

Searching for Policy Options

Is CoFaB a Suitable Alternative to UPOV?

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The article compares and contrasts the Convention of Farmers and Breeders (CoFaB) text with the International Union for the Protection of new Varieties of Plants (UPOV) provisions. It also lists the plausible reasons behind areas of disagreement, issues of silence and exclusive provisions. It then highlights suggestions that can form inputs for fine tuning India's domestic law for plant variety protection.

I Backdrop

INDIA is a founder member of the General Agreement on Tariff and Trade (GATT) and a signatory to the World Trade Agreement (WTA). The Uruguay round of GATT, which was concluded in 1994, requires member states to protect plant varieties. By first January, 2000 AD, we have to legislate a system to protect plant varieties.¹ UPOV is the only internationally recognised system that details principles and procedures for plant variety protection. However, there are considerable apprehensions about not only the UPOV and its provisions, but also of complying with our obligations concerning TRIPs in general and plant variety protection in particular [Sahai 1996]. The debate over protection for plant varieties has often been characterised by emotions rather than logic [Ravishankar 1996].² It is in this context that we need to take a hard look at options relating to systems of plant variety protection.³ Plant varieties can be protected by patents, or by an effective *sui generis* system or by any combination thereof. Efforts are under way in this direction, and any draft proposals that facilitate the process of domestic law making need to be examined.

Two New Delhi based NGOs, Gene Campaign and Centre for Environment and Development, have prepared a text of an international draft treaty as an alternative to UPOV, called the Convention of Farmers and Breeders (CoFaB). The proposed text claims to "protect farmers' and breeders' rights in the germplasm owning countries of the south, secure their interests in agriculture, and aim to fulfil food and nutritional security goals of their people". CoFaB aims to acknowledge and ensure that farmers have rights ensuing from their contribution to the identification, maintenance and refinement of germplasm and that breeders of new plant varieties have rights over the varieties that they have bred. The seat of convention is

proposed at New Delhi or Kuala Lumpur or Jakarta. CoFaB views UPOV as a system suited for the developed world with a completely different agricultural profile. CoFaB surmises that UPOV permits the philosophy of visualising big corporate conglomerates as breeder, investment in intensive research including recombinant DNA technology⁴ as breeding, and above all, agriculture as a purely commercial activity. CoFaB contends that UPOV does not suit Indian scenario with large number of small and marginal farmers for whom agriculture is a livelihood. Furthermore, farmers in India are age-old practitioners of breeding and conservation of genetic diversity. According to CoFaB, the UPOV does not recognise their contribution as creators of landraces and traditional varieties.⁵ The government funds almost all agricultural research and breeding in India and therefore this research belongs to the public. CoFaB also argues that the costs of testing, approval and acquiring Plant Breeders' Rights (PBR) is far too expensive under UPOV system and forebodes the preclusion of farmers' co-operatives and farmer-breeders. Thus, CoFaB advocates an alternative to UPOV, by underscoring the role of farmer as producer as well as consumer of seed.

However, a system of plant variety protection often transgresses technical, legal and economic domains. Presence of a prototype simplifies the task of putting in place a new system. Experts reckon various acts of UPOV as an archetype. UPOV has established a detailed set of general principles for the conduct of the

examination of plant varieties for distinctness, uniformity and stability. The texts of the successive acts of the UPOV convention have been established after detailed discussions by experts, which have taken place over the years imbibing technological advances and dynamics of global policies. Furthermore, UPOV member states and its secretariat provide legal, administrative and technical assistance to nations interested in developing framework for plant variety protection (Table 1).

This article attempts to understand, compare and critically review CoFaB and UPOV in the light of national interests. Such an analysis is essential as it is timely and topical. In our opinion, generation of a debate in prospect is meaningful and worthwhile rather than an autopsy report. Section I provides the context. Section II details the areas of consensus, differences, silence and novelty between the two texts. In Section III, the plausible reasons for divergence are discussed along with possible implications on our domestic plant variety protection law. Section IV summarises the write-up.

II CoFaB vs UPOV

On April 24, 1998, the 1991 Act of the UPOV Convention has entered force.⁶ It is therefore, only relevant that CoFaB is technically compared with the 1991 act of UPOV.⁷ Is CoFaB a real and worthy alternative to the UPOV? Does the draft stand the test of legal and technical rigour? What are the areas of agreement and disagreement? Do any provisions seek to

TABLE 1: MEMBERSHIP STATUS OF UPOV AS ON APRIL 8, 1999

UPOV Member States		39
Latest acts of convention to which member states are party	1961-72	2
	1978	25
	1991	11
States not yet members having started accession procedure	1978	8
	1991	5
States with laws based on the UPOV convention which have not yet started the accession procedure	1978	-
	1991	8
States with proposals for legislation	1991	27
Not yet clear		8

protect national interests? Any glaring omissions? These and other related questions are addressed in this section.

