Plant variety protection to feed Africa?
Rhetoric versus reality

GRAIN
October 1999

In an official aide-memoire sent to francophone African governments in June 1999, the Union for the Protection of New Varieties of Plants (UPOV) spelled out what are the principal advantages of introducing plant variety protection – a form of patent law – in Africa:

> At the end of the day, plant variety protection contributes to the well-being of the population by contributing most particularly to:
> a) food security (by the increase in quantity, quality and diversity of foodstuffs);
> b) sustainable agriculture (for example by a more efficient use of available resources and inputs or by the use or pest- and disease-resistant varieties); and
> c) protection of the environment and of biodiversity (for example by reducing pressure on natural ecosystems through better productivity of cultivated lands, increase in species- and varietal-diversity and increase in the interest in conservation and use of genetic resources for food and agriculture).[1]

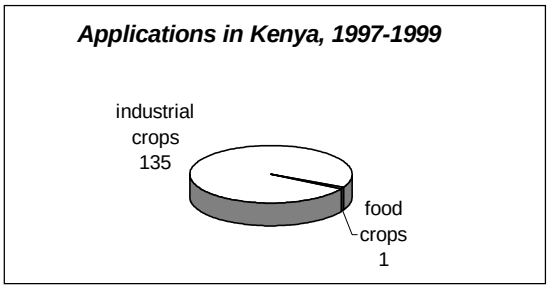
This pot of gold being promised by UPOV to some of Africa's poorest countries deserves scrutiny. UPOV is a group of mainly industrialised countries granting monopoly rights over seeds to transnational corporations and other institutional plant breeders. UPOV is highly active in promoting its plant variety protection (PVP) system throughout the Third World.

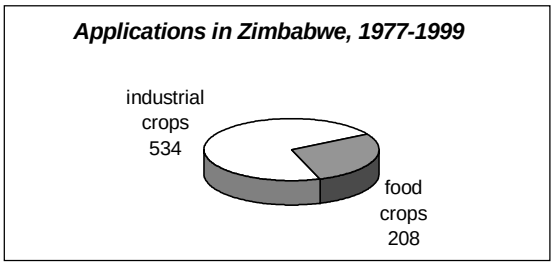
In February 1999, the francophone African countries which form the Organisation Africaine de la Propriété Intellectuelle (OAPI)[2] were swayed to join UPOV under the terms of its 1991 Convention. They have yet to ratify their decision. The aide-memoire was meant to remind them of what lies at the end of the ratification rainbow.

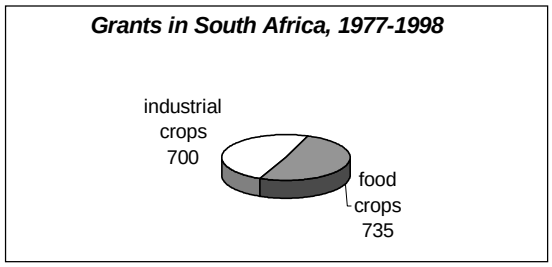
FOOD SECURITY

There is nothing in the international PVP system that orients plant breeding toward food security. More specifically, there is nothing in the UPOV Convention that prioritises legal protection of food crops over industrial crops. The reality in Africa is that food security is not on the agenda of PVP systems at all. Our first graph presents a breakdown of PVP applications and grants in the three African countries which provide such rights to date.

PVP promoting food security in Africa?







Industrial crops: fibre, forage, ornamental, oil and processing industry crops
Food crops: all cereals, food legumes, fruits, tubers and vegetables

SOURCE: compiled by GRAIN from Kenya Plant Health Inspectorate Service (KEPHIS) public notice, 3 May 1999; Zimbabwe Ministry of Agriculture, Dept. of Research and Specialist Services, Seed Services Division, 23 September 1999; South African Plant Variety Journal, December 1998

In Kenya, not one application filed and tested from the start of its PVP administration up to May 1999[3] has been on a crop important to national food security. Nearly all have gone to cash crops: ornamentals, sugarcane, coffee and barley for the brewing industry. One certificate has been granted on a variety of green bean – which Kenya grows for the European market. Thus, the PVP system in Kenya might help food security of Kenyan flower growers and European vegetable consumers, but does absolutely nothing for the vast majority of local farmers who grow the food for the country.

In Zimbabwe, the Plant Breeders' Rights Act was enacted in 1973. In 1974, 13 genera or species were eligible for protection. That figure has now reached 31.[4] As of 1999, over 70% of all applications were on industrial or cash crops: ornamentals, fibres, oilseeds and tobacco. Only 30% covered what can be classified as food crops.

