Eva Masha from Strydkraal, in Limpopo, proudly shows off pumpkins growing in her backyard.

Towards productive water use and household food security in South Africa

A recently completed project funded by the Water Research Commission (WRC) is proving that with the correct knowledge and training families can successfully turn around the hunger cycle by growing their own food.

Despite national efforts, millions of South Africans still go to bed hungry every night. Research shows that around 53% of all the country's households experience hunger, with 59% of households being food insecure.

Increasingly development practitioners are recognising the importance of household food security and especially the impact of under-nourishment among household members (both children and adults) on wider society. The focus is shifting to the potential role of the homestead yard in food production for improvement of family nutrition.

Improving national and household food security has been priority for the WRC for nearly 20 years. According to Drs Gerhard Backeberg and Andrew Sanewe of the WRC's key strategic area focusing on water utilisation in agriculture, while around 9,5% of all households have access to agricultural land (predominantly small plots of less than a hectare), nearly 18% of households can potentially grow food in homestead backyard gardens in rural villages. Most of these households are headed by women. Currently these households rely on multiple sources of income, with rainfed and irrigated farming, on average, contributing respectively 10% and 30% to rural livelihoods.

However, households require more than just material input to successfully grow their own food. The challenge is to empower people who are hungry and under-nourished to produce or acquire sufficient food which meets their dietary needs. Experience indicates that the focus should be on improving people's

knowledge through informal, practical, on the ground training and skills improvement.

PARTICIPATORY RESEARCH

Early in 2004, the WRC solicited a research project to develop training material for agricultural water use in homestead farming systems. The emphasis was placed on participatory research and, as such, households from various communities around South Africa were included throughout the project cycle. This approach emphasised the participation of farmers in the generation, testing and evaluation of technology to increase or promote sustainable agricultural production.

The overall objective of the project was to improve food security through homestead gardening, by developing and evaluating the appropriateness and acceptability of training material for water use management, training the trainers and training of household members in selected areas.

The resultant resource material for facilitators and food gardeners deal with (among others) production potential, water supply and management, dietary requirements for balance nutrition, poverty alleviation, participatory rural appraisal and applicable adult educational approaches within rural social structures. In addition, the specific techniques and infrastructure required to harvest and conserve rain, cultivate soils and produce crops that will impact on the essential dietary needs of people living with limited means and opportunities are explained and illustrated.

Some of the homestead soil and water use techniques introduced include deep trenching for concentrating water and nutrients in the plant zone; run-on ditches for in-garden rainwater harvesting; tower gardens for saving labour and using greywater; drip-kits for saving time and water; and underground rainwater storage tanks, among others.

A homestead garden such as this one could do much to improve hunger statistics in South Africa.

The resource material has succeeded in drawing widely from local and international materials and experience. Its usefulness in practice has already been acknowledged by facilitators who were not part of its development.

It is anticipated that a variety of stakeholders, including practitioners, will rely on this resource material to develop course material for their own purposes. Already a significant demand for the material exists from universities and agricultural colleges that are aware of the material.

With the cooperation and assistance of agricultural colleges, non-governmental organisations, and community-based organisations across the country, a national initiative is now required for training the trainers, facilitators, farmers and individual household members, particularly women. The support of senior managers at provincial and local government level is essential for successful implementation of this training programme.

- This article is based on an original paper by Drs Gerhard Backeberg and Andrew Sanewe of the WRC: Water Utilisation in Agriculture presented at the 6th Asian Regional Conference of the International Commission on Irrigation & Drainage held in Yogyakarta, Indonesia, 10-16 October, 2010.
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