



भारतीय कृषि एवं खाद्य परिषद
INDIAN COUNCIL OF FOOD AND AGRICULTURE

2016

Report on Doubling Farmer's Income by 2022 Farm Crisis and Farmers' Distress



Indian Council of Food and Agriculture

India International Centre, New Delhi



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Report on Doubling Farmer's Income by 2022

Farm Crisis and Farmers' Distress

30 April, 2016, India International Centre, New Delhi

Indian agriculture is passing through difficult times due to two consecutive drought situations in several parts of the country, thereby resulting into wide spread distress among farmers. The rural areas in these parts are facing food and livelihood crisis, more specifically the shortage of fodder and drinking water. Government needs to proactively address the situation and make more long term farmers centric policies related to irrigation, farm diversification, farm profitability and community support programs so as to socially and economically empower farmers.

In this context, a National Round Table Meet was held at India International Centre, New Delhi on 30 April, 2016 from 9.30 am – 1.30 pm, for discussing the immediate and long term measures towards addressing the issue of agriculture sustainability in face of climate change, market and technological developments and the need of effective policy measures to aid the farmers.

The highlights of the meet are as follows:

Dr MJ Khan, Chairman ICFA, convened the session by welcoming the guests and introducing the participants and highlighted the aims and objectives of the meet.

Dr.M.S Swaminathan set the agenda rolling by pointing out the two major factors that influence the farmers i.e. market and monsoon. Market fluctuates due to uncertainty of monsoon thereby putting farming sector in crisis. Climate change issues are also involved leading to extreme events which are difficult to predict. He also discussed market volatility which is also affecting highest production sector like rubber. The distress is multidimensional involving social, economic, technological, gender and ecological aspects and therefore policy changes needs to be incorporated and agriculture progress can take place by synergy between policy and technology.

Emphasising on the role of technology and youth in agriculture his words can be quoted as: "If agriculture goes wrong nothing else goes right." and "Younger people will join agriculture if it is technologically driven".

S.K Pattanayak Secretary – A&C, shared the role of policy and government in overcoming farmer distress during two major draughts. He told that a crisis meeting took place in Hyderabad in which various departments participated and a crop contingency plan was prepared and implemented in 10 states which were severely drought affected. He also introduced advantages of Pradhan Mantri Fasal Bima Yojna which presently focuses on reducing the premium i.e. 2% for Kharif crops and 1.5 % for Rabi crops so as to provide relief to farmers. This scheme also covers various types of contingencies like crop failure, germination failure, crop damaged at harvest and lack of marketing of produce in 14 days after harvesting. He also appreciated the efforts of Govt in rolling out biggest soil health card programme i.e. 3.2 Cr cards and 14 Cr cards by next financial year. He informed that by end of this financial year 23 irrigation projects will be completed and by end of next financial year 40 projects will be completed under Pradhan Mantri Krishi Sinchai Yojna. Recommendations from National Commission of farmers regarding integrating agriculture market shall be implemented by bringing 3 amendments to the Act. The states shall be funded if they implement the amendments like have single license, single license fee and launch e-marketing platform where the farmer can trade. This model has been rolled out in Karnataka.

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He also stated that a task force is constituted that will perform set of different activities like reducing cost of cultivation, designing a package for farmers including various allied activities that can be taken up to enhance income.

Sh JNL Srivastava ED – IFFCO Foundation and former Secretary – Agriculture, shared various points present in National Report on Farmers and discussed the importance of role of state govt in framing policies. He focussed on allied activities along with farming for income assurance and the need of skill development program for the farmer and his family. He emphasised the need of good institution along with good policies. He pointed out various lacunas in the system like absence of channels to disseminate technology to the farmers and the need to reform systems which have become bottlenecks in the growth.

He recommended that action should be taken at village level through ground level institutes like KVK and the transfer of technology from lab to land. He thus focussed on practical approach at both macro and micro level and coordination between the same.

