

Varanashi Farms towards Organic and Sustainable Agriculture

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Introduction

This is the story of a 16-hectare Varanashi Farm (VF) with multiple cropping systems. From 1981 onwards, this low-level chemically managed farm giving poor yields was converted to a high-level chemical farm with an idea to augment the yield level. On the other hand, this shift in the cultivation practice caused increased pest and diseases problems, the profits still remaining low. In 1991, VF completely shifted to organic. The subsequent years saw the slow and steady progress of the farm yield and profitability.

Description of the Project

In organic farming, the mobilization of enough farmyard manure (the conventional manure) was found difficult. The introduction of coir pith, an agro-industrial by-product for composting, became handy and led to sweeping changes in the manurial practices. Later on, recipes for compost production from different agro-industrial wastes, like coffee husk, tea wastes, cocoa pod waste, saw dust, poultry manure etc. were formulated. Application of balanced compost to VF fields, based on soil testing, improved more than 50 per cent crop yields. The farm has multiple cropping system growing arecanut, rice, cocoa, coconut, banana, pepper, cashew, vanilla, vegetables etc. An efficient biogas unit is located near the cattle shed. The spent slurry is distributed in the farm by a pipeline. A bigger unit producing both electricity and manure is under planning. Varanashi Farm has also adopted water harvesting measures by providing catch pits, mini check dams, percolation pits and feeding bore wells during the rainy season which has greatly enhanced the water availability during summer. By growing timber and firewood trees like teak, jack, *Acacia*, *Casuarina* etc., the farm is now producing excess of timber and firewood after meeting the requirement of the people depending on the farm. Another interesting and eye opening observation is the reduction in the absenteeism of the farm workers due to ill health during recent years compared to the pre-organic period. The farm workers as well as the owners are healthier not only due to non-exposure to the hazardous chemicals but also due to consumption of self-grown poison-free food. Thus, the Varanashi Farm has become a model with multifarious farm activities, which are eco-friendly and economically stable.

To intensify the work on organic farming, an R&D unit namely 'Varanashi Research Foundation' (VRF) was established in 1994. The unit has developed a technology called "VRF Method of Composting", a modified heap method involving the use of a thin plastic lining underneath as well as at the top, which helps to conserve the nutrients. The method is also efficient and cost-effective. It involves incorporation of bio-degraders, P-solubilizers, N-fixers and bio-pesticides. Because of these advantages, it is getting popular year after year. At present, over 20,000 tones of compost is produced annually by VRF Method. Another achievement is the successful introduction of *Trichoderma harzianum*, a bio-control agent, against wilt in black pepper. Such information generated by VRF is initially field-tested in VF. VAST Centre, another sister institution, is involved in manufacture and marketing of eco-friendly organic inputs. VRF and VF are attracting large number of visitors.

Conclusions

During the last decade, Varanashi organizations have contributed a great deal towards the promotion of organic and sustainable agriculture not only in their own farm, but also in the surrounding regions. The improvements in agricultural practices are brought about by recycling of agro-wastes, use of bio control agents, water harvesting and silviculture.

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