Philosophy and organisation of the text: The text of CoFaB begins with farmers' rights. In fact, the entire approach is farmer-centred. The third world perspective is evident from various articles and provisions thereof. Whereas, UPOV concentrates on administering breeders' rights, i.e., modalities of implementation, regulation and monitoring. In other words, UPOV is more concerned with the 'how' part rather than 'whom' part. Nowhere in the UPOV text, farmers' rights find a mention.⁸ Prima facie, the UPOV text reveals no propensity towards the stage of economic development of nations in its overall approach. Under 10 chapters, 42 articles are grouped in the UPOV document (Table 2). The document begins with definitions and ends with final provisions. The important chapters relate to the obligations of contracting parties (CP), conditions for breeders' rights and rights of the breeder. Whereas, CoFaB provisions are listed under 35 articles directly (Table 3).

**COMPARISON ON TECHNICAL GROUNDS:
AREAS OF MAJOR DISSENSION (TABLE 4)**

General obligations of contracting parties: Both the documents clearly spell out the need to grant protection to the breeders of new varieties. There are differences with respect to number of genera and species to be protected. In UPOV, members of the previous acts need to protect all genera and species within five years from the day of joining 1991 act. New members have to protect at least 15 genera to begin with, and protect all the genera and species within 10 years after accession. CoFaB proposes gradual application of the provisions to the largest possible genera and species, however members are bound to protect all intended genera within 10 years after entry. In addition to breeders' rights, CoFaB requires that farmers' rights also enjoy equal legal protection across member states.

Conditions for PBR: The preconditions for the grant of breeders' rights are (1) distinctness (2) uniformity and (3) stability (DUS) of the new variety.⁹ The UPOV adds the condition of 'novelty' as a prerequisite¹⁰ for the enforcement of DUS. However, one critical contrast concerns what 'common knowledge' implies in the distinctness criterion. According to CoFaB, common knowledge is established from: (1) oral or documented reference in formal or informal sector, regarding cultivation, use and marketing already in progress, (2) precise description in publication, (3) inclusion in a reference collection and (4) entry into an official register of varieties.

In contrast, UPOV recognises only official registration of the variety as common knowledge.¹¹ Another important provision in CoFaB is that application for breeders' rights must be accompanied by a declaration with effect to the name and source of all varieties especially landraces or farmers' varieties used in the breeding of new varieties.

Applications for PBR: There is agreement concerning filing of application and independence of protection. The breeder can choose the place of first application and the time of subsequent application. Concerning subsequent application,

CoFaB allows a period of four years after the expiration of right of priority for submission of additional documents. UPOV limits this period to two years in case of acceptance/pending or allows an appropriate time in case of rejection. CoFaB proposes an independent institutional arrangement for the evaluation of the variety. UPOV authorises the competent authority to either (1) generate, (2) get generated or (3) obtain existing test-data in order to examine the application. CoFaB also stipulates that the new variety should have entered field trials for at least two cropping seasons. Further, the breeder

TABLE 2: ARTICLES OF UPOV 1991

Chapter	Article	Description	
I		Definitions	
	1	Definitions	
II	2	General obligation of the contracting parties	
	3	Basic obligation of the contracting parties	
	4	Genera and species to be protected	
		National treatment	
III		Conditions for the breeders' rights	
	5	Conditions of protection	
	6	Novelty	
	7	Distinctness	
	8	Uniformity	
	9	Stability	
	IV		Applications for the grant of breeders' rights
		10	Filing of applications
		11	Right of priority
12		Examination of application	
13		Provisional protection	
V		The rights of the breeder	
	14	Scope of the breeders' rights	
	15	Exceptions to the breeders' rights	
	16	Exhaustion of the breeders' rights	
	17	Restrictions on the exercise of the breeders' rights	
	18	Measures regulating commerce	
	19	Duration of the breeders' rights	
VI		Variety denomination	
VII	20	Variety denomination	
		Nullity and cancellation of breeders' rights	
	21	Nullity of breeders' rights	
VIII	22	Cancellation of breeders' rights	
		The union	
	23	Members	
	24	Legal status and seat	
	25	Organs	
	26	The council	
	27	The office of the union	
	28	Languages	
	29	Finances	
IX		Implementation of the convention; other agreements	
	30	Implementation of the convention	
	31	Relations between contracting parties and states bound by earlier acts	
	32	Special agreements	
X		Final provisions	
	33	Signature	
	34	Ratification, acceptance or approval; accession	
	35	Reservations	
	36	Communications concerning legislation and the genera and species protected; Information to be published	
	37	Entry into force; closing of earlier acts	
	38	Revision of the convention	
	39	Denunciation	
	40	Preservation of existing rights	
	41	Original and official texts of the convention	
42	Depository functions		

should provide genealogy, molecular, morphological and physiological characteristics (including DNA fingerprinting).¹² This point is made explicit in the CoFaB document. In case of varieties whose applications are pending, CoFaB provides protection against wrongful acts by third parties. Under similar circumstances, the breeder enjoys equitable remuneration according to UPOV.