Sh Krishan Bir Chowdhary, President, Bharat Krishak Samaj, strongly recommended the judicious use of natural resources to as to prevent them from exploitation. Since 89% of the farmers in the country are small and marginal, therefore he emphasised on the need of a farmer centric model instead of corporate based model so as to prevent usurpation of subsidies and resources.

He also advocated organic farming, the need to promote small scale industry, SHG and cooperatives, crop insurance and agricultural processing industry. Opposing the idea of GM mustard he said that there are much better yielding varieties present in our country having minimum yield of 25 quintal per hectare and also recommended the promotion of Indian breeds over exotic ones since Indian breeds are immune and are cost effective. He opined that to reduce distress in farming focus should be more on allied activities like milk production. He also suggested practising kitchen gardening for urban households and the need to focus on improving the extension services.

SK Goel former Additional Chief Secretary, Maharashtra: He agreed to Dr. Swaminathan's comment that farmer is in grip of two monsters i.e. monsoon and market and we are unable to provide complete solution to him and therefore, the formula of green revolution should be applied with risk mitigation strategy so as to prevent crisis.

He suggested the strengthening of value chains like that in Amul and seed value chains. He aimed that in coming 5 years every farmer should be part of one value chain or the other which includes soil moisture security, more crop per drop and market integration. He suggested the incorporation of an agency which can bring factors of production together.

Dr. RB Singh Chancellor, CAU and former Member, National Commission on Farmers: He pointed out that major recommendations of National Commission Report on Farmers are made by major political parties which contain the actual definition of a farmer, agriculture including a separate chapter on farmer distress and farmer suicide. Recommendations of the commission are: Farmer income must be enhanced; efficiency in the use of resources; minimum expenditure of non renewable resources. He quoted "Serve the farmer to save farmer". Since soil and water are common resources thus it is the responsibility of every individual to protect it and therefore, every farmer should be issued a soil health card. He stated that National Commission Report on Farmers has separate chapter on splitting of land holding, village knowledge centre digital dream, attracting and retaining youth in agriculture, market stabilisation fund, national risk fund, direct transfer of fund and procedure to link Indian system to international system which should be managed and measured.

Dr. P Joshi, South Asia Director, IFPRI Chairman, APEDA, recommended drought management in non drought season. Listing the causes of declining size of land holding, he suggested various steps like need to revive RKVY, more warehouses, more cold chain, implement watershed and water harvesting, ensure drinkable water to every house, adopt PPP model in canals management similar to power and road sector. He suggested bundling of insurance products and promotion of cooperative farming. He encouraged promotion of agribusiness, market reforms, organisation of backend and front end, increased investment in R & D and skill



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development. In nutshell Mr Joshi concluded, " Sustainable intensification, diversification, value addition, and good pricing can fulfil PM vision".

Vijay Sardana head – F&A, UPL Group, questioned the absence of food security plan at the central as well as state level, lack of resource allocation, lack of execution plan for Farmer Commission Report, vague idea of resource mobilization due to conversion of agriculture into a political activity rather than economic activity. Consequently, India will be importing 40 billion dollar of edible oil by 2020 despite of doubling productivity. He therefore suggested leadership development and plan of action at every level with improvement in private sector intervention in dairy and poultry.

Sh. Ravi Verma, MP and Chairman ICFA Parliamentary Forum, emphasised on use of traditional agricultural practices in order to prevent drought and other agricultural disasters. He suggested the need to organised and compile all the discussions taking place at various forums and sessions of parliament about condition of farmer year wise. He highlighted Mandi's role in watching farmer's interest. According to him Mandi samiti are farmer agency so farmer should be registered at Mandi and maintain the record of all that is sold. Data captured at mandi can address many problems. Farmer should be incentivised and rewarded so as to prevent rural youth from opting out. He targeted the increasing incidences of clashes and conflicts among farming communities and the need of cooperation between agriculture labour and farmer and therefore the need of leadership development. He suggested increasing investment on judiciary which should be fair and fast. He also stated that value chain of herbs should be developed. Coordination between Ayush and Ministry of Agriculture needs to be established. Focussing on use of indigenous resources he stated "We have not yet documented entire gene pool which should have been done on urgent basis".

