

Vetiver, the Magical Grass spreads in Busia County

Written by Cheki ABUJE

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James Were, Kenya Forestry Coordinator in Busia County has asked the residents of the county to begin planting Vetiver grass, (*Chrysopogon zizanioides*) to improve soils.

Vetiver grass is a tropical clump grass with origin in south India. It has the ability, when planted close together in a line, to create a near perfect barrier that filters out sediment, spreads rainwater, improves the sheer strength of soil, and recycles soil nutrients. He explains that the grass should be planted during the start of the rainy season when the ground is wet. "Get a clump of vetiver grass. Cut the roots to 4 or 6 inches (15 cm). Keep the grass trimmed to a height of 12 to 20 inches. Divide the clumps into individual slips. For plant multiplication plant each slip using spacing of between 12 and 12 inch (30x30 cm) and ensure that the nursery is watered properly and mulched with dry grass" says the forestry officer, who was demonstrating the cultivation of the grass on a farm in Bunyala, Busia County. Mr. Were adds that rapid multiplication can be achieved by dividing and replanting during the initial stages when the weeds should be controlled effectively. Further, the grass should be cut before flowering.

According to Fiona Imbali, the Communications Officer at Arid Lands Information Network (ALIN), cultivation of Vetiver grass is one of the best ways of preserving soil especially in dry lands. Its effectiveness has been proven through practice, since more than 120 countries are documented as currently using it to rehabilitate degraded land. It can survive harsh climatic condition, and communities in dry land areas could also use it for commercial purposes such as fodder for domestic animals and also for roofing/thatching.

Vetiver grass is known principally for soil and water conservation. Its deep root system enables it to tolerate extreme climatic conditions including prolonged drought, flooding, fires and frost. It can tolerate a wide range of soil acidity levels and plays an important role in clearing heavy metals from the soil. However, it's intolerant to shade.

Dr. James Owino, a lecturer at Egerton University says that Vetiver grass' lack of stolons (long stem or shoot) and rhizomes (a thick underground horizontal stem) enhances its drought tolerant characteristics. "Vetiver grass could be used to support a forestation programs. When planted across the slope, it develops into a narrow barrier of stiff stem grass hedge that reduces soil loss and water runoff." Dr. Owino explains. "The grass can provide a source of fodder for livestock as well as promote plant diversity which makes it an effective tool that could combat desertification. Its strong root systems enables the soil to bind together ensuring that it can withstand the effects of tunneling and cracking. The roots grow downwards and thus do not compete with crops growing next to the hedge," observes Dr. Owino.

Currently in Kenya, Vetiver grass projects are mainly located in the Coast, Rift Valley, Nairobi, Nyanza, Eastern and Western provinces.

The dried roots of the grass can be used for the production of scented soaps as well as perfumes.

Vetiver grass has been known to clean up the soils: in Thailand, Vetiver hedges captured and decontaminated pesticides such as carbonfuran, monocrophos and anachlor used in cabbage growing thus preventing them from filter

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contaminating and accumulating in the soils and crops. On pineapple farms in Queensland Australia, it was able to river beds. Vetiver grass controls pests, diseases and weeds; its leaves attract pests like the storm borer and once they lay eggs on the hairy leaves, the larvae when hatched fall to the ground and die.

Traditionally, it has been used as medicine in Asian countries. It is generally used for cosmetology, aromatherapy, making handicrafts and thatching among others.

A farmer in semi-Arid Bunyala South, Mr. Christian Makokha, has taken up the cultivation of Vetiver grass in his home at Bunyala. Despite abounding challenges, he is widely sought after for his efforts to promote environmental conservation through growing of the grass.

“I pioneered the planting of Vetiver in Bunyala. I had tried Napier grass but I realized that it could not sufficiently curb soil erosion. The local tree varieties which were recommended took a long time to mature yet I wanted to reclaim and rehabilitation my land (which) is rocky and hilly quickly,” states Makokha.

Makokha started a Vetiver nursery that he used to teach the community about the grass. He notes that some community members were skeptical about the viability of the project but after several forums with them, some took it up and are currently reaping benefiting from it.

Makokha has collaborated with various organizations including the National Environmental Management Authority (NEMA) and the European Union. “In 2011, I was awarded a certificate of technical excellence by the Vetiver Network International (TVNI) for my efforts in promoting Vetiver technology in Kenya”.

Most of the land in his home area is rehabilitated and the yields have improved tremendously. He has helped his community stabilize riverbanks like the Sio River. Makokha says that if taken up by the government and various stakeholders, cultivating Vetiver especially for the communities in the arid areas will go a long way in curbing desertification.

The budding environmentalist who says he became interested in the venture when he visited test farms in Mbale Uganda in 2011. He engaged a Non Governmental Organization (NGO) Plan for Land Use Sustainability (PLUS) Kenya where with the assistance of Elise Pinnars who is in charge of Vetiver PLUS Kenya, and benefited from Rotary Club Tubbergen funding to start his own vetiver farm nursery.

PLUS-Kenya in Bunyala supports Sio river dikes construction for control of flood waters and farms in Bunyala by promoting vetiver use by enabling partners who actually work on the ground, mainly, community based organizations, NGOs and private sector.

PLUS Kenya also lobbies for an enabling policy environment for sustainable Land and Water Resource Management, e.g to get Vetiver System recognized and properly understood in the agricultural sector, and Vetiver be introduced for road works, storm and flood protection, etc.

Makokha formed part of a team that participated in two trips to Lodwar, one to Bududa Uganda, to discuss an upcoming project for landslide mitigation, and a meeting with the planner of two roads projects in Uganda where he was given an opportunity to supply Vetiver seeds and possibly overseeing works under supervision of Alain Ndonga from DRC, the certified expert for vetiver system on roads who was flown in to assure much needed backstopping for these two roads projects.

TVNI decided he was indeed eligible and he is the second person in Kenya receiving the TVNI certificate for Vetiver propagation and training for its use on-far,