

Who is watching out for agriculture?

In a belated response to the challenges posed by climate change, India has finally prepared an action plan. The thrust of the National Action Plan on Climate Change, unveiled by the Prime Minister is on energy. The plan identifies eight core "national missions" running through 2017 and directs ministries to submit detailed implementation plans to the Prime Minister's Council on Climate Change by December 2008. Not surprisingly, one of the weakest links in the Action Plan is its response to agriculture. Whereas market based incentives have been formulated for industry and affluent consumers, like automobile owners, not much is proposed to rescue farmers, who will be the worst affected category, standing perhaps, to lose their livelihoods. They and poor consumers are not visible in the national deliberations and have been left to cope on their own. This is demoralising specially when it has been projected by practically all the models generated by international teams of scientists, that South Asia will be amongst the worst affected areas impacted by global warming and would face serious challenges to food production.

In India, food security has still not been achieved on a sustained basis as we remain totally dependent on the monsoons to achieve food production targets. With its dependence on the monsoon and its low levels of irrigation, only a third of the country's agriculture is irrigated, the rest being rain fed, the prospect of swings in the monsoon are a frightening possibility. Yet, little is being planned to cope with this situation, which is not in some distant future, but is upon us. The meteorological department's linkage with agriculture departments remains a formality, when actually they should be working closely together to predict the onset of the rainy seasons and planning planting cycles according to that.

If the onset of the South-west monsoon is delayed, farmers can be told to delay planting their rice; if on the other hand, as we saw this year, the rains came very early, farmers could have been advised to plant another suitable crop. Swings in rainfall patterns are expected to intensify with climate change, so coordination between the Met department and agriculture departments will become even more crucial and necessary in future.

What is worrying though is that far from responding to the rapidly changing situation with any urgency, our system of agriculture research and implementation seems to be immobile and unable to cope. The Indian Council of Agriculture Research, India's leading

agency (some would say, leading in expenditure rather than competence) has still not revealed any plans on how it proposes to adapt to food production in a warming world. No strategies have been prepared, nor any changes in research strategies developed to address the impact of global warming on agriculture in the many agro climatic zones in the country.

Perhaps the most urgent requirement today is to anticipate how the crop cycle in each of the agro climatic zones will be affected by the predicted rise in temperatures. New crop varieties will be needed to plant in situations where the older crop varieties that were well adapted earlier, will not be so, when the conditions are warmer. Say for instance, the varieties of maize that are being cultivated in the mountain belt of Himachal Pradesh, will not perform well there when temperatures rise. New varieties of maize will have to be developed for that eventuality. Developing a new variety and testing its suitability for a region takes time.

It takes even more time to generate enough planting material like seeds or tubers to make available to farmers. An exercise begun today will yield results only in some years. Yet, the country's agriculture research and implementation machinery sits inertly, unable to react either timely or appropriately.

Overhauling the ICAR has been on the cards for a long time. It is high time this exercise is undertaken and a new ICAR crafted to make it more responsive to the challenges that Indian agriculture is facing. Fresh blood needs to be inducted and a radical new approach and fresh plans are needed which include the perspectives and experience of a range of stakeholders who are seldom consulted in agriculture planning. These should include experts in diverse fields like water conservation, ecology, pest control, genetics and plant breeding working in formal institutions and in civil society organisations (CSOs).

Many groups working on the ground have valuable experiences and suggestions that should be heard. The indigenous knowledge of rural and tribal people must be tapped and combined with formal science to find solutions and to create new opportunities.

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