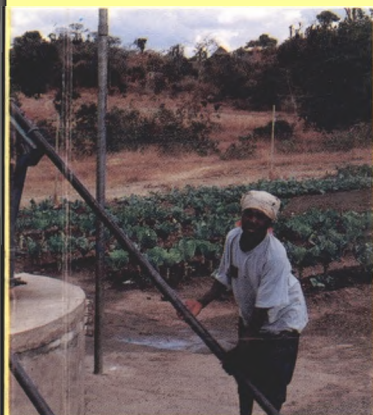


Smallholder Horticulture

in
ZIMBABWE



edited by
**J.E. Jackson,
A.D. Turner
and
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FOREWORD

J.E. Jackson

Horticultural production is expanding very rapidly in Zimbabwe, as throughout much of the tropics and subtropics. This results from a number of separate developments:

As population increases so must the output per unit of land. Horticultural crops are outstanding from this point of view, giving much higher economic returns and also surprisingly high food returns compared with staple crops, cabbages, for example, giving ten times the cash value and the same edible protein value as wheat per ha (Horton, 1990).

As population increases so does the need for employment opportunities. Horticulture is labour-intensive and generates the wealth to pay for labour so is supported by government for its role in employment creation (Government of Zimbabwe, 1986).

There is increasingly demand for fresh horticultural produce throughout the year in the developed countries, creating major export market opportunities especially, but not exclusively, in the northern hemisphere winter. This potential for export marketing also attracted government recognition and support (Government of Zimbabwe, 1986).

Recurrent droughts have emphasized the importance of irrigation at all levels from that using simple wells and pumps to substantial new dams on commercial farms and irrigation projects in small-scale farming areas with government and donor support. Irrigated agriculture is inherently expensive and inevitably farmers with such resources tend to move towards production of high value horticultural crops.

The expansion of horticultural production on large-scale commercial farms in Zimbabwe has been explosive and well documented. Exports have risen in value from Z\$3 million in 1984/85 and Z\$62 million in 1990/91 (Rukuni and Makadho, 1994) to US \$101 million (approximately Z\$1,000 million) in 1995/96 (Heri, 1996). Cut flowers, produce (mainly high-value vegetables) and citrus dominate exports but the detailed pattern is continually changing. Large-scale commercial farmers also produce a very wide range of horticultural crops for local fresh markets, for processing and for seed.

Horticultural production by the peasant farming sector (small-scale, communal and resettlement area farmers) is much less well documented. It has long been an integral part of the indigenous farming systems (Rukuni, 1994) making a key contribution to family nutrition and also, in recent years, being a very important source of income through sales (Kundlande *et al.*, 1995, Shumba, 1992) including those to the major urban markets. Horticultural production has, indeed, been a major engine for economic development in many of the peasant farming areas (Kundlande *et al.*, 1995). To date there has been little involvement of this sector in the lucrative export marketing activity but there is little doubt that this will occur.

In order to provide fuller documentation on small-scale horticulture and to bring together those involved in development in this area, a workshop was held in Harare in August/September 1994. This was multi-disciplinary and wide-ranging: including contributions from horticultural crop production specialists, economists, sociologists and those with experience in integrated horticultural development projects. In such a meeting, involving people with very different backgrounds, it was useful to have a

number of concept papers and also for many of the authors to give considerable attention to explaining underlying concepts before presenting their results. Inevitably this led to repetition and also presentation of information which is readily available in standard text books. To provide a tight focus for the published proceedings these have concentrated on those papers, and sections of papers, providing solid information on small-scale horticulture in Zimbabwe. The vitally important subject of irrigation in relation to small scale horticulture has been largely omitted because this was covered in another recent workshop, the proceedings of which were published in 1995 (Owen *et al.*, 1995). For wider aspects of agricultural development (with some coverage of horticulture) in the small-scale sector, readers are referred to Whingwiri *et al.* (1992) and Rukuni and Eicher (1994).

In two respects the focus extends beyond Zimbabwean smallholder horticulture *per se*. In the sections on marketing there is consideration of horticultural marketing by large-scale commercial farmers as well as smallholders because the two inevitably interact. This interaction is likely to become greater with time as a result of the involvement of smallholders as outgrowers for commercial-sector exporters (two papers on which are included in these proceedings) and also as a result of production of large quantities of export-reject fruits and vegetables by commercial farmers which may flood local markets but may also stimulate the further development of processing industries. There are also contributions which relate to smallholder horticulture in other African countries, the Kenyan experience, where smallholders are the major producers of horticultural crops and where horticulture employs 20% of the labour force during the harvest season and is the third biggest foreign exchange earner (Blackie, 1994) being of particular interest at the present stage of smallholder horticultural development in Zimbabwe.

REFERENCES

-
- BLACKIE, M. J. 1994. Realizing smallholder agricultural potential. In: M. Rukuni, and C.K. Eicher, (Editors), *Zimbabwe's Agricultural Revolution*, 335–347. Harare, University of Zimbabwe Publications.
- GOVERNMENT OF ZIMBABWE. 1986. First five-year national development plan 1986–1990. Volume 1, 26–27. Harare, Government Printers.
- HERI, S. 1996. Personal communication, citing data held by the Horticultural Promotion Council Harare.
- HORTON, D.E. 1990. Potatoes: truly a world crop. *Developing World Agriculture*, 49–53, London, Grosvenor Press.
- KUNDHILANDE, G., GOVEREH, J. AND MUCHENA, O. 1995. Socio-Economic Constraints to Increased Utilization of Dambos in Selected Communal Areas In: R. Owen, K. Verbeek, J.E. Jackson, and T. Steenhuis (Editors), *Dambo Farming in Zimbabwe, Water Management Cropping and Soil Potential for Smallholder Farming in the Wetlands*, 87–96. Harare, University of Zimbabwe Publications.
- OWEN, R., VERBEEK, K., JACKSON, J. E. AND STEENHUIS, T. 1995. (Editors). *Dambo Farming in Zimbabwe: Water Management, Cropping and Soil Potentials for Smallholder Farming in the Wetlands*. Harare, University of Zimbabwe Publications.

- RUKUNI, M. 1994. The evolution of agricultural policy: 1890–1990. In: M. Rukuni, and C.K. Eicher, (Editors), *Zimbabwe's Agricultural Revolution*, 15–39. Harare, University of Zimbabwe Publications.
- RUKUNI, M. AND EICHER, C.K. (Editors) 1994. *Zimbabwe's Agricultural Revolution*, Harare, University of Zimbabwe Publications.
- RUKUNI, M. AND MAKADHO, J. 1994. Irrigation development. In: M. Rukuni and C. K. Eicher, (Editors), *Zimbabwe's Agricultural Revolution*, 127–38. Harare, University of Zimbabwe Publications.
- SHUMBA, E.M. 1992. The Farming System. In: E.E. Whingwiri, M. Rukuni, K. Mashingaidze, and C.M. Matanyaire, (Editors), *Small-Scale Agriculture in Zimbabwe. Book 1, Farming Systems, Policy and Infrastructural Development*, 16–20. Harare, Rockwood Publishers.
- WHINGWIRI, E.E., RUKUNI, M., MASHINGAIDZE, K. AND MATANYAIRE, C.M. (1992). *Small-Scale Agriculture in Zimbabwe. Book 1. Farming Systems, Policy and Infrastructural Development*. Harare, Rockwood Publishers.



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