

### Dwelling in the Deluge



In search of safe water ... most of the existing sources in flood-hit areas being polluted. — Star photo by Anisur Rahman



Basabo main street.

— Star photo by Amran Hossain



Loose electric wires ... posing threat to life in low-lying areas. — Star photo by Enamul Haq



Sonargaon Museum area.

— Star photo by Enamul Haq

## Challenges in Agriculture

by P K Ghosh

*According to the provisions of TRIPS, all species and genera of plants and plant varieties are eligible for protection. There is no scope for exclusion of any plant variety if it falls under the criteria for protection.*

BY being a member of the World Trade Organisation (WTO), India has agreed to provide protection to plant varieties through patents or an effective sui-generis system or by a combination of the two in accordance with WTO provisions.

Trade-related intellectual property rights (TRIPS) of the WTO do not insist upon the protection of any naturally occurring substances, organisms or varieties, which may have been isolated or identified for the first time by individuals, or substances that are claimed to be purified to a previously unknown degree. Also, it does not impose the condition of deposition of plants or plant parts or order to obtain protection. Countries can operate within the WTO's provisions to enact their own laws.

Therefore member countries will not agree on uniform treatment for the protection of new cultivars, although each country would have to enact laws to comply with the minimum provisions of WTO. Consequently, the ceiling limits of protection would be different. However, each member country would have to provide equal status in accordance with its laws to individuals operating in such countries from other

member countries.

New plant varieties will become a major instrument for increasing agricultural productivity. Countries will try to utilise the fruits of new developments at affordable prices. Such endeavours would include stakes of protection and, consequently, claims of proprietary rights not only on the source germplasm used as the starting materials for the new developments, but also on the inventive components of conversion of starting materials.

TRIPS would harness on protecting the inventors' rights, while the proponents of sovereign rights of biodiversity, through the Convention of Biological Diversity (CBD), would put their claims on the new products and cultivators through their sovereign rights on the use of the starting genetic materials. Humankind would therefore be on the threshold of the forces of privatisation on the one hand and the stakeholder individual countries on the other. Intellectual property rights (IPR) in biotechnology will therefore be one of the most controversial issues in the coming years.

According to the provisions of TRIPS, all species and genera of plants and plant varieties are

eligible for protection. There is no scope for exclusion of any plant variety if it falls under the criteria for protection. However, non-cultivated wild genera can be excluded as they are naturally occurring ones.

The TRIPS agreement brings in the various options relating to the protection of plants. The agreement provides rights for delaying the enactment of the provisions for the protection of plant varieties up to December 31, 1999, by member countries. There are also provisions for a further transition period for amending the patent laws up to December 31, 2004.

It is important to note that in 1999, the plant variety protection laws framed by member countries will be reviewed by the WTO. Consequently, India may have to finalise its plant variety protection (PVP) laws by the end of 1998.

The WTO emphasises that customary rules of interpretation of public international laws be applied to disputes. The

dispute settlement body (DSB) will become the institution preserving the rights and obligations required of WTO for each member country.

Patentable articles as per WTO would have to be new — their creation should involve an inventive step and they should have applications. Two hidden additional criteria must also be satisfied: the inventions should be sufficiently described, and persons skilled in the art should be able to reproduce the invention.

Inventions could be products or processes or both. Genetically engineered plants will be considered products. The Indian PVP Act has to work and make room within these provisions as no other criteria for protection has been elaborated in the WTO document.

The WTO does not require the disclosure of the source materials used to create an intellectual property right. This is considered to be an inadequacy for developing countries in the

area of plant variety invention as they are the holders and providers of the genetic biodiversity to the research community.

Through the provisions of the CBD, the countries are trying to enact laws that uphold their sovereign rights on genetic materials. Genetic biodiversity, according to the CBD, does not belong to individuals. Therefore utilisation of genetic biodiversity for the creation of protected inventions should have provisions for compensating the country that had provided the genetic biodiversity source material. Consequently, disclosure is relevant.

Several societies in developing countries have preserved their knowledge in their own ways and traditions. Very often, traditional knowledge has not been documented in books or structured literature, for example, the practice of Ayurveda in India. Interestingly, some inventors have refined such knowledge and have created in-

tellectual properties after taking clues from traditional knowledge sources that rely upon plants and herbs. Systematic cultivation of medicinal plants is anticipated to become an important activity in another decade or so, as in the case of cash crops. If medicinal plants are protected for the community as a whole, then it would be possible to provide benefits to a large number of people.

In order to provide wider benefits, the possibility of documenting traditional knowledge in a manner acceptable by the member countries as published literature needs to be examined. Concomitantly, provisions can be made to compensate the societies possessing the traditional knowledge. TRIPS allow the necessary measures to protect public interest.

India can therefore make good use of this clause. We can take steps to adequately document Ayurveda. Therefore an important issue is to document

the intellectual knowledge of the traditional societies in a manner acceptable to the member countries.

More than 60 per cent of the population in developing countries depends on agriculture for livelihood. Protection of agricultural rights is essential to the protection of people in these countries. Developed countries, where the farming community is less than 5 per cent of the population, will hardly be interested in issue of farmers' rights.

There are several important questions for developing countries. In biotechnology research, the resource materials emanate from the genetic biodiversity which is in preponderance in the developing world. In the event of commercial gains by inventors, how can the possessors of genetic biodiversity be compensated?

Biotechnology research is highly skill-based. How can an equal, level-playing ground be evolved in the less industrialised countries to enable them to compete with the industrialised countries?

How can product patenting be made more difficult so that transgenic plants are not closed for research for a long time? How can information shar-

ing and exchange be made easier among all countries. Further, what will constitute a literature? Can the unwritten information passed on from generation to generation among the tribal populations and other societies be considered to constitute a literature acceptable to the member countries?

How can the real inventors be created and rewarded in developing countries? Are they really rewarded adequately in the present time?

How can privatisation of biotechnology inventions through IPR be harmonised and rationalised with the sovereign rights of the countries standing on different socio-economic and cultural conditions?

The world is emerging to the situation of the survival of the fittest. Some are born in the environment of the fittest while others have acquired or are acquiring these qualities. But there are many more who are neither prepared nor can they graduate in the foreseeable future to such status unless the fortunate ones help them. As the food availability situations worsens in many densely populated countries, how will the world be at peace?

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