Scope of PBR: Informal breeding activities of farmers also come under the purview of the 'scope of breeders' rights' in CoFaB. Breeder's authorisation is not required for the use of protected variety as an initial source to create and market new varieties, as a rule in CoFaB. This provision however, is covered as 'compulsory exemption' by UPOV. CoFaB may restrict breeders' rights for reasons of public interest, while farmers' rights remain unrestricted. Under identical restrictions, UPOV awards equitable remuneration to the breeder. UPOV provides protection for a minimum period of 20 years (25 years in case of trees and vines). Duration of breeders' rights is reduced by five years (by seven years in case of trees and vines) under CoFaB, probably to bring the protected varieties to public domain as early as possible. However, farmers' rights are protected for an unlimited period. Among other reasons that are common in both the texts, CoFaB cancels breeders' rights on two more grounds. First, if the productivity potential of the variety is no longer valid. Second, if the farmers' demand for seeds is not met leading to scarcity of planting material, increased market price and monopolies.

Variety denomination: Both the documents are clear regarding the requirements of variety denomination. UPOV maintains that the breeder has to change the denomination if due to a prior right, use of denomination is forbidden to a person who is obliged to use the denomination. CoFaB advises against the inclusion of a trademark in the denomination. If, however, the breeder submits such a denomination, he may not continue to assert his rights over the trademark in respect of the said variety from the time of its registration. According to CoFaB, institutions have the privilege to choose brand names for their varieties. For instance, the 'Pusa' prefix for varieties bred by the Indian Agricultural Research Institute (IARI).

Organisational structure: Council and the office of the Union are the two permanent organs of the UPOV. It has headquarters agreement with the Swiss confederation. The seat and its permanent organs are located in Geneva. The permanent organs of CoFaB are the council, general body and secretariat general (office of the

CoFaB). The seat of CP of CoFaB is proposed at New Delhi, Kuala Lumpur or Jakarta. In UPOV, each member state appoints one representative and one alternate to the council. Assistants/advisors may accompany the representatives. NGOs can also accompany the representative in the council of the CoFaB. Among other tasks, administrative and financial regulations are to be established by the council in UPOV. CoFaB requires the council to consult the government of India (GOI) before establishing such regulations and appointing secretary general of the council. The texts differ regarding issues that require approval of three-fourths majorities of the council (refer Table 4). On joining, each CR shall indicate the number of contribution units (UPOV) or the class in which it wishes to be placed (CoFaB).

Admission procedure: With respect to signature and deposition of instruments, there are considerable differences between the two texts (refer Table 4). To gain entry into UPOV, new member states have to

seek advice of the council regarding their existing domestic laws. In the eventuality that the new members agree to conform to the council's advice, they then can deposit the instrument of accession. In CoFaB, four-fifths approval of the council is required for the accession by a non-signatory. CoFaB proposes in the text, revision of the convention every two years. In UPOV, this is decided by the council.

EXCLUSIVE CLAUSES OF COFAB

There are certain provisions that are specific to CoFaB text. A national gene fund (NGF) is proposed to facilitate the collection and utilisation of farmers' rights fees. The proceeds resulting from farmers' rights will flow into the NGF. A multi-stake holder body will decide about the use of this fund. Laying down the conditions for breeders' rights, the CoFaB advises breeders to maintain broader genetic base in order to avoid adverse implications of breeders' rights via narrowing of genetic base.

