

OPINIONS OF RESEARCHERS TOWARDS GLOBALIZATION OF AGRICULTURE AND WTO

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ABSTRACT

World Trade Organization (WTO) has developed certain provisions related to agricultural sector to help in regulate trade between nations. With the advent of WTO and its provisions in agriculture bring many opportunities and put many serious challenges as well. To evaluate the opinion of the researchers regarding to globalization of agriculture and WTO, the study was conducted in the research institutes and organizations belong to ICAR, and located in Pusa Campus, New Delhi. A total sample of 120 consisting of Principal Scientists (PS), Senior Scientists (SS) and Scientists (S), 30 from each category was selected. From the results of the study led to conclude some important points as follows: Opinions on the effect of TRIPs Agreement on farmers and food security: For this issue, 65.0 percent were highly pessimistic and only 35.0 percent had optimistic perception about the affect of TRIPs agreement on farmers as well as food security'. The opinion on The apprehension among Indian farmers about the removal of Quantitative Restrictions (QRs): Most of researchers who expressed their opinions, responded pessimistically. In this regard, they had no optimistic opinions on the apprehension. For the Opinions on the Impact of the QRs on Indian Agriculture, most of the scientists (77.9 %) had "Undecided" response with the assumption. There were 13.3 percent agreed with the positive impact and 8.8 percent did not agree with the assumption. The Cheap Consumer Goods Are Ostensibly Being Dumped in Indian Market by Foreign Producers. For this assumption, there were 24.4 percent scientists revealed that this is the unhealthy trend and another 7 percent agreed that this is a healthy trend. For the Opinion on the Impacts of Private Sector Participation in Agriculture, most of respondents (62.2%) said "yes". Only 6.7 percent of respondents had said "no". Opinions on the Impact of AoA in market access, most of scientists (70 %) selected the "undecided" response, 14 percent of respondents said "yes" with the question. This meant that the AoA agreement has resulted in protection and increased market access. For the Opinions of Researchers on the Patenting System now-a-days, most of scientists (75 %) did not decide their opinions whether the patenting system nowadays is appropriate or inappropriate, 25 percent of scientists agreed with the view that patenting system nowadays is appropriate to our advantages, and remaining 10 percent of them revealed that patenting system nowadays is not appropriate to our advantages.

INTRODUCTION

In the year 2000s the media were full of references to globalization of the economy, communications-even politics and military affairs. Large crowds turned out to protest meetings such as that of the World Trade Organization (WTO) in Seattle, Wash., in 1999 or called attention to International Monetary Fund (IMF) policies in granting loans to

struggling economies. Many of the large empires and religious movements represent forms of globalization. Trade and investment between countries have promoted interdependence of the world's economies for centuries. What is now called globalization, however, represents an exponential acceleration of the integration process. As early as 1962, the Canadian visionary Marshall McLuhan wrote that the electronic age was turning

all humanity into a “global tribe,” and the term global village is attributed to him (Encyclopedia Britannica, 2000).

The post WTO period induced a major component of new economic policy is the globalization of agriculture that is linking the Indian agrarian economy with world economy. The new situation has awakened the farmers, researchers and planners to the implications of the WTO on the economy and life in the new economic system.

To study opinions and the attitude of scientists about WTO implications on Indian agriculture such as the affect of TRIPs, removal of QRs, private sector participation, impact of AoA, Patenting System nowadays etc. This study was undertaken. Besides researchers’ opinions about WTO, their view points on the globalization of agriculture were also studied. The study helps to develop insight into this issue in the process of globalization of agriculture and to plan our strategy to educate scientific community and others about the WTO and its implication in agriculture.

RESEARCH METHODOLOGY

The study was conducted in the research institutes and organizations belong to ICAR, and located in Pusa Campus, New Delhi. These organizations were Indian Agricultural Research Institute (IARI), Indian Agricultural Statistical Research Institute (IASRI), National Center of Agricultural Economics and Policy Research (NCAP), National Center of Integrated Pest Management (NCIPM) and Directorate of Extension (DOE).

The sampling frame of the study consisted of 555 researchers (according to the report of IARI 2002

and other scientists and officers of IASRI, NCAP, and NCIPM including DOE) present at the time of the study. Among them, a total sample of 120 consisting of Principal Scientists (PS), Senior Scientists (SS) and Scientists (S), 30 from each category was selected. However, only 90 of them returned the questionnaires. The respondents were selected purposefully from different levels to give each category their due representation in this study.

The respondents within each category were selected randomly. The sample size of the study was fixed approximately 15 % of the total scientists of IARI and other research organizations.

