DAILY NATION
Thursday August 14, 2008

TECHNOLOGY

Farmers take charge of own roads

Peter Chege is a hardworking farmer at Mumui in Nyandarua South district. He grows horticultural crops for export and knows just too well how profitable this is when he delivers his produce fresh and in time to Nairobi for shipment to markets abroad.

But this does not always happen. Many times he and other farmers in the area have lost crops worth thousands of shillings during the rainy season when access roads to farms become impassable.

This makes it impossible for exporters from Nairobi to collect the produce and it ends up rotting on the farms. This loss and frustration may soon be a thing of the past as farmers have come together to improve sections of roads in their area that are impassable when it rains.

With locally available materials and a simple but effective road making technology perfected in Japan, the farmers in Mumui and elsewhere in Kenya can now repair sections of their access roads that become impassable during the rains. This technology called 'Do-nou' has been used in Japan and other parts of the world successfully to benefit rural farmers.

Exports

A demonstration of the technology was held at Mumui recently to Kariko farmers group which specializes in growing vegetables for export and for which Mr Chege is the group's chairman.

The technology was demonstrated by the Smallholder Horticulture Empowerment Project (SHEP), a technical cooperation project between the government of Japan through the Japan International Cooperation Agency (JICA) and the Government of Kenya.

According to Dr Engineer Yoshinori Fukubayashi, an expert in rural infrastructure with SHEP, 'Do-nou' is a Japanese word which means wrapping soil in gunny bags.

The soil, once compacted, becomes as strong as concrete. Dr Fukubayashi who is the head of the rural infrastructure component of SHEP says the 'Do nou' technology was fronted by Prof Makoto Kimura of Kyoto University who argues that inaccessible feeder roads is one of the main causes of poverty in the rural areas.

A trench is dug on the bad sections of the road and the bags placed on the excavated sections.
PHOTO / CORRESPONDENT

'Do-nou' technology involves the use of gunny bags filled with soil or sand, gravel or murrum and the opening properly secured. The technology can be used to repair rural access roads, raise temporary structures after disasters and reinforce building foundations.

The technology can be used to repair rural access roads or raise temporary structures after disasters

The use of the technology for maintaining unpaved roads in some Asian countries goes back to almost two centuries but it was only introduced to Kenya with the SHEP.

The Do-nou technology uses a gunny bag 45 cm x 60 cm or used plastic bags of similar sizes used to carry things like fertilizers and the materials used inside the bag are either sand, murrum or gravel as well as ordinary farm soils.

The process is manual labour-based and is easily adaptable by communities in rural areas which are often willing to contribute labour to projects that benefit them. Roads that have been repaired require regular maintenance especially after the rains. If treated well, the bags can last up to 50 years.

Do nou is technology is applied by filling the bags with the recommended quantity of either murrum, gravel, sand or farm soil.

— CORRESPONDENT