TABLE 3: ARTICLES OF CONVENTION OF FARMERS AND BREEDERS 1998

Articles	Description
1	Purpose and constitution of the convention
2	Nature of rights; collection of revenue
3	National treatment
4	Botanical genera and species which must or may be protected; meaning of variety
5	Rights of farmers and breeders ; scope of protection
6	Condition required for protection of breeders' rights
7	Official examination of new varieties; provisional protection
8	Period of protection of farmers' right and breeders' rights
9	Restrictions in the exercise of farmers' right and breeders' rights
10	Nullity of forfeiture of breeders' rights
11	Free choice of contracting state in which the first application is filed, application in other contracting states; independence of protection in different contracting states
12	Rights of priority
13	Denominations of new varieties of plants
14	Protection independent of measures regulating production, certification and marketing
15	Organs of the convention
16	Composition of the council; votes
17	Observers in the meetings of the council
18	Officers of the council
19	Meetings of the council
20	Rules of procedure of the council; administrative and financial, regulations of the convention
21	Duties of the council
22	Majorities required for decisions of the council
23	Tasks of the office of the convention; responsibilities of the secretary general; appointment of staff
24	Supervisory function of the Indian government
25	Finances
26	Revision of the convention
27	Special agreements for the protection of new varieties of plants
28	Implementation of the convention on the domestic level; special agreements on the joint utilisation of examination services
29	Signature and ratification; entry into force
30	Accession; entry into force
31	Communications indicating the genera and species eligible for protection
32	Territories
33	Transitional rules concerning the relationship between variety denominations and trade marks
34	Settlement of disputes
35	Duration and denunciation of the convention; discontinuation of the application of the convention to territories

Provisions exclusive to CoFaB (article numbers in parentheses)
 (1) Farmer's rights (1)
 (2) Arrangement for the collection of farmer's right fees by CP (2)
 (3) Institution of National Fund (2)
 (4) Maintenance of broader genetic base by breeders (recommendatory provision) (6)
 (5) Mandatory independent evaluation of performance of new variety by each CP (11)

(6) Supervisory function of GOI (24)
 (7) Provision to exclude territories/states from the purview of the convention (32)
 (8) Settlement of disputes (34)
 (9) The convention is of limited duration (35)
 CoFaB envisages the GOI to discharge following responsibilities:
 - Advise council in establishing administrative and financial regulations and supervise its implementation.

- Appoint Secretary General to the council
 - Accept the application for and deposition of instrument of accession.
 - Collect and disseminate the list of genera and species that member states intend to protect.
 - Perform depository functions.
 CoFaB allows CP to decide whether the convention applies to all or parts of states/

TABLE 4: COMPARISON OF SALIENT ISSUES OF UPOV AND COFAB

Criteria	UPOV	CoFaB
Genera and Species to be protected	(a) New members to protect at least 15 genera to begin with (b) Protect all genera and species within 10 years after accession. (3)	(a) Gradual application to largest possible genera (b) Protect all intended genera and species within 10 years after entry. (4)
National treatment	breeders' rights (4)	Breeders' rights and farmers' rights (3)
Conditions of protection	NDUS (5,6,7,8, and 9)	DUS + declaration with effect to name and source (6)
Right of Priority (ROP)	Two years after expiration of ROP (11)	Four years after expiration of ROP (12)
Examination of application	Discretion of competent authority (12)	Independent institutional arrangement (7)
Provisional protection	Equitable remuneration to breeder (13)	Protection from wrong acts from third-parties (7)
Scope of breeders' rights	Only breeders are entitled (14)	Farmers are also entitled (5)
Exceptions to breeders' rights	Compulsory exception for breeding new varieties (15.1)	Breeders authorisation not required for breeding new varieties (5)
Restrictions on breeders' rights	Breeders get equitable remuneration (17)	farmers' rights are not restricted (9)
Period of protection	20 years from grant of protection (25 years for trees and vines) (19)	(a) Farmers' rights - Unlimited period. (b) 15 years from date of application (18 years for trees and vines) (c) breeders' rights to be curtailed in the event of susceptibility to pest attack (d) Longer duration of protection for specific classes of plants (8)
Variety denomination	No exclusive rights for brand names (20)	Exclusive rights to institutions to use their names as brands. (13.3)
Reasons for Cancellation	IF conditions of stability and uniformity are no longer fulfilled (22)	IF: (a) productivity potential is not met (b) Farmers demand for seeds is not (10)
Seat	Geneva (24)	Proposed at New Delhi, Kuala Lumpur, Jakarta... (1.3)
Organs	(a) Council (b) Office of the Union (25)	(a) Council (b) General body (c) Secretariat general (15)
Composition of the council	Representatives accompanied with assistants and advisors (26)	Representatives accompanied with assistants, advisors and NGOs (16)
Administrative and financial regulations of the council	Established by council (26)	Established by council after consulting GOI (20)
Appointment of secretary general	Appointed by council (26)	Council makes proposals to GOI (21)
Majority	three-fourths majority necessary for: (a) ROP (b) Administrative and financial regulations (c) Revisions by conference (d) Delay in contributions (e) Language (26)	three-fourths majority necessary for: (a) ROP (b) Administrative and financial regulations (c) Revisions of the convention (d) Accession and entry into force (e) Vote on budget (22)
Contribution units	New member states to indicate number of contribution units on joining (29)	New member states to indicate the class in which it wishes to be placed on joining (25)
Signature	Any member state could become a signatory before March 31st 1992. (33)	Open for signature by CP until January 31, 2000. (29.1)
Deposition of Instruments	Instruments are deposited with the secretary general (34)	(a) Instrument of ratification to be deposited with Malaysian government. (b) Instrument of accession to be deposited with GOI. (29)
Conditions for entry of new members	Council's advice is a pre-requisite for entry (34)	Council's approval by 4/5th majority essential for accession by a non-signatory (29)
Communications concerning Genera and species protected	Secretary general is notified (36)	GOI is notified. (31)
Revision of the convention	Convocation of the conference is decided by council (38)	Conferences shall be held every two years (26)
Denunciation	To be notified to the secretary general (39)	(a) To be notified to the GOI. (b) Convention itself is of limited duration (35)

