

What It Meant to Double the Farmers Income - Going by Madhya Pradesh State's Success Story

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Abstract

The paper, through the recorded observations made, enables the reader to know the fundamental steps taken by the state of Madhya Pradesh in achieving 100% increase in the Farmers Income which is visible from the statistics for the year 2014-15 onwards. It has thus experienced and exhibited a clear possibility of the achievement. There are a number of major and minor factors that were identified, discussed, planned, programmed and executed by the state administration to make the initiative a success. The whole initiative has involved a cross section of experts from different areas within the field of Agriculture - Administrators, Researchers, policy makers and those representing various farming and non-farming activities that the farmers have the access to. The benchmarking performance of attaining the abnormal increase in income of farmers that Madhya Pradesh could turn out at the state level has not only been on account of a general aspiration, but also the state's deep sentiment for the farmers in the state, whose earnings were quite low for years. The decision taken now to replicate the performance at the National level also is mainly to end the sad saga of hand-to-mouth incomes earned by the farmers, who actually get down into the fields and toil, day after day, throughout the season with expectations on incomes, commensurate with their objectives, dedication and the labour that they put forth. The resounding success that the state of MP achieved had set the tone for making it a National level goal too. The conclusive statement and the supportive information here-in the paper, would be a set of clear cut objective based achievements of the state which formed a clear agenda for implementation at the National level of farming sector. The Central Government's policy objective of doubling of the farmers' income at the national level, which was drafted in the year 2017, considering the factors that brought resounding success to the Madhya Pradesh State, is now a work-in-progress at the national level, and the initial targeted year for completion of the project is pushed now to Yr-2024 as against the year Yr-2022 fixed earlier. For Madhya Pradesh state it would now be an extended effort adopting certain factors which were not there in their agenda that pushed up their state level agriculture outputs in the pre-2017 period.

Methodology:

The paper is a reflection of study and observations in the field of agriculture and the success that the Madhya Pradesh state could achieve. It is about the planned effort that was undertaken by the state of Madhya Pradesh to look into various essential steps to be taken to attain the phenomenal success in increasing the agricultural output. The policies, plans, procedures and the connected activities that were major and minor were brought into the paper supporting through the connected statistics, recording the results achieved thereof. So the method adopted for this study was to identify, select, study and make note of the essential steps, their implementation and the results attained by the state of Madhya Pradesh, sourced from the already published information.

Keywords: Food security – Agricultural productivity – Doubling farmers' income – non-farming income – Madhya Pradesh state's success in agricultural output

Introduction

From the most ancient and the earliest living entity that first inhabited this earth to humankind – the evolved animal, if we have to go by the evolution theory, depended on plants and other animals for their food needs. The first search was therefore for food – the most basic need for the sustenance of life. While the plants synthesize and prepare their own food, the human being and entire animal kingdom depended upon plants for their food requirements. Humans categorized their needs and raised different kinds of food items from out of the plant kingdom which remained as the largest source of food requirements, while plant-life also supported other needs of humans – such as Wood for construction & furniture and medicinal plants for preventive and curative needs for the possible health based requirements and umpteen number of others. Plant-life has therefore been the primary source for human sustenance since it met all the needs of the people and most importantly the food needs. The importance given for Agriculture in India has not been a recent thing, but right from the ancient times, India has been focusing mainly on Agriculture.

“The excavation of the Mehrgarh period sites that is around 8000-6000 BC throws some startling facts about Indian agriculture that began as early as 9000 BC. The domestication of plants and animals are reported in the subcontinent by 9000 BC. Wheat, barley and jujube were among crops, sheep and goats were among animals that were domesticated. This period also saw the first domestication of the elephants.

With implements and techniques being developed for agriculture settled life soon followed in India. Double monsoons that led to two harvests being reaped in one year in the country facilitated the settled mode of production.

In the Neolithic period roughly 8000-5000 BC, agriculture was far from the dominant mode of support for human societies, but those who adopted it flourished. Agro pastoralism in India included threshing, planting crops in rows—either of two or of six—and storing grain in granaries. They passed their techniques of agricultural production to the next generation. This transformation of knowledge was the base of further development of agriculture in India.”

