

Kick-starting the biochar value chain

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Biochar can hold major benefits for Namibian farmers such as enhancing the quality of soil in agricultural systems and providing feed to animals.

This according to a recently launched brochure with practical guidelines for Namibians interested in producing biochar from encroacher bush.

Biochar is a form of black carbon that is similar to but also distinctly different from barbecue/braai charcoal. It is used to enhance life processes in soil, water or the atmosphere.

It is considered a very promising product for Namibia as farmers can use it to build their soil for future generations and producers can benefit from a growing international market.

Biochar has a large inner-surface and can take up water, nutrients or toxins like a sponge. Applying biochar into soils can fix carbon for thousands of years and help mitigate global climate change.

Special kiln needed

According to a statement issued by the Deutsche Gesellschaft für

Internationale Zusammenarbeit (GIZ), for Namibian farmers biochar can also complement the production of animal feed and charcoal.

GIZ explained that biochar is produced from fine and medium bush fractions, which are typically too big for bush-based animal fodder and too small for charcoal production.

Any type of woody bush species can be used. However, a special kiln is needed for production, such as the Kon-Tiki kiln. This kiln is locally manufactured at low cost for small- and medium-scale production.

The time is now

At the launch of the brochure, experts pointed out that the best time to start producing is now, so that the biochar is ready for soil application once the rainy season starts.

Dr Ibo Zimmermann from the Namibian University of Science and Technology (Nust) explained that a number of faculties are involved in research on biochar. The engineering faculty runs a design project which includes kilns, crushing machinery and animal feeders.

Meanwhile, testing facilities are being set up and laboratory tests for biochar will be available at the faculty of health sciences.

Market potential

Colin Lindeque, the managing director of Carbon Capital, said agricultural use accounts for roughly half of the global market. Internationally, biochar is also used for water and air filtration, for electronics such as electromagnetic shields, in construction as insulation, in cosmetics, in textiles for adsorption or odour control and in food, especially in health supplements.

Biochar is also used to sequester carbon in soils to mitigate climate change.

“Experts expect a market growth of 12% to 15% per year. However, these off-takers are looking for specialised and high-quality products. You need to have exactly the right product at the right price for the right market,” Lindeque said.

Domestic markets could include farmers growing grapes, blue berries, dates, livestock, dairy or mushrooms.

The brochure was developed through a technical working group consisting of the Bush Control and Biomass Utilisation project of the environment ministry and GIZ, the Nust Bush Project, as well as industry representatives from the Namibian Charcoal Association and the Namibian Biomass Industry Group.