RESULTS AND DISCUSSION

1 Opinions on the effect of TRIPs (Trade-Related Aspects of Intellectual Property Rights) Agreement on farmers and food security

For this issue, only 27.8 percent of researchers had revealed their opinions, whereas 72.2 percent of respondents did not mention about this. Out of total responses, 65.0 percent were highly pessimistic and only 35.0 percent had optimistic perception about the affect of TRIPs agreement on farmers as well as food security.

Table 1a presents the perceived pessimistic opinions (18 % out of 35 % of responding scientists) about the effect of TRIPs agreement on farmers and food security. Ashok Mitra, (1996), has supported some of these pessimistic opinions in his article that the *sui generis* system, the government still has not answered how it will protect the right of farmers and researchers’ right vis-à-vis the breeders.

Table 1a: Pessimistic response about the affect of TRIPs

| S.No. | Pessimistic opinions | Frequency | (%) |
|-------|---|-----------|------|
| 1 | Farmers have to pay higher price for inputs, so seed will be costlier; | 16 | 17.8 |
| 2 | Food security will be adversely affected; farmers may not be able to handle freely amongst themselves. | 16 | 17.8 |
| 3 | Seeds, seedlings and farm machinery to be traded through TRIPs agreement. | 12 | 13.3 |
| 4 | India would only be used as market for products of developed countries and their multinational companies (MNCs). | 10 | 11.1 |
| 5 | Less of income, farmers can not sell branded seed of varieties; less of control over seed production. | 7 | 7.8 |
| 6 | Private monopoly will inject anti-biodiversity faith to recognize the collision. | 7 | 7.8 |
| 7 | Fear of competitiveness of products; no <i>sui generis</i> system to protect rights of neighbors for plant and seed; bio-piracy can take place. | 3 | 3.3 |

Opposite to the pessimistic opinions above, 10 percent out of 35 percent of responding scientists responded about the effect of TRIPs agreement on farmers and food security and the same is presented in the Table 1b.

Table 1b: Optimistic response about the affect of TRIPs

| S.No. | Optimistic opinions | Frequency | (%) |
|-------|---|-----------|------|
| 1 | The TRIPs negative affect will only be in short-term but in long-term it will be beneficial; food security in India is not going to be affected significantly. | 9 | 10.0 |
| 2 | Farmers can get their food items better, producers of food materials can get license. Changed market access; changed cropping pattern; more demand regarding maintaining quality standards. | 8 | 8.9 |
| 3 | It would encourage investment in agriculture, research and better quality seeds would be available to farmers for higher productivity. | 5 | 5.6 |
| 4 | Availability of diverse quality seed material through international market; development of Indian seed industry; domestic farmer's interest not directly affected. | 5 | 5.6 |
| 5 | It would provide an opportunity of commodity export; quality is assured at international level. | 3 | 3.3 |
| 6 | The patent owners must enjoy from TRIPs agreement; they should benefit from the rich biodiversity existing, conservation of genetic diversity. | 2 | 2.2 |

2. The apprehension among Indian farmers about the removal of Quantitative Restrictions (QRs)

Only 30.0 percent responses were received out of 90 respondents. About 70.0 percent did not express any thing for the apprehension among Indian farmers about the removal of Quantitative Restrictions (QRs) on a large number of agricultural commodities to meet WTO obligation.

Most of researchers who expressed their opinions, responded pessimistically. In this regard, they had no optimistic opinions on the apprehension.

It needs to be repeated again that on the apprehension among Indian farmers about the removal of Quantitative Restrictions (QRs), there was no optimistic opinion of scientists. Some major problems they mentioned about this apprehension, which is presented in Table 2.

Table 2: Pessimistic response on the apprehension about the removal of QRs

| S.No. | Pessimistic opinions | Frequency | (%) |
|-------|--|-----------|------|
| 1 | There would be surge of imports of cheap foreign products due to their export subsidies policy; it would lead to affect domestic price; people become more unemployed; more competition to be faced by farmers. | 27 | 23.0 |
| 2 | Fall in profit / income of farmers; export opportunities will be narrowed; farmers will get fewer buyers for their costlier commodities. | 25 | 27.8 |
| 3 | Local goods may not withstand; seeds may be costlier and not available at subsidized rates. | 18 | 20.0 |
| 4 | Lot of dumping; adverse effects on natural resources; change in cropping patterns; permanent dependence on MNCs; globalization at the cost of small and marginal farmers. We lack of technical know-how to produce quality products to compete with foreign cheap goods. | 12 | 13.3 |
| 5 | The monopoly of multinational companies will control agricultural production and market. Problem of disposal may arise. Exotic problem of pests and diseases may enter. | 6 | 6.7 |

Some of these pessimistic in apprehensions have also been calmed down by Q & A, (<http://pib.nic.in/focus/foyr>, 2001) that India has also not taken any commitment to provide minimum market access opportunities which other countries. They had tariffed their QRs, had to undertake to the extent of 3% of its domestic consumption going up to 5%, at the end of the implementation period. Though India is not entitled to use the Special Safeguard Mechanism of the Agreement, which can be used only by countries, which had tariffed, yet it can take action under the WTO Agreement on Safeguards if there is a surge in imports causing serious injury or if there is a threat of serious injury to the domestic producers.

