

PROJECT COMPLETION REPORT

34-6

HORTICULTURAL DEVELOPMENT

PROJECT 633-0215

Project Summary:

Horticulture in Botswana is still in an early stage of development. It is characterized by a few scattered domestic producers, a large market for imported horticultural products, little local expertise on the technical aspects of horticultural production, and rudimentary market structure. To address some of these constraints, the International Voluntary Services, Inc., (IVS) was given a program grant (OPG No. 78-633-30) for activities which commenced in July, 1978 and were planned to provide support for four years, starting July 1, 1978 but were extended for 7 additional months until January 31, 1983.

The project purpose was to "support the efforts of GOB and Community Development Associations to expand both commercial and subsistence horticultural crop production in Botswana through the provision of technical services," with the ultimate goal of near self-sufficiency in vegetable and fruit production. The project was funded in two phases: during the first two years the emphasis was on the development of commercial production units with a focus on community based production units and on experimentation, research and training; during the second phase the focus shifted somewhat to emphasize extension activities which were aimed at encouraging smaller-scale horticultural production.

Considerable progress was made towards achieving the Project goals, although the planned focus for IVS participation in rural production and extension activities was inhibited by administrative

and management decisions and issues. The four volunteer horticulturalists working under the project have considerably strengthened the Horticultural Unit in the Ministry of Agriculture (MOA) and the Research Unit in the Department of Field Services (DAFS), and have helped to achieve closer linkages between extension and research.

The linkages between the initial phase of the Rural Sector Grant (RSG) which provided assistance to four small-scale cooperative horticultural estates, and the second phase of the RSG which will continue to support technical and marketing assistance to small producers through continued support to technical horticultural officers are important and vital to continued development of the horticulture industry in Botswana.

Project Implementation:

After the first year of project activity, a project evaluation recognized that the original targets had been set too high and more modest ones were set. Only 4 out of 8 originally projected IVS technical assistance positions were ultimately filled. IVS prepared a new implementation plan, and a consultant was engaged who prepared an analysis of the marketing situation and economic potential for the horticultural industry in Botswana.

During the mid-term evaluation, a review of the original concept and intended outputs indicated over-ambitious planning in the delineation of the end-of-project goals. It was recommended that the project focus for the remaining period be directed to a more intensive staff training effort, and investigations of vegetable production constraints of small gardeners be started. Additional

emphasis should be placed on linking research and extension activities into a complementary effort.

By the end of the third year, a review of Phase II, carried out by IVS in March, 1982 identified the lack of data on marketing as a key constraint to development of a horticultural industry. Reasonable progress was being made in meeting the needs of small-scale commercial and subsistence surplus growers. With \$5,331 in unspent funds from Phase I, IVS requested that this amount be added to the Phase II Grant to cover any additional expenses of a requested 12 months extension at no additional cost to the Horticultural Development Project. This request was refused by USAID on the grounds that AID/W had said that OPG's were to be terminated at the PACD date. Activities were allowed to continue until January 31, 1983 since Phase II implementation started later than anticipated.

Project Status:

Out of the original 6 to 8 volunteer technicians envisaged originally, only 4 professional horticulturalists were ultimately involved in research, extension and administration to assist the MOA. The discrepancy was partly due to GOB delays in establishing and planning the horticultural estates, and to internal problems with the Community Development Associations which caused a reassessment of the desirability of placing extension advisors with them. Provision of counterparts and training for Botswana horticulturalists was satisfactorily achieved during the project. Lack of strong administrative and planning skills by the horticultural volunteers remained a criticism throughout the project: largely because the CRDA's with whom they worked lacked

management skills themselves. As this was not anticipated the volunteers were recruited for their technical skills. A consultancy produced a report on the social and economic aspects of horticulture in Botswana, which highlighted the problems of cost effective development of horticultural production locally, and constraints imposed by the lack of a marketing structure.

Progress in achieving output targets was generally good in this project. Introduction and adaptation of proven techniques for horticultural crop production was substantially aided by the establishment and development of the Horticultural Research Unit under the Department of Agricultural Research, MOA, which carried out variety trials on 6 major crops and comparisons of irrigation techniques and cultural practices. Transfer of skills to Botswana was implemented with both comprehensive training for the counterparts, on-the-job training and intensive in-service training for field staff. Training targets were exceeded in most areas. Horticultural extension support was given to a variety of target groups: privately owned horticultural production units, Community Development Associations, small vegetable growers, primary and secondary schools, hospitals/clinics and 4-B Clubs with gardens. Institutional linkages were developed between the GOB and the various CDA's; however, this area was deemphasized given the management problems occurring with many of the CDA's.

