

The Protection of Plant Varieties and Farmers' Rights Act: From legislation to implementation*

During the year 2001, two major steps were taken to realize Farmers' Rights in relation to the breeding of new varieties of crops. These are:

(1) FAO's International Treaty on Plant Genetic Resources for Food and Agriculture adopted by the FAO General Conference in November 2001. This Treaty contains a specific clause concerning the operationalization of Farmers' Rights.

(2) The Protection of Plant Varieties and Farmers' Rights Act, 2001 of India, which will soon come into force. This legislation gives concurrent attention to the rights of farmers, breeders and researchers and the protection of public interest. Public interest relates to issues like the compulsory licensing of rights and to the prevention of the import of varieties incorporating the Genetic Use Restriction Technology (GURT), which makes it obligatory for farmers to depend on companies for seeds.

At a consultation held at the M.S. Swaminathan Research Foundation (MSSRF), Chennai, eighty-seven participants from nine countries (India, Nepal, the Philippines, Malaysia, Indonesia, Sri Lanka, Thailand, Italy and Cambodia) discussed how to achieve the goals of the Indian legislation and of the FAO Treaty. The participants included practising farm women and men from different parts of the country, political leaders and policy makers, plant breeders from the public and private sectors, experts in the field of plant genetic resources and plant breeding, eminent environmental lawyers, gender experts, experts from FAO and the international agricultural research centres of the Consultative Group on International Agricultural Research (CGIAR), and eminent professionals in this field from the Asia-Pacific region. They made the following recommendations.

*A report of a consultation held at the M.S. Swaminathan Research Foundation, Chennai in collaboration with FAO, during 21–23 January 2002.

National issues

Integrated implementation

Access to good seeds of appropriate varieties is an effective method of bridging the technology divide among farmers. Hence, there is need for the effective and integrated implementation of the following three Acts.

- Protection of Plant Varieties and Farmers' Rights Act, 2001
- Biodiversity Act (yet to be approved by the Parliament)
- Seed Act (the revised Seed Act is now under consideration of Parliament).

Rights of the seed

Soil and water pollution is increasing in several productive farming areas. Although there are nearly 200 laws relating to environment protection, they have not been very effective in preventing soil, water and air pollution. Seeds have to be given the right to survive, sprout and grow. At least areas rich in agrobiodiversity should be free from pollution. It would be useful to develop *Food and Health Security Sanctuaries* in areas rich in bio-resources on the model of National Parks and Protected Areas for wildlife.

Awareness generation and information empowerment

The provisions of the Act cannot be implemented effectively, unless there is a major effort in awareness generation and information empowerment through the vernacular press, radio, television and the new media (Internet). For ensuring the effective spread of credible information concerning the rights of farmers as cultivators, breeders and conservers, there is need for a *Standing Committee on Awareness Generation and Information Empowerment under the Plant Varieties and Farmers' Rights Protection Authority*. Such a committee should include, among its members, representatives of the media and farm women and men.

Farmers rights

In order to ensure that the farmer-breeders and conservers secure the recognition and reward provided under the Act, there is need for Resource Centres for Farmers' Rights on the lines established by the MSSRF. Agricultural universities, ICAR institutes and Krishi Vigyan Kendras can establish such *Resource Centres for Farmers' Entitlements*, which should mobilize a corps of young lawyers who could travel to villages and help Panchayati Raj members (women and men) and local farm families understand the provisions of the Act in relation to their entitlements.

Institutional structures for effective implementation

There is need for an *autonomous National Institute for Varietal Research*, directly reporting to the Plant Protection and Farmers' Rights Authority. This is essential to inspire confidence among private and public sector breeders as well as farmer-breeders that the assessment procedures will be fair and will provide a level playing field to all. Such a national institute can use existing facilities at the state agricultural universities, ICAR institutions, Krishi Vigyan Kendras, All-India coordinated projects and other appropriate institutions for organizing the evaluation trials, to assess the distinctness, uniformity and stability of the varieties submitted for recognition under the Act. The evaluation procedure should inspire confidence among all the stakeholders.