Note: Figures in the parentheses refer to relevant articles.

territories. A dispute settlement mechanism is proposed in CoFaB. Disputes concerning interpretation or application of the convention shall be settled through negotiations between CP. In case of non-settlement, the issue shall be submitted to the council. If the dispute persists, it will be referred to an arbitration tribunal. The decision of the tribunal is final and binding.

Silent issues: Several pertinent issues remain untouched by CoFaB. Since CoFaB assumes legal personality, a glossary of technical terms is essential. This is missing in the CoFaB text. One of the contentious issues in UPOV 1991 Act is related to farmer's privilege. Third world countries, where agriculture is not a commercial activity, have championed the cause of farmers' privilege. For strange reasons, CoFaB does not enunciate this core provision among its articles. Essentially derived varieties (EDV)¹³ do not find any place in the CoFaB text. Thus, areas of silence in CoFaB can be said to be: (1) glossary of technical terms; (2) exemptions and exhaustion of breeders' rights; (3) essentially derived varieties (EDV); (4) measures regulating commerce; (5) official languages.

III

Reading between the Lines

In this section, we attempt to analyse the why part. That is, list plausible reasons behind differences and similarities between the two texts. Further, we strive to reason out issues on which CoFaB is either silent or inadequate. Some suggestions are highlighted to safeguard our interests concerning *sui generis* system, which is in the process of formulation.

Where CoFaB is exclusive: The probable reasons for providing flexibility to CP in extending the convention either to a part or to their entire geographical area are:

- (1) To recognise and further the federal character of central-state relations with respect to plant variety protection;
- (2) To promote *in situ* conservation of crop biodiversity. [Restriction of breeders' rights in agro-biodiversity rich regions will help maintain a broader genetic base of food crops and ecotypes of fruits. This will also supplement efforts of *in situ* conservation of crop biodiversity, albeit in an indirect manner (by discouraging marketing of protected varieties)].
- (3) To avoid operational difficulties of administration of breeders' rights owing to socio-economic nature of the populace (Certain pockets in the country are marked by skewed distribution of land holdings and associated biotic and abiotic constraints. In such situations, neither breed-

ers' rights are operationally feasible nor do they in any way serve the interests of the small and marginal farmers).

(4) Keeping in view the importance of certain crops as staple food of the masses. [In areas where a crop is staple and non-commercial in nature (like sorghum in the semi-arid tropics and ragi in pockets of Karnataka), restrictions on breeders' rights are desirable.]

CoFaB advises breeders to base new varieties on a broader genetic base. This is particularly relevant to agricultural scenario of our country. The onset of seed-fertiliser revolution coupled with growing demand for foodgrains has considerably eroded the genetic base of important food crops.¹⁴ Besides, breeders' rights, farmers are also accorded rights analogous to breeders' rights by CoFaB. However, farmers' rights enjoy much more privileges. Farmers' rights are neither restricted under any circumstances nor are they limited temporally. In fact, the issue concerning farmers' rights is the *raison d'être* of CoFaB.

For many reasons, the provision for research institutions to use their identities as exclusive brand names is a welcome step in CoFaB. First, having contributed significantly in crop improvement efforts, public sector research institutions should be given sufficient opportunity to encash in a market-driven environment. Second, these institutions enjoy immense credibility among farmers. [Research system in the public sector (particularly the National Agricultural Research System) has played an important role in achieving self-sufficiency in foodgrain production. This system is fully responsible for the creation and maintenance of most varieties and conservation of germplasm]. Third, such a step will pre-empt scrupulous traders from exploiting established and trusted brand names for private gains. The constitution of National Gene Fund (NGF) is a sound proposal. Such an institution will address issues relating to benefit sharing among the farming community and tribals. The CoFaB envisages a central role to the GOI. From appointing the secretary general to accepting instruments to performing depository functions to supervising various regulations, the GOI is assigned the role of a super policeman. In fact, such is the magnitude of responsibilities delegated to the GOI that the convention becomes subjugated to the regime. Are these wide-ranging duties and powers earmarked to the GOI acceptable to potential member states? The CoFaB proposes an additional organ – the governing body in between the council and the office of the council. Neither the functions of this organ is listed

nor its advantage clear. Similarly, one wonders why the convention has announced limited life span even before it is born. Under what circumstances this provision becomes applicable is left to the imagination. If this implies that upon revision the previous act becomes legally invalid, this should be made clear and explicit. Here, the use of the word 'convention' is misleading and needs to be replaced by 'act'.

