

FPJ-MONEYCONTROL FORUM

FORUM

Madhya Pradesh's glorious agri-revolution



TIME for MADHYA PRADESH to take its NEXT LEAP

THE VENUE WAS THE MARIOTT INDORE, IN THAT CITY.

The occasion was a conference on 'Madhya Pradesh's glorious agri-revolution' which was jointly organised by Free Press Journal and Moneycontrol.com, in association with the state government of Madhya Pradesh. More than 500 people gathered to hear Madhya Pradesh, Chief Minister, Shivraj Singh Chauhan. He was delivering his keynote address. In the packed conference hall, Chauhan discussed his achievements, his challenges and his possible plans for the state. But most interesting were the ambitious targets that he has set for himself and for the state's farming community. Some of the key plans include:

- **MECHANISM TO** be developed to fix the crop rate, per hectare which will be above the existing minimum support price and price difference (Bhavantar) scheme of the state. This will help small and marginal farmers.
- **IN ORDER** to provide better farm prices to the farmers, Government of India's Agricultural and Processed Food Products Export Development Authority (APEDA) will set-up Agriculture Produce Export Board in the state.
- **WITH AN** aim to put an end to over production of a single crop, a system will be developed to guide farmers. This system will tell them which crop would be the best for the forthcoming sowing season depending on the area (soil conditions), climate and price trends. This will be done through a mobile app. Through these measures, MP will become the first state in the country in ensuring a doubling the farmers' income by 2022.
- **ABOUT 15** years ago, the irrigated farm area was just 7.5 lakh hectare, but now it has grown to 40 lakh hectare. In time to come, it will touch 80 lakh hectare.
- **THE TARGET** of 80 lakh hectare irrigated land will be made possible in part by the river-linking project. After Narmada-Kshipra Link River link, Narmada-Gambhir river link is under progress. The work of Narmada-Chambal River Link project will commence soon.
- **FARMERS' CHILDREN** will be trained and given funds to set-up food processing units. The funds to be made available would range from Rs 1 lakh to Rs 1 crore. Additional funds could also be made available in deserving cases. At present, the government plans to skill 30,000 youths under this initiative. The loans would be linked to subsidies, grants and interest subvention. This will help in value adding the farm produce at its very source.
- **REGION SPECIFIC** marketing of products will be done. For instance, in case of Malwa, the products will be branded as 'Malwa Fresh'.
- **THE GOVERNMENT** will offer difference in MSP in case farmers sell wheat even outside the market place (mandi).
- **THE STATE** will try to patent state specific varieties of basmati rice that is of high standard.

The journey till date

The first panel discussion 'What made Madhya Pradesh's agriculture programme succeed' focussed on the journey of Madhya Pradesh till now. This conversation was around the evolution of the state in agriculture and different factors that enabled the evolution. Dignitaries that participated in this discussion included: (in alphabetical order) Rama Chari, Head, Materials Science Division, RRCAT; Narendra Dhandre, DGM, Netafim; DN Pathak, Executive Director (ED), SOPA; and Rajnikant Rai, CEO, ITC-Agro. This session was moderated by R N Bhaskar, Consulting Editor.



(L to R) R N Bhaskar, Consulting Editor; Narendra Dhandre, DGM, Netafim; DN Pathak, ED, SOPA; Rajnikant Rai, CEO, ITC-Agro and Rama Chari, Head, Materials Science Division, RRCAT at the first panel.

THE BACKGROUND PERSPECTIVE

RAJNIKANT RAI, CEO, ITC-Agro: Let us take a moment to understand the progress of agricultural sector in Madhya Pradesh and the factors behind the same. Madhya Pradesh, over the past ten years or so, has seen area under irrigation go up tenfold. This has naturally enhanced productivity of land under cultivation. Wheat output in this period has gone up five times, and Madhya Pradesh has displaced the traditional leader Haryana from the top position. The state has multiple varieties of wheat at price points from Rs 15-25 per kg.

Farmers in this state are lucky, because this state has given the best realisation to farm produce consistently and across categories over the past ten years. The prices are supplemented by bonus amounts from the state government.

The downstream industry is active, particularly in soya. Twenty years ago, soya output was 10 lakh tonnes. Since then, it has peaked at 65 lakh tonnes. Soya is an industrial crop and has helped farmers invest back in their agriculture activity.