3. Opinions on the Impact of the QRs on Indian

Agriculture

For this issue, most of the scientists (77.9 %) had “Undecided” response with the assumption. There were 13.3 percent of respondents who agreed with the positive impact in long run of the removal of quantitative restrictions on Indian agriculture. Opposite to this, there were 8.8 percent of respondents who did not agree with the assumption.

The opinions of researchers were sought on the impact of QRs. The question was “Do you agree that the impact of the removal of Quantitative Restrictions on Indian agriculture would be positive in long run?”. The responses received were analyzed and is presented here in the Figure 1.

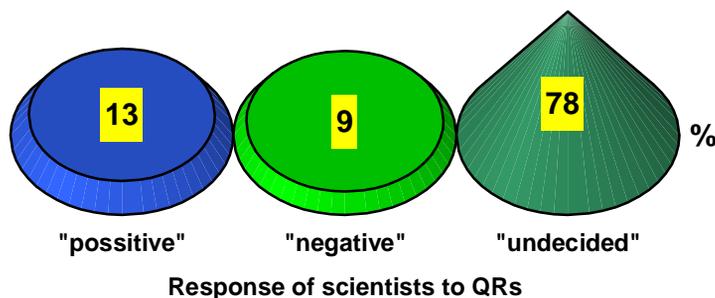


Fig. 1: Response of scientists on the impacts of removal of QRs

The agreed respondents have revealed their opinions as mentioned in the Table 3a follows:

Table 3a: The positive impact of the QRs on Indian agriculture

| S.No. | Agreed opinions on the positive effect of QRs | Frequency | (%) |
|-------|--|-----------|------|
| 1 | Indian agriculture must avail the opening up of opportunities in the world market by more investment in agriculture. | 12 | 13.3 |
| 2 | The removal of restriction will boost import and export and create the healthy competition between companies / countries. The procedural development will be avoided. | 12 | 13.3 |
| 3 | Big farmers have tended to take advantages of public sector support. The small and marginal farmers have remained on the situation. This will be an opportunity for them to join hands and take the opportunity. | 10 | 11.1 |
| 4 | Export prospects will be more and there will be free and more import for the need. The private-public partnerships may arise. | 7 | 7.8 |
| 5 | Market in developed countries should be exploited for export of our goods and products. | 5 | 5.6 |
| 6 | Farmers will have freedom to produce of their choice and their market. They have more capacity to improve production level and productivity. | 4 | 4.4 |
| 7 | Agricultural market is not competing with other which business is not oriented. Efficient producers of commodities produced on comparative advantage will remain in world market. International economy will work on principle of market forces. | 4 | 4.4 |

Some of these agreed opinions (positive effect of QRs in long run) were expressed online by P. Ramaswamy (1995): As a result of the globalization process, significant shifts in the agricultural production profile and changes in the commodity composition can be clearly foreseen. National as well as international corporations are

making substantial investments in new ventures. These include production and processing in such diverse areas...

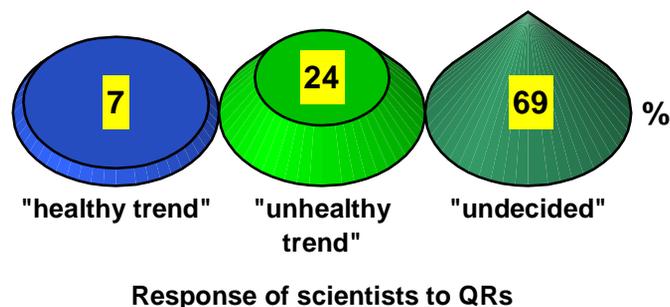
The **non-agreed respondents** have revealed their view of points as given in the Table 3b follows:

Table 3b: The negative impact of the QRs on Indian agriculture

| S.No. | Disagreed opinions on the positive effect of QRs | Frequency | (%) |
|-------|--|-----------|-----|
| 1 | Indian agriculture is at cross road as far as WTO / AoA are concerned. Mostly agriculture remains a way of living to the mass and export consciousness is now at trading level and not farmer's level. | 8 | 9.0 |
| 2 | Some products from outside country will compete unfavorably. | 8 | 9.0 |
| 3 | Domestic agriculture / industry will get effect. Developed countries will manage to keep their markets closed. | 6 | 6.7 |
| 4 | In the long term, our economy will suffer as our farmers are not yet equipped to compete in the open market (as adoption of high tech, SPS etc., need in the export stage). | 5 | 5.6 |
| 5 | If there are no quantitative restrictions, there could be imbalance in productivity, farmers would tend to grow more for benefit by export, and our own people may suffer which could also be counterproductive due to flooding of goods on the markets. | 3 | 3.3 |

These non-agreed opinions were in line with K.V. Peter and T. Paul Lazarus, (2002): Through the WTO' Agreement on Agriculture (AoA) came into force from January 1, 1995; it was seriously debated in India only from the preceding couple of years. With the removal of QRs on imports into India since April 2001, several concerns have been

raised on the impact of liberalization on India's agricultural exports. Out of the various agricultural products exported by India, spices have been selected for the present study....variability in both quantity exported and export earnings from spices is lesser in the post WTO period than in the pre WTO period.

