and exchange. The controversial TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement of the World Trade Organization, for example, requires countries to provide some form of intellectual property protection for plant varieties, constituting a significant departure from previous practice in Africa and elsewhere, which typically emphasised the free sharing of knowledge and germplasm.

Over the years there has been significant pressure on developing countries to adopt systems based on the International Convention for the Protection of New Varieties of Plants (UPOV), an international agreement that offers common rules for the protection of the ownership of new plant varieties by commercial plant breeders. Rights granted to breeders under UPOV are powerful, and are widely regarded as promoting genetic uniformity in agriculture and biased towards privatising agriculture and pushing the commercial interests of industrial breeders. Plant breeders' rights make seed saving and seed exchange of protected material a form of counterfeit that countries can ban, or permit only if royalties are paid.

South Africa is one of the few African countries to have a plant variety protection regime in place, in keeping with the country's history of industrial agriculture and the presence of a strong commercial breeding sector. South Africa has signed, but not ratified the highly restrictive 1991 UPOV agreement and is a party to the significantly more flexible 1978 UPOV agreement.

Current legislation exclusively protects the rights of the commercial breeder and seed sector, which is dominated by a handful of multinational corporations. As an example, the laws governing the seed sector prevent the cultivation and sale of noncertified seed varieties, thereby destroying the market value of non-certified seeds and promoting reliance on varieties sold by registered commercial seed producers. This creates an unhealthy bias towards monoculture as the best form of agricultural production and favours large-scale commercial seed producers at the expense of small-scale, traditional farmers.

In contrast, little supportive legislation exists to broaden the system to include farmers and communities that have traditionally bred and developed crops and that have, in some instances, provided knowledge and resources to commercial breeders. Moreover, the country's historical – and current – focus on industrial-scale agriculture and the cultivation of a limited number of commercial crops has led to a wider neglect of the so-called orphan crops responsible for the food security of many people. As a result, the genetic base of small-scale farmers will likely continue to erode, along with the resilience of small-scale farmers and their ability to provide food security in the region.

A significant recent development has been the emergence of a plant breeders' rights policy which attempts, for the first time, to develop a more holistic policy approach that incorporates Farmers' Rights within a highly regulated and well-developed sector comprising formal plant breeders. A new Plant Breeders' Rights Bill has also been tabled. This new legislation does not, however, include any recognition of Farmers' Rights and, in contrast, proposes to strengthen restrictions on the propagation and exchange of protected varieties.

This has potentially negative impacts for small-scale farmers, in particular those blending open-pollinated protected varieties with their saved seed stock as a means of maintaining the vitality of that stock.

Plant breeders' rights laws should give adequate recognition and protection to small-scale farmers and their unrestricted rights to save, exchange and develop seeds. South Africa should not ratify UPOV 1991 and should work towards realising Farmers' Rights through giving farmers the legal space to freely save, use, exchange and sell farm-saved seed.

Continued access to plant genetic resources for food and agriculture is vital. Different policies and incentives are needed to regulate different kinds of use. Although policy debates about bioprospecting, access and benefit sharing have been ongoing in South Africa for nearly 20 years, and have led to the development of a comprehensive body of law, the policy focus has largely been on indigenous plant use and drug discovery, rather than PGRFA (which are typically not indigenous) and Farmers' Rights.

Most tellingly, South Africa has neither signed nor ratified the International Treaty on Plant Genetic Resources for Food and Agriculture, and a national policy discussion on Farmers' Rights has yet to transpire. Unique solutions to benefit sharing are needed for PGRFA because of their importance for food and agriculture, and the difficulties of identifying "providers" of these resources.

There is also limited demand for access to wild species or landraces outside research and conservation. For example, an estimated 90-95% of all genetic resources used in the plant breeding industry today are elite, modern varieties, and the remaining 5-10% represent landraces or wild relatives. The effort required to turn landraces or wild relatives into commercially viable resources is considerable, when compared to using an established elite variety that already incorporates desired characteristics. Wild species are thus typically considered to have little commercial value, requiring considerable investment with risky returns.

New biotechnological tools are likely to increase interest in crop wild relatives, more especially with a move towards precision breeding and the ability to incorporate traits from crop wild relatives into cultivated crop material in a more efficient, effective, and faster, manner. Whether this demand will lead immediately to the increased collection of wild genetic material is, however, debatable, especially given the fact that many companies now have their own private gene banks or ready access to those of international agricultural research centres.

Genetic resource exchange at the community level remains largely unrestricted, and there are strong flows of traditional seeds within and among communities. Elaborate systems of exchange, loan or donation play an important role as a safety net in case of harvest failure, encourage crop diversity within household gardens, and maintain good community and family relations. Procedures for seed exchanges outside of the community are less clearly defined, however, and represent a potential area of abuse.

