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WORLD TRADE ORGANIZATION, INTELLECTUAL PROPERTY RIGHTS AND BASMATI RICE EXPORTS, ISSUES IN FOCUS

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PROVISIONS concerning agricultural subsidies is causing lot of concern amongst indian basmati exporters. Issues concerning foreign exchange fluctuations, use of pesticides and many other reasons have caused lot of concerns for indian farmers . Use of anti tariff measures and provisions of Plant variety Protection and Farmers rights Act 2001 will cause lot of concern amongst indian farmers . However the provisions of the recent survey indicate that these provisions will not affect exports of basmati rice in the international market.

Keywords: IPRS/SEEDS/ PBR (Plant Breeders Rights)/Biopiracy/agricultural subsidies/ genetic engineering/ monoculture/farmers/ genetic pollution.

Introduction

Agriculture and allied activities make the second largest contribution to GDP and agriculture is the single most important sector for providing employment. Cultivators and agricultural labourers are 227 mn in number and account for over half the national workforce. The Indian rural population which numbers 741mn is largely dependant on workers. The importance of agriculture for poverty reduction is not only due as a result to the proportion of population dependant on agriculture but also due to disproportionate concentration of poverty in this sector (Jha, Gupta, Nedempara, Karthikeyan 2005).

There is also the contrary and an overview that IPRs do little to stimulate invention in developing countries, because the necessary human and technical capacity may be absent in developing countries because the necessary human and technical capacity may be absent in developing countries that IPRs are ineffective in stimulating research activities to benefit the poor people that they limit the option of technological learning through imitation, that they allow foreign firms to drive out domestic competition by patent protection and to service the market through imports rather than domestic manufactures that they increase the costs of essential medicines and agricultural inputs affecting poor people and farmers particularly adversely. These concerns led to the historic declaration of TRIPS and public health(Maskus, 2000).

The link between TRIPS and the right of the farmer to grow seeds has significant implications for agricultural growth and poverty reduction because the farmers use the same seeds for breeding as well. The farmers in India have nurtured and conserved genetic resources and have been successful in developing new varieties by crossing and selection from their fields In almost all the cases these new varieties are taken up by agricultural research institutions (Sahai, 2000).

There is a need for active engagement at the domestic level. A lot remains to be done to prepare the

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Indian farm sector to face the challenges and seize the opportunities offered by the WTO regime. There is a need to minimize the role of the Government in agricultural production and marketing make India a single commodity market governed by the law of comparative advantage. There is a need to encourage farmers corporations that aim to bring about an operative consolidation of land by converting farmers holdings and labour into equity. The corporate farm, with the help of technicians and management should provide the necessary inputs as also post harvest services (Joshi, S, 2003).

The IPR regime has provided for three basic rights to the Indian farmer: Plant Breeder rights, Farmers Rights and farmers privilege. However in the distant and remote areas of the country many farmers are not aware about the various parameters of the Plant Varieties and Farmers Rights Act 2001. Many farmers in the remote areas do not even know the basic parameters concerning the legislation. What is required is that many poor farmers in india do not even know what plant variety means. The agricultural research Institutions in India must educate the farmers about the various nuances of Indian agriculture so that in future the Indian farmers can educate and prepare themselves better about the problems and prospects of Indian agriculture.

Background Literature

It is quite clear that there exists a substantive trading interest among the major nations comprising the G-20 extending beyond coalition on issues relating to agriculture exports in the WTO negotiating table. what india has to weigh and examine is whether the G-20 can also successfully deliver on its other market access requirements such as mode 4 textiles and non agricultural sectors. Subsidies is another issue which needs examination.

Promotion of monocultures has very obvious negative implications for biodiversity. In this context a question raised by India at the meeting of the Committee on Trade and Environment (CTE) of the WTO was whether IPRs for plant varieties militated against in situ conservation by promoting There are a number of problems and conflicts that arise from the point of view of local and indigenous communities. The IPR model which is sought to be harmonised under the TRIPS agreement, does not recognise informal community innovation. Further, the notion of private, monopolistic IPRs under the TRIPS is an alien concept for many local andindigenous communities, since for them most knowledge and biological resources are communally owned and are meant to be shared (Posey, 1996). The notion of collective IPRs is not recognised under current IPR models, or the TRIPS agreement. Regarding the traditional knowledge and informal innovation practices of indigenous peoples and local communities, the CTE simply states that new forms of protection adapted to the particular circumstances of local and indigenous communities do not fall within the purview ofTRIPS since they were not discussed during the negotiations (TRIPS, 1995).

Objectives and Hypothesis

To examine the impact of protection of basmati rice seeds on Indian agriculture.

