

CLASSIFICATION  
PROJECT EVALUATION SUMMARY (PES) - PART I

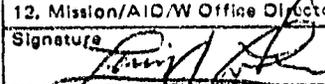
Report Symbol U-447

<b>1. PROJECT TITLE</b> IVS Botswana Horticulture Development Project OPG 78-633-30			<b>2. PROJECT NUMBER</b> 633-0215	<b>3. MISSION/AID/W OFFICE</b> BOTSWANA
<b>4. EVALUATION NUMBER</b> (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <span style="float:right">81</span>				
<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION				
<b>5. KEY PROJECT IMPLEMENTATION DATES</b> A. First PRO-AG or Equivalent FY <u>79</u> B. Final Obligation Expected FY <u>81</u> C. Final Input Delivery FY <u>83</u>	<b>6. ESTIMATED PROJECT FUNDING</b> A. Total \$ _____ B. U.S. \$ <u>227,650</u>	<b>7. PERIOD COVERED BY EVALUATION</b> From (month/yr.) <u>Oct. 1, 1979</u> To (month/yr.) <u>Sept. 30, 1980</u> Date of Evaluation Review <u>Oct. 1, 1981</u>		

**B. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR**

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., sirgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Finalize new Phase II IVS Grant Agreement through Jan. 31, 1982.	USAID/B AID/W	Dec. 1981
2. Terminate KRDA Hort. Unit Manager position at end of contract.	IVS/B KRDA	August 1981
3. Establish guidelines for identifying priorities among MOA/Horticulture Unit activities	GOB/MOA	July 1981
4. Prepare definitive localization plan for the Horticulture Research Officer position.	GOB/MOA	July 1981
5. IVS staff should focus increasing attention on activities relevant to objectives specified in project logical framework.	GOB/MOA	Ongoing

<b>9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS</b> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Project Paper</td> <td><input type="checkbox"/> Implementation Plan e.g., CPI Network</td> <td><input type="checkbox"/> Other (Specify) _____</td> </tr> <tr> <td><input type="checkbox"/> Financial Plan</td> <td><input type="checkbox"/> PIO/T</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> Logical Framework</td> <td><input type="checkbox"/> PIO/C</td> <td><input type="checkbox"/> Other (Specify) _____</td> </tr> <tr> <td><input checked="" type="checkbox"/> Project Agreement</td> <td><input type="checkbox"/> PIO/P</td> <td>_____</td> </tr> </table>	<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____	<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____	<input checked="" type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____	<b>10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT</b> A. <input checked="" type="checkbox"/> Continue Project Without Change B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan C. <input type="checkbox"/> Discontinue Project
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____											
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____											
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____											
<input checked="" type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____											

<b>11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)</b> D.M. Jones, ADO/USAID/B      D. Inger, KRDA/Mole-polole C. Martin, ADO/REDSO/EA K. Morris, MOA/Hort. Unit H. Clark, IVS/W L. Histan, IVS Field Director	<b>12. Mission/AID/W Office Director Approval</b> Signature  Typed Name <u>Louis A. Cohen</u> Date _____
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## IVS/Botswana Horticultural Development Project

OPG-78-633-30

### I. BACKGROUND

The project was planned as a four year activity, commencing on 1 July, 1978 and scheduled to terminate on 30 June, 1982. The total funding for the first phase of the project is \$227,650.00, which will carry the project through December 31, 1980. The project goal, as stated in the logical framework is "Expanded Horticultural Production leading to near self-sufficiency in vegetable and fruit production".

The project purpose is "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".

The project activities are to be focused on horticultural development through the linking of a research program to the transfer of relevant technology to commercial and subsistence farmers. An in-service training program to improve the knowledge and skills of about 100 to 150 agricultural demonstrators was included as a part of the project. Also, Community Development Associations were to be supported in a number of places in Botswana. The International Voluntary Services, Inc., (IVS) was given a Program Grant by USAID/Botswana to provide six to eight volunteers in the field of horticulture.

