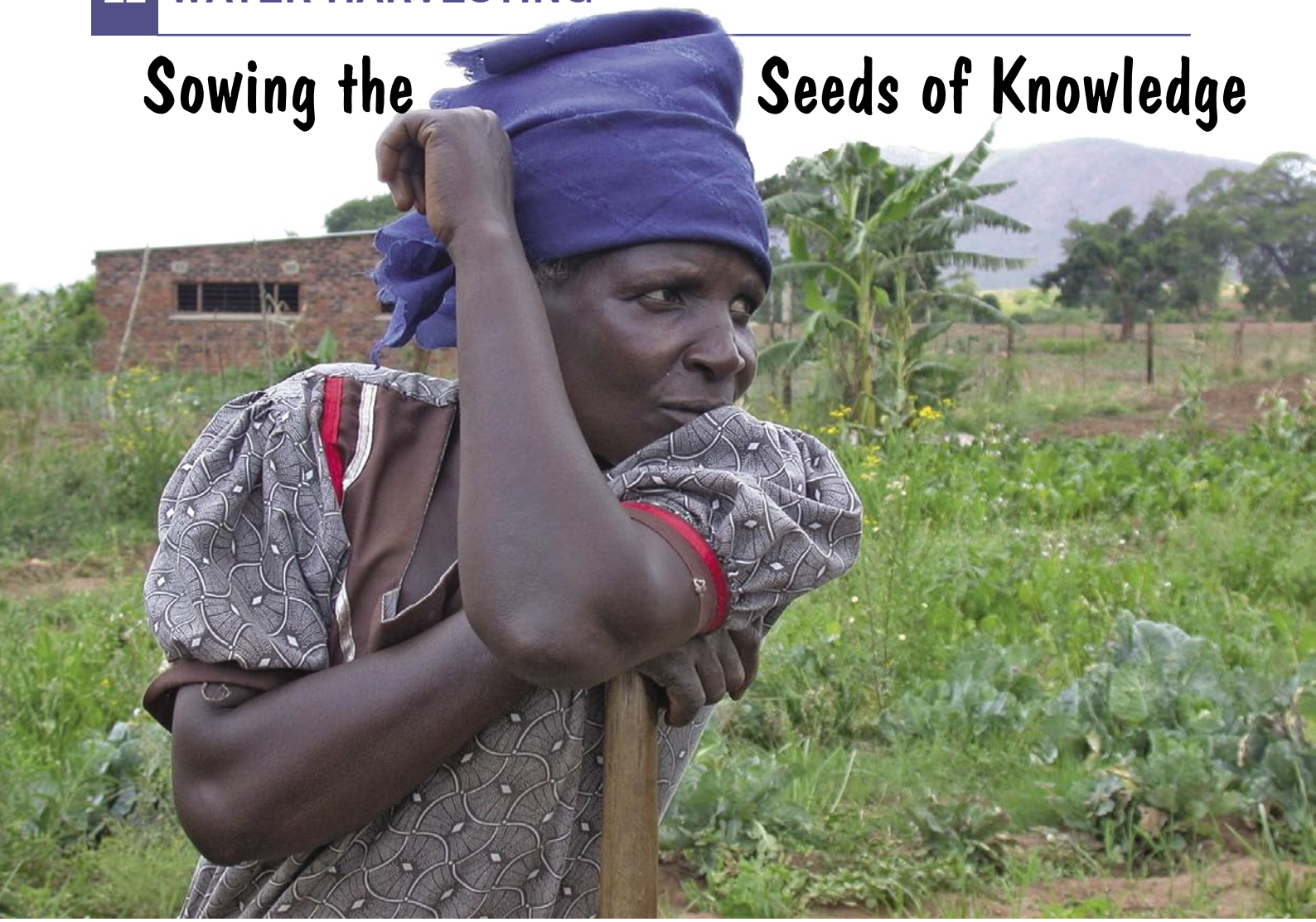
Sowing the Seeds of Knowledge



It has been recognised that, while water-efficient production technologies, such as rainwater harvesting, can improve the plight of the poor, the mere creation of optimum techniques are not enough. The Water Research Commission (WRC) is now funding research, undertaken by Rural Integrated Engineering, into the best ways of disseminating this knowledge to the rural communities who can benefit most.

Improving food security among the poorest communities in South Africa remains one of the government's most important development thrusts. It is estimated that 35% of the country's population or 14 million people are vulnerable to food insecurity and that 43% of households suffer from food poverty. There is thus a dire need to introduce measures that will contribute towards increasing household food and/or income.

