

*The Hindu, Wednesday, October 5, 2011*

## **From barren land to rose fields, a success story**

**Check dams and better farming practices turn around the fortunes of Wahegaon farmers**

Wahegaon Village (Aurangabad District, Maharashtra): Forty eight year old Rameshwar Prahlad Bobade's agricultural land was barren. With poor groundwater levels, the bore well on his land turned defunct and this forced him to work as a labourer to eke out a living.

But that is past. Rameshwar Bobade has now planted rose plants on his 10 'kuntas' of land. Even before he could sell the garlic that was produced simultaneously on the same land, Mr. Bobade is gearing up for a good yield of roses.

This transformation was possible with the intervention of Pepsico and Alternative Development Initiatives (ADI), a civil society organization here. Mr. Bobade is one of the many farmers in the village, 40km from Aurangabad, not only repaying loans promptly but also reaping profits.

There are over 1,000 acres of agricultural land in the village and it is mostly rain-fed. With poor access to water, farmers had to be content with a single crop during kharif season. Annual average rainfall here is about 700mm and during a good monsoon, the excess rainwater used to drain away without serving any purpose.

Pepsico, under its corporate social responsibility activity, in association with the ADI conducted a water resource assessment study in 2009. Check-dams were constructed on three rivulets that pass through the village and over 100 water recharge structures in the locality, to facilitate better water

access to the farming community, says Vaishakh Palsodkar of ADI.

With check-dams, the groundwater levels have improved over the last two years. Most 30-40 feet deep wells in the vicinity are now filled to the brim. With adequate water, farmers are now also cultivating sweet lime and other crops in the Rabi season, which was once a rarity, points out the farmer sarpanch, Laxman Bobade.

Awareness programmes were also conducted for farmers to help them adopt better farming practices. "I was unaware of the drip irrigation technique. With sufficient water supply, I planted rose plants on the field and simultaneously planted garlic seeds between them. The garlic yield was good and many roses too have blossomed in my field," beams Mr. Bobade.

Fellow farmers too have taken to different crops in their fields apart from cotton, "My average income per acre has increased from Rs.1.5 lakh to rs.2.5 lakh per acre. I am also cultivating vegetables and other crops along with cotton. It is reaping good yields," says Narayan Bobade, another farmer.

"We extend our support for three years by when the farmers are on their own," explains Annie Kishen, Head, CSR, Pepsi Foods. The corporate and civil society intervention has also brought change in the thought-process of the villagers. The panchayat this year announced Rs.500 cash award to women who give birth to a girl child in the village, says sarpanch Heerabai Bobade.

*The Pioneer, Wednesday, October 9, 2011*

## **Organic farming crucial to soil health**

**Policy makers have to understand that the agricultural sector has to eventually move away from a chemical-based fertilizer regime and towards biomass usage. But for that to happen the Government has to offer incentives to farmers.**

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New Delhi: Experts have repeatedly warned that, with the rapid degradation of soil, food security is under threat. They have also pointed out that the crisis can be tackled through a series of ecological interventions, of which biomass generation and its use is the most critical. In this context, we need to understand the existing dynamics of biomass availability and its usage at the farm level.

At present, different sectors compete for whatever biomass is available. Green biomass is needed as fodder for cattle, cow dung cakes, pressed leaf litter etc. are used as cooking fuel in certain regions. Biomass is also used for decentralized energy production systems and for soil health improvement as well.

There are certain constraints related to labour and water availability. In addition, we need to also consider existing Government programmes, incentives and institutional support and come out with a new and effective strategy to make biomass-based soil health management a reality. This strategy is vital to prevent an imminent food crisis. It assumes even more relevance as the fossil-based soil nutrition are fast becoming unsustainable and unaffordable.

After decades of neglect, the Union Government is now recognizing and accepting the importance of having a

focused and comprehensive policy to promote ecological and organic maturing to rejuvenate degrading soils and maintain soil health. The 12<sup>th</sup> plan Approach Paper, prepared by the Planning Commission, cleared by the Union cabinet in September and waiting final approval from the National Development Council, has highlighted the importance of 'ecological/organic fertilization' practices in tackling the soil health crisis. The paper calls for the rejuvenation of soils and the restoration of soil health through addition of organic matter in bulk quantities in the soil, along with the promotion of other agro-ecological interventions.

While this acceptance is a welcome move from the Planning Commission, the challenge is to ensure that effective policies, institutions and sufficient investments are made in the 12<sup>th</sup> plan to make ecological/organic manuring a reality.

The recent national workshop on Biomass Strategy for Sustainable Agriculture organized by Greenpeace India and attended by a panel of scientists, agriculturists and bureaucrats at the India International Centre, New Delhi, discussed in detail the existing dynamics of biomass availability and usage at the grassroots level and the need to have

in place a proactive strategy to synergies with various sectors.

The workshop discussed the need for an institutional mechanism driven by a State-level agency to manage biomass and ecological fertilization. The institutional mechanism needs to bring together Government department's concerned, flagship Government programmes, research institutes and civil society to deliver the strategy. At the grassroots, it should operate through a federation of civil groups, who will research as well as implement the programmes at the ground level.

The workshop discussed in detail the importance of a farming system approach integrated with livestock, trees, crop rotations ect as a vital strategy for biomass generation on farm. It explored various options of recycling crop residues, weeds and bringing urban waste back to the fields. The common pool resources including those classified as waste lands will also play a critical rolw in the biomass strategy.

Constraints related to labour costs need to be tackled by integrating the biomass strategy with other flagship schemes like the Mahatma Gandhi national rural Employment Guarantee Scheme and finding synergies with them.

Now, the Government support systems and incentive mechanism are highly skewed towards chemical fertilization paradigm. The Government spends roughly Rs.60,000 crore a year in subsidizing chemical fertilizers. According to the Draft Approach Paper for the 12<sup>th</sup> Give Year Plan, Rs.61,264 crore was spent in 2009-10 while the

budgeted subsidy for 2010-2011 is Rs.58,000 crore. On the other hand, the support for organic fertilization is scattered and miniscule.

One must also note that the chemical fertilizer-based soil nutrition practices are unsustainable. The production of chemical fertilizers is highly dependent on fossil fuels, and so, any fluctuations in the fossil fuel prices can have serious implications on the agricultural sector. Moreover, nitrogen fertilizer production and its usage in fields can lead to emission of highly potent greenhouse gases and hence can contribute to climate change,

There is also a growing consensus on the reality of peak phosphorus, another nutrient used in agriculture, running out of stock. Phosphate rock is a non-renewable resource and is fast getting used up. The situation also points to the need for a comprehensive biomass strategy which will help in developing alternative ways and means of plant nutrients.

The experts, practitioners and farmers in one voice endorsed the need for an institutional mechanism with sufficient investments to be initiated during the 12<sup>th</sup> Plan period to effectively implement ecological fertilization. The gathering also endorsed the need for an incentive mechanism to make farmers use the ecosystem and soil-health enhancement measures.

The ideas generated in the workshop have been shared with the Planning Commission, which is expected to factor them in the panel's deliberations with the States as a run-up to the finalization of the 12<sup>th</sup> Plan.