A part of the project was conceived as an effort to develop and institutionalize a horticulture capability in the Ministry of Agriculture, staffed with expatriates until such time as Botswana professionals were trained to take over the total administration and implementation of the program. The extension activities would be carried out under the Department of Field Services and the research activities would be fitted into the ongoing program of the Department of Agricultural Research. Since the horticultural program is relatively small, coordination of both the research and extension activities was assigned to the Senior Horticultural Officer in the Department of Field Services. A review of the original concept and intended outputs of the project at this time indicate there was a great deal of optimism and over ambitious planning in setting out the end-of-project goals.

the project has now reached it's mid-point. Consequently, it would seem quite appropriate that the project outputs be revised downward, based on the experience to date, and the better knowledge of the environment in which the project works. It is believed that some consolidated action could be taken in setting up more attainable goals. Therefore, it is suggested that the IVS project leader, volunteer horticultural officer and USAID/Botswana Agricultural Officer reconsider and revise the original project outputs and determine what would realistic targets for the remaining years of the project.

## II. OUTPUTS

The project outputs, as stated in the logical framework, are as follows:

- a. Introduction and adaptation of proven techniques.
- b. Transfer of skills through counterpart training.
- c. Advisory services in training, extension, research and policy governing horticulture development.
- d. Management of horticultural projects.
- e. Extension and research activities.
- f. Linkages between government and community development association horticultural projects.

The project paper outlines the end-of-project status as follows:

- a. Four-six profitable operated horticultural production units managed by Batswana, meeting local market demands for fruits and vegetables, providing jobs and extension services to the local community.
- b. An ongoing horticultural research program, managed and staffed by Batswana.
- c. A trained Batswana senior horticultural officer coordinating all government horticultural programs.
- d. Horticultural training materials for government extension officers and instructional materials for community development associations and subsistence farmers in regular use.
- e. One hundred-one hundred-fifty government agricultural demonstrators with specific training in horticulture extension.

f. A government horticultural plan approved through 1985.

There is a noted difference in the outputs as described in the logical framework and some of the outputs given for the end-of-project. However, in trying to judge the achievements of the project at this stage of development, the evaluation team did ascertain specific activities leading toward the final objectives.

During the last year, the team determined the following accomplishments were supportive of a number of the planned outputs.

Output II-b "Transfer of skills through counterpart training."

1. The work plan of the Horticultural Officer called for two training seminars to be conducted during the period of 1 October, 1979 to 30 September, 1980. However, only one seminar was conducted during the period for about 30 agricultural demonstrators and others assigned to work in horticultural activities.

Output II-c "Advisory services in training, extension, research and policy governing horticulture development."

1. The evaluation team was informed of efforts made to create an awareness in the Department of Field Services of the role horticulture (vegetables and fruit) can play in the commercial and subsistence farm sectors. The major emphasis in creating an awareness was the organizing of a National Horticultural Conference Committee. It was reported that this committee did convene once during the evaluation period, however the meeting was poorly attended and no written report has been prepared at the time of the evaluation. The Horticultural Research Advisory Committee is also charged with the responsibility of advising on the research program. Statements given to the Team indicate that an insignificant number of recommendations have been made regarding research priorities.
2. The Horticultural Officer reported that a major effort was directed toward cooperators who grow vegetables under net houses and those planning a program for citrus production. Some work was directed to arranging for vegetable seed sales and distribution outlets as well as securing a market outlet in Gaborone.
3. The team was told that considerable effort was devoted to citrus production, with the magnitude of the area devoted to oranges, being about 60 hectares, mostly operated by one farmer.

Output II-e "Extension and research activities."

1. The horticultural research work is focused on the following crops; cabbage, onions, carrots, potatoes, tomatoes and green-mealies. Trials are being conducted under trickle and sprinkler irrigation methods. The major work is directed to adaptive research, where variety screening, fertilizer responses and time of planting experiments are being run. Tomato trials also include different staking methods. The research program appears to be focused on solving production constraints of commercial type vegetable growers. At present, the IVS research officer determines the research priorities and submits written plans on trials to be conducted to the Director of Agricultural Research for concurrence. Thus the Director of Research serves in a supervisory role for all research conducted on vegetable crops. It is the judgement of the Team that little input or guidance is received from the vegetable growers as to what production constraints should be investigated at the Sebele Research Farm.