Income from non-farming activities

Farming community is respect-worthy in the society like no other community. India has been an agricultural country having large focus on the farming and the related activities. Industry developed over years and is a huge sector, but farming receives an equal or more focused attention of the Government as Agriculture in the country keeps it together. Over years, India has grown industrially and the GDP from the industrial sector has been growing steadily, but the agriculture remained and would remain as one significantly important sector. Successive Governments therefore worked with the purpose of improving the agricultural output as the food needs of the huge population in the country have to be met, apart from the exports, which is also done. Since small and insignificant land holding of the small farmers is quite high and the continuous hardships are faced by the small farmers in different areas of agricultural activities (initial investment, meeting costs of crop seasons, yield that they obtain, transportation and market prices, as also to withstand the failed crops and the corresponding losses), the small farmers are left with only hand-to-mouth earnings and have sometimes incurred losses. The impact of low income and the losses became significant and they found it difficult to come out from. It is surprising but a fact that the income from non-farming activities has been increasing while the income from the farming is not growing the same way.

While failed crops were a negative factor that irked the farmers and farming community, the excess production and productivity also posed a problem of excessive losses due to inadequate facilities to store and preserve food products especially the perishable food products.

Global food losses have been documented to be on the order of 25% to 50% of production volumes, caloric content and/or market values depending on the commodity (Lipinski et al, 2013; Gustavsson et al 2011; IIR

2009). The use of "cold" handling and storage systems as an investment to prevent perishable food losses is widely used in developed countries and can be highly cost effective compared to continually increasing production to meet increasing demands

for these foods. The use of cold technologies in the development of agricultural supply chains for meat, dairy, fish and horticultural products in the USA and EU countries began the early 1950s along with the growth of the mechanical refrigeration industry, but cold chains are still limited in most developing countries

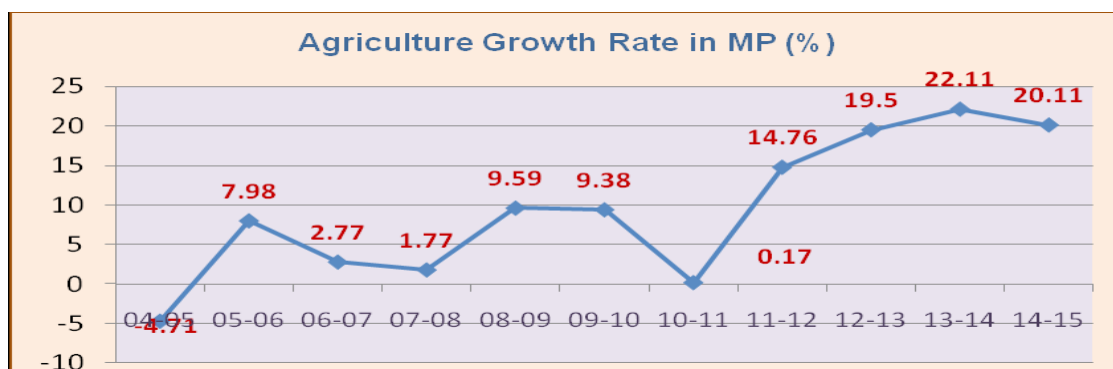
Food Security to be ensured through increased Farmer's income

Food Security has been a buzz word for years in the country and the successive Governments at the Centre were working their way towards the objective. Madhya Pradesh State had its priorities and the preparations. There was a systematic and series of discussions which led to a planned approach to resolve the problem, not only in the perspective of the state but overall in the national interest. The Madhya Pradesh State Government had thus worked its way to achieve a 100% increase (70% increase in five years) in the incomes of the farmers as a result of the major steps that were taken for attaining the goal.

