

Why can't the government provide a higher income for farmers, asks M.S. Swaminathan

It is 11 years since agronomist M.S. Swaminathan handed over his recommendations for improving the state of agriculture in India to the former United Progressive Alliance government, at the height of the Vidarbha farmer suicides crisis, but they are still to be implemented. To address the agrarian crisis and farmers' unrest across the country, he urged the government to take steps to secure farmers' income. As India marks 50 years of the Green Revolution this year, the architect of the movement says sustainability is the greatest challenge facing Indian agriculture. Excerpts:

There are two major challenges before Indian agriculture today: ecological and economical. The conservation of our basic agricultural assets such as land, water, and biodiversity is a major challenge. How to make agriculture sustainable is the challenge. Increasing productivity in perpetuity without ecological harm is the need of the hour. In Punjab, and in other Green Revolution States, the water table has gone down and become saline. Further, during the Green Revolution the population was about 400-500 million; now it is 1,300 million and it is predicted to be 1.5 billion by 2030. The growing population pressure has made it pertinent to increase crop yield.

Also, the economics of farming will have to be made profitable to address the current situation. We have to devise ways to lower the cost of production and reduce the risks involved in agriculture such as pests, pathogens, and weeds. Today, the expected return in agriculture is adverse to farmers. That's why they are unable to repay loans. Addressing the ecological challenge requires more technology while the economics requires more public policy interventions. In my 2006 report, I had recommended a formula for calculating Minimum Support Price, $C_2 + 50\%$ (50% more than the weighted average cost of production, classified as C_2 by the Commission for Agricultural Costs and Prices). This would raise the current MSP and has now become the clamour of farmers and the nightmare of policymakers.

Yes. All kinds of excuses have been given by governments for not implementing this recommendation like food price inflation. But the question is, do the farmers of this country, who constitute nearly half of the working population, also not need to eat? The government is willing to pay Seventh Pay Commission salaries to insulate government servants from inflation, but they cannot provide a higher income for farmers to improve their lot? If you really look at what is happening now, farm loan waivers are posing a bigger burden on the government exchequer compared to what higher pay for farm produce will incur. But the government is not prepared to give the 20,000 crore or so for farmers by way of higher MSP. In 2009, the UPA government gave 72,000 crore as farm loan waiver, but no government is prepared to take long-term steps to ensure the economic viability of farming.

There are three ways to improve the incomes of farmers. MSP and procurement is one. We also need to improve productivity. The marketable surplus from agriculture has to be enhanced. We should also look at making a value addition to biomass. For example, paddy straw is a biomass product that could be used to make edible mushrooms.

We are not really analysing the causes of farmer suicides. Instead, we are simply attributing it to the inability to pay off debts. Some serious thought needs to be given to how we could reduce the cost of farm production, minimise risks and maximise returns. The solution for ending farmer suicides is not only paying compensation. I've seen in Vidarbha — so many men have committed suicide and their families are left in the lurch. One of the first projects we initiated in Vidarbha at that time was to rescue children and give them education. Farming is the most important enterprise in this country and farmers are an integral part of our country. In China, farms are

owned by the government, and farmers are mere contractors. In our case, land is owned by the people. How do you treat this largest group of entrepreneurs? Unfortunately, all policies today are related to corporate powers. What about food security and 50 crore farmers? We need to think about them too.

After the Green Revolution, I came up with the concept of the Evergreen Revolution. In this we will see increase in farm productivity but without ecological harm. This will include integrated pest management, integrated nutrient supply, and scientific water management to avoid the kind of environmental damage witnessed during the Green Revolution. I've addressed these issues in my 2016 paper on Evergreen Revolution. I recommended mandatory rainwater harvesting and introduction of fodder and grain legumes as rotation crops to be adopted by wheat farmers in States like Punjab to ensure sustainability of farming. We can also declare fertile zones capable of sustaining two to three crops as Special Agricultural Zones, and provide unique facilities to farmers here to ensure food security. Soil health managers should be appointed to monitor and ameliorate the soil conditions in degraded zones and rectify defects like salinity, alkalinity, water logging, etc.

The Prime Minister recently went to Israel. We have several practices to emulate from there. They have a clear sense of where water is needed and where it's not. The idea of more crops per drop has been implemented well in Israel. We should adopt those practices here. You should see how a water controller works in an Israeli farm. Everything is remote-controlled. They know exactly which portion of the field requires how much water and release only the exact amount. We cannot sacrifice on productivity now, because land under crop cover is shrinking. Post-harvest technologies like threshing, storage, etc. will have to be given greater attention now.

There are many methods of plant breeding, of which molecular breeding is one. Genetic modification has both advantages and disadvantages. One has to measure the risks and benefits before arriving at a conclusion. First, we need an efficient regulatory mechanism for GM in India. We need an all-India coordinated research project on GMOs with a bio-safety coordinator. We need to devise a way to get the technology's benefit without its associated risks. At MSSRF (M.S. Swaminathan Research Foundation), we used GM technology with mangroves to create salt-tolerant varieties of rice. For this we took the genes from the mangroves and inserted them into rice. To make the most of GM technology we must choose a problem where there is no other way to address the challenge.

Barring the U.S., most countries have reservations about adopting GM technology. Europe has banned it on grounds of health and environmental safety. I'd say GM in most cases is not necessary. Normal Mendelian breeding itself is sufficient in most cases — 99% of what is being done under GM initiatives is not justifiable. Parliament has already suggested a law based on the Norwegian model where there are considerable restrictions on GMOs.

Organic farming can have a good scope only under three conditions. One, farmers must possess animals for organic manure. Two, they must have the capacity to control pests and diseases. Three, they should adopt agronomical methods of sowing such as rotation of crops. Even genetic resistance to pests and diseases can help organic farmers.

If you look at the organic farms in Pillaiyarkuppam near Puducherry that were started by the Sri Aurobindo Ashram, it is a good model to follow for organic farming. They have adopted the requisite crop-livestock integration.

Both less rainfall and a higher mean temperature affect farming adversely. Currently we are witnessing drought, excess rainfall, sea-level rise... There are both adaptation and mitigation measures to follow in this regard. I've evolved a drought code and a flood code... some of the

recommendations I've made in recent times include setting up a multi-disciplinary monsoon management centre in each drought-affected district, to provide timely information to rural families on the methods of mitigating the effects of drought, and maximising the benefits of good growing conditions whenever the season is normal. Animal husbandry camps could be set up to make arrangements for saving cattle and other farm animals because usually animals tend to be neglected during such crises. Special provisions could also be made to enable women to manage household food security under conditions of agrarian distress.

In the case of temperature rise, wheat yield could become a gamble. We should start breeding varieties characterised by high per day productivity than just per crop productivity. These will be able to provide higher yields in a shorter duration.

India has done well in production, but not in consumption. What we are witnessing today is grain mountains on the one side and hungry millions on the other. The Food Security Act must be implemented properly to address the situation. We should also enlarge the food basket to include nutri-milletts.

The novelist explains how his books, including 'Exit West' that is shortlisted for the Man Booker Prize, originate from personal crises

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com