Research Methodology

After an indepth analysis of the issues concerning the impact of IPR provisions on agriculture, the Questionnaire was sent for an initial screening to National Council of Agricultural policy and research, Pusa Road, New Delhi, and to Indian Institute of Science, Bangalore. After the first screening the Questionnaire was checked by Shri Devendra Sharma, agricultural expert and a journalist in Delhi. And in the third and final stage the Questionnaire was finalized by Shri Biswajit Dhar, international expert on IPR issues presently working as chief of WTO division at IIFT, New Delhi. The process of collection of data was conducted through personal interviews, mail surveys and telephonic interviews. The sample consists of the following five segments:

1. Non Governmental Organisation and Farmers Organisations
2. Agricultural Scientists
3. Professors and Academicians
4. Seed companies
5. Experts

NGOS/Farmers Organisations: For NGOS ,the respondents were chosen carefully from the directory of NGOs. In India. all the NGOs were chosen from Northern India because rice is grown mainly in this region only. For Farmers organizations the respondents were chosen from the rice fields of Karnal and Palwal from the state of Haryana and Pilbhit and Ghaziabad from the state of U.P. These two states incidentally are the major rice producing states of India.

Agricultural Sceintists: Under the aegis of Indian Council for Agricultural Research (ICAR), seed technology Division of National Council of Agricultural Policy Research has been doing research on seed varieties over the Years. Most of the respondents were chosen from this Institute. Other respondents were chosen from ICRISAT, Pune, and from ICAR campus, Pusa Road, New Delhi.

Professors and Academicians: Professors were chosen from Universities and Institutes where research is being done on agricultural issues and International business. Gobind Ballabh Pant University, Pant Nagar, Indian Institute of Management, Bangalore and Ahmedabad, Indian Institute of Foreign Trade, New Delhi RIS, New Delhi, TERI, New Delhi were the prominent institutions from where the respondents were chosen.

Seed Companies: Respondents were chosen mainly from seed Quest Yellow pages which is an international organization. maintaining the data base of seed companies in India and other organizations in Delhi.

Experts: Respondents were chosen mainly from Institutions like, IGIDR, Mumbai and Gujarat, Indian Institute of Pulses Research, Kanpur, and Indian Statistical Research Institute, New Delhi.

The Sample

A sample of 250 respondents was drawn from the categories mentioned below:

1.	Seed Companies	Sample Size 50
2.	Expertsin Agriculture	Sample Size 50
3.	Professors/Academicians	Sample Size 50
4.	Ngos/Farmersorganisations	Sample Size 50
5.	Agricultural Sceintists	Sample Size 50

Data Analysis

The entire data of 250 respondents was analysed using the Chi- square test. Chi square test was used because this test analyses the data and verifies the degree of difference amongst the data collected. As the respondents come from various parts of the country no other test seemed to be better other than the chi-square test. Question wise analysis is given below followed by hypothesis testing. The entire

questionairre was divided into two parts quantitative and subjective .Therefore each question has been analysed accordingly. Subjective responses have been analysed under the heading Content Analysis

Q1. Will Biopiracy affect indian exports adversely ?

Seed Companies	29	13	8
Agricultural Sceintists	27	3	20
Farmers Organisations	35	2	12
Experts in agriculture	36	10	4
Professors agricultural sceintists	30	3	18
	157	**31**	**62**

Content Analysis

DISAGREE- 3

P- I believe in free trade and free movement of factors of production .Small farmers may not get affected.

F- Biopiracy has caused severe concern for small farmers in India but actually speaking it may not happen.

S- Exports may not be affected by Biopiracy at all. There are other factors involved in it.

AGREE-0

Survey Results

62.8% agreed, 12.4% remained indifferent, 24.8% did not agree. None of the subjective respondents agreed to the question.

Implications

No, biopiracy will not negatively affect indian agriculture.

Q2. There is provision in the Plant variety Protection and Farmer's Rights Act for the Plant Breeders to Share benefits of technology with the farmers in India under the clause of benefit sharing. However it is apprehended that plant Breeders may for various reasons not like to pass on the benefits to small farmers. In the long run majority of exporters may not be able to upgrade their quality and exports of basmati rice can take a beating.

Seed Companies	28	10	12
Agricultural Sceintists	18	12	20
Farmers Organisations	30	3	17
Experts in agriculture	28	10	12
Professors/agricultural Sceintists	18	12	20
	122	**47**	**81**

Content Analysis

DISAGREE-3

A- There are other reasons for low rate of Transfer of Technology to small farmers like awareness and low levels and Govt Policies Breeders sharing technology (or not sharing) may be only for small reasons.

E- Germplasm of all crops plants is so scattered that it would remain unavailable for farmers.

A- The GOI has to ensure that provision is implemented , if quality is upgraded export will be affected.