Ref.No.3

Growth in productivity in the country, in general, has brought into focus the **Researchers** and the **Policy makers** – since the former could find beneficial answers and the latter could give a go ahead signal for positive measures for implementation and continuance. Food Security issues were the reason for it. The exit of the young from farming community and the increasing suicides among farmers led to the objective of increasing the Farmer's income and the rural sector which will take care of the Productivity increase and the Food Security simultaneously. The Union Government's decision & the resolve to ensure doubling of the farmer's income hence should not surprise us. The level of a paltry income of Rs. 6-8000 pm has been a distressing reality. Government's decision to act on it with a resolve now is quite understandable which adequately supported the decision by substantial resource allocation and put in place the committee and an authority to monitor that the execution is proper and the resources are used as planned and the program is moving at the right speed, keeping in view the targeted time period by which the goal is to be achieved – year 2022. The whole thing has been working on a mission mode going by the reports. The collective results of the dedicated measures such as - educating on agriculture, research and extension activities chosen essential for the purpose and extension of the facilities for irrigation which is the most essential input, enabling low-cost organic farming, providing crop insurance, national agricultural market, horticulture development and agro forestry - have been found to be the pathway to achieve the goal. It is also to be noted that the government created required awareness among the farmers about the new initiatives adopted for ensuring progress of agricultural sector through transformation of rural sector in a way that is positive. The success story of the Madhya Pradesh Government had worked as a great impetus for the policy reformation at the centre and the states subsequently leading to the "Doubling of Farmers Income"

The graph below depicts the Agriculture growth rate in MP from the years 2004-05 to 2014-15 which is a clear picture of that success path that the state could achieve from the year 2010-11 to 2014-15



Farmer's income – the key issue

Realizing that the first correction has to be of the Farmer's income to attain the overall objective, the focus therefore shifted. The whole initial focus was on a few things – primarily it was on raising agricultural output. On a study on this revealed that apart from other reasons for low agricultural output, low farmer incomes compared to incomes from other non-farming sector, were found to be one of the major reasons for the required focus. So looking at the issue of food security in future, the farmers income and the urgent redressal required to at least double their income, was found to be the key issue, solving which the larger issue of Food security could be ensured.

The success that was tasted in the 80s was the reason for a wave that resulted in mechanization and rural boom and prosperity. Soya bean was considered to be the positive route to prosperity for the Madhya Pradesh state farmers. But the macro issues like low exports, unsure rainfall and uncontrollable pest attacks affected it.

Ref.No.5

While the northern and eastern belts of the state were traditionally Rice producing areas, the Central Narmada Region of MP took to rice cultivation and achieved big success. The rice from this region is procured for exports mainly. The crops could offer very high returns, which was six times more than Soyabean. Productivity jump was seen in the short duration hybrid crops – Basmati and the other long grain varieties. The productivity increase attained was a jump from 6.6 quintals per hectare in 2002-03 to 24.5 quintals per hectare in 2014-15. All these together made big leap for the agricultural growth.

The real transformation that happened actually turned the tables in favour of the state of Madhya Pradesh and from then on the state never looked back.

1. Observations & Discussion

Agriculture in Madhya Pradesh

“Madhya Pradesh state has 51 districts and 51 KVKs under 11 different agro-climatic zones. Six more KVKs are in the process to be established. The total geographical area of Madhya Pradesh is 30825 thousand hectare out of which 48.57 per cent i.e. 14972 thousand ha is being cultivated, which 6449 thousand ha is cultivated more than once. Around 28 per cent of total geographical area is covered by forest in the state. The economy of state is predominantly based on rain fed agriculture (only 1/3rd of gross cropped area is being irrigated). The major crops are cereals: Rice, wheat, maize and sorghum, Pulses: chickpea, pigeon pea, black gram and green gram, Oilseeds: soybean, groundnut and mustard, commercial crops: sugarcane and cotton. Horticultural crops like potato, onion, garlic, along with fruits papaya, banana, oranges, mango and grapes. In some parts of the state medicinal crops and narcotic crops are also cultivated.”