National gene fund

This fund, likely to be very modest, *should be used mainly for recognizing and rewarding the contributions of tribal and farm women and men* to the conservation and enhancement of agrobiodiversity. The administration costs relating to this fund should be borne by the Government of India. Transparent and credible methods of recognizing *individual and community* contributions will have to be developed. This can be done

by a *Standing Committee on Farmers' Rights* set up by the Authority. Since a majority of primary conservers are women, there must be adequate representation of tribal and farm women on such a committee. The manner in which the award should be utilized should be left to the community. In this respect, there could be linkages between the provisions of this Act and the Biodiversity Management Committees proposed to be set at the Panchayat/local body level under the Biodiversity Act now before the Parliament.

Infrastructure development

In addition to Resource Centres for Farmers' Rights, the role of the National Bureau of Plant Genetic Resources (NBPGR) as a national repository, and the establishment of recognized DNA fingerprinting centres for conflict resolution, deserve attention.

Revitalization of the in situ on-farm conservation traditions

There is need for allocation of funds from the National Gene Fund for assisting farm and tribal women and men to continue their *in situ* on-farm conservation traditions so as not to suffer economically and/or financially as a consequence. This is particularly important in areas such as Goa, Kutch in Gujarat, Kolli Hills in Tamil Nadu, Wayanad in Kerala, Jeypore tract in Orissa and states in the NE hill region, as well as in the Eastern and Western Ghats regions.

Capacity building

Periodic training programmes should be organized in the local languages for tribal and farm women and men on various aspects of the legislation. Also, research institutions should undertake participatory breeding programmes with farm families. Rural knowledge centres can also be organized in relation to the different legislations relating to seeds, biodiversity conservation and plant breeding. Agricultural universities should use the RAWE (Rural Agricultural Work Experience) programme to train students in helping farm families to access their rights under the Act. A *corps of 'bare-foot' legal volunteers* should also be organized in agro-biodiversity-rich areas,

who along with RAWE scholars can help to reach the unreached in the area of information and knowledge empowerment. Also, agricultural universities should include, in the curriculum for undergraduate courses, information on such legislation.

Global issues

The following are the major recommendations relating to global issues.

Role of International Agricultural Research Centres of the CGIAR

The group noted the important role the centres already play in enhancing farmers' rights. Through the pursuit of their mission of promoting food security and eradicating poverty, centres promote the realization of farmers' rights by, *inter alia*:

- Promoting the dissemination of germ plasm;
- Distributing improved products and technologies;
- Conserving and promoting diversity in agriculture;
- Focusing research on the needs of resource-poor farmers.

The CGIAR policy documents, such as its Guiding Principles on Intellectual Property and Genetic Resources and its Ethical Principles relating to Genetic Resources, explicitly and implicitly recognize farmers' rights.

Partnership is also critical to the work of CGIAR and is relevant to implementation of farmers' rights. The Global Plan of Action suggests a new partnership between scientists, gene banks and farmers to improve on-farm selection and development of Plant Genetic Resources for Food and Agriculture (PGRFA), particularly in areas not serviced by commercial or public breeding programmes. The group recommended that the CGIAR build on its work in the area of participatory plant breeding, including refining and endorsing the draft Code of Conduct and Ethics and continuing to explore the possible legal implications arising from such collaborative arrangements.

FAO International Treaty

The group considered what the International Agricultural Research Centres

(IARCs) should do, now that the FAO-steered International Treaty (IT) has been adopted. Although the IT places the responsibility for implementing farmers' rights on national governments, the group noted that the IT taken in its entirety does still recognize the global dimensions of farmers' rights. It was generally agreed that centres need to raise awareness of the benefits that are shared with farmers through the exchange and circulation of in-trust materials. Centres must also consider what action-oriented research they might usefully undertake to support the implementation of farmers' rights.

Global gene fund

The group noted that a weakness in the IT is the absence of a mandatory funding mechanism and assured source of funds. The group recommended that the IT's Interim Governing Body should appeal to development banks, the GEF (Global Environmental Facility) and IFAD (International Fund for Agricultural Development) to contribute to funding strategy and identify resources which each feels it could make available to implement the IT. The Interim Governing Body and the Secretariat should help raise the position of public good-related agricultural research on the investment agenda.

