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Transformation of the Rural Economy of Gujarat - A Study on Krishi Mahotsav

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ABSTRACT

Krishi Mahotsav, held across Gujarat State of India, is an intensive, month-long programme of mass contact, promising an innovative approach to reinvent agricultural extension, to reconnect scientists with farmers, and to expand the farmers' production possibility frontier through the active and creative involvement of 18-line departments of Gujarat government. The campaign was started in April - May 2005 with the objective to double agricultural income within five years in a sustainable manner. A total of 13 Krishi Mahotsavs have been successfully conducted up till now. In the past, the farmers desperately sought the help and direction of agricultural scientists for farming operations, but the scientists did not have time to hear their concerns and offer counsel. In fact, farmers were unable to make an appointment with the scientists. But, after the introduction of Krishi Mahotsav by the then Chief Minister, the farmers opined that now the agricultural scientists and the whole government machinery associated with farming and agricultural practices have come to the farmers' fields with serious intention to address their issues relating to farming, electricity, revenue and land, agricultural and rural finance, animal husbandry, etc. It has proved beneficial in terms of increasing farm income, motivating the youth to engage in progressive farming, and the holistic development of agricultural and rural economy. Krishi Mahotsav has become an Indian Model of Agricultural Extension.

Key words: Krishi Mahotsav, Farm income, Kharif crops, Rural economy, Crops diversification

The State of Gujarat has been experiencing a transformation in its agricultural and rural economy which is widely visible from the life of farmers and rural economic activities. The growth rate of Gujarat's agriculture has kept above 10 per cent for the past 10 years; its share in GSDP (Gross State Domestic Product) as well as the area and yield of various crops such as cotton and other cash crops have increased in the last ten years. Even as the country struggles to achieve 4 per cent in agriculture, Gujarat has been able to achieve more than 10 per cent growth owing to the state's effective policies. Food grain production has increased to 100 lakh tones in 2010-11 from 44 lakh tones in 1999-2000. The primary source of growth is the diversification in agriculture. Gujarat is predominantly a non-food crop economy; oil seeds, groundnut, tobacco, and cotton are the principal non-food crops. The share of cotton has risen to 15

per cent from 9.4 per cent. The share of high value sector, i.e., livestock, fruit and vegetables, has also increased to 34.9 per cent from 32.6 per cent. The share of food grains has fallen to 12.9 per cent from 15.8 per cent. This growth rate and visible impacts on Gujarat's agriculture is quite significant in spite of the declining growth rate of national agriculture in the major states of India. What made this remarkable transformation in the rural economy of Gujarat is a researchable issue though it has been found that Krishi Mahotsav, initiated by the then Chief Minister Shri. Narendra Modi in 2005 played a vital role. It is an Indian extension model of agricultural research and innovative practices from lab to land. With 5 per cent of the country's population and about 6 per cent of the total geographical area of India, Gujarat contributes nearly 6.5 per cent to India's GDP. Gujarat has become a role-model of economic performance and development for the country.

Context of Krishi Mahotsav— An Indian model of agricultural extension

Krishi Mahotsav is a concept derived from the persuasive, paternalistic, educational, and participatory paradigms of agricultural extension. During the eighties and the nineties, Gujarat's growth was dominated by manufacturing and services sectors, which can be attributed to the state's strong industrial policy and support to private

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sector initiatives. But during this period agricultural growth had slowed down, showing little or no growth. This was attributed to many factors like saturation of the green revolution, diminishing land productivity, decreasing public expenditure for agricultural development, lack of natural resources like water for irrigation and erratic rainfall.

The diminishing contribution of agriculture to the State's GSDP drew the attention of policymakers and after the year 2000, the growth in agriculture sector picked up dramatically—recording an average annual growth rate of more than 10 per cent during the last decade. The knowledge-intensive nature of the sector is more evident now than ever before. However, it is still not possible to permit farmers to nurture the plantations and produce food in their own way, because the agricultural sector in the country is facing rapid changes and unprecedented challenges. Urban market trends, globalization, changing consumption patterns, land and water constraints, climate change, need for alternative sources of energy including bio-fuels, and emerging diseases are factors that influence agricultural development [1].

