USE OF VETIVER GRASS IN ORGANIC CULTIVATION OF AROMATIC CROPS

Ramakant Harlalka and Nikunj Harlalka

S-12 Green Paradise, Vishal Nagar Telibanda, Raipur (C.G) 492006 India

Abstract

In India good quality agricultural lands are degraded by water and wind erosion, loss of organic matter, water-logging and salinity which decrease crop yield and biodiversity. Lands are also contaminated with heavy metals due to growing industrialization. Human exposure to these metals through ingestion of contaminated food or uptake of drinking water can lead to their accumulation in humans, plants and animals. There are lots of expensive methods for controlling soil erosion, soil salinity, and land degradation, which cannot be achievable in developing countries. These kind of lands can be developed for cultivation of aromatic crops like lemongrass, citronella and jamarosa alonwith Vetiver.

In Village: Tupakbora, Teshsil: Baghbhara, District: Mahasamund, State: Chhattisgarh, M/s.C.G Herbals is engaged in Organic cultivation and procession of aromatic essential oils. This presentation contains details of the ways in which vetiver grass has helped in attaining organic status for the farm. M/s. C.G. Herbals a proprietary firm and sister concern of M/s. Nishant Aroma. C.G Herbals is a leading distiller & producer of essential oils based in Chhattisgarh and having its own aromatic farm of 30 acre located at Tupakbora village of Mahasamund district. In most of the time the aromatic farm lands were problem with soil erosion. About 60% of farm lands were highly susceptible to soil erosion i.e heavy monsoons showers removes the surface soil through runoff. The surface soil erosion not only reduced the fertility of land but also it threatened to bring down the productivity of adjacent agricultural land. Accordingly the organization has laid various physical structures to control soil erosion but however the problem did not solve.

In the year 2008, a senior member of organic certification agency has visited the affected farm land and suggested for vetiver plantation to control soil erosion and also conservation of eroded soil. His pessimism was all the more justified because the sites to be protected and also got certificate as organic certified farm. In the spring of 2008 the vetiver slips were planted in the barren and severely affected lands of Tupakbora farms. Despite all the hazards, however most of the vetiver plants in the farm sites were survived. In eight weeks some were becomes almost 2m tall. In ten weeks they had grow together in to hedges. By that time the hedges were so effectively arresting the velocity of raging floodwater and also filtering the runoff that the old flow off mud and silt was largely cut off. The lands were protected from soil erosion caused by water and wind. However vetiver was acting as much more than an erosion trap in the agricultural lands. It was also produces excellent long-lasting, absorbent mulch which helps to increase the organic carbon in soil and also increasing soil porosity for better aeration. The practical experience of application of Vetiver mulch in Tupakbora farms helps to increases water infiltration and reduces evaporation, thus protects soil moisture under hot and dry conditions. By that time it was clear that vetiver was a “nurse plant” that was protecting other aromatic species and thereby giving these devasted farm lands a chance to heal them-selves. Whether because of better soil moisture or the capture silt, the combination of hedges and revegetated lands solved difficult erosion problem little more than a year before.