Policies related to private sector companies

The role of the private sector and the importance of its meaningful linkage with the public sector at the national and international levels was noted. The group also noted that the CGIAR and other public-sector institutions are facing the need of finding alternate sources of funding. One partner is and will continue to be the private sector. In the process of collaborating with the private sector, the group stressed that the partnerships must be premised on the ability to continue to make sure that research products are available to the resource poor. The group stressed that the research agendas of the CGIAR and other international organizations such as FAO and IFAD must continue to be set by their common mission of promoting food security and eradicating poverty. The technologies must be available to all and should not become the exclusive property of those

who can afford to pay heavily. It was also noted that the private sector is very diverse and that small companies and seed villages in developing countries can be important mechanisms to see that new varieties are widely disseminated and made available to all who can derive benefit from them.

Genetically modified organisms

The group noted that:

- In order to maximize the benefits and minimize the risks, the value of genetically modified organisms (GMOs) should be objectively assessed;
- Each country needs to have a biotechnology policy that relates to biodiversity and biosecurity;
- For harnessing the maximum benefits from biotechnology, the required infrastructure and capacity building need to be strengthened in each country. A new FAO project funded by Japan was noted in this regard as well as funds available from UNEP for

capacity building under the Biosafety Protocol;

- International trials or testing by centres must strictly adhere to national laws and regulations.

Regional support systems

Based on the commonalities of problems and prospects in realizing farmers' rights, and given the interest and demonstrated spirit of the countries in the Asia-Pacific region, a Regional Cooperative Network (RCN) was recommended to provide technical and other support for the realization of farmers' rights involving NARS, MSSRF, CGIAR Centres, FAO, IFAD and other national and international partners. The pioneering initiative and experience of India in establishing the necessary Act and Rules could be a starting point for discussions. Working in partnership, the RCN could take the lead in disaggregating issues and establishing an action-research agenda aimed at finding solutions to common problems. The Group urged FAO and IFAD to take

necessary action to operationalize an RCN.

Draft rules

At this consultation, draft rules relating to the implementation of the Indian Act were developed. It is hoped that the draft rules will help the Government of India to start the process of implementation of the provisions of the bill as soon as possible. No further time should be lost in accelerating the pace of revitalization of the *in situ* on-farm conservation traditions of tribal and rural families, while at the same time improving the tempo of breeding new varieties of economic plants through incentives to public and private sector breeders.

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Mapping of India and naming of Mount Everest – A bicentenary

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The field of geodetic sciences in India began with the Great Trigonometrical Survey (GTS) and Arc on 10 April 1802. This bicentenary, a landmark, in the history of science in India is being celebrated from 10 April 2002 for a full year. The Department of Science and Technology (DST), Government of India has proposed a series of activities for commemorating this event (Box 1).

Going back to about the 1800s, little was known about the earth's size and shape. Accurate maps were non-existent. What helped to change this were the surveys conducted by the Survey of India, one of the oldest in the world. The Survey of India began its operations in 1767 with the commencement of the Bengal Surveys. Major James Rennel was the first Surveyor General of Bengal Survey.

However, in the realm of maps and surveys, the most fascinating story, a triumph for science, was that of the Great

Trigonometrical Survey (GTS) and the Great Indian Arc of the Meridian (Great Arc). This survey ran for over 2400 km across the length of the Indian subcontinent, a survey, conducted over fifty years with 'inch-perfect accuracy'. Data were gathered over several locations and observatories dotted across India. The accurate data thus obtained then provided the base on which further surveys and maps of India depended. India's infrastructural development of roads, railways and power grid lines, all owe their origin in some way to these measurements. What makes this as one of the great scientific achievements of unparalleled magnitude is the sheer task of painstakingly measuring and plotting positions and heights manually with such a high degree of accuracy. It had much to do with a combination of physics and surveying techniques, with an accuracy (obtained then) still on par with the precision of measurements

possible today, i.e. with the available instrumentation and computational facilities. The Royal Geographic Society has called GTS the 'most significant contribution to the advancement of science in the 19th century'. The survey was completed in 1854. The costs involved in terms of both investment and human lives lost to fever, especially malaria and dysentery were huge. It demanded true grit for bearing with and battling Nature. Then, there were also dense jungles, uncharted territories, curious onlookers, local customs and traditions, tigers, scorpions, flimsy tents and heavy monsoon rains to contend with.

Furthermore, in order to perform the precise survey, an instrument called the theodolite that weighed about half a ton and which needed twelve able men for carrying it was used. The theodolite was made from cast iron and brass. The job was laborious as it involved hauling this