In the case of South Africa, the PVP system became operational in 1977. As of the end of 1998, a total of 1435 PVP grants had been made. Half of them were for industrial crops.

These three examples – the only ones in Africa – show very clearly that PVP has no "food security" orientation. On the contrary, they indicate that PVP supports the export agriculture industries very well. This is particularly true in Kenya and Zimbabwe, where 80% and 70% of the population respectively depend on agriculture for their livelihoods. The "bottom line" that UPOV ignores is that in all three countries, food production per capita has declined over the past two decades.[5]

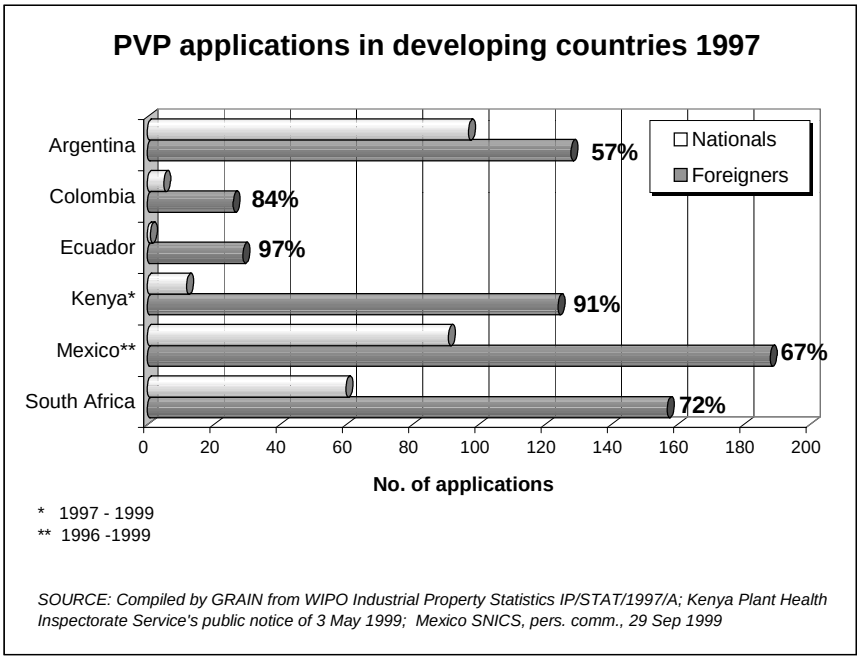
SUSTAINABLE AGRICULTURE

Again, there is nothing inherent in either the UPOV Convention or national PVP laws which directs plant breeding towards a certain goal – other than "DUS", that is. All PVP laws in Africa

require that plant varieties be "distinct", "uniform" and "stable" to be eligible for monopoly protection. These are known as the DUS criteria. Uniformity and stability are the two factors which make PVP biased toward plant breeding for industrial agriculture. As requirements for protection, they incline breeders to develop varieties that have low adaptability and are highly adjusted to monoculture production systems for large markets (national and for export). In addition, these varieties tend to require external inputs to compensate for their uniformity, since uniformity over large areas leads to vulnerability on the farm. We note that in the time period 1977-1997, both Zimbabwe and South Africa tripled their pesticide importation bills.[6] Over the same period, Kenya's doubled. Genetic uniformity, monocultures and dependency on external inputs and foreign markets are hardly the features of sustainable agriculture.

But perhaps an even better indication of the relationship between PVP and sustainability is a look at which breeders are actually awarded plant variety protection rights. It is widely recognised that for a country to move towards sustainable agriculture, it needs a strong national research system that can develop technologies adapted to the needs of local farmers. This is especially true in plant breeding, since farmers need different crop varieties for different agronomic, environmental and socio-economic conditions.

Our second graph, which compiles data from six different developing countries, shows that the vast majority of PVP applications are pouring in from foreign institutions. These foreign institutions tend to be the large transnational corporations that are increasingly controlling the global plant breeding, agrochemical and genetic engineering complex. In the case of Kenya, over 90% of all PVP applications come from breeders outside the country, while for South Africa this figure is over two-thirds.



Rather than promoting sustainable agriculture and a sustainable national research infrastructure able to respond to national and local needs, PVP promotes the expansion of inherently weak industrial agricultural systems and increased dependence on a handful of transnational corporations.