**Fig. 2:** Response of scientists on the impacts of removal of QRs

4. The Cheap Consumer Goods Are Ostensibly Being Dumped in Indian Market by Foreign Producers. Is This A Healthy Trend?

For this assumption, there were 24.4 percent scientists revealed that this is the unhealthy trend and another 7 percent agreed that this is a healthy trend. Their opinions have been sum up in the Figure 14 and Table 18a and 18b as follows:

These responses of researchers have also been supported by Krishnan Venugopal (2002). He wrote that in some case, anti-dumping duties have been imposed even though the result would be to render certain user industries uncompetitive in their export markets. In other cases, anti-dumping duties have adversely affected certain small-scale industries that used as inputs the goods on which anti-dumping duties were imposed. Whatever be

the merits of anti dumping as a remedy for unfair trade, therefore, it would certainly be appropriate for either the Designated Authority or the Ministry of Finance to take into account the “national interest” before levying anti-dumping duties in each case.

Table 18a: The unhealthy trend of the cheap consumer goods

| S.No. | “unhealthy trend” opinions | Frequency | (%) |
|-------|--|-----------|------|
| 1 | It will affect domestic industry, it will induced more competition, create more unemployment. | 22 | 24.3 |
| 2 | It would discourage the growth of domestics and lead to quality deterioration in a competition for making cheap goods. | 22 | 24.3 |
| 3 | It will affect farmers’ income and may raise the food security problem. | 14 | 15.6 |
| 4 | It will result to reduction in demand of produce, low return to Indian producers. | 7 | 7.8 |

Table 18b: The healthy trend of the cheap consumer goods

| S.No. | “healthy trend” opinions | Frequency | (%) |
|-------|--|-----------|-----|
| 1 | It will result in finding ways of reducing production costs and specialized farming. | 6 | 6.6 |
| 2 | It will help us in strengthening our production to cope with the international standards. | 4 | 4.4 |
| 3 | Our farmers will not have consistent market for their produces. It would help in increase competition, help in quality enhancement. | 2 | 2.2 |
| 4 | Consumers will benefit initially and it will bring the power of consumers. | 2 | 2.2 |

For the opposite opinions, there were only 6.6 percent of respondents. They agreed with the assumption that the cheap consumer goods were ostensibly being dumped in Indian market by foreign producers. This is a healthy trend and their opinions were presented in the Table 18b.

5. Opinion on the Impacts of Private Sector Participation in Agriculture

In the process of globalization, the participation of private sector would be arisen. The question was asked whether it would have positive development or not. In this aspect, most of respondents (62.2%) said “yes”. Only 6.7 percent of respondents had said “no”, and 31.1 percent of respondents did not give their opinions (Figure 3).

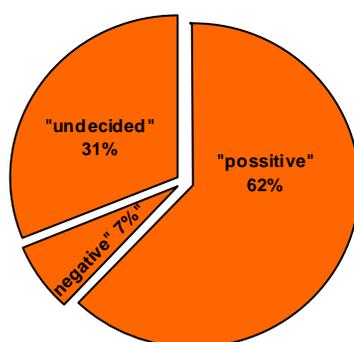


Fig. 3: Response on the impacts of private sector participation in agriculture

The majority of agreed opinions had revealed some main positive developments, which is presented in the Table 19.

These opinions were supported by M. Shivamuthy, B. Krishnamuthy, Vanitha Chetan and M.T. Lakshminarayan, and V.P. Gupta, (2001): Contract farming would be the better proposition for improving the efficiency in farming and to increase processing and export of fruits and vegetables in our country. In today's age of

competition, the government jobs are becoming scarce. The agricultural universities are turning out thousands of farm graduates who cannot find government jobs. Today unemployment among farm graduates has reached a peak stage. Therefore, there is a need to develop entrepreneurship among rural educated youth.

The minority of non-agreed opinions were afraid of the participation of private sector in all the activities. Their opinions are given in the Table 20.