Agricultural extension is an effective option for creating awareness and thus reducing the knowledge gaps among the farming community. It is an ongoing, non-formal educational process which occurs over a period of time and leads to improvement in the living conditions of farming households by increasing the profitability of their farming activities. However, in order to achieve the goals of improving the knowledge and skills of farmers as well as of bringing about a change in their attitude towards agricultural technology, farming activities and agricultural marketing is quintessential.

There are a number of paradigms in the agricultural extension system as numerous extension models have been introduced and implemented. But these extension models have differing success rates because of the difference in strategies. Thus, there was a need to evolve an effective and sustainable agricultural extension system with integrated and concentrated approach where farmers are organized and involved in the process of problem identification, planning, execution and monitoring of activities. Consequently, an outcome of a brain storming exercise, the Government of Gujarat came up with a unique plan to promote scientific and sustainable cultivation practices among farmers engaged in agriculture and its allied activities, i.e., the Krishi Mahotsav.

What is Krishi Mahotsav?

It is an intensive, month-long programme of mass contact, promising an innovative approach to reinvent agricultural extension in order to reconnect scientists with farmers and to expand the farmers' production possibilities frontier. The programme is being held since 2005. Every year it is inaugurated on Akshaya Tithiya, an auspicious day to begin farming operations. People from 18,600 villages along with the Chief Minister and ward members of the panchayat participate in the Krishi Mahotsav. Over one lakh officials from more than 18-line departments are engaged in the Krishi Mahotsav, which is attended by more than 10 lakh farmers. Demonstration kits are given to beneficiaries selected by the gram panchayats. Krishi Mahotsav is the world's largest mass intensive extension programme to facilitate agricultural planning and overall rural development. The campaign was started in April-May 2005 with the objective to double agricultural income within five

years in a sustainable manner. Up till now 13 Krishi Mahotsavs have been successfully conducted, where a total of 2.07 crore farmers have been guided by experts (Directorate of Agriculture, Government of Gujarat).

Strategies of Krishi Mahotsav

The basic strategy of Krishi Mahotsav involves four R's viz. at Right time, at Right place, by Right person, and with Right inputs. The Mahotsav aims to impart knowledge to the farmers at their doorstep by arranging farmer-scientist interaction meetings. The month-long campaign is preceded by months of elaborate planning. Krishi Mahotsav is not just limited to agricultural extension; it is also a medium for the holistic development of villages. Extension and development activities are being carried out parallelly on individual and community basis.

These events are organized at the place where all farmers, irrespective of their social standing, can easily participate, thus resulting in a large-scale farmer mobilization which includes women farmers also. Soil health tests are undertaken and soil health cards¹ are given to farmers, detailing the soil composition of their respective farms and suggesting the best possible crops for the soil type. Apart from providing information and exposure, the month-long campaign also serves to foster peer-group communications and discussions as well as recognize and publicize the achievements of farmer-innovators. In a nutshell, the Krishi Mahotsav is a massive exercise, which mobilizes various stakeholders in the agricultural developments of the State in a concentrated and time bound manner [2].

An important feature of Krishi Mahotsav is the Krishi Rath. It is a Mobile Extension Unit, mounted on a decorated tractor trolley and equipped with a video projector, posters and extension material, and is manned by agricultural university scientists and students who visit each of Gujarat's 18000 villages or a cluster of 4-5 villages on a pre-scheduled date.