National access and benefit-sharing policies and laws should support and not impede the continued sharing of plant genetic resources for food and agriculture and related knowledge among farmers. Recognition should be given to the strong customary rights communities have over varieties and landraces, the need for prior informed consent, and the use of incentives and agreements to enable equitable benefit sharing.

Ex-situ conservation of plant genetic resources for food and agriculture is highly fragmented and poorly coordinated.

The ex-situ conservation of PGRFA in South Africa is thwarted by a lack of coordination between the diverse institutions responsible for different gene banks, the absence of an overall strategy for ex-situ PGRFA conservation, insufficient funding and low capacity.

A key constraint is the poor description of many accessions (items lodged in a collection), leading to inadequate information about the PGRFA held in *ex-situ* collections. This is partly why demand for ex-situ material held in national collections is low, along with

the fact that mergers and acquisitions have now given many companies access to vast private collections that they are able to utilise for research and development.

Although efforts have been made to ensure the conservation of landraces and farmer varieties, these initiatives are similarly hampered by an absence of resources, capacity and political will.

At a local level, household seed banks represent a practical and viable approach to the storage of genetic material. These seed banks are vital for food security, enabling seed to be kept from year to year, so maintaining the breeding characteristics selected by farmers, such as better performance, bigger seeds, adaptation and insect resistance.

A coordinated, needs-based and well resourced strategy should be developed for the ex-situ conservation of PGRFA at national, community and household levels. Despite the importance of landraces and farmers' varieties, these crops have been historically neglected in both research and development.

Private companies have little interest in their commercial development, and government and university funding is very limited. The potential of farmers' varieties to adapt to climate change, coupled with increased donor attention, has, however, led to increased research interest.

Research is essential not only for the development of possible commercial varieties, but also to support small-scale farmers. Although farmers reliant on rainfed agriculture have been selecting locally adapted seed for generations, rapid climate change will require them to have access to a wider pool of genetic diversity and the help of modern plant breeders to develop appropriate varieties. Given existing institutional and technical capacities, South Africa could well be considered as a logical location to focus this research.

Research on plant genetic resources for food and agriculture needs to be strengthened to support the development of appropriate and unprotected climateresilient varieties for small-scale farmers. Links need to be fostered between researchers and farmers to ensure that research is needs-driven.

Insufficient research is being undertakenon plant genetic resources for food and agriculture. South Africa largely remains outside of international policy frameworks for the conservation and sustainable use of plant genetic resources for food and agriculture.

South Africa participates actively in meetings of the Commission on Genetic Resources for Food and Agriculture, yet has not signed the International Treaty on Plant Genetic Resources for Agriculture, which entered into force in 2004. The treaty sets in place an international framework for the conservation and sustainable use of PGRFA and recognises the importance of farmers as custodians and developers of genetic diversity in food and agriculture.

Even though South Africa is not a party to the treaty, many of its provisions are implemented through various national programmes. Moreover, South Africa remains

contractually bound by provisions of the mandatory standard material transfer agreement when obtaining genetic material from the international agricultural research centres for crops listed in Annex 1 of the treaty.

With climate change, many crops are likely to face conditions that have never been encountered before during their history of domestication. Severe dislocations in parts of the world and dramatically different growing conditions could well lead to a situation in which farmers require an entirely new set of genetic diversity.

If South Africa were to sign the International Treaty on Plant Genetic Resources for Agriculture, it would not only signal the importance of acting cooperatively to meet this challenge, but also enable the country to be part of the multilateral system for plant genetic resource exchange and benefit sharing, and to have a say in the way in which it operates.

It is vital for South Africa to be part of international systems of exchange, use and conservation for genetic resources, more especially as we move towards a climate changed world. South Africa should sign and ratify the International Treaty for Plant Genetic Resources and Agriculture as a matter of priority.

future food security – are under increasing threat. “

References

Andersen, Regine (2006). Realising Farmers’ Rights under the International Treaty on Plant Genetic Resourcesfor Food and Agriculture, Summary of Findings from the Farmers’ Rights Project (Phase 1), FNI Report

11/2006, p. 5, The Fridtjof Nansen Institute, Lysaker, Norway

EnAct International (2003). Review and analysis of legislation and policy relevant to the formal and informalseed sectors in South Africa. Legal Review Prepared for Biowatch South Africa.

FAO (1998). State of the World’s Plant Genetic Resources for Food and Agriculture, Food and AgricultureOrganization of the United Nations, Rome.

FAO (1999). International Treaty on Plant Genetic Resources for Food and Agriculture, Food and AgricultureOrganization of the United Nations, Rome, www.planttreaty.org

van Niekerk, Jaci and Wynberg, Rachel (2012). Securing Farmers’ Rights and Seed Sovereignty – Case Studies from KwaZulu-Natal. Waterloo, Canada: Africa Initiative, Centre for International Governance Innovation.