Table 19: Response on the impact of private sector participation in agriculture

| S.No. | “positive development” opinions | Frequency | (%) |
|-------|---|-----------|------|
| 1 | The participation of private sector will help in development of agro-industry, more investment in production and research in the country, more availability of necessary goods to farmers. | 56 | 62.2 |
| 2 | It will induce more competition, more opportunities and less restriction, profit maximization. | 50 | 55.5 |
| 3 | This will assure the quality of goods and satisfaction of consumers. It will revitalize agriculture and agriculture will be science-based from which new technologies introduced, innovation may be fast. | 42 | 46.7 |
| 4 | It will help in food security and encourage breeding of novel varieties, ensures the quality of seeds, particularly hybrids. | 36 | 40.0 |
| 5 | The participation of private sector will also increase output and contribute to non-agriculture. | 36 | 40.0 |
| 6 | It will increase the efficient use of resources, improve and develop infrastructures, contribute effectively in commercialization of agriculture, services and do better management. | 26 | 28.9 |
| 7 | Private sector will take part to improve the identification of trade opportunity as gathering of processing, enhance trade coordination and promote export. | 16 | 17.8 |

Table 20: Response on the impact of private sector participation in agriculture

| S.No. | “Negative” opinions | Frequency | (%) |
|-------|--|-----------|-----|
| 1 | It can affect farming community; exploitation of nature may lead to problems. | 6 | 6.7 |
| 2 | The unfair competition between public sector and private sector can lead serious implication to farmers, agriculture. | 5 | 5.6 |
| 3 | Private sector does not help effectively small and marginal farmers; prelude better encourage for beneficiaries of private companies whereas small farmers are not profitable. | 3 | 3.3 |
| 4 | Big enterprises so they are more economical leading to cheap agricultural produce. Thus small farmers will be suffered as they can not reduce the price to that extent. | 3 | 3.3 |

6. Opinions on the Impacts of AoA in Reduction of Support and Protection Extended to Agriculture

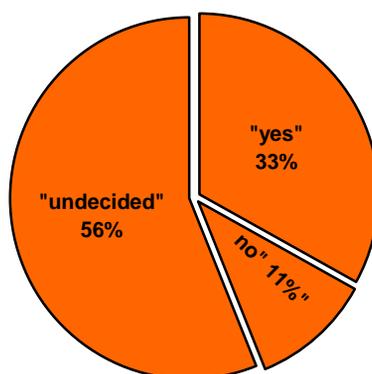


Fig. 4: Response on the impact of AoA in reduction of support and protection extended to agriculture

The respondents' opinions were in three categories: "yes" opinions, "no" opinions, and "undecided" opinions.

For this issue, the question has been raised: does the AoA aim to progressively reduce to a

substantial degree the support and protection extended to agriculture? The responses received were analyzed and the results are depicted in Figure 4.

Table 21: Response on the impact of AoA in reduction of support and protection

| S.No. | "Agreed opinions" | Frequency | (%) |
|-------|--|-----------|------|
| 1 | AoA aims to gradually reduce and cut subsidies to producers to open global market. | 30 | 33.3 |
| 2 | To make agricultural products cheaper globally and competitive. | 25 | 27.8 |
| 3 | To bring efficiency in agricultural production. | 16 | 17.8 |
| 4 | To use natural resources effectively. | 16 | 17.8 |
| 5 | To check unhealthy competition in agricultural export. AoA required all countries to allow a certain market access for agricultural export. | 12 | 13.3 |
| 6 | Reduction in support for Indian farmers who are largely small and marginal should make them incapable for achieving low price and quality products to maintain uniformity and economic progress. | 8 | 8.9 |
| 7 | To maintain uniformity and economic progress. | 4 | 4.4 |

Most of researchers had responded "undecided" (56 %). There were 33 percent of researchers who had agreed ("yes" opinions) with the issue that AoA aims to progressively reduce to a substantial degree the support and protection extended to agriculture. About 11.1 percent of researchers had not agreed with the statement.

The agreed responses of researchers have focused to some main problems (Table 21).

These agreed opinions were not in line with the opinion of C.H. Hanumantha Rao, (2001). He wrote that this (reduction of support and protection in agriculture) is a consequence of the pursuit of an inward-looking and import substituting

development strategy which has an in-built bias against agriculture. The terms of trade were, thus, deliberately kept unfavourable to agriculture in keeping with the prevailing wisdom to 'extract' surpluses from this sector for promoting industrialization.

7. Opinions on the Impact of AoA in market access

To investigate the response of researchers for this problem, the question was asked: Has the AoA resulted in a reduction in protection and increased market access? The responses collected were

analyzed and is presented in Table 22 and Fig. 5.

For this issue, most of scientists (70 %) selected the "undecided" response. There were 14 percent of respondents said "yes" with the question. It means that 13 out of 90 scientists have agreed with the opinion i.e., the AoA agreement has resulted in protection and increased market access.