Where CoFaB is silent: Definitions of key terms are a crucial aspect of any legal document. For reasons, which we cannot fancy, CoFaB ignores this vital aspect. Whether they agree with UPOV is a question that remains unanswered. How or what is defined is the prerogative of one who proposes. Nevertheless, this in no way discounts the importance of defining or rather leaving essential terms undefined. A glossary of definition of important terms will be a welcome addition. One critical omission in the CoFaB text relates to the exceptions and exhaustion of breeders' rights. Such provisions can be imaginatively adapted to suit our national interests. In particular, research interests and farmers' privilege can be better served by these provisions. By choosing to remain silent (maybe inadvertently) on a crucial issue as farmers' privilege, the CoFaB is on a weak wicket. Such a glaring mistake is hardly expected from a draft claiming to be a third world alternative to the UPOV. Provisions relating to the Essentially Derived Varieties (EDVs) are missing. Two important implications follow: (1) India being a storehouse of landraces and traditional varieties, cosmetic changes of such varieties may get protection and deny the farmers their recognition and reward; (2) seeking protection for a large number of redundant varieties cannot be avoided.

Another notable aspect ignored by CoFaB is 'measures regulating commerce'. Domestic laws relating to production, certification, marketing, import and export of propagating or harvested or direct products are strategically important for a country like us. Exports of agricultural commodities contribute significantly to our forex earnings. Breeders' rights must ideally be independent of such domestic laws. In fact, the entire debate concerning IPR and breeders' rights has strong economic and commerce underpinnings. Relations between the two need to be clearly spelt out. The CoFaB is again quiet on the lingua franca of the convention and the text. The importance of official language comes to the fore in case of disputes. Should one assume that since the draft is in English, it is *de facto* official language of this convention?

Where CoFaB is inadequate: Concerning novelty, an important condition for breeders' rights, CoFaB is inadequate in the sense that it does not specify the deadline beyond which one can claim protection for an already existing variety. This needs to be expressed unequivocally if we intend to award farmers' rights. CoFaB seems unclear regarding equitable remuneration to the breeders under conditions of provisional protection and restrictions. Scope of breeders' rights is incomplete concerning import and/or export transactions of protected varieties with nations where no protection is accorded. Regarding the direct products derived from the protected variety; CoFaB is not comprehensive enough. Under what circumstances of 'public interest' will CoFaB restrict breeders' rights is not specified. Public interest may be specified as conditions arising out of natural calamities or tendencies of monopoly. For the protection of farmers' rights, CoFaB proposes the setting up of a new authority or entrusting the task to an existing one. However, the nature of such an authority is not described. Whether this responsibility will be assigned to existing institutions like the Indian Council of Agricultural Research (ICAR), ministry of agriculture (MOA), ministry of industry, department of science and technology (DST) or a court of law? Or alternatively, to a new institution of legal personality like the plant variety protection (PVP) office?

The CoFaB requires field trials of new varieties for at least two cropping seasons and establishment of productivity potential of new varieties. However, both of these are not conditions for granting PBRs under article 6. Are these trials for DUS testing or for agricultural value? As productivity potential differs over space and time, the modalities of establishing the same may run into practical difficulties. This is particularly true in India endowed as it with diverse agro-climatic conditions. This logic can be extended to maintenance of varietal productivity potential. Suppose a variety becomes susceptible to a pest attack only in a particular region, does this force forfeiture of the protection through out the country?

Where CoFaB is elaborate: In CoFaB, the provision of 'common knowledge' is comprehensive and protects our interests. India is having a long tradition of varietal development by farming community. Traditionally, indigenous knowledge is passed from generation to generation orally. This has resulted in poor documentation of practices and products. These shortcomings are taken care of in the definition of common knowledge. Along

with adhering to the conditions of DUS, CoFaB requires that the name and source of the varieties used in developing a new variety especially farmer's varieties and landraces need to be declared. The additional provision goes a long way in recognising and rewarding the role of indigenous people in maintaining diversity. CoFaB seeks to promote research, by exempting breeders from seeking prior permission from titleholders, by including a separate article rather than in the form of an exemption. CoFaB provides strong grounds for the cancellation of breeders' rights. The intention is to install a system of checks and balances. For instance, if the productivity potential of a protected variety declines because of biotic and abiotic stresses. This will pave way for protection of similar new varieties that can withstand such stresses. Market malpractices like creation of artificial scarcities, formation of cartels and other tendencies of monopoly are prevented by this provision. Another option (without assenting to cancelling breeders' rights) for CoFaB could be the introduction of 'compulsory licensing'.¹⁵ Anyway, both the clauses are beneficial from consumers' viewpoint.