Need and importance of Krishi Mahotsav

In the past, the farmers desperately sought the help and direction of agricultural scientists for farming operations, but the scientists did not have time to hear their concerns and offer counsel. In fact, the farmers were unable to make an appointment with the scientists. But, after the introduction of Krishi Mahotsav by the then Chief Minister, the farmers opined that now the agricultural scientists and the whole government machinery associated with farming and agricultural practices have come to the farmers' field to seriously address their issues relating to farming, electricity,

¹Soil Health Card system is a unique online programme, which makes the transfer of technology more scientific, precise, easy and need-based between scientist-extensionist-farmer and input-output dealers. It runs on a networked environment, which includes intranet and GSWAN (Gujarat State Wide Area Network). It is a repository of agricultural information for the benefit of farmers, agricultural scientists and policymakers. This programme makes fertilizer recommendations based on the analysis of the soil and nutrient requirements of the crop for each field to help increase the efficiency of the fertilizer.

revenue and land, agricultural and rural finance, animal husbandry, etc. Krishi Mahotsav is held every year before the Kharif season; there are review committees that periodically review the progress of Krishi Mahotsav as a follow up of the agricultural extension activities. The agricultural officers who received education at the agricultural universities in Gujarat not only maintain a very good relationship with the agricultural scientists, extension officers and farmers, but also help the government and agricultural universities in serving the farmers effectively and creatively. It is really a lab to land practice. In Gujarat, the government has introduced fully mechanized farming operations. Earlier, due to lack of such schemes, the medium and small farmers used to rent tractors, which prevented them from buying their own agricultural equipment. But now, the scheme floated by Government of Gujarat has enabled the farmers to acquire own tractors to help accelerate agricultural production and thereby multiply income in rural areas. As per the scheme, once in ten years, the farmers will be given 10–40 per cent subsidy to enable them to purchase tractors. Already, they are being given 50 per cent subsidy for installation of the micro irrigation system (MIS) and sprinkler irrigation system. Now, in Gujarat, more than 85 per cent of the agricultural land is irrigated, which has increased the income of farmers and motivated more and more youngsters to take up farming.

Field visit experiences

The first review committee on Krishi Mahotsav met in 2005 where the farmers demanded many incentives from the government, including subsidies and electricity. Up till 2005, the farmers received power for maximum four hours in a day. But now, they receive assured eight hours of uninterrupted power supply. This had raised their level of confidence in farming as a very progressive and remunerative economic activity. More than the review committee's recommendations, it is the good personal relationship between and the combined synergy of agricultural scientists, government officers and farmers at multiple levels that has resulted in the success of agricultural operations in Gujarat for the past 12 years. Their synergy is reflected in the farming activities after the initiation of the Krishi Mahotsav by the government of Gujarat. The farmers said that before 2005, it was difficult to arrange a meeting with agricultural scientists and researchers, but now the entire government machinery related to agricultural and allied activities is working on the farm to help increase their farm income [3]. The innovative practices and methods introduced by the scientists will be disseminated and diffused among the farmers. Group meetings not only give an opportunity to farmers to share knowledge and experiences, but also help boost their confidence. This practice can be emulated by the other states as well. This Krishi Mahotsav has ensured two-way traffic of ideas on farm practices between farmers and research community, and scientists and government officials.

Areas that were earlier the desert areas of Gujarat, now have assured water supply [using MIS (Modern Information System) tools that target water-related agencies to improve performance and reduce overall costs] with three seasons of cultivation. After each harvest, farmers receive guidance from agricultural officers and scientists on the types of crops that can be cultivated and in which particular soil and climatic condition—this is the real practice of taking the science lab to the farmland and science and

technology to the farmer's doorstep. This relationship between the farmers and the establishment has brought a revolution in the agricultural sector of Gujarat.

Of late, there is not a single report of farmers committing suicide in Gujarat, specifically the cotton growers as they earn huge profits by cultivating BT-cotton and are in direct contact of the government. The farmers request for a demonstration of the different agricultural implements and seeds in the Krishi Mahotsav. Thereafter, the farmers suggest which agricultural implements and seeds they want and from which companies, which includes private companies. The farmers are given options and the freedom to decide the list of companies. This is true decentralization as farmers have the power to make both small and big decisions relating to the choice of agricultural seeds and equipment supplying companies.