The mandi system in Madhya Pradesh is also supportive. Distances to mandi are longer but facilities within the mandi and process of transparency are quite excellent. Given that land holdings in Madhya Pradesh are larger than average, the scope for structured finance is better and indeed the Kisan Credit Card has been well utilised.

NARENDRA DHANDRE, DGM, Netafim: In terms of irrigated area, Madhya Pradesh is high at 44 percent. However within this, the micro irrigation share is marginally. When you look at annual micro irrigation targets set by states, most are in the range of 2-2.5 lakh hectares. Madhya Pradesh targets are around 0.5-0.6 lakh hectares whereas it has among the largest areas under cultivation in India. Clearly potential is massive and emphasis is needed. It is proven that productivity, especially in vegetables, can rise by 50 per cent through micro irrigation.

THE SOYA CONUNDRUM

D N PATHAK, ED, SOPA: If we look at soya specifically, the last four-five years have not been good for the industry. Globally

FOOD FOR THOUGHT

RAJNIKANT RAI, CEO, ITC-Agro: Farmers in this (MP) state are lucky, because this state has given the best realisation to farm produce consistently and across categories over the past ten years.

NARENDRA DHANDRE, DGM, Netafim: Clearly potential is massive in micro irrigation and emphasis is needed. It is proven that productivity, especially in vegetables, can rise by 50 per cent through micro irrigation.

D N PATHAK, ED, SOPA: For a soya cultivator, it is important to cultivate good practices. Productivity is the key. So all can benefit— farmer, processor and consumer.

RAMA CHARI, Head, Materials Science Division, RRCAT: The DAE has for long been working on improved seed varieties, especially in pulses. Today 42 varieties of such seeds are commercially available.

soya production has risen sharply in this period, going up to 350 million tonnes. This has seen a sharp decline in prices.

As far as the domestic processor is concerned, the soya cake is of paramount importance. If that is not exported in remunerative terms, the business economics are hit. Our productivity is one third compared to large producers like Argentina, who are naturally in a better position to drop prices and sell their output.

The last two years' monsoon has been unfavourable towards the soya production areas (Marwah) and therefore the dependence on buyers has gone up. Thus, reduc-

ing farmers bargaining ability. Farmers therefore start switching crops which is understandable. The terrain is difficult and hence irrigation penetration is also less. For a soya cultivator, it is important to cultivate good practices. Productivity is the key. So all can benefit— farmer, processor and consumer.

NARENDRA DHANDRE: Economics of drip irrigation in the case of soya are not as attractive as other crops.

THE SIGNIFICANCE OF MANDI TODAY

RAJNIKANT RAI: The mandi concept was introduced in the seventies. Today connectivity is better, India is a bazaar and each company is an equal opportunity for the seller. Those days you needed collective bargaining and the mandi was important. Today you can negotiate if you deliver quality produce and promise reliability.

D N PATHAK: When you go through the mandi route, there is a Rs 70-100 per quintal cost that the producer/ seller has to bear and there is no tangible benefit to the buyer. If the farmer connects directly, this can be avoided.

GOVERNMENT AGENCY SUPPORT

RAJNIKANT RAI: India imports 17 million tonnes of edible oil which is 70 percent of the domestic consumption. All this means prices cannot be fixed by the Indian producers. The government can have a duty structure to protect the domestic producers. Beyond that, it is only productivity that would help.

RAMA CHARI, Head, Materials Science Division, RRCAT: Our institution is an arm of the Department of Atomic Energy (DAE). The DAE has for long been working on improved seed varieties, especially in pulses. Our method of improving seed quality is by mutation. The mutation process is accelerated through irradiation. Mutation increases hardness of the seed and helps mitigate the climate change impact on yields.

Today 42 varieties of such seeds are commercially available, which is the DAE contribution. We have, of course, a pipeline of such offerings. There is a three-year trial period and once the trials are successful, ministry approvals are obtained for the commercial release.



(L to R) R N Bhaskar, Consulting Editor; Suhas Joshi, Head-Sustainability, Bayer group, South Asia; Bharat Char, Lead Biotechnology, Mahyco Ltd; Amit Vatsyayan, Partner, EY; and Amitabh Mohan, DGM, Nabard.

Taste of things to come...