IV Summing up

The CoFaB draft is proposed as an alternative to the UPOV. This is a welcome effort in a grey area, particularly so, as it claims to protect the third world perspective. In order to fine-tune domestic laws, a clear understanding of different views across the spectrum is inevitable. A detailed examination of the UPOV text dispels many myths that have gained ground. The provisions of UPOV have to be approached not with apprehension but with caution. A scientific dissection of the text reveals that the 1991 act is not restrictive as has been projected. On many accounts, the UPOV is flexible. Introduction of compulsory licensing, extending the purview of common knowledge, having special agreements and provision of withdrawal from the convention are some examples. This is reflected by the domestic laws concerning plant variety protection of UPOV member states. Exclusion of wild species in member states like Colombia and Ecuador is a case in point (UPOV publication no 644-E). Besides the obvious advantages that go along with UPOV membership, the text is flexible enough to protect our national interests. It is pertinent to note that even communist China has joined UPOV on March 23, 1999. More recently, the Bolivian and Brazilian congresses have passed resolutions authorising their governments to accede to the UPOV convention. As on

February 15, 1999, apart from 37 transnational corporations, 11 public research entities, 11 co-operatives, and 360 small breeders appear in the list of applicants for protection under the new European Community Plant Variety Protection System. This therefore dispels apprehensions that UPOV precludes small breeders and co-operatives. Certain misconceptions regarding UPOV need clarification. First, it only describes a set of general and normative principles and procedure for plant variety protection. It defines only basic concepts that must be included in the domestic laws of member states. Second, it is a forum to exchange and share experiences. Third, it is equitable in the sense that member states have an equal say in final decisions (unlike the UN). Fourth, it is not a body meant for varietal registration, regulation, enforcement, or dispute settlement.

Our idea is not to push for UPOV membership. A dispassionate dissection of the two texts brings forth their strengths and weaknesses. The CoFaB is an honest attempt and the only alternative proposed thus far to safeguard the third world perspective. It has shortcomings as well as merits. Since the text is only a draft, there is considerable room for improvement. In its present avatar, however, it falls short of an effective alternative to the UPOV. At best, it has potential to form an inter-governmental organisation to represent third world countries in the UPOV council. All said and done, the strengths of CoFaB can serve as vital inputs for our plant variety protection act. Certain critical issues need to be internalised in the process of evolving the plant variety protection act. Farmers' rights and conservation of biodiversity are important. [Pistorius 1997]. Nevertheless, efforts to club them with PVP are not desirable. These can be taken care by independent legislation such as biodiversity bill which recognises and rewards community contributions. Internationally, the subject of farmers' rights is regulated by the International Undertaking on Genetic Resources for Food and Agriculture. There is a clear case to reduce the period of protection in order to bring the plant varieties into public domain as early as possible. Giving adequate protection and recognition to public sector research and researchers is another critical area. The idea of dispute settlement is relevant requiring elaboration. The jurisdiction and administration canvass of the various organs ought to be clearly spelt out. Setting out protocols for effective dealing with UPOV members, inter-governmental organisations and other nations merits attention. There are strong reasons for the

inclusion of EDVs under the act. One obvious reason would be to deny protection for cosmetic changes in existing landraces. The provision of compulsory licensing should be a sine qua non. Restrictions to PBRs encompassing public interest, farmers' and researchers' privilege must form an important component. Provisions to arrest genetic erosion and protect the agricultural profile of our nation should be detailed.

Whether or not we join UPOV or an alternative, we are obligated to legislate a plant variety protection act. A sequential process of formulation, debate, refinement and enactment is not only credible but also ideal. This process needs to be set in motion rather than promulgating presidential ordinance at the 11th hour. The priority therefore, must be to evolve a *sui generis* system that seeks to balance perspectives. The ideal strategy would be to learn from the experience of other nations and take the best of both the texts. In this process, the underlying philosophy of varietal protection should not be undermined. The challenge lies in being imaginative without being isolated in the global forum whilst formulating a fair plant variety legislation. This will then result in a win-win situation.

