

Smallholder Horticulture

in
ZIMBABWE



edited by
J.E. Jackson,
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and
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SHINGA IRRIGATION SCHEME

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INTRODUCTION

Lack of water for human and livestock consumption as well as for gardening is one of the major constraints for farmers in Mudzi district. During a planning seminar with farmer representatives and extension staff, it was therefore agreed that promotion of horticultural production through the realisation of small-scale irrigation schemes should be a priority for the Mudzi District Agricultural Development Project (Mudzi A.D.P.). The Shinga Irrigation Scheme is the first scheme constructed with assistance from Mudzi A.D.P.

The first attempt to construct an irrigation scheme in Shinga date back to 1987, when a study indicated that an area of about 8 ha at 1 km distance from the dam-wall could be served by gravity. Farmers were mobilised and organised themselves in an irrigation committee. Unfortunately, later surveys, carried out by the AGRITEX Irrigation Branch, proved that the site was not really suitable for a gravity-fed irrigation scheme. People were left frustrated after all these surveys without any real action taken.

However immediately downstream of Shinga dam, a terrain of 1.88 ha was identified to be suitable for gravity-fed irrigation. A detailed survey was carried out in April and May 1992 by the local Agricultural Extension Officer, Conservation. The construction works started in June 1992 after two preparatory meetings with the members of the previously established irrigation group were held and an agreement of co-operation signed between the irrigation committee, Mudzi A.D.P., Agritex and District Development Funds to define the division of tasks and the responsibilities for all parties involved.

EXECUTION OF THE CONSTRUCTION WORKS

After completion of the designs and diagrams by the local Agricultural Extension Officer Conservation, one qualified builder was contracted by Mudzi A.D.P. to assist and supervise the construction works. All other labour requirements were provided on a free basis by the members of the irrigation group. From mid-June until the end of October, on average 30 members worked full-time on a daily basis in the scheme, being more than 4 000 person-days. Some of the local builders were trained in the construction of concrete irrigation canals. At specific moments, District Development Fund tractor units and the Agritex motorised grader assisted in the works.

A maximum of materials was sourced locally, such as aggregate stones, bricks, fencing poles and river sand. All external materials were provided by Mudzi A.D.P.

The works were regularly visited by the Agricultural Extension Officer; Conservation and the project staff to assess progress and workmanship.

Altogether, the cost price of this scheme is about Z\$20,000 or Z\$11,000 per hectare. This is far less than the common rates, amounting to Z\$20,000 to 30,000 per hectare. Through appropriate designs, provision of local materials and free labour, costs can be seriously reduced in the implementation of micro-irrigation schemes.

FUTURE PLANS

Twenty households will benefit directly from the scheme. For ease of management, the land will be divided into three units. Each farmer will be allocated an equal area in each unit. One crop will be planted per unit. About 0.4 ha will be irrigated every day in a 5-day cycle.

The households in the scheme will receive intensive training, covering aspects such as water management, agronomic management of horticultural crops and marketing as well as organisational skills to prepare them to make proper and intensive use of the scheme.

Sustainable use and proper maintenance of the scheme is more or less guaranteed due to the high level of participation of the irrigators during the construction works. They won't easily forget their sweat and efforts.

The experience in Shinga should allow us to improve the efficiency of planning and implementation of new small scale irrigation schemes. Shinga was in a certain way a test-case to assess the possibilities of constructing low-cost micro-irrigation schemes with a maximum of farmer participation. The positive experience will certainly lead to similar initiatives in other Wards of the project area.



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