Mr. Anand Bhaskar Rapolu, Member of Parliament highlighted the female dominated nature of agriculture and emphasised on holistic approach towards farm management by collective efforts of the community. He focussed on the need of preparedness for disasters like drought, cloud burst and flash floods using traditional methods. He appreciated the success of MNREGA which provided employment to more than 14Cr youth till date. He also emphasised on skill development for rural youth to provide strong workforce for mechanised farming and the revolutionary role of e-markets in modern day agriculture. Regarding role of ICFA he suggested ICFA should be vigilant towards flow and attacks towards agriculture and food security.

Sh. Salil Singhal, Chairman, PI Industries Ltd. appreciated the revolutionary efforts of green revolution, white revolution and horticulture mission. Highlighting the importance of technology he declined the role of soil health cards as the satellite can scan and communicate the soil condition even at 1 square meter level and farmers can receive the information on their smart phones. Quoting the example of Saurashtra he emphasised on traditional water harvesting approaches to combat drought and focussed on mechanisation of farming. He also highlighted the presence of 50,000 low grade pesticides rampant in market and misguiding the farmers which need to be checked.

A.K Sikka, insisted on preparedness and contingency plans for drought management for long run. He emphasised on efficient watershed management practices and rain water harvesting in order to prevent the decrease in water table. He informed that contingency plans have been made and implemented for 600 districts and have shown positive results but they need to penetrate at the block level. He stated that area specific regionally differentiated solution is required along with integrated farming with water and nutrient management as top priority. Fringe forest management should be focussed to save forest area near villages and a PPP model should be adopted for better coordination and convergence.



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Recommendations of the National Round Table on Doubling Farmers Incomes by 2022

Based on the recommendations of National Commission on Farmers, Government announced measuring agricultural progress by real income of farmers and not by gross production of agricultural commodities. The Finance Minister in his Budget 2016 Speech mentioned about doubling farm incomes. Later the Prime Minister of India gave a call to the nation of doubling farm incomes by 2022 by spelling out 6 points strategy. Accordingly a Task Group has been formed by the Ministry of Agriculture to come out with a detailed plans and its operationalisation.

In this context, Indian Council of Food and Agriculture organised a national consultation on 30 April, 2016 in New Delhi, involving top experts from the Government, industry, research and academic bodies, farmers organisations, parliamentarians and NGOs. The meet was chaired by Prof. MS Swaminathan and co-chaired by the Secretary – Agriculture, Government of India.

The average monthly income per capita from farming increased from Rs 1,060 in 2003 to Rs 3,844 in 2013, according to the report Situational Assessment of Agricultural Households by the NSSO, a compounded annual income growth rate of 13.7%. To double the income of farmers by 2022, in nominal (numerical) terms—which do not take inflation into account—would require a 15% compounded income growth rate, which is a marginal increase over the achieved increase from 2003 to 2013. However to increase the income in real terms would imply restructuring agriculture processes & policy interventions.

There is however, almost unanimity that the net income of farmers can surely be doubled well within the period of six years. A total of 40 recommendations for increasing incomes of farmers, have been divided into five parts, as under:

- 1. Increasing incomes by improving productivity*
- 2. Water and Agri-Input policies*
- 3. Integrated Farming System*
- 4. Better market price realization*
- 5. Special Policy Measures*

We seek one hour time for presentation of the recommendations, inviting some experts, who had participated in the deliberations on 30 April and some who sent their inputs by mail.

Thanking you and with regards

Dr. MJ Khan

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Increasing incomes by improving productivity