Notes

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- 1 Members of WTO are free to develop their own system in broad conformity to the TRIPs requirement. Developing countries have an extended period of five years, i.e., from 1995 to 2000 AD to put in place a system for plant variety protection.
- 2 Unlike inventions in industrial products, which are *de novo*, inventions in life forms essentially result from modifications of pre-existing forms (It all started from the famous *Diamond v Chakrabarty case 447 US. 303*, 1980). Patenting life forms also raises ethical and moral dilemmas. In India, the issue of farmers' privilege to replant saved seeds has added fuel to the fire.
- 3 There is a variety of forms of intellectual property protection in plants. For instance, in the US, an invention in plant based technology is given utility patents, plant patents, plant variety protection certificates or trade secret protection. While utility patents are awarded to transgenic plants (Agricetus patent on transgenic cotton, US Patent 5,159, 136), plant patents and plant variety protection certificates protect particularly those products resulting from traditional breeding techniques. Trade secrets protection is awarded to parental lines of F1 hybrids (Pioneer Hybrid patent on parental lines of corn). Though all these forms provide similar protection to the breeder, they differ in degree of description, statute and the

administering authority. For details refer Kjeldgard and Marsh 1994.

- 4 Modern breeding involves the manipulation of genome. Inclusion of foreign genes into plant genome (for, e.g., Bt-transgenic cotton) and manoeuvring plant reproduction system (e.g., terminator technology) have far-reaching economic ramifications.
- 5 Landraces and traditional varieties are the outcome of farmers' breeding. Such varieties are not released by any organisation, but spread and refined continuously by the cultivators themselves. E.g., most of Basmati cultivars and Mango cultivars are landraces/traditional varieties. Refer Zeven 1998.
- 6 The new act resulted from a diplomatic conference held in Geneva. The 1991 act required a minimum of five ratifications and accessions before coming into force as an international legal instrument. The accession of Bulgaria and the Russian Federation brings to fix the number of adherences. The UPOV Office has calculated, however, that protection, based on the 1991 Act, is already available within the domestic laws of more than 30 countries. The UPOV Convention was initially created in 1961. Between 1961 and 1991, dramatic scientific and technical developments took place resulting in the emergence of genetic engineering and advanced tissue culture. These developments, plus the experience of operating the 1961 Convention, provided powerful motivators for the 1991 revision of the Convention 1991 (UPOV press release no 30, 1998).
- 7 Unless otherwise specified, henceforth UPOV means the 1991 act of UPOV and CoFaB implies the draft treaty (December 1998) proposed as an alternative to UPOV.
- 8 It is order to note that farmers' rights and farmers' privilege are entirely different. Farmers' rights refer to the rights granted to the farming community, which entitles them to charge a fee from breeders' every time a land race or a traditional variety is used for breeding new varieties. Farmers' privilege is a form of restriction of breeders' rights in order to permit farmers to use, for propagating purposes, on their own holdings, the product of the harvest which they have obtained planting, on their own holdings, a protected variety.
- 9 With regard to morphological, physiological and biochemical characteristics a new variety should be
 - Clearly distinguishable from any other existing varieties (distinctness);
 - Sufficiently homogenous, having regard to its mode of propagation (uniformity);
 - Stable in its essential characteristics after repeated cultivation (stability) in short, commonly known as DUS.
- 10 According to UPOV, in order that new variety satisfies the condition of novelty; application for the grant of right in a CP must be filed within one year of release for commercial exploitation of the variety in that state, or within four years of release (six years in case of trees and vines) in any other CP.
- 11 Prima facie, common knowledge in the UPOV text means official registration of the varieties. However, all the other ways in which a variety can become a matter of common knowledge still exist. Accordingly, one can bring forward any form of evidence to establish that a variety

is a matter of common knowledge, including its use in the so-called informal sector. Declaration of breeding history of the variety is necessary though not explicitly mentioned in any article (vice-secretary-general, UPOV, personal communication).

- 12 Traditionally, varieties are distinguished based on morphological and physiological characteristics. Due to narrowing of the genetic base and the increase in the number of varieties, varietal identification is becoming extremely difficult. Therefore, molecular tools like DNA fingerprinting are employed to support the traditional methods.
- 13 A variety shall be deemed an EDV if it is predominantly derived from a pre-existing variety while retaining the expression of the essential characteristics that result from genotype or combinations of genotypes of the initial variety.
- 14 Agricultural intensification especially monoculture has significantly eroded the genetic base of food crops in India. E.g., in case of rice, from over 30,000 different landraces prior to 1960, to less than 50 varieties currently [McNeely et al 1989].
- 15 Generally, compulsory licensing is invoked to ensure that (a) the variety is available to the public at reasonable prices; (b) the supply of the variety is widely distributed; (c) reproductive material of high quality is kept; (d) royalty rates are kept reasonable. This provision exists in the domestic laws of even developed countries like Canada, the UK and Australia (for details see *UK Plant Breeders' Right Handbook 1998; A Guide to Plant Breeders' Rights 1997 and General Information on PBRs 1998*).

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