Conclusions:

Progress was made in expanding horticultural production in Botswana. A recent consultancy report (1983) estimated total consumption at 30,000 tons annually. During the last project year, local production was estimated at between 7,000 and 8,000 tons,

thought to be a marked increase over the life of the project. Lack of statistical information on the horticultural industry is an obvious deficiency in Botswana. This makes it difficult to assess the economic viability of specific projects as well as sub-sectors of the industry. The MOA has estimated that there were 1,280 persons employed in the horticulture industry. To assess increases in remunerative employment much more information on employment in the various groups involved, hours worked and cash earned would have been necessary. There is little doubt that nutritional levels benefit from any home production of horticultural crops in Botswana. The high costs of imported fruits and vegetables and their limited availability, generally restrict their consumption to the urban population with middle and upper level incomes.

Lessons Learned:

During the design of the project little attention was paid to the managerial capacity of the CDA's, and assistance to this type of institution should have been more realistically assessed at the onset of the project.

Much better information is required on the economics and feasibility of horticulture in Botswana, particularly for commercial production. In many areas the necessary inputs are not available: suitable soils, reliable and inexpensive water sources, ability to purchase locally suitable seeds, fertilizers and pesticides. Given the lack of information on economic and external factors affecting horticultural production, the project design and implementation could have placed more emphasis on their collection and analysis. In addition, there must be access to a ready market for the crops produced. The project largely focused on small to medium sized

producers of vegetables. In terms of improvement to diets in Botswana, some effort directed to gardens in the yard around the home for domestic consumption using waste water may have been warranted.

The time horizon for this project of four years to set up an expanded horticultural system, from applied horticultural research through extension to production seems extremely short. Little attention was given to the prior level of training of the counterparts, so while it was possible to replace some of the volunteers with well-trained Botswana staff, it was not with others. A no cost extension for this project would have allowed the horticultural staff a few more months of effort to achieve project purposes. It was fortunate that IVS was able to secure some additional funding to continue to pay their salaries.

The importance of more attention being given to marketing problems was identified at the mid-project review, and a recommendation was made to add a Horticulture Market Economist to the IVS OPG. However, with the length of time necessary to recruit this specialist, he was ultimately placed after the PACD.

Areas for Improvement:

1. More emphasis should be placed on data collection and analysis in a subject matter area where little prior information is available to facilitate decision-making on economic feasibility.
2. If a more realistic appraisal of the prior skills and educational levels of the counterparts had been carried out prior to the project it would have enabled a logical plan for phased takeover of the Botswana counterparts from the IVS volunteers.

3. Identification of the marketing area as needing more assistance was made at the mid-project review, yet the time horizon was too short to adequately address this constraint.
4. Little attention was paid to the lack of availability and continuity of the supply of suitable inputs such as seeds, tools, pesticides and fertilizer. Visits to ongoing horticultural projects have revealed this to be a real problem to many producers.
5. Assistance to MOA core support staff in all relevant areas of horticulture, research, extension and marketing could have been recognized earlier as the necessary precursor to providing financing and technical assistance to producers. A more substantial input earlier to this area might have resulted in a better environment for horticultural estate development at a later point.

ATTACHMENT #1

SUMMARY OF PROJECT BUDGET AND EXPENDITURE¹

	Phase I (7/1/78 - 1/31/81)		Phase II (2/1/81 - 1/31/83)	
	Budget	Expenditures	Budget	Expenditures
1. IVS Botswana staff	25,750	24,621	28,205	25,029
2. Volunteer technicians	52,400	54,744	104,470	51,939
3. Contingencies	3,500	--	16,485	--
4. IVS/Washington overhead	74,000	69,328	59,440	44,587
5. In-country support or other External Costs	44,000	44,799	10,000	2,094
6. IVS/Botswana Administration	28,000	28,827	14,400	17,063
Total	227,650	222,319	233,000	140,712
Unexpended Balance	5,331		92,288	

¹per IVS records. USAID records show total expenditures to be \$24,376 less than IVS claims. This is in all likelihood due to the vagaries of AID/W accounting for consolidated FRLC disbursements.

Concurred James Brody (In Draft)