1. **Biotechnology is set to play critical role in crop and livestock production** by enhancing yields, nutritional profile, stress tolerance and crop protection. India must have a clear vision of the GM crops. The policy support accordingly be provided for the development of seed and biotech industry in the country. As per studies BT cotton alone has contributed more than Rs. 80,000 crores of additional output value to farmers. Similar potential many other crops may have for Indian agriculture and towards enhancing farmers profitability. Besides preparing Vision Document on Biotechnology, passing the BRAI bill in the Parliament, which can facilitate greater investments and faster rollout of biotech products, while ensuring compliance of bio-safety measures.
2. **Improving agricultural productivity in rain fed regions of India**, which constitutes more than 50% of the country's arable land. Besides watershed management, constructing check dams and farm ponds should be taken up in a mission mode for providing life saving irrigation for the crops. Chandrababu Naidu Committee report (2003) need to be revalidated and implemented for bringing 69 million hectare area under Micro-Irrigation to save water and input costs, increase productivity and improve quality of output. The area expansion and subsidy to the States must be linked with the adoption of precision agriculture model.
3. **Bridging yield gaps among the States** is important in improving national productivity i.e. the gap in rice yields almost 3 times between Punjab and Chhattisgarh. There is urgent need for developing a strategy document for assessing the present trends of crop productivity vis-a-vis the potential yield of major crop systems, so that specific action plans can be taken up for bridging the yield gaps, which in turn will contribute to enhanced productivity of farming systems. **Increased Budget on Farmers Inter-State Exposure Visits and Training Scheme of MoA.** This is a powerful scheme towards helping farmer bridge the yield gap.

Water and Inputs

1. **Fertilizer Subsidy and Rationalizing the NPK pricing** for maintaining NPK ratio in the soil and better application technologies to improve efficiency and reduce fertilizer subsidy by Rs. 25,000 – 30,000 crores annually. Policy on promoting crop specific speciality fertilisers and fertigation, besides setting standards and regulating bio-fertilisers under Soil Health Mission is needed. Since the year 2010, NP / NPK fertilisers have been reformed and put under Nutrient Based Subsidy (NBS) whereas Urea continues under direct control. Consequently, the gap in MRP of Urea and NP / NPK fertilisers has been widening. Therefore, unless corrections are made in the fertiliser policies, the benefit of soil health card will not be realised. And desired increase in yields in major crops will continue to delude the nation.

2.



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2. **Crop losses in India are huge and estimates range from Rs. 90,000** to Rs. 1.50 lac crores annually. Pesticides play an important role not only in crop productivity, cost reduction and quality improvement but also in protecting crops from pests and diseases. The cost benefit ratio in using pesticides is heavily in favour of farmers. The Government however needs to check flood of spurious pesticides in market by fly-by-night operators by regulating registrations, strengthening quality enforcement and tackling corruption through provisions of joint testing of samples.
3. **Farm Mechanisation in India** has been a story of tractorisation. Time has come to promoting efficient equipments and tools and small engine driven tractors to address small farm requirements adequately. Through a mix of specialised CHCs and with State Agros, Cooperatives and input dealers. Developing and Custom hiring facility in farm mechanization should be given high focus. Through MANAGE network of ACABCs, Custom Hiring Centres can be promoted effectively by enhanced incentivisation and by provisioning to hire agribusiness consulting companies by MANAGE / States for promoting CHCs among ACABCs.
4. **There is a need for integrated water use policy.** India should critically examine several ongoing initiatives and develop its country-wide system for judicious and integrated use and management of water. A national commission on efficient water use in agriculture should be established to assess the various issues, regulatory concerns, water laws and legislations, research, technology development and community involvement. This will especially help resource-poor farmers in the rainfed ecosystems, who practice less-intensive agriculture.
5. Farmers however need to be educated on water usage systems to drift them away from flood irrigation systems, which affects productivity and wastes water. The most important part is the crops planning, which needs to be done keeping water resources of a region and the water intake by various crop in mind. For example high water consuming crops like paddy and sugarcane should be grown in high rainfall areas.

Integrated Farming System

1. **Promotion of Integrated farming system approach** involving synergic blending of crops, horticulture, dairy, fisheries, poultry, etc. seems viable option to provide regular income and at site employment to small land holder, decreasing cultivation cost through multiple use of resources and providing much needed resilience for predicted climate change scenario. Model Farms @ Rs. 200 lacs each need to be established in each district with 100% GOI funds for farmers to learn and adopt.
2. **Dairy husbandry is a boon for small farmers**, as a family with three cows or buffaloes can earn an annual income of Rs. 50,000 to 60,000, while conserving our precious native breeds. With stall-fed, high yielding animals, the dung availability will increase by 3 to 4 times, giving a boost to biogas and agricultural production. With introduction of good goat husbandry practices by appointing local youth to facilitate the activities as Field Guides, 35 million goat keepers in the country who are living below the poverty line, can



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enhance their income by four folds from Rs. 8000 to 35,000 per annum (BAIF's experience in Jharkhand, Odisha and Rajasthan).

