Farmers discuss essential shifts as monsoon shows a slowdown – Is the institutional machinery prepared?

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At a workshop organized to discuss challenges in Kharif(monsoon)sowing this year, farmers from Datiadistrict in the Madhya Pradesh State of India are prepared with alternatives. It seems previous experiences are being built upon to safe-guard incomes from a precarious Kharif crop as monsoons show a definite slow-down. The kharif crop in this rain-fed region of semi-arid Bundelkhand is the main cash crop and provides the critical income for ensuring that adequate inputs are bought for Rabi (winter crop)– the main crop that accounts for food and income security for farmers here. Failure or a reduced Kharif crop will push farmers to seek credit from government and private sources, say farmers from Datia.

However, there is no resignation to fate. Discussions at a workshop organized by the Bundelkhand Knowledge Platform on the 9th of July, 2012 revealed that farmers are prepared. The standard sowing window for groundnut crop – the primary monsoon (Kharif) crop is from 22nd June to 15th July. Farmers do accept that in the previous years – this has often not been the standard. So even as the Government of India at the highest levels discussed whether or not to press the panic button[1] and prepare for contingency, farmers from Noner village in Datiadistricthad already planned to shift to either urad (pulse) or Sesame in the Kharif season of 2012.

The Monsoon of 2012 in the first month had already indicated a slow-own. According to the Indian Meteorological department (IMD) Pune, the monsoon rains are expected to be less than 90 per cent of the long-period average, a 50-year timeframe of the rainfall recorded during the four monsoon rains[2]. The impending El-Nino predictions from the Indian Meteorological Department (IMD) have further created the fear of a reduced precipitation that could lead to a drought like situation in many of the central and western states of India. According to IMD rains over the entire June to September season were now expected to be less than 90 percent of long-term averages. As per weather office forecast, there would be a decline in the El Nino weather pattern that would reduce rains again in the second half

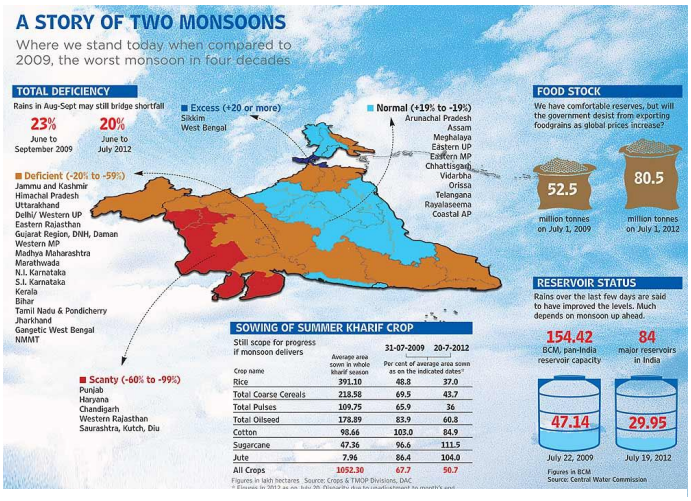

Figure Courtesy, Outlook magazine
http://images.outlookindia.com/Uploads/outlookindia/2012/20120813/page_14_20120813.jpg

[1]http://www.livemint.com/2012/07/11234213/Situation-worrisome-but-not-gr.html
[2]http://news.outlookindia.com/items.aspx?artid=770823

of June to September. Between June 1 and August 1, 2012, rainfall was about 19 per cent below average, close to the 23 per cent shortfall in the 2009 drought season[3]. The Prime Minister's Office (PMO) has declared drought in the states of Karnataka, Maharashtra, Rajasthan and Gujarat. And although, Madhya Pradesh is not officially declared as drought prone, the monsoon situation continues to be grim, with the western part of State indicating 23% deficit even one and half month into the 'standard' monsoon period.

Farmers in Datia district however, have not lost hope. The Integrated Water Management Programme initiated last year has worked in a scientific manner mapping watersheds, catchments and waterways. They have constructed many small water retaining/ harvesting structures that are helping harvest the scarce monsoon to recharge wells and the ground water. The fears of a complete drought with the dwindling monsoon leading to a possible failure of the Rabi crop have been mitigated somewhat due to this intervention. The farmers hope that even though the monsoon is clearly low, the water for the winter crop may still be available. Of course, even in the Rabi season, they would have to shift from the traditional wheat to either barley or the low water consuming wheat variety keeping with the reduced water availability. In addition, the reduced water availability will be somewhat mitigated through the adoption of efficient irrigation methods such as drips and sprinklers that have been introduced in the last three years and have found some applicability.

The region, has traditionally seen drought every three years[4]however, the 2003-2008 period saw a prolonged drought that catalyzed the government to announce a special drought relief package for Bundelkhand. While rains improved in the 2009-2011 period with a delayed monsoon in 2009, the region recorded a bumper crop in 2010 and 2011. The package has supported some large and small initiatives to mitigate droughts and create water sufficiency in the region[5]. In addition, organizations such as Development Alternatives have been working to promote both water conservation and efficient use through improved farming techniques. The impacts of the initiatives will be tested in this season of 2012.