The Horticultural Research Officer has drafted an annual research report for 1979-1980, however, it has not yet been published at the time of the evaluation. The Team did obtain a copy of the annual research report for 1978-1979. The IVS Horticulture Research Officer is assisted by two full time diploma level employees, a part time Agricultural Demonstrator and a number of workers employed on a daily basis.

The major constraints in the research program, as noted by the IVS research officer are; a mechanism for establishing research priorities; chronic field labor shortages; managing and collecting data from regional tests and getting articles published in Agrifact for distribution to vegetable growers. As an example, an article was drafted on potatoes by the research officer one year ago, and it still is to be published.

2. The Department of Field Services did produce a radio program on vegetable production during the earlier part of the year, however, at the time of the evaluation, the program had been discontinued due to the lack of available manpower. A publication titled, "AGRIFACTS" in the English language is published on vegetable production. No issues were printed during the period of this evaluation.

Output II-f "Linkages government and community development association horticultural projects."

1. Assistance to the Kweneng Rural Development Association (KRDA) is being provided by two IVS volunteers. During this evaluation period, one volunteer has been directing a commercial vegetable production scheme and the other volunteer directing the vegetable extension activities of KRDA. It is noted that KRDA is the only association being supported by IVS.

The commercial garden unit is about 1.2 hectares where vegetables are grown for the urban market. The crops are grown under irrigation with water provided from a nearby dam. Vegetable crops under cultivation on the unit are onions, carrots, leeks, green beans, peas and cabbages. The IVS volunteer is assisted by one part time agricultural demonstrator and eleven daily field workers. Produce grown on this unit have been marketed in Molepolole and Gaborone. During the period of 1 January to 20 September, 1980, about eleven tons of vegetables were harvested from the commercial unit. It is estimated another four tons will be harvested in the next thirty days. The Team was unable to get an accounting of the income received from the produce marketed, as the KRDA fiscal office is lacking accounting staff.

At the time of this evaluation, the KRDA has taken a decision to stop all commercial vegetable production on the unit and directed the IVS volunteer to subdivide the land area into approximately 40 equal plots. The plots will be assigned on a family basis to inhabitants living in Molepolole. It is anticipated that the families gaining access to land in the new scheme will produce vegetables for home consumption with some of the produce to be marketed in Molepolole. The IVS volunteer is to assist the new producers by providing technical knowledge. Eight families have already been selected for the new scheme, with 12 additional families to be selected in the sixty days. The volunteer was also responsible for operating a one-half hectare net house area, devoted to intensive vegetable production. This unit has now been leased to an individual, who will operate it as a commercial enterprise.

The other IVS volunteer (Horticultural Extension) is responsible for conducting extension type activities in the village of Molepolole. This activity was commenced in January, 1980. At the time of this evaluation, the volunteer was assisting about 64 families. The major

effort has been to collect baseline data and provide technical knowledge on vegetable growing to the family cooperators. Observations were made of five vegetable gardens. The produce of these kitchen type gardens was primarily for home consumption. One visit was made to a village health center garden where the produce is being used by the center staff to teach families improved nutrition. The IVS volunteer is assisted by one full time agricultural demonstrator of the Field Service Office. The major constraint reported was the providing of water to vegetable gardens during the dry season. Water is hand carried to all plots. The volunteer provides some technical assistance to primary school groups interested in growing vegetables at the school.

### III. INPUT (personnel)

As of this evaluation, (September 15-19, 1980), the contractor has on board four professionals, who are assisting the MOA in the fields of research, extension and administration.

