

# WRC water harvesting short course materials get the nod



***Water harvesting and conservation (WH&C) has gained increasing priority in rural development and agricultural initiatives over the last ten years in South Africa. The Water Research Commission (WRC) is developing an active role in developing the science of WH&C by targeting research grants to modernise, localise and quantify methods and their benefits. Words by Jonathan Denison.***

**T**he most recent contribution is the development of a comprehensive learning package on water harvesting and conservation, structured as a 30 credit short course, and which has received resounding approval from colleges and stakeholders nationally. The course is designed to be presented by AgriSETA accredited service providers and the Agricultural Colleges, among others.

It aims to equip rural development fieldworkers and agricultural college graduates with both the technical and the facilitation skills to effectively take water harvesting and conservation technologies and approaches to farmers and home-gardeners.

Up to the late 1990s, WH&C was promoted mainly by non-governmental organisations working towards food security through improved gardening and crop-production methods. Trench beds, diversion furrows, swales, mulching and other techniques can be found around South Africa, usually, but not always at a small scale. Although still not widely known, WH&C has also been practiced at an impressive scale by commercial lucerne farmers of the arid Northern Cape who are dependent on thousands of hectares of 'saaidamme' or floodwater harvesting basins, to sustain their sheep production and the regional economy.

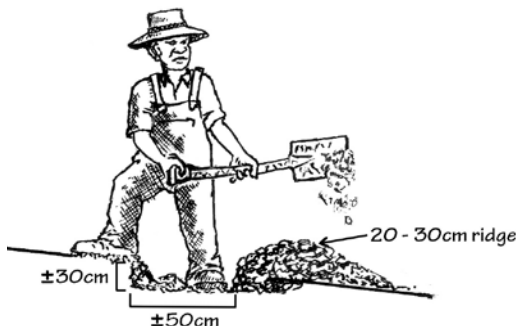
Even with these working systems at all scales and across cultural and income groups, the many different water harvesting and conservation techniques remained on the fringe of mainstream practice and policy until the last decade. However, this has changed and WH&C is now increasingly part of the common discourse by politicians and scientists alike. It is recently embedded in South African government policy and subsidy arrangements across departments, including the Department of Agriculture (in the National Five-Year Plan); the Department of Water Affairs (in the resource poor farmers subsidy); and the Department of Rural Development and Land Affairs (in the Green Paper), among others.

The value of water harvesting approaches are that they offer relatively low-cost interventions that can be implemented in stages as resources allow; and they have proven

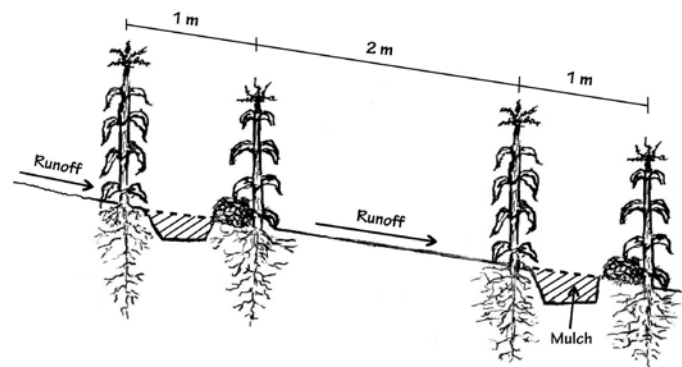
outcomes of increased yield, reduced risk of crop failure and greater profitability. A scan of the WRC website for water harvesting publications provides convincing and credible evidence of the increased role that these approaches will have in securing food into the future.

*The Comprehensive Learning Package on Water Harvesting and Conservation* was developed over three years by the Umhlaba Consulting Group and collaborating researchers, artists and educationalists, including a piloting team at the University of KwaZulu-Natal. The materials were crafted following wide consultation with government departments and potential users, and responds to the Department of Agriculture requirements for Unit Standard compliance (Set at NQF 5). The materials, in their final form, are also compatible with the Quality Council for Trade and Occupations requirements for a Short Course; in this case comprising 30 credits.

The package comprises three main parts: Part 1 and 2 are geared to students of rural development and agricultural extension, while Part 3 is developed specifically for resource poor farmers and gardeners – who are the primary end-users of the learning package initiative.



**The Technical Manual** introduces the principles of water harvesting and conservation, the water cycle, soils, water and ecosystems. It then sets out detailed, step-by-step illustrated descriptions of how to implement the 13 different WH&C approaches that were selected as being most appropriate to the South Africa context.



**The Facilitation Manual** is based on contemporary participative research and extension thinking, consolidated in the 'Participatory Technology and Innovative Development' approach. The course challenges students to consider the concept of development, to identify and appreciate indigenous knowledge and sets out a sequence of interactions to ensure respectful and motivational engagement with

a range of people. The approach is centred around the well known Kolb Cycle of action learning. The specific intention is to engender a paradigm shift in the way the course-graduates engage with gardeners and farmers, primarily by respecting their existing knowledge base, and promoting knowledge gain through joint experimentation, shared learning, self-monitoring and information sharing.



**Farmer handouts** are fully illustrated, A4 size materials which can be left with farmers and gardeners. The black-and-white line drawings can readily be photocopied and left with farmers and villagers as reference materials to aid their implementation and experimentation with whatever methods are suitable to their context.

A recent survey of the Agricultural Colleges and other potential users who were circulated the draft materials, found widespread approval of the content, illustrations and educational approach. The vast majority of the Agricultural Colleges expressed

substantial interest to use the materials both as resource material for existing courses, and are keen to offer a WH&C short course.

Two colleges have already started to embed content from the drafts in their 2011 coursework, unable to wait for the final print. One College Head who was interviewed said: "In the context of climate change and in our arid country, we must make sure that our students embrace these techniques. They are an unavoidable part of our agricultural future."

The guides will be available from the WRC in April. □