PROTECTION OF THE ENVIRONMENT AND CONSERVATION OF BIODIVERITY

UPOV's claim that PVP stimulates protection of the environment and conservation of biodiversity has no basis in law, economics or real-life experience. It seems to produce a rather opposite effect. We already pointed out that the uniformity criterion for PVP tends to destroy diversity in the field, rather than safeguard it. Following UPOV's logic, such genetic erosion can be said to stimulate biodiversity conservation because it alarms people!

There is not one provision in the UPOV Convention relating to preservation of genetic resources. This makes sense, since it is not the purpose of intellectual property law to protect the environment but to protect works of human genius. In reality, the relationship between intellectual property rights applied to life forms and the conservation and sustainable use of biodiversity is highly contentious. This can be seen in the widely acknowledged conflict between the World Trade Organisation's TRIPS Agreement and the Convention on Biological Diversity (CBD).[7]

Despite this, or because of this, some developing countries are trying to draft their own PVP laws right now which incorporate pro-biodiversity agendas in the spirit of CBD: requiring environmental impact assessments, using broader criteria for eligibility than DUS, earmarking funds for community seedbanks and so on.[8] Yet, UPOV stands in the way of such efforts. To take an example from Central America, UPOV advisors have recently told Nicaraguan legislators that any linkage between their national PVP law and the Convention on Biological Diversity would make that law incompatible with UPOV.[9]

CONCLUSIONS

UPOV's arguments that PVP – in particular the UPOV Convention – contributes to food security, sustainable agriculture and protection of biodiversity are unfounded and misleading.

The promise of food security can be scrutinised by examining African experience to date with PVP. In Kenya and Zimbabwe, PVP is clearly biased toward strengthening the industrial cash crop sector, not improving food security. In South Africa, no privileged relationship can be found between PVP and food crops.

The promise of sustainability is undermined by the uniformity requirement of the PVP laws themselves and by the data showing that rather than promoting a sustainable national research infrastructure, the vast bulk of PVP monopoly rights ends up in the hands of foreign multinational corporations. This promotes dependency, not sustainability

The promise of support to biodiversity is probably the most misplaced of all. As shown above, PVP laws promote uniformity and industrial export-oriented agriculture, not biodiversity. A legal

system which undercuts the rights of farmers to freely save seeds and vetoes variability in its own concept of a plant variety has no merit as a tool to protect biodiversity.

---

[1] *Aide Mémoire pour la Ratification du Nouvel Accord de Bangui et l'Adhésion à l'Union Internationale pour la Protection des Obtentions Végétales (UPOV)*, Genève, Juin 1999.

[2] Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Cote d'Ivoire, Djibouti, Gabon, Guinea, Mali, Mauritania, Niger, Senegal and Togo.

[3] The PVP Office was established in March 1997. Between then and May 1999, 136 varieties had undergone testing as applicants for protection. Of these, 123 were ornamentals, 6 were sugarcane, 5 were barley (the breeder being a brewer), 1 was coffee and 1 was a green bean (KEPHIS Public Notice, 3 May 1999).

[4] Dr Bellah Mpofu, *National Experience and Plant to Implement a Sui Generis System in Zimbabwe*, paper presented at the UPOV-WIPO-WTO Joint Regional Workshop on the Protection of Plant Varieties under Article 27.3(b) of the TRIPS Agreement, Nairobi, 6-7 May 1999.

[5] United Nations Development Progra
m, *Human Development Report 1999*, http://www.undp.org/hdro/food.htm

[6] FAOSTAT only provides pesticides importation figures in value. For Zimbabwe this was $12million in 1977 and $27 million in 1997. In South Africa, $34 million in 1977 and $115 million in 1997. In Kenya, $24 million in 1977 and $42 million in 1997. Most of these chemicals were sprayed on cash crops. http://apps.fao.org/

[7] TRIPS stands for Trade-Related Aspects of Intellectual Property Rights and it allows for the patenting of life forms. See Gaia/GRAIN, "TRIPS versus CBD", *Global Trade and Biodiversity in Conflict*, No. 1, April 1998, http://www.grain.org/publications/gtbc/issue1.htm

[8] See *Beyond UPOV Examples of developing countries preparing non-UPOV sui generis plant variety protection schemes for compliance with TRIPS*, GRAIN, July 1999, http://www.grain.org/publications/reports/nonupov.htm

[9] Daniel Querol, personal communication, 16 August 1999.

For further information please contact:

Genetic Resources Action International (GRAIN)
Girona 25 pral.
08010 Barcelona Spain
Tel: (34-93) 301 13 81
Fax: (34-93) 301 16 27
Email: grain@bcn.servicom.es
Web: http://www.grain.org

This report is also available in French.