<u>NAME &amp; TITLE</u>	<u>ARRIVAL</u>	<u>END OF CURRENT CONTRACT</u>
Keith Morris, Horticultural Officer	May, 1977	June, 1981
Geoffrey Wiles, Horticultural Research Officer	May, 1978	Feb., 1982
Lala Kumar, Unit Manager	Aug., 1979	Aug., 1981
Diomedes Indicar, Project Leader	Dec., 1979	Dec., 1981

The Horticulture Officer is assigned to the Field Services Office MOA in Gaborone. The Horticultural Research Officer is stationed at the Sebele Research Station, the two other officers are assigned to work with the Kweneng Rural Development Association at Molepolole. The titles of these officers are Project Leader and Horticulture Unit Manager. The remaining two to four positions under the contract have not been filled, furthermore, it is understood by the evaluation team, that no further recruitment will be initiated by IVS under the current OPG agreement. The total amount of volunteer professional assistance provided by the contractor during the evaluation period is about 48 person months. Consequently, the Contractor will only supply about sixty percent of the volunteer services requested in the original agreement with USAID/Botswana.

The Operational Program Grant states on page one, that IVS will provide 6-8 volunteer technicians and field staff support during the period of July 1, 1978 to June 30, 1982 to the Botswana Government, Ministry of Agriculture for horticultural planning, research and extension services and rural community owned horticultural production projects. As of September 20, 1980, only four volunteers have been provided by IVS, thus recruitment must be considered inadequate when gauged against the original plan. In general, the volunteers on board appear to have had limited experience of being responsible for both administrative and technical work in the same position. The volunteers are much stronger in technical areas, than in administrative and planning work. If recruitment is undertaken by IVS for years 3 and 4 of the agreement, the emphasis should be on horticulturalists with strong administrative and planning skills.

#### IV. IMPACT OF PROGRAM

During this evaluation period, the impact of the horticultural activity has been on the administration of the program at the national level, the training of national and district level officers of the Department of Field Services and formation of a research program capable of conducting vegetable variety screening trials. The Department of Field Services has established a horticulture unit which is responsible for administering, planning and implementing vegetable production program. The unit has fostered the promotion of a National Horticulture Conference Committee that aims to organize commercial producers into a commodity group. This committee focuses on the organizing of growers to promote vegetable production, sales and distribution of inputs, produce marketing and advises on problems to be investigated by the Department of Agricultural Research. While the committee is in an infancy stage, it is an institution that requires further nurturing and support. The committee can play an important role in the setting of policy, if it receives adequate support from project professionals. It is urged that more attention be given to the committee and its program during the next two years of the project.

The Team was briefed on the recent formation of a National Citrus Board, which will be responsible for coordinating the development of a citrus production program. The Board is currently drafting a piece of legislation that will establish its legality. It would appear that public and private efforts to develop a viable citrus industry are some years off, at this time.

The staff of the Horticulture Unit is quite thin. Hence on-the-job training is probably adequate for the small full time

and part time staff made available. However, if the Department of Field Services is to support an active horticulture unit, there must be an expansion of the full time staff. The Team did receive some indications that considerations were under way to provide additional staff positions. As an example, four participants are in academic training outside of the country, who will be assigned to the horticulture unit when their training is completed. Also, three diploma level officers will be made available during the next couple years. Additional agricultural demonstrators may also be assigned to the unit during the next couple of years. In the meantime, more effort should be given to the providing of on-the-job training to other district level agriculture officers in the department.

The research program, through its variety screening trials, has selected a number of vegetable varieties that grow well in the country. Future research trials, however, should be focused more sharply on soil fertility problems and on plant/water relationships. One of the major constraints in growing vegetables is adequate water requirements for small gardens that are irrigated by hand.

#### V. RECOMMENDATIONS

It is suggested that if project support is to be continued, that USAID, IVS and the Ministry of Agriculture, consider tightening the focus of the project during the next two years of its life. The first two years have been exploratory in nature, in that surveys were made countrywide, as to the potential for growing horticultural crops; tests were conducted at various sites to determine the most adaptable varieties of six to eight vegetable crops and an institutional hierarchy is being established and staffed to administer a horticultural program. In future years, it is suggested that the project focus be directed to a more intensive staff training effort, commence investigations of vegetable production constraints of small gardeners and link research and extension activities into a complementary effort. Hence, the following recommendations are being made to achieve a more focused activity during the next two years.