The Krishi Mahotsav largely benefits the small and marginal farmers, rather than the big farmers. It is because the big farmers have many other options for learning through experimentation from the government and private farmers. Sixty-seven per cent of the farmers in Gujarat are small and marginal farmers and as a result of Krishi Mahotsav, the previously dry land areas of Banas kantha district have now become irrigable and the district's contribution to the total agriculture production has increased. Rabi farmers are generally rich and the state cultivates lesser area under Rabi crops.

The farmers have also benefitted from e-Krishi Kiran, (an e-Governance initiative of the agricultural department), a web-based information system implemented in Gujarat to promote scientific farming technologies by enabling the farmers to get specific information relating to soil health card, alternate crop planning, etc., through the use of information technology. People felt the need to transform these vast databases of scientific and research stations into technologies and make it available for the farmers as technological interventions suitable to specific farming conditions. The farmers can benefit if this scientific agricultural information is made available to them for practical application in the fields [4].

At the district level, at each of the venues of the Krishi Mahotsav, it is the District Collector who is the Programme In charge. The farmers follow innovative farm practices; innovation is the base and the reason behind the success of the Krishi Mahotsav. It is obvious from the history of the development of developed countries that diversifications and innovations, information and knowledge sharing, and extensions have had positive impacts on the growth and development of an economy. How a state can enhance agricultural production and promote farmers' welfare through the application of knowledge for overcoming challenges has been proved in the case of agricultural development in Gujarat. Rather than through mediation of field officers, it is the direct contact with agricultural scientists that gives tremendous boost to farmers' confidence. The Krishi Mahotsav is a coordinated effort of 18 departments, which include revenue, irrigation, agriculture, electricity, land and water conservation, cooperatives, forest, health, fisheries, animal husbandry, ICDS (Integrated Child Development Scheme) centres, and rural development that work through a Three Plus One layer, i.e., scientists, department staff or bureaucrats, and farmers, with the "plus one" layer being the government and private companies. The Three Plus One layer has a synergetic effect on farmers.

Further, a cultural programme is also organized in coordination with the information department and the LSGD (Local Self Government Department). It helps build a cordial relationship between the officers of the various district-level departments, which, consequently, benefits the farmers. The officers work in a coordinated manner to ensure fast delivery of government services to the people. The Department of Agriculture Co-operation and Farmers Welfare is the nodal agency for Krishi Mahotsav, which helps maintain synergy between the line departments. In this context, it is important to note that extension visits play an essential role in enhancing farm productivity [5]. The extension workers make repeated visits to the farmers to spread awareness about the innovative government schemes and programmes, financial assistance available, and the new programmes and policies of the government.

Almost 10 years back, the Banas kantha region was a desert, but now 7 lakh hectares of land has been cultivated during the summer seasons with assured irrigation. In the Krishi Mahotsav review committee meetings, the farmers make choices and convey their requirements so that the officials are prepared to deliver the required services and material (seeds, fertilizer, etc.) during the fair. It is also an opportunity for the farmers to receive appropriate guidance and establish personal contact with the officials. In fact, it is an overall rural development programme where people feel

a close connection with the government. In other words, Gujarat is truly a decentralized democracy, unlike Kerala where planning is more theoretical.

The very friendly and able officials spread awareness about these schemes among the people. This type of knowledge dissemination should be encouraged in the system because new challenges keep cropping up in the agricultural and farming sector. It is a capacity building programme, which allows for a two-way communication between farmers, government officials, and agricultural scientists and helps strengthen both organizational and individual capacities. The programme involves officials of government departments, staff and students of agricultural universities, and farmers, and its budgetary allocation has rarely exceeded Rs. 100 crore per year [6].

With regard to the third layer of Krishi Mahotsav, i.e., the private and public agricultural inputs companies, the government has no inhibitions about including private companies if it is beneficial to the farmers. On the contrary, private inputs supplying companies are encouraged to participate in the programme. As mentioned earlier, it is the farmers who recommend the names of private companies. These companies are invited to participate in the Krishi Mahotsav where the government negotiates with them to provide agricultural inputs like fertilizers, seeds, etc., at the best price to farmers.

