

Vertical agriculture

In India, farmers born after 1950 will be puzzled if they are told that crops can be raised without the use of manmade chemical fertilizers and pesticides. But that is what have precisely been doing since 1995 in our family-owned *Prakash Bio- Organic Farm*. We have not innovated anything. We are only adopting what farmers have been following for thousands of years before the advent of chemical fertilizers and pesticides. We follow the time-tested, traditional techniques and adopt the best and the latest organic practices.

Azolla, introduced on the farm, serves as a feed for livestock and an organic supplement for plants. Chemical manures and pesticides are not at all used on the farm. Vermiculture, composting, *pancha gavya*, *amrith jalam*, bio-dynamics, effective microorganism, amino acid (fish), sub soil rain water harvesting and apiculture are some of practices followed on the farm to promote crop yields. Every day, we perform 'homam' and play music as both of them contribute to better growth of plants.

We follow a lot of eco-friendly practices. Neem, garlic, marigold, tulasi, basil and aswagandha grown on the farm to aid in nematode control and prevention pest infestation. Twenty types of herbal leaves available farm are fermented with cow urine and E.M. Solution and mixed with vermiwash to serve as a foliar spray. All the bio integrated farm components are being effectively harnessed to attain sustainability on the farm. On-farm organic wastes like weeds, coconut leaves, coconut husk and outer shells, and trimmings of cocoa, gliricidia, jetropha, drumstick, henna and custard apple are recycled into compost to provide excellent nutrients to the crops. We observed that, the incidence of 'mite' can be arrested when two pure copper rods of 6mmX250 mm are perpendicularly inserted in the trunk of the coconut tree enabling the sap to get converted into copper oxi chloride on a continuous basis.

Vertical agriculture is another innovation on the farm developed for producing about 10 types of vegetables in limited space available on the roof tops in urban areas. The method is described below: Take a drum with a capacity of 200 liters. Remove the top and the bottom portion. Make 6 holes each at two variable heights – one level at the bottom portion and another a little below the top portion. Each hole of the diameter 8-10 cm. for the air to flow freely. Fill the drum with straw, crop wastes, dried leaves and sprinkle water. In a few days, these materials decompose and it comes close to the holes made at the bottom portion. Plant the saplings through these holes. As the plants establish and grow, see that it comes out of the hole having its base within the drum. Again fill the drum with the wastes as done before. When the decomposed material fills to the next level of holes made, again plant saplings so that they grow out of the holes. By this method more than 10 varieties of plants can be grown from one single drum.

Prakash Bio-Organic Farm, the first in Andhra Pradesh be certified organic by Skal International, supplied MT of Totapuri Mangoes to ITC Limited. ITC produced pulp out of the mangoes and exported it to the U.K. "The quality of the farm produce is superb", commends ITC. The produce tastes great and its preserving quality, incredible.

Shri. Chalasani Dutt