[3]http://www.businessworld.in/web/guest/storypage?CategoryID=37476&articleId=444006&version=1.1&journalArticleId=444081
[4]nraa.gov.in/drought%20mitigation%20strategy%20for%20bundelkhand.pdf
[5]nraa.gov.in/Performance%20of%20UP%20and%20MP.pdf

Despite a bountiful monsoon in the past two years, farmers have not forgotten the long drought of the last decade. Interface institutions such as Development Alternatives have helped them understand the possibility of a gradually shrinking resource base and the need to conserve, regenerate and sustainably utilize water for agriculture. The ShubKalcampaign promoting Climate Change Adaptation in the Datia, Jhansi and Tikamgarh districts of Bundelkhand has been a constant reminder to farmers that water use practices will need to change as the climate changes. The Climate Change Adaptation initiatives of Development Alternatives under its Natural Resource Management Program have reached out with possible solutions for water use efficiency in irrigation through new technologies, improved seeds and varietal shifts. These enabled farmers in the last two years to test wheat, barley, sesame, ground-nut, vegetable farming with lower water requirements than traditional. This experience has given farmers of this area a confidence to deal with the present circumstance of a poor monsoon.

The KrishiVigyan Kendra (KVK) is a grass root level institution function with a mandate of technology and information dissemination to the farmer level.

Functions of KVK

1. On-farm testing to identify the location specificity of technologies in various farming systems.

2. Demonstrations to establish production potential of newly released technologies on farmers field and provide feedback.

3. Training of farmers and farm women to update skills in modern agriculture technologies.

4. Awareness about frontier technologies through extension activities like farmer fair, field day, strategic campaign, Ex-trainees meet etc.

5. The seed and planting materials produced by the KVK also be made available to the farmers

Currently, the extension activities of the KVK include field days, *kisanmelas* (farmer fairs), soil health camps, agri mobile clinic, soil test campaigns, workshops, group meetings, newspaper articles, visit to farmer's fields, exposure visits and occasionally radio talks and TV shows

In these times of change, farmers are not only looking towards credible information on meteorological phenomenon but also have high expectations from the extension services of the public sector to guide them in their decisions to adapt to both sudden and slow changes.

In their endeavor to track the rains, farmers revealed that their traditional methods to predict rain fail them often and they look towards public broadcasting systems for more accurate and localized information. While farmers are keeping close track of the rains through information from the newspapers, radio and Television – in that order, it is from the public sector extension machinery – the KrishiVigyanKendras (KVKs) and Gram Sevak's or KrishiMitra (farmer's friend) that they have high but unfulfilled expectations. As they plan to shift from ground-nut to sesame and pulse, adequate quantity of improved pest resistant seeds and advice on potential diseases and fertilizers is what they find lacking. Information backed by know-how and service delivery in time is the

challenge that farmersoften face. The current extension services support them, said the farmers if they go to them (visit the KrishiVigyanKendras (KVK), but the KVKs do not proactively reach out and the KrishiMitra (farmer's friend) is not really in a position to help provide timely advice and or connect them to technical services.

A regular interaction with agencies that conduct trials in their fields, help them to plan and implement water management systems and connect them to sources of information, and services including training when required has been appreciated and is also an expectation from "development agencies – whether private or public." In the present case, farmers from Nonerfound that KVK is unable to supply them with the quality of seed they require, fortunately some of them have saved seeds from the previous season, others not so lucky who had procured seeds from the market which were attacked by pests now need to change to foundation seeds and are finding it difficult to access the same either at KVKs or at the local market.

Farmers in Noner, Datia district Madhya Pradesh are facing the predicament of a poor monsoon this Kharif season through a timely shift and are preparing for a potential lower than normal water availability in Rabi this year. The combination of water conservation, management and change in agriculture practice seems to have demonstrated clear benefits to the farmers – we hope that in coming years of plenty, these lessons will not be forgotten. The issue is, whether and how can the agriculture extension systems be prepared to handle this variability that is becoming a norm?

Information Dissemination by Institutions

1. Integrated Agromet Advisory Services: It is an IMD initiative to meet the farmer's information needs in real time. It provides information on

- Sowing/ transplanting of *kharif*crops based on onset of monsoon
- Sowing of *rabi* crops using residual soil moisture
- Fertilizer application based on wind condition
- Prediction of occurrence of pest and disease based on weather
- Preventive measures at appropriate time to eradicate pests and diseases
- Weeding/Thinning at regular interval for better growth and development for crop
- Quantum and timing of irrigation using meteorological threshold
- Advisories for timely harvest of crops

2. Dissemination of Advisories: IMD also communicates the information to 130 Agro Met Field Units (AMFUs) that are located in various agro climatic zones.Additionally, Agromet Advisory Services Bulletins are issued at three levels issued by: the National Agromet Advisory Service Centre, Agrimet Division, IMD, Pune, the State Agromet Service Centre at the Regional Meteorological Centre, the District Level the bulletin issued by the Agromet Field Units for the farmers.

3. District Level Advisory Services: Information on rainfall, maximum and minimum temperatures, wind speed and direction, relative humidity and cloudiness. In addition, weekly cumulative rainfall forecast is also provided.

4. National Agricultural Technology Project (NATP): Its Innovations in Technology Dissemination–ICAR Component has made significant contribution in empowerment of farmers and stakeholders in terms of information, knowledge and material.

5. Agricultural Technology Information Centers (ATIC): helps farmers and other stake holders to provide solutions to their location - specific problems in agriculture and make available all the technological information along with technology inputs and products for testing and use by them.

6. Agricultural Technology Management Agency (ATMA): responsible for technology dissemination at district level. It identifies specific needs of farming community for farming system based sustainable agricultural development. And to execute and coordinate plans through line departments, training institutions, NGOs, farmer organizations and allied institutions.