The non- agreed opinion was held only by 6 percent respondents. In the non-agreed opinions, they mentioned the following main problems (Table 22).

Table 22: The opinions on the impacts of AoA in market access

| S.No. | "non-agreed" opinions | Frequency | (%) |
|-------|---|-----------|------|
| 1 | Failure to developed countries in reducing their support to agriculture. | 14 | 16.0 |
| 2 | There are different bargaining powers of different nations. | 13 | 14.4 |
| 3 | There is the ambiguity in definition and no implementation of the agreement. | 10 | 11.1 |
| 4 | The globalization of agriculture has increased global marketing opportunities, increased competition. | 6 | 6.7 |
| 5 | Indian agriculture has not changed much, it is still largely subsistence. | 3 | 3.3 |

This non-agreed opinion did not in line with the statement that "the concern is misplaced because India is under no obligation under the WTO Agreement on Agriculture to reduce any of the subsidies given to our farmers. This is because the total aggregate value of subsidies given to farmers

namely, subsidies on fertilizers, electricity, seeds, pesticides and cost of credit available to all crops as well as agricultural commodities is well below the ceiling prescribed in the Uruguay Round agreement." Q & A, (<http://pib.nic.in/focus/foyr2001>).

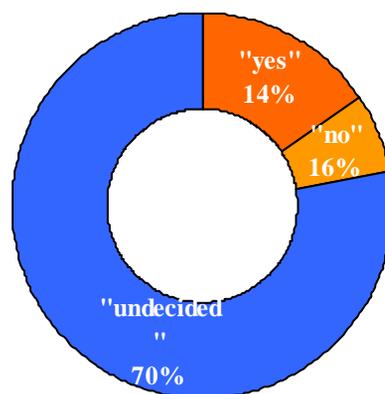


Fig. 5: Response on the impacts of AoA in market access

8. Opinions on the Implication When Provision of Reduction in Subsidies and Protection Will Be Fully Implemented

Table 23: Opinion on the implications when provision of reduction in subsidies and protection will be fully implemented

| S.No. | “Positive development” opinions | Frequency | (%) |
|-------|--|-----------|------|
| 1 | Affect on inputs such as fertilizers, chemicals...to production. | 23 | 25.5 |
| 2 | Increase in cost of production, and prices of agricultural commodities. | 18 | 20.0 |
| 3 | Protection solution will affect the domestic industry. | 18 | 20.0 |
| 4 | Inflation may go up. | 14 | 15.6 |
| 5 | Debt problems and problems of poverty may rise. | 14 | 15.6 |
| 6 | The export from Indian agriculture would be increased in competition, price will go down leading to less income / profit to the farmers because they can not compete with cheap dumped goods prices. | 10 | 11.1 |
| 7 | Small and marginal farmers will be badly affected. They have to join hand and function more effectively as a group. | 8 | 8.9 |
| 8 | Market will be flooded with goods. | 6 | 6.7 |
| 9 | Agriculture will become non-feasible. | 6 | 6.7 |
| 10 | Market will be unstabilized. | 3 | 3.3 |
| 11 | Status of poor will be elevated because of corruption. | 3 | 3.3 |

Some main implications as perceived by scientists about when provision of reduction in subsidies and protection will be fully implemented were observed. Disadvantages for farmers and agriculture when provision of reduction in subsidies and protection will be fully implemented as perceived by scientists are presented in Table 23.

The disadvantage opinions of researchers as expressed have online support by Ramesh Chand, Linu Mathew PhiLip (2001): The agricultural package of WTO on domestic support and export subsidies provides for complex classification of support and subsidies for agriculture, some of which are totally exempted from reduction commitments. This classification favours developed countries, which are able to maintain very high level of support for agriculture in the

exempt categories. The agreement provides enough room for maneuvering subsidies to provide protection for domestic produce. The level of non-exempt subsidies in developed countries remains awfully high even after meeting reduction commitments. These subsidies empower developed countries to cause distortions in the international market and protect domestic production from competition against imports. Compared with developed countries, the level of support in developing countries such as India is so low that a level playing field in agriculture trade is a far cry.

The advantages on the implication when provision of reduction in subsidies and protection will be fully implemented are many. The researchers mentioned some main issues which are presented in the Table 24.