The Animal Hostel in Sabarkantha district is an initiative of Government of Gujarat, started by the then Chief Minister Shri. Narendra Modi in 2012-13 under the Rashtriya Krishi Vikas Yojana (RKVY) scheme. There are 350 beneficiaries (households) of the scheme who keep their animals (buffaloes and cows) in the hostel; however, the farmers have to clean and maintain their animals. There are 2 veterinary doctors and 5 livestock inspectors at the hostel. All animals are vaccinated and cared for but the cow owners have to pay Rs.100/- as treatment charge. Medicines are provided at the animal hotel by the deputed doctors of the Department of Animal Husbandry. The hostel has an 18000-liter water tank and gets 24 hours water supply for the animals, which has, scientifically, proved that there is a 10 per cent increase in the production of milk. The water supply facility for the animals is well managed and is something to be replicated in other parts of the country. They produce bio-gas and electricity for own use at the animal hostel. While milking is done by the owners, the milk is supplied to the dairy co-operative society by the farmers. Though the hostel has a capacity to accommodate 1000 animals, at present there are only 450 animals at the hostel. There are thirty-six sheds in the animal hostel, which allows for the farmers to keep limited number of animals in their homes. Besides, it helps keep their villages clean and beautiful. However, the fencing of the animal hostel has got damaged which needs to be fixed in order to keep the cattle protected. Further, the owners (who have to visit daily) not only have to take care of their animals, but also have to keep their animal's living space clean; however, it is a collective effort. The one-time payment to the hostel is Rs. 5000/-, whereas the annual payment is Rs. 2500/ per party. Many applications are pending before the Department of Animal Husbandry for starting animal hostels in different parts of the state; and of the total applications received, four have already been processed.

Visible impacts of Krishi Mahotsav

The Krishi Mahotsav has had a positive impact on Gujarat's agriculture. Some of the possible achievements are:

- After 1949, the highest ever achievement in terms of area, production and productivity of different crop was reported for the first time after the Krishi Mahotsav.
- Increase in crop area as well as in the production and productivity of major crops such as cotton, groundnut, wheat, rice, castor, and total food grains.
- Area-wise expansion of horticulture crops.
- Adoption of tissue cultured plants like banana and date palm.
- Increased production of "processing" variety of potato which gives better returns.

- High density plantation of pomegranate in arid area.
- Outbreak of a number of diseases declined to 39 (2011-12) from 106 (2004-05).
- Milk production increased to 98.17 lakh MT in 2011-12 from 67.45 lakhs MT in 2004-05.
- Agriculture GSDP at constant prices increased to Rs. 45,085 crores (2011-12) from Rs. 26,746 crores (2004-05).

A total of 1, 98, 07,034 farmers received guidance during the Kharif Krushi Mahotsav from 2005 to 2015. Moreover, 13,22,197 agriculture input kits, 10,11,383 horticulture input kits, and 14,81,014 animal husbandry input kits were distributed free of cost at the fair. At the Kharif Krushi Mahotsav 2015, sanction letters and cheques concerning the various subsidy-linked schemes worth

Rs.4458.28 lakh were distributed among 301,173 beneficiaries. The then Chief Minister Smt. Anandiben Patel had announced that the year 2014 will be celebrated as “KrishiVikasVarsh,” as a part of the Rabi Krishi Mahotsav. Up till now, two Rabi Krishi Mahotsavs have been successfully organized. During both Rabi Krishi Mahotsavs, a total of 5, 22,773 farmers participated and sanction letters and cheques concerning the various subsidy-linked schemes worth Rs.15,905 lakh were distributed to 53,296 beneficiaries [7]. Gujarat has its own way of transforming the agriculture and rural economy, which has become another revolution given the knowledge-sharing between farmers and researchers to bring innovative, modern agrarian practices to the farmlands. During both Rabi Krishi Mahotsavs, the Department of Animal Husbandry organized 417 Animal Health Camps across the State, wherein, a total of 3.54 lakh medical services, 1.06 lakh vaccinations, and 3,063 artificial inseminations were performed. Besides, the camps proved beneficial to 33,845 stockmen. During the Kharif Krishi Mahotsav 2016, a total of 376,521 farmers received guidance from agricultural scientists, and a total