One of the overarching principles of the government's integrated food security strategy is that food insecure communities should be made agents of their own development. While research into smallholder farming has increased substantially in the last decade, much of the information generated has not been packaged for use by resource-poor, ill-educated community members.

The WRC project, which started last year, intends to develop training guidelines for food insecure households, and develop training material incorporating indigenous farming knowledge in efforts to improve present farming practices and systems. Research efforts have been focused on rural villages in the former homelands in KwaZulu-Natal, Eastern Cape and Limpopo.

HOUSEHOLD GARDEN PRODUCTION

The first step has been to identify current practices and constraints in household food production. It is reported that in the coastal areas that have a high rainfall, particularly the

former Transkei, rural production has become more important, and there has been a re-engagement among rural households of their agricultural resources.

The application of rainwater harvesting and intensive gardening can make a real difference, but the villagers require a helping hand in the initial stages.

It is believed that this re-engagement is mostly as a result of increasing levels of poverty and large-scale retrenchments of migrant and formal economy workers. Consequently, households have been forced to depend more on rural agricultural resources and on household subsistence production.

Yet, it appears that farming and even gardening still play a negligible role in the survival strategies of people who are residents in the rural village. These villages are essentially 'suburbs' of distant commercial and industrial centres with a critical role being played by urban wages and state transfers. Household incomes are depressingly low and there are no reserves to take care of domestic crisis or to finance initiatives.

It seems from case studies that dry land; field-based arable production does not rate highly in villagers' livelihood strategies. Household composition, often dominated by old people and young children, militate against field-based arable production. In villages subject to betterment planning, increased risks of theft, personal security considerations and stock damage mean that arable production in fields remote from the residences are being considered too risky.

The more intensive inter-cropping of maize, vegetables and fruit and other food crops in fenced gardens next to homestead is the most widely practiced. This homestead gardening is highly varied and differentiated, from the desperate sub-subsistence survival case to the more effective surplus, storage and exchange examples.

THE ROLE OF WATER

One way of increasing production is through water harvesting, which is essentially based on the principle of depriving (natural or artificially) part of the land of its share of rain (which is usually not used productively) and adding it to another part where it can be used beneficially.

This involves, among others, capturing the water that falls on the roof of the homestead and storing it in an underground tank. In addition, during a rainstorm runoff water from the rest of the plot can be gathered in

Disseminating information regarding optimum water harvesting techniques to rural communities is essential if food insecurity is to be overcome.

With an estimated 35% of households suffering from food poverty, there is a dire need to introduce measures to increase household food and income.

Household gardening is probably the only viable aspect of village-associated agriculture that can make a significant contribution to the livelihood strategies of individual households.

Harvesting rainwater, here through the use of underground reservoirs, is one way of increasing household food production, but community members need training.

drains made across the slope and taken down to the vegetable garden. This water can then be used to water the garden during dry spells during the rainy season or to make vegetable production possible in the dry season.

Harvesting and storing water, however, is only half the battle. Unless vegetables and fruit can be grown intensively so that there is high production of top-quality products the effort required will not be justified. It is also important that purchased inputs be kept to a minimum since cash is such a scarce commodity.

This implies the application of production methods based on organic principles, as well as the use of intercropping (growing different plants, for different seasons, on the same piece of land) and companion planting (mixing plants that help each other grow well), to name but a few.

THE ROLE OF LOCAL GOVERNMENT

It is believed that household gardening, in conjunction with limited livestock production, is probably the only viable aspect of village-associated agriculture that can make a significant contribution to the livelihood strategies of individual households. However, it appears that this has yet to be appreciated by many policy makers.

Rural development is the direct responsibility of the local government. The promotion of the technology of agricultural water use in homestead farming systems for improved livelihoods would seem to be in line with the current deployment of community development workers. These multi-skilled public servants are being deployed in communities to help people access government services and poverty alleviation programmes.

After training, these workers are expected to have the ability to plan, manage, implement, monitor, and evaluate programmes in a wide array of developmental disciplines, including water supply, agriculture, infrastructure development, and health.

The application of rainwater harvesting and intensive gardening can make a real difference, but the villagers require a helping hand in the initial stages. This is a challenge for the community development workers and all concerned with the plight of the villages.

The intention is that the guidelines being developed under the WRC project will support the activities of these community development workers.