3. **Promotion of intensive vegetable production** using improved varieties, organic manure and drip irrigation, can provide five times higher annual income, to the tune of Rs. 2 lakhs per acre (BAIF's experience in Andhra Pradesh, Karnataka and Maharashtra). Farmers in semi-arid areas with 2-3 cows or 8-10 goats and cultivating dual purpose food grain crops on 0.4 ha land, have been earning Rs. 60,000 – 75,000 per annum. With efficient watershed development, land use planning and selecting of suitable crops, the income of the farmers can go up by 80-100% to generate an annual income of Rs. 40,000 to Rs. 60,000.

Better market price realization

1. **Revision of the APMC Act** and monitoring its implementation in the states. Need to amend APMC act by all the states to encourage competitive marketing environment and participation in NAM. Direct marketing and contract farming should be made easy for the farmers. Also to encourage the States for contract farming under which the buyer can provide the farmer access to modern technology, quality inputs, other support and a guaranteed price. A few experiments of direct procurement backed with technical support have shown to benefit the farmers in some States.
2. **The launch of NAM requires easing of norms of licensing** to enable seamless participation of buyers from across the country, movements of goods without restriction, harmonization of tax laws (including a uniform GST), standardization of grades and recognition of electronic trades. Exchanges would also have to widen the participation by facilitating farmers to take positions through cooperative or other aggregators such FPOs.
3. **Reforms to the APMC Acts to permit pan-India trades**, electronic auctions and trading in warehousing receipts. Enactment of policies that enforces the standardization of agricultural produce such that graded product would have a form of a logo or label mandatorily attached to it to signify that the product meets all the standardization and grading requirement for packing, sealing etc., and only traders who are willing to follow the regulation are given "Certificate of Authorization".
4. **Agri infrastructure, storage systems** and market yards needs to be strengthened. More multipurpose market yard complexes, comprised of go downs, cold storage, farmers service centre etc. needs to be set up for farmers to directly participate, especially online in NAM. Farmers need to be educated on the available scheme of the Government. Enabling policy provisions can be done for large scale play of corporate in agricultural marketing and storage operations.
5. **Reducing post harvest losses** by strengthening grain storage infrastructure, cool chain systems for perishables, post harvest processing and value addition, transport, marketing, commerce and trade. FPOs can play an important role, provided they are provided proper training. FDI policy in food sector need to be relooked and allowed with more research inputs available now on its benefits.



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Special Measures

1. Structural reforms in agriculture pertaining to land leasing and market restrictions need to be addressed. The market regulation on movement and procurements by private players is hampering market growth and prices realization by farmers. Similarly due to land leasing policies of State Governments the concept of contract farming is not successful. The experiments of contract farming are based on "win all", bringing value to all partners in operations. This needs to be encouraged on a large scale.
2. **Through a nationwide crops competitiveness study**, States' profiling of crops and animal resources should be done, indexing them against national and global benchmarks on cost, quality and productivity parameters, and their short, medium and long term strategic advantages. Based on this national indexing and estimation of market demands in short, medium and long terms national crop planning needs to be done. If India has to succeed in global market on a long term basis, this task is unavoidable.
3. **Agriculture to be brought to the Concurrent List: Bringing the entire gamut of post production activities in agriculture, such as PHM, marketing, processing, infrastructure, agribusiness etc.. under the concurrent list of the Constitution for better central planning, as the business of food and agriculture is globalizing and role of central Government is increasing in making laws and policies, especially in post harvest, trade and agribusinesses, where MNCs and corporate sector is involved in big way.**
4. **Review of current scenario of farm credit and subsidy** disbursement system. All financial benefits, mainly the subsidies in different forms, should be provided and transferred directly to farmers account through e-governance through which tracking of farmers' application, status and approval of all schemes is available online. Gradually phase out all subsidies including fertiliser and only transfer money to farmers, calculating aggregate measure of support. This improves efficiency of govt investments.
5. **Implementing ambitious Agribusiness Hubs Model**, operating on a national platform and establishing 2.40 lac multi-functional Agribusiness hubs in all the Gram Panchayats of the country. This will revolutionize the farm economy and create jobs. The project outlines creating 10.0 million jobs, 50,000 crores of additional annual farm value, providing increased market opportunities of Rs. 50,000 crores and initiating various multifarious socio-economic activities, aimed at improving farm incomes.
6. **ICT-based agricultural extension** brings incredible opportunities and has the potential of enabling the empowerment of farming communities. Information technology can support better crop, fertilizer and pesticide use planning as well as disease monitoring and prevention, both in crops and animal husbandry,