of 3,528 sanction letters and cheques (each of Rs. 1,166/-lakh) concerning the various subsidy-linked schemes were distributed to the beneficiaries [8].

Technocentric farming – A case of Bt-cotton

India ranks second in production (25.5 million bales) after China (34 million bales), though it occupies the top position in terms of area at 11.7 million hectares. Among the major cotton growing countries, Australia registered the highest productivity, followed by Brazil and Turkey (1415 kg/ha), China (1403 Kg/ha), USA (971 kg/ha), and India (475 Kg/ha). Within India, Gujarat registered the highest cotton production (688 Kg/ha). The emergence of biotechnology as a powerful tool to combat insects/pests through the transfer of resistance genes from sources unrelated to plants led to the development of the transgenic plants. The Bt genes have revolutionized the production of transgenic cotton [9]. Gujarat started cultivating Bt cotton in 2002 and its sales stood at 0.018 million packets in the first year itself, i.e. 2002-03. In 2012-13, 5.5 million packets of approved Bt cotton hybrids were sold in Gujarat.

Table 1 Area, production and productivity of cotton before and after the introduction of Bt-cotton

Year	Area (Lakh ha)	Production (lakh bales)	Yield (Kg/ha)
1996-97	15.24	34.25	382
1999-00	15.39	27.5	304
2001-02	16.87	32.5	328
2002-03	16.47	50	517.09
2005-06	19.06	89	793.81
2009-10	26.25	98	634.67
2011-12	29.62	120	688.72
2016-17	25.31	84.71	569

With over 92 per cent of cotton area in Gujarat being used to grow Bt cotton hybrids, productivity has increased by 39 per cent as also the demand for Bt cotton hybrid seed which has increased by 220 per cent in the last one decade. This entire boom has been possible because of the proactive role of the private seed sector, as it has the ability to access technology from MNCs and other sources. On the contrary, the public seed industry, which mainly deals with varieties and hybrids released by the public research system, could not harness the benefits of such development. Successful state government initiatives like the implementation of the Micro Irrigation System (MIS) through its implementing agency, the Gujarat Green Revolution Company, to encourage farmers to adopt MIS to produce cotton has resulted in boosting yields and bringing more area under.

Gujarat has a separate institution for promoting organic farming

The progressive farmers² are members of the review committees as well as of other committees of the agricultural department of the Government of Gujarat. Earlier, the committee members did only arm chair research, with no benefits to the farmers. But now, the progressive

members from the farming community actively engage in the various activities of the committees; for example, fixing the procurement prices of commodities. The progressive farmers form a cartel (producers’ formal or informal agreement) to determine the price. While the producers decide the price, the brokers and middlemen try to increase their profit margin by discharging the various marketing functions; nevertheless, the government favours the just and logical arguments of the farmers. Thus, it is the collective effort of the scientists, officials, and farmers as well as the private agricultural inputs companies that has helped make Krishi Mahotsava success [10]. The empanelment of private agricultural inputs supplying companies is based on the feedback and opinion of the farmers, and not solely on the decisions of the bureaucrats and political lobbying.

Suggestions on further reforms in Krishi Mahotsav

Each year, the Krishi Mahotsav is organized on a different theme with a set of priorities but the number of days vary. In this regard, it is important to note that the number of days should not be reduced as the Mahotsav is an important source of agricultural information for the farmers. More importantly, the farmers feel the same should be repeated during the Rabi season, too.