AGREE- 2

E- The issue of "Policy for transgenic varieties of crops" especially the rice has already been taken care in the agri- biotech research. The elite class of rice varieties like Basmati and Pusa are used only for standardization of transformation techniques and not for commercial preparation of transgenic varieties. The Indian scientists and the Government are well aware on the importance of the Indian rice germplasm protection. No studies done on gene flow in rice, no concept of gene pool contamination.

F- In traditional seed system, farmers continuously search for new planting material from neighbours, the next village, the next valley or through more distant trading routes. Formal sector Supply of seeds to marginal areas will always be difficult. Since resource limitations will continue, public seed supply should be designed to take advantage of local seed system for producing and distributing seed. This will help in on-farm resource conservation. Efforts should be made to train farmers in saving seed on-farm, assistance in development of low-cost seed stores and local gene bank technology. These changes necessitate significant changes in policy makers' perspectives.

Survey Results

32.4 agreed, 18.8% remained indifferent and 48.8% did not agree. 60% of the respondents disagreed whereas 40% agreed.

Implications

It seems that the matter is not so grave, Indian sceintists will be able to take take care of the same.

Q3. Farmers in India are trapped in debt buying inputs for crops. Farmers rights provisions and Plant Breeders rights can improve this situation in India.

Seed Companies	35	3	12
Agricultural Sceintists	19	3	28
Farmers Organisations	35	7	8
Experts in agriculture	35	3	12
Professors/agricultural scientists	28	6	18
	152	**22**	**78**

Content Analysis

DISAGREE -2

A- There are highly defective provisions for protection of farmers rights.

E- To some extent, but on the whole farmers rights provisions will certainly not affect farmers in India.

AGREE -3

E- It is difficult to say but on the whole the provisions seem encouraging for farmers in India.

F- The Plant Variety Protection and Farmers Rights Act 2001 has encouraging provisions for indian farmers. It will certainly help the indian farmers in the long run.

E- The Provisions are helpful for indian farmers, it is expected that it will certainly give a strong fillip to the indian farmers in the long run.

Survey Results

60.8%, agreed, 8.8% remained indifferent whereas 31.2% did not agree. 40% disagreed and 60% disagreed.

Implications

The provisions in the law are promising, only time will tell the actual reality.

Q4. The genetic alteration of seeds can result in crop failures. In extreme circumstances this can also result in farmers committing suicides. This can give a massive blow to the exports from the country.

Seed Companies	22	12	16
Agricultural Sceintists	22	9	19
Farmers Organisations	22	12	16
Experts in Agriculture	22	9	19
Professors/agricultural scientists	22	12	16
	110	**54**	**86**

DISAGREE

A- Farmers are committing suicides in India but they are not doing so because of genetic alteration of seeds.

S- Genetic alteration will certainly not affect the exports from India.

AGREE

P- Farmers must face open competition as Government has given moderate facility to them.

F- Any genetic improvement is for better crop failure.

A- Farmers in India are not committing suicides because of crop failures. Genetic alteration can further aggravate the situation for farmers.

Survey Results

34.4% agreed, 21.6% remained indifferent and 44% did not agree. 40% of the respondents did not agree and 60% said they don't agree.

Implications

Q5. Sceintists apprehend that the tests carried out to assess safety of genetic contamination of seeds crops may be insufficient for new crops in development. Tampering with the genetic make up of rice seeds may affect india's rice seeds and may affect India's market in regions like Europe which have imposed ban on imports of genetically modified crops.

Seed Companies	31	12	7
Agricultural Sceintists	28	12	10
Farmers Organisations	32	13	5
Expertsinagricultural scientists	31	12	7
Professors/agricultural scientists	28	12	10
	150	**61**	**39**

Content Analysis

DISAGREE- 2

E- We should take steps to move out of chemical agriculture.

P- India will be able to increase trade in agri products provided farmers are open minded.

AGREE- 0

Survey Results

24.4% agreed 15.6% remained indifferent 60% said they did not agree. 67% disagreed and 33% agreed.

Q6. As more and more pesticides and other inputs will be imported from abroad the prices of these inputs can be subject to foreign exchange fluctuations. Price fluctuations can make the exporters difficult to compete in the international market.

Seed Companies	31	13	6
Agricultural Sceintists	16	14	20
Farmers Organisations	31	3	16
Experts in agricultural Sceintists	22	12	16
Professors/agricultural sceintists	29	12	10
	127	**54**	**68**

Content Analysis

DISAGREE - 10

E- India stands to gain from higher world prices in the long run as india also liberalises agricultural trade, however the increase in the domestic food prices skews the distribution of gains only in favour of large farmers. Real incomes of landless labourers and small farmers fall.

AGREE – 7

Survey Results

27.2%, agreed 21.6% remained indifferent and 50.8 did not agree 58.% disagreed whereas 42 disagreed.