Table 24: Opinion on the implication when provision of reduction in subsidies

| S.No. | “Advantages” | Frequency | (%) |
|-------|---|-----------|------|
| 1 | Agricultural goods from developing countries will have access to the market of developed countries. | 16 | 17.7 |
| 2 | Fair trade, export prospects of countries like India will increase. | 14 | 15.6 |
| 3 | Access to quality products. | 14 | 15.6 |
| 4 | Low inputs in agriculture leading to lower yield of crops. | 9 | 10.0 |
| 5 | Consumers will get quality products at reasonable cost. | 4 | 4.4 |
| 6 | Equalization of world food prices. | 3 | 3.3 |
| 7 | Reduced exports from developed countries. | 3 | 3.3 |

9. Opinions of Researchers on the Patenting System Now-a-days

In the post WTO or globalization of agriculture era to protect the right of the inventors, WTO has regulated in the TRIPs agreement, in which every country has to have *sui generis* system in the patenting for the innovators / inventors. The study tried to understand whether the patenting system in our country nowadays is appropriate / inappropriate to our advantages. The information received on this aspect was analyzed and is presented in Figure 6 and Table 25 & 26.

In this regard, most of scientists (75 %) did not decide their opinions whether the patenting system nowadays is appropriate or inappropriate to our country. There were 25 percent of scientists who had agreed with the view that patenting system nowadays is appropriate to our advantages, and remaining 10 percent of them revealed that patenting system nowadays is not appropriate to our advantages. The sums up of their agreed and disagreed opinions are presented in Table 25 and 26.

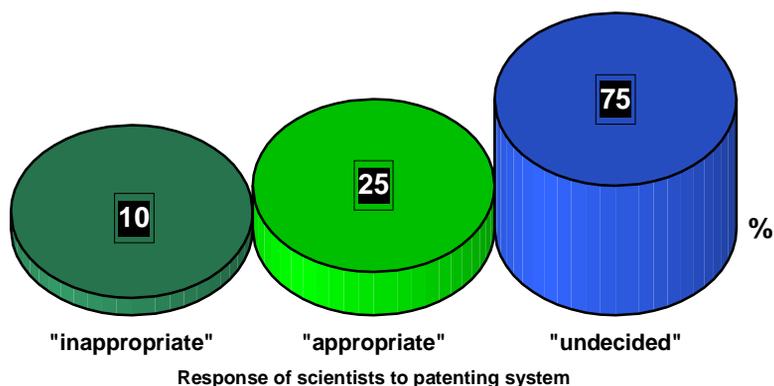
**Fig. 6:** Response of scientists on the patenting system nowadays

Table 25: Opinion of scientists on the Patenting System

| S.No. | Agreed opinions | Frequency | (%) |
|-------|---|-----------|------|
| 1 | It has been proper enforcement of farmer's and breeder's right. | 23 | 25.5 |
| 2 | To formulate procedure for proper benefit sharing, and recognize the contribution of inventors. | 12 | 13.3 |

Table 26: Opinion of scientists on the Patenting System now-a-days

| S.No. | Disagreed opinions | Frequency | (%) |
|-------|---|-----------|------|
| 1 | We have our own patenting system <i>sui generis</i> wherein we have to keep precision for our farmers to confine with their use of seeds for personal use. | 9 | 10.0 |
| 2 | Inventors should be adequately rewarded by the country of origin and the companies who get the patent right to market the product. | 6 | 6.7 |
| 3 | Indian Patent Act needs to be revamped to comparable up agreement laws. Strengthening of research and development and problem of bio-diversity through <i>sui generis</i> system. | 4 | 4.4 |
| 4 | The number of patents applied in Indian context is so low that it does not make a big dent. The patent owned may not be really needed at commercial level of production. | 4 | 4.4 |
| 5 | It should ensure that the patenting is done in a shorter period of time. | 4 | 4.4 |
| 6 | Base studies need to be conducted to ascertain the possibility in the future of the invention. | 3 | 3.3 |
| 7 | First has to be judged taking conscience of all inventors. Patenting as gene / nature need to be avoided. | 2 | 2.2 |
| 8 | Everything can not be salable and exploited but nature has to be preserved by all means and all have right of dignity and life. | 1 | 1.1 |

The results in Table 25 indicate that about 25.5 percent of the scientists observed the patenting system as proper and helpful to formulate procedure for benefit sharing and recognize the contributors.

Those who disagreed with present patenting system expressed their opinions in this regard. The information received is presented in Table 26.

These issues are somewhat in line with A.D. Damodaran (2002). According to him, patenting activities under the new IPR regime, which puts several constraints on 'indigenisation', patenting activity will necessary have to go up significantly; any failure on this front can have disastrous consequences for the country in future from the points of view of self-reliance and indigenous strength. If the Indian drugs sector is already

facing threat, the strong Trade Marks Regime has also started pinching other sectors as well.

CONCLUSION

There was the vast variation in the empathy of the scientists. However, there was the best point that their feelings, empathy, affection would be very kind-hearted and humane. Their opinions would be of immense value to make improvement in the globalization of agriculture. This also means that globalization of agriculture should be for the benefit of the mass of farmers and people.