With an aim to peep into the future of agriculture in the state, the second panel discussion 'Future directions for Madhya Pradesh' was held. This dialogue had panellists like (in alphabetical order) Bharat Char, Lead Biotechnology, Mahyco Ltd; Suhas Joshi, Head-Sustainability, Bayer group, South Asia; Amitabh Mohan, DGM, Nabard; and Amit Vatsyayan, Partner, EY. The panellists reached a consensus that state would need to create opportunities that allowed the flow of value to primary producers.

The current system and its offerings

SUHAS JOSHI, Head-Sustainability, Bayer group, South Asia: Contract farming appears to be the only sustainable solution. The basic logic— sustainable income for cultivators and supply visibility for processors— cannot be doubted. However it is necessary to tweak the framework. The clear objective should be that farmers get money rather than middlemen. The cornerstone of thinking, even in downstream activities, should be— when there is value generated through processing, how does the value reach the farmer?

AMITABH MOHAN, DGM, NABARD: After output, value matters most to the farmer. In that context, if his bargaining power is increased, the results will be more beneficial. NABARD has participated in the process of creation of 360 farmer producer organisations, at different stages of evolution in Madhya Pradesh. These organisations focus on collective action, with backward and forward linkages. They also generate storage and chilling capacities at local levels, which is particularly of help in products like milk, but should grow more in terms of products serviced. Collective marketing is also an activity which helps the agri-producers.

Linkages with processors are very vital— all over the state, there are six food parks being set up by the state government and four mega food parks being set up by the central government. Processing units aiming to set up facilities in such parks can directly access finance from NABARD at around 8 per cent interest.

SUHAS JOSHI: Productivity and farmer empowerment go hand-in-hand, as was evident in the Operation Flood— for prosperity to flow

FOOD FOR THOUGHT

BHARAT CHAR, Lead Biotechnology, Mahyco Ltd: Drones can be extremely useful in this sector. They can save time in mapping data and can provide better visuals.

AMIT VATSAYAN, Partner, EY: There are four core areas where attention is needed. First is stop the wastage and value deterioration between the time the crop is harvested and the time it is sold.

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to the farmer. For farmers and consumers (corporate buyers) to connect, there are logistics, time and management issues and therefore efforts are needed from both sides. In that context, the establishment of FPOs is a welcome development because it is empowering the farmer.

Structural changes needed

AMIT VATSAYAN, Partner, EY: I believe there are four core areas where attention is needed. First is stop the wastage and value deterioration between the time the crop is harvested and the time it is sold. That value deterioration of 20-30 percent goes away from the farmer's income and does not do anything for the buyer. The next core area is to create more

value, mainly through warehousing and processing. All stakeholders must understand the value and there has to be greater impetus both to create more capacities as well as to enhance usage of existing ones. If cooling plants today operate at around 35 per cent utilisation, it does not reflect well on the ecosystem.

Next, the farmer has to understand that, if he wants to gain more, he must participate more. Rather than just selling their output en masse to traders, they should actively engage in sorting, grading and use of infrastructure like pack-houses, with a view to increasing the aggregate sales realisation from the same crop. Value-addition is a constant need. Even in the milk sector, if processors can focus on cheese and ice-cream they will find there is profitable demand.

Last but not the least, is the need for value-added services (insurance, credit etc) also need to evolve and keep pace with the times, rather than just give options which are outdated and not in sync.

BHARAT CHAR, Lead Biotechnology, Mahyco Ltd: I will speak a bit on the scientific aspect. There is a need to focus firstly on soil health for sustainable output. We definitely needed the Green Revolution, no question about that but at that time we availed of whatever techniques and technologies were available. However, the output maintenance and growth now onwards can sustain only by soil growth. We as a company do research on beneficial microbes which would organically maintain and/or improve soil health. This treatment is released directly into the soil or indirectly via treated seeds.

The other scientific focus area is precision agriculture which primarily means use of available digital technologies. Drones can be extremely useful in this sector. They can save time in mapping data, can provide better visuals. With proper sensors, drones can heighten the data output quality and improve the process ability of the data generated.

Satellite images today give global crop estimates and updates, which translates into price movements on commodity exchanges. The need is to get such technology accessible at the farm level. Any improvement in estimation and forecasting can only enhance effectiveness of sowing and harvesting efforts.