Implications

The range under which the pesticides prices will fluctuate is minimal. No major difference to the farmers.

Q7. IPRs in agriculture would encourage companies to develop new varieties of non basmati rice which may promote exports of non basmati rice from India.

Seed Companies	32	10	8
Agricultural scientists	16	10	24
Farmers Organisations	30	4	16
Experts in agricultural Sceintists	32	10	8
Professors/agricultural Sceintists	20	12	18
	130	**46**	**74**

Content Analysis

DISAGREE - 5

It is not IPR regime but the quantity and demand of the product that will give advantage.

AGREE - 11

Survey Results

29.6%, agreed, 18.4% remained indifferent, 52% did not agree.

Implications

Development of new varieties will certainly improve export possibilities for indian agricuture.

Q8. The IPR regime will allow the Indian farmers to get access to high grade seeds which will give them an advantage in the international market.

Seed Companies	24	22	4
Agricultural Sceintists	30	12	8
Farmers Organisations	34	5	11
Experts in Aricultural Sceintists	24	22	4
Professors/Agricultural Sceintists	30	12	8
	142	**73**	**35**

Content Analysis

DISAGREE- 5

Although genetically and physically the seed quality may not be as high as in the formal seed supply systems, the advantages of low price, seed adaptability and easy access to seeds of traditional varieties offset the difference in quality. However, it should be noted that although farmers' varieties have better adaptability and tolerance to biotic and abiotic stresses compared to many of the available improved varieties, these qualities tend to deteriorate with time. It is, therefore, clear that unless action is taken to assist the informal sector in the improvement of on-farm variety development, seed production, quality control, seed handling and storage, the majority of farmers in Asia will be denied the benefits of modern crop improvement programmes.

AGREE- 2

Survey Results

56.8% agreed, 29.2% remained indifferent and 14% did not agree at all.

Implications

Farmers are not aware about the benefits of the GM seeds. What is required is that they should be educated enough to utilise the benefits of the same to enhance productivity.

Q9. Patenting of basmati rice non Indians abroad may India loose $ 500 million every year.

Seed Companies	31	13	6
Agricultural Sceintists	16	12	22
Farmers Organisations	18	12	20
Experts in agricultural Sceintists	31	3	16
Professors/ agricultural Sceintists	34	15	1
	130	**55**	**65**

Content Analysis

DISAGREE

No comments

AGREE

No Comments

Survey Results

52%, agreed 22% remained indifferent and 26% did not agree.

Implications

No comments

Q 10. Trade related intellectual Property rights regulations may itself turn out to be an impediment to rice trade in India particularly for every poor farmers in India.

Seed Companies	31	13	6
Agricultural Sceintists	16	12	22
Farmers Organisations	18	12	20
Experts in agricultural Sceintists	31	3	16
Professors/agricultural Sceintists	34	15	1
	130	**55**	**65**

Content Analysis

DISAGREE - 5

AGREE- 11

Survey Results

52%, agreed 22% remained indifferent 26% did not agree.

Implications

It can safely be said that the speed of progress of patenting will certainly benefit advanced countries more as compared to india. Indian farmers can certainly get affected.

Testing of Hypothesis

Hypothesis

Protection of seeds of Basmati rice will reduce india's market share of basmati rice in the international market.

Categories	Agree	Indifferent	Disagree	Grand Total
Seed Companies	294	121	85	500
Agri Companies	208	99	193	500
Farmers Organisations	285	73	142	500
Experts in Agriculture	292	94	114	500
Prof./Agriculture	273	110	117	500
Grand Total	**1352**	**497**	**651**	**2500**

Observed Frequencies	Expected Frequencies	(O-E2)	O-E2/E
294	270	576	2.13
208	270	3844	14.2
285	270	225	0.83
292	270	484	1.79
273	270	9	0.03
121	99	484	4.88
99	99	0	0
73	99	676	6.82
94	99	25	0.25
110	99	121	1.22
85	130	2025	15.5
193	130	3969	30.5
142	130	144	1.10
114	130	256	1.96
117	130	169	1.30
			82.51

$X^{2=} = 82.51$

V = (R-1) (C-1) = 4 X 2 = 8

For v =8, X2 0.005 = 15.507. The calculated value is greater than the table value.

Result

The hypothesis stands null and void

Protection of Basmati rice seeds will not adversely affect indian agriculture.

Conclusion

It seems that IPR is not causing any problems to basmati rice exports but it is the infrastructural problems that create all the hassles towards export of basmati rice from India. What is required is that the Government of India should improve infrastructural bottlenecks to improve the situation concerning exports. Farmers have to be made more aware about the provisions of Farmers Rights and farmers Privilege. It is the indian farmer who has to wake up.

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