Close to 50% of the total geographical area is under cultivation (14972 thousand hectares out of 30825 thousand hectares)

- 44% out of cultivable area is cultivated more than once a year
- 65% of Cropped area is Rain-fed and only 35% of the cropped area is irrigated.
- Major crops

Cereals: Rice, Wheat, Maize and Sorghum

Pulses: Chickpea, pigeon pea, black gram and green gram

- Oilseeds: Soyabean, Groundnut and mustard

- Commercial Crops: Sugarcane and Cotton
- Horticultural crops: Potato, Onion, Garlic, Fruits-Papaya, Banana, orange, mango and grapes.
- Others: Medicinal crops and Narcotic Crops

.The advantage that the state of Madhya Pradesh enjoys is the higher percentage of Cultivable area and also significantly higher percentage of Rain-fed Area (which is also a disadvantage when monsoon fails)

“Madhya Pradesh has been contributing significantly to the national food basket”. As per Year 2016 statistics – Production of

- 24.66 per cent of Oil Seeds
- 31.08 per cent of Pulses
- 18.91 per cent of Wheat
- 57.15 percent of Soya Bean
- 24 percent of Live stock contribution
- 71 percent area under cultivation – Both Khariff and Rabi together.

Growth rate jump in Agriculture in MP.

Madhya Pradesh state attained an incredible growth of 20% over the previous year. Especially this is worth mentioning, since it was distinctly progressive – from - 4.7% in the year 2004-05 to 20% in the year 2014-15. The state won the highest growth in the production of food and was awarded by the Union Government “Krishi Karmarn Award” for 4 years. The production thus doubled in 10 years.

Madhya Pradesh – Farmer’s Income				
Duration	Average Monthly Income grew substantially – which was possible through planned growth in Agriculture		Growth %+	Growth Type
	2012-2013	Rs. 6210 per month		Actual
Within 4 years	2015-2016	Rs. 9732 per month	56%	Actual

Within 8 years		Rs. 19200 per month	100%	Projection	
Enhancing Farmers' Income					
Enhance Gross Income			Reduce Costs		Stabilise Income
Production Growth	Higher Prices	Diversify-Farm/Non-farm	Reduce purchased Inputs	Exploit Complementarities	Coping Mechanisms

The plan was thus focussed as follows

On Productivity, the following measures were identified to enhance the output:

- Increased / improved Irrigation
- Technological advancement –
- Raise Short duration crops after the main kharif and rabi crops
- Produce high value crops like fruits, vegetables, fiber, condiments & spices and sugarcane.
- Diversification into other allied enterprises like forestry, dairying rather than depending primarily on crop cultivation.
- Improvement in terms of trade for farmers or real prices received by farmers- Use of CPIAL (Consumer price index for agricultural labour) as a deflator to change nominal farm income to real farm income.

Ref.No.6

Predominance of Rain-fed agriculture

“The economy of state is predominantly based on rainfed agriculture (only 1/3rd of gross cropped area is being irrigated). The major crops are cereals: Rice, wheat, maize and sorghum, Pulses: chickpea, pigeon pea, blackgram and greengram, Oilseeds: soybean, groundnut and mustard, commercial crops: sugarcane and cotton. Horticultural crops like potato, onion, garlic, along with fruits papaya, banana, oranges, mango and grapes. In some parts of the state medicinal crops and narcotic crops are also cultivated”.

Due to increased dependence on Seasonal rains for the needs of water for agriculture, the problems were severe during failed monsoons. So focus on irrigation was planned to make sufficient water availability even when rains failed.

Horticulture Assessment and Management Program

A major technological push was initiated to make the whole system effective and efficient in assessing and managing of horticulture through the launching of Horticulture Assessment and Management Program – with a cost estimation of Rs.13.38 crores, as early as, in the September, 2014. The program was specially to strengthen the system of forecasting method to know 1) potential of production in a given area for agriculture crops – with the use of remote sensing technology and doing sample survey. Through this also it was aimed to enhance the income of the farmers. The Government also propagated “Integrated Farming System (IFS) for Multi-cropping, cycle cropping, inter cropping, allied horticulture activities, livestock, fisheries, bee-keeping and so on. Such an initiative was to ensure overall and cumulative production of livelihood to counter the ill-effects of drought,

flood and other mishaps. Farmers, it was noted, realized an annual 40% increased income through these efforts – as a part of agriculture consolidation.