Indian model of agricultural extension needs to be replicated in other parts of India

The Krishi Mahotsav is a promising agricultural extension model with a customized, integrated approach essential for the development of sustainable agriculture in

²Progressive farmers are new generation farmers who are greatly encouraged by the Government of Gujarat to increase agricultural productivity. They are equipped with fresh vigour, knowledge of modern innovative practices, and large areas of land. They use HYV (High Yielding Variety) seeds and plants.

the State. It will bridge the knowledge gap, which, in turn, will narrow the yield gap in agriculture and thus help achieve nutrition and livelihood security. The agricultural sector of all states of the Indian Union face severe challenges due to (i) the continuous and rapid changes in the world economic situation post globalization, (ii) the challenges relating to climate change, and (iii) the Free Trade and Regional Trade Agreements. Farmers in rural areas are unable to make successful operations plan as they cannot perceive the changes relating to the above developments at the national and international levels. This is why they need the technical expertise and advice of agricultural scientists as well as the technical and operational support of the government officials.

CONCLUSION

The Krishi Mahotsav, the flagship initiative launched by the then Chief Minister Shri. Narendra Modi in 2005, is organized routinely at the district, taluk and village levels by the Government of Gujarat with the help of 18-line

departments. This is an innovative approach to agricultural extension and can be aptly described as the Indian Model of Agricultural Extension as it celebrates farmers. Scientists, officials from agricultural and related departments and people's elected representatives are actively involved in the process that guide and aid the farmers at each and every level and process of farming. After the introduction of this scheme, there was a transfer of technology from agricultural labs to farmers' land which has helped boost the confidence and energy levels of farmers. Farmers in Gujarat invariably feel that they have a very sensitive government establishment which is highly elastic to their requirements and rising aspirations. It is evident that Gujarat is the leading cotton growing state of the Indian Union, but there is not a single incident of cotton growers committing suicide in Gujarat even though lakhs of such farmers committed suicide in Maharashtra, Punjab and other states. Hence, other states of the Indian Union as well as the countries of Asia and Africa can also experiment with the Krishi Mahotsav model of agricultural extension for the benefit of their farmers.

LITERATURE CITED

1. Bhalla GS, Singh G. 1997. Recent developments in Indian Agriculture – A state level analysis. *Economic and Political Weekly* 32(13): A2-A18, March 29.
2. Bhattacharya BB, Sakthivel S. 2004. Regional growth and disparity in India: Comparison of pre- and post-reform decades. *Economic and Political Weekly* 39(10): 1071-1077, March 6.
3. Anonymous. 2011. Government of Gujarat (2011). District-wise area, production and yield of important food and non-food crops in Gujarat state: 2008-09, 2009-10 and 2010-11. Directorate of Agriculture, Government of Gujarat.
4. Anonymous. 2017. Government of Gujarat (2017). Socio-economic review 2016-17, Gujarat State. Budget Publication No. 34, Directorate of Economics and Statistics, Government of Gujarat, Gandhinagar, February.
5. Mahendradev S. 1987. Growth and instability in food grains production: An inter-state analysis. *Economic and Political Weekly* 22(39): A82-A92, September 26.
6. Mishra S. 2006. Suicide of farmers in Maharashtra. Indira Gandhi Institute of Development Research (IGIDR), Mumbai, January 26.
7. Ray K. 2005. Globalization or Colonization? Deep and Deep Publications Pvt. Ltd., New Delhi.
8. Sinha A. 2005. *The Regional Roots of Developmental Politics in India: A Divided Leviathan*. Oxford University Press, New Delhi.
9. Anonymous. 2005. Tata Institute of Social Sciences (2005). Causes of Farmer Suicides in Maharashtra: An Enquiry. Final Study Report Submitted to the Mumbai High Court, Mumbai, March 15.
10. Anonymous. 1975. United Nations/Centre for Development studies (1975). Poverty, Unemployment and Development Policy: A Case Study of Selected Issues with Reference to Kerala. Department of Economic and Social Affairs, United Nations, New York.