The response of researchers about the affect of TRIPs agreement on our farmers and food security was very poor. Only 27.8 percent of researchers expressed their opinion, whereas 72.2 percent of them did not mention anything for this issue. Out of total responses, about 65.0 percent were

pessimistic about the globalization of agriculture and its impacts. The majority did not respond might be attributed to their lack of awareness of WTO and its implications.

The result on apprehension among Indian farmers about the removal of Quantitative Restrictions (QRs) on a large number of agricultural commodities to meet WTO obligation revealed that only 30.0 percent expressed their opinions and most of them (100 %) responded pessimistically. In this regard, no scientists had optimistic opinions on the apprehension.

For the issue of the impact of QRs on Indian agriculture, most of the scientists (77.9 %) responded "Undecided". There were 13.3 percent respondents who had agreed with the positive impact in long run of the removal of Quantitative Restrictions on Indian agriculture. In addition, opposite to this, there were 8.8 percent of respondents who had not agreed with the assumption.

The cheap consumer goods are ostensibly being dumped in Indian market by foreign producers. Is this a healthy trend? For this assumption, there were 24.4 percent scientists who revealed that this is the unhealthy trend.

In the process of globalization, the participation of private sector would be arisen. The question has asked whether it will be positive development or not. In this aspect, most of respondents (62.2%) said "yes". Only 6.7 percent of respondents said "no", and 31.1 percent of respondents did not give their opinions.

In case of the responses of researchers about the AoA resulting into the reduction in protection and increased market access, most of scientists (70 %) had selected the "undecided" response. 14.4 percent respondents said "yes" with the question. It means that 13 out of 90 scientists had agreed with the opinion *i.e.*, the AoA agreement has resulted in protection and increased market access.

For the patenting system in the post WTO or globalization of agriculture era to protect the right of the inventors, WTO has regulated the TRIPs agreement. In this regard, most of scientists (75 %) did not decide their opinions whether the patenting system nowadays is appropriate or inappropriate to

our country. There were 25.0 percent of scientists who had agreed with the view that patenting system nowadays is appropriate to our advantages, and remaining 10.0 percent of scientists revealed that patenting system nowadays is not appropriate to our advantages.

The results of attitude of researchers in general had showed that only 21.0 percent of researchers supported globalization of agriculture (high group of favourable). The medium attitude was high (51 %), and the low group of favourable was also relatively high (28 %). From that result, we can say that most of researchers did not support globalization of agriculture. In other words most of researchers in this study have been responded unfavourably towards globalization of agriculture. From this result we can understand that why most people all over the world have joined hands to protest against globalization. But it has been already in existence, so the best solution should be to give good suggestions for the improvement in the globalization of agriculture.

The unfavourable attitude may be attributed to low level of awareness of WTO issues among the scientists. The items not found favourable in the Attitude Scale need due attention on the part of planners and administrations. The results stress need to increase awareness of researchers about WTO issues.

The percentages of non-response and undecided are high indicates that respondents were not sure whether impacts of the WTO issues would positive or negative.

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Ý kiến của các nhà nghiên cứu về toàn cầu hóa nông nghiệp và WTO

Nước ta mới gia nhập Tổ chức Thương mại Thế giới (WTO) vào ngày 7/11/2006, còn đối với Ấn Độ thì họ đã là thành viên của tổ chức này từ tháng 4 năm 1994. Tuy nhiên họ vẫn còn nhiều nghiên cứu về những cơ hội và thách thức đặt ra do quy định của WTO. Nghiên cứu này tiến hành nhằm đánh giá ý kiến của các nhà khoa học trong lĩnh vực nông nghiệp làm việc trong các cơ quan và viện/trường thuộc Hội đồng toàn Ấn Độ về Nghiên cứu Nông nghiệp (ICAR) trên các lĩnh vực như tác động của hiệp định về quyền sở hữu trí tuệ liên quan đến thương mại (TRIPs), ý kiến về sự linh hoạt của những người nông dân Ấn Độ về sự dỡ bỏ hạn chế số lượng xuất nhập khẩu (Quantitative Restrictions), sự quan tâm khi hàng nông sản nước ngoài tràn ngập thị trường trong nước với giá rẻ đe dọa hàng nội địa, ý kiến về sự tham gia của bộ phận tư nhân vào hoạt động kinh tế, về các tác động của hiệp định về nông nghiệp (AoA) trên sự tiếp cận thị trường và ưu nhược điểm của hệ thống bản quyền (Patenting System) ngày nay ở Ấn Độ.v.v... Vì Ấn Độ cũng là một nước nông nghiệp như nước ta và những bài học của họ trong quá trình gia nhập WTO là rất quý giá cho nước ta để tranh thủ cơ hội và phòng tránh thách thức. Do đó, nghiên cứu này có thể giúp ích cho các cá nhân và tổ chức hữu quan trong hoạch định chính sách, sản xuất và xuất khẩu nông sản của nước ta trong quá trình hội nhập WTO.