Ref.No.7

Important Interventions

The success also owed its due to some of the interventions which played key role:

- Intervention through water for irrigation by scaling up the irrigation projects and restructuring done in water management which contributed to increase in productivity – schemes like Kapil Dhara had their role
- Availability of certified seeds was another major intervention which contributed as driver of growth.
- Ensuring of adequate stocks of fertilizers worked against the shortage experienced in the yester-years.
- Mechanization and making available 3 times the number of tractors worked effectively.
- Farm credit was available at zero per cent interest right from the year 2012-13 (reduced from 5 percent)
- Also ensured that cash was available for the other expenses.

2. Highlights

While the Farmer's distress was a perpetually thought out issue, zeroing in on the primary task of identifying the major lacunae and finding ways and means to correct / alter / ideate to bring out solutions was a major move ahead. Further, commitment to acquire greater clarity on issues and the corrective solutions that would work was a robust part of governance on the goal oriented tasks chosen.

Taking a cue from the Madhya Pradesh model's success and determining to set the goal to double the Farmers income within FIVE years at the National level though have not been big tasks, incisively analyzing the strong criteria that could make the state of MP's success possible and ensuring to plan by replicating the success model with the right choice of tasks and focus on governance have been commendable. While one could feel that it is not an "out-of-the-world-idea" to only apply a model which was successful, from the practical areas of differences among different states and their local practices, it could be understood that only unflinching focus and strong governance could bring results at the National level.

The Government's initiative to study the whole agricultural sector's performance keeping in view the various inputs for the expected performance and deciding to work on every issue with missionary focus and apply the solutions showed its high level commitment to redress and rejuvenate the agricultural sector in the country. The decision to set the goal to double the Farmer's income in 5 years time, by simultaneously addressing the issues with significant commitment to involve people, investments and the governance speaks high about the Government administration. The policy, plan and execution details – all together work for attaining the goal of doubling the Farmer's income and also ensuring Food Security of the country.

Madhya Pradesh State's significantly higher growth in farmer's income year after year to attain an almost doubling of it - in Five Years duration – Year 2010- Year 2015 proved a worthy example to initiate the basic discussions for a targeted growth – doubling the farmer's income in five years at the National level

Madhya Pradesh has been major contributor of agricultural products to the National food basket. The following details will give a glimpse how MP has been a model state which has exhibited the state's strength on its outstanding performance in agricultural sector:

“Following were the steps taken that contributed to MP State’s Growth in productivity and Income of the Farmers

- Reduction in input cost (15 per cent share)
- Increase in productivity (30 per cent share)
- Increase in area under cultivation (14 per cent)
- Agricultural diversification (20 per cent)
- Reduction in post-harvest losses (6 per cent)
- Remunerative prices (15 per cent)”

The success story of the Madhya Pradesh thus turned out as a leading example, which brought the expected growth in Agriculture in the state, the magnitude of which was phenomenal. The state of Madhya Pradesh worked on essential focus areas to bring out the change keeping growth as the objective, in the process attained the income objectives also. Going by the differences among different states - geographical, climatic and others, the Union Government brought into the scope other areas into focus in aiming at the goal - Doubling of the income of farmers across all states in the country by the year 2022 – which is now pushed to the year 2024.

3. Conclusion

The paper is focused on to study the different steps that were taken by the State of Madhya Pradesh aiming at the growth in production and productivity during the period – Yr.2010-Yr.2015. The focus areas were also those that were the inherently problem areas. They were – increase in cultivable area, certified seeds usage, irrigation needs - considering the rain-fed area being two-thirds of the cultivable area, sufficient stocking of fertilizers, insurance needs, inclusion of non-farming activities and the incomes from them thereof. The steps taken by the Madhya Pradesh government and the departments resulted in increased production and productivity, which were phenomenally high in terms of quantities. All these positive steps resulted in growth of 70% in five years duration which also reflected in the Farmers higher income. These efforts, results and the scenario together became a model policy which was later considered and declared as “Doubling of Farmers income” at the National level – in five years time. Madhya Pradesh state’s performance thus stood as a model and will remain in memory of Indian Agriculture history – post independence.

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