

Classroom and on-field training helps maintain soil health

July 25, 2013

Package of practices: The National Agro foundation lent support to watermelon cultivation.-Photo: Special Arrangement

Maintaining soil health is an important aspect of agriculture that many farmers simply tend to overlook. In fact, poor growth, declining yield, pest and disease infestations are all chain reactions that can be associated with poor soil fertility. Periodical soil testing for any nutrient deficiency and seeking right advice from experts become essential for good crop growth. Mr. R. Paramasivam, from Mambattu village in Kancheepuram district, cultivates paddy, groundnut and watermelon (through drip fertigation). In spite of good care and a lot of investment the farmer could not get a reasonable return.

Lot of problems

Poor vine growth, unproductive flowering and infestations plagued his watermelon crop for which he received little advice from local traders. The distressed farmer was trying to seek a solution for this problem when he happened to know about the National Agro Foundation experts visiting his village periodically to advise and guide farmers. He approached the experts during their subsequent visit when, through NABARD Farmers Technology Transfer Fund (FTTF), the foundation established a frontline demonstration using its "Resource conserving lean farming technologies" on watermelon crop in the village last year. As a first step, the soil was tested and found to be deficient in micronutrients. A package of practices was advised based on the soil analysis report. The incidence of diseases was attributed partially to deficiency of nutrients also. Though Mr. Paramasivam hails from a family of farmers he lacked the knowledge for maintaining soil fertility. He was aware neither of the bio control measures and combining the organic, bio and chemical sources of nutrients nor of pest control materials.

Ignorant

"Generally farmers do not appreciate the importance of maintaining soil health and fertility (which is long term), as they do not see an immediate change in the crop performance in fields. "Correcting the deficiency and nullifying the effect of excess is the key for a sound soil health management programme. Secondly, each nutrient plays an important role in the entire life cycle of a crop which cannot be substituted. "Farmers, out of ignorance, use certain type of fertilizers over and above the requirement — especially nitrogen and phosphorus — and neglect the deficiencies of other parameters, especially secondary nutrients like calcium, magnesium and sulphur, and micro nutrients like iron, manganese, copper, zinc, boron etc.," says Mr. M.R. Ramasubramanian, Director.

Judicious mix

The foundation offered both classroom and on-field training for the farmer to improve the soil fertility status, modified the fertigation schedule apart from providing nutrients like calcium, magnesium, zinc and boron externally by soil application. It advised a judicious mix of organic, bio and pest control measures and Panchagavya spray to boost female flower formation. "We find panchgavya to be a very good growth promoter in crops and are encouraging its use among our farmers," says Mr. Ramasubramanian. In a matter of 2-3 months the results appeared to be quite good. The yield of watermelon increased to 14 tonnes from 10 tonnes per acre with an investment of Rs.10,088. The farmer sold the fruits at the local market for Rs.4,700 per ton.

Income details

He got a gross income of Rs.65,800. The net profit was Rs.56,000 per acre as against a previous net income of Rs.37,000 per acre resulting in an additional profit of Rs.18,000 per acre. This increase in income in about 6-7 months has been the bait for many other farmers in Arasur and Vanniyanallur region who also want to follow Mr. Paramasivam's method of cultivation. According to Mr. Ramasubramanian in many regions of the state the soil has saturated levels of phosphorus but still farmers apply two bags of DAP (diammonium phosphate) before growing any crop.

Balanced application

“They think that this is a must without bothering to know its implications. Instead of DAP application of low cost biofertilizers like Phosphobacteria also help. Unless the levels of these nutrients are balanced, farmers would be increasing the cost of inputs and production without commensurate returns,” he says.

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