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besides improving farmers' operational and financial management and to effectively connect them with the markets for better price realisation.

7. **Diversification of agriculture in the First Green Revolution areas** such as Punjab, Haryana and Western U.P. seems need of the hour. To promote diversification on ecological principles, will require making monetary equivalence (profit margin) between the replaced crop/commodity and enterprise with the ones planned to be introduced. Farmer is mainly concerned with the profit he gets from a particular crop or commodity. Crops like maize, soybean, pulses, oilseeds, fruits and vegetables have the potential to replace rice and wheat in this area. Upward push in MSP in favour of proposed diversification crops will be a practical option to achieve this objective.
8. **Integrating all central and state subsidies**, instead of reducing costs of inputs, need to be targeted to empower farmers through infrastructure development in rural areas to promote agribusiness, food processing, water management, soil health enhancement, seed production and processing, custom hiring, plant protection, dairy, poultry, fisheries and enterprises etc. This will boost up agriculture sustainability and farms profitability.
9. **Strengthening Organic Food Program** for India to make 10% of the global 60 billion USD market for each. Major parts of India such as NE, HP, J&K, Uttarakhand, MP, Chhatisgarh, Jharkhand, which are organic by default, must be made Organic by Process for the producers to get advantage of market value.
10. **Establishing Special Agriculture Zones (SAZ)** by selecting export oriented and industrial use crops. Promoting Crop Stewardship Programs, GAP and Certification, formation of Global Commodity Boards, on the pattern of California Walnuts, Washington Apples etc., can help double in 5 years the current level of 1.70 lac crores of agri exports, which will benefit farmers significantly. We need to globally position Indian food and agri produce such as North Eastern region as Organic Zone, Spices of Kerala, Cardamom of Sikkim, Mango of Malihabad, Orange of Nagpur, Kashmiri Apples, Bihari Litchies and Ratnagiri Mangoes, Tea of Darjeeling, Soybean of Indore and Nilgiris...and so on and promoting Geographic Appellation. Like tea belt of Assam, cotton belt of South India, the nation has to streamline rice belt, wheat belt, corn belt, oil seed belt, Pulses belt, sugarcane belt, tomato belt, mango belt, apple belt, ginger belt, turmeric belt, orange-lime-lemon belt, orchid belt, cut flower belt, jack fruit belt, peach and plum belt. Likewise livestock, fishery, apiary and sericulture belts shall also be created across the country with the objective to improve production and export.
11. **Promoting scientific agriculture micro-irrigation** on a very large scale. Micro irrigation along with the nutrient application can be highly efficient and priority should be given to empower farmers with micro irrigation. Advanced concept of Precision Agriculture need to be promoted on a large scale, emulating the success of TN Precision Farming Project. **A National Project on Precision Agriculture on the pattern of TNPFPP** should be launched with integrated approach from advance production technologies to formation of FPOs and linking them with the markets. Studies done by LSE, Harvard, IIM-A and other premier global institutions show an increase of 80% to 600% extra yields in different crops under Tamil Nadu Precision farming Project.