1. In view of progress to date to organize and institutionalize a horticultural program in the Department of Field Services, it is recommended that USAID/Botswana continue to fund the IVS Operational Program Grant for years three and four, as per the original agreement. The focus of future project activities should be more sharply directed toward expanding the family vegetable garden effort, so as to improve the nutrition and welfare of the small farmers. With the focus on family

vegetable gardens, the research variety screening activities should be continued and probably expanded to include additional leafy vegetables as well as other varieties acceptable in the diets of farm families. The suggested modifications in the research program and extension activity should be done at the time the review is undertaken to revise the project outputs as suggested in the background section in this report

2. The "Activities and Objectives" document prepared by the IVS Director and the Department of Field Services for each IVS volunteer, should in the future be tied directly to the project outputs, detailed in the logical framework. A work plan developed from the outputs in the project paper will narrow the range of activities, thus, providing greater resources to solve major constraints.

Also, the "Activities and Objectives" documents should be examined as a whole and a determination made if the four work activities add up to a sound program. It is important that strong linkages are fostered between the national and provincial level offices, as well as between the research program and the transfer of the relevant technology to vegetable growers. The work activities should be focused in such a way, that there will be an impact on the target group.

3. The IVS volunteers should focus their resources on vegetable crops and refrain from working on citrus crops until the Department of Field Services employs a citrus specialist. It is recognized that the Agriculture Policy Committee is responsible to determine the programs to be implemented; however, with no professional expertise in the field of citrus research or production in the department, it appears real questionable whether the IVS volunteers should devote efforts to citrus. As any immediate work in the field of citrus production will most surely be directed to the economically better off farmers.
4. The research program should be expanded to investigate vegetable production constraints of small farmers e.g. trials on water requirements, soil fertility, plant populations, vegetable crops acceptable to farm families, and protection against vertebrates. The results of these trials will provide relevant technology for the extension service to disseminate in the rural areas as well as a means for feeding back information on production constraints to researchers.
5. The vegetable research officer should contact the Asian Vege-

table Research and Development Center and the International Potato Center for cultivars of adaptable vegetable crops to test under Botswana growing conditions.

6. IVS volunteers should provide more resources to the National Horticultural Conference Committee as the potential of the organization to promote the industry appears vital at this time.
7. The providing of two IVS professionals to the Kweneng Rural Development Association appears to be more resources than the absorptive capacity of this institution is able to use at this particular time. Hence, consideration should be given to better utilization of the Horticultural Unit Manager position in another facet of the vegetable activity.
8. The IVS Horticultural Officer should continue to work closely with USAID/Botswana in planning academic training programs for participants at the B.S. and M.S. levels.
9. It is recommended that future volunteer staffing of the project for years three and four remain at the current level of four horticulturalists. This opinion is based on the absorptive capacity of the Department of Field Services, the level at which new permanent staff will be assigned to the horticultural unit and the priority assigned to horticulture development by the Ministry of Agriculture. Also, the qualifications of the senior horticulture officer position should be revised to include more administrative and planning skills at the end of the present incumbent's contract. It is suggested, that this position be filled with an incumbent who has a background and previous experience in administering medium to large horticulture programs. As an example, an experienced U.S. extension horticultural specialist. The leadership capabilities provided by this position will be crucial during years three and four of the project.

UNITED STATES GOVERNMENT

# Memorandum

TO : AFR/DP/Evaluations, AID/W DATE: December 17, 1980

FROM : Mr. John Pielemeier, Evaluation Officer, USAID/Botswana

SUBJECT: IVS Botswana Horticulture Development Project Evaluation (OPG 78-633-30)

Enclosed are copies of the subject evaluation reports conducted by IVS Inc. and AID respectively. It should be noted that IVS Botswana Horticulture Development Project Activities Review Report (Oct. 1, 1979-Sept. 30, 1980) was prepared by IVS Field Director for Botswana, Lowell Hinstead, and IVS Program Officer, Heather Clark from discussions held with GOB, NGOs, and USAID/B. This review report represents the views of IVS Inc. and those of the IVS officers assigned to conduct the interim evaluation.

The major findings and recommendations of the IVS review report are summarized as follows:

1. USAID/B should continue to support the Horticulture Development Project through its third and fourth year of operation (Phase II).
2. It is recommended that the Phase II emphasis move away from development of commercial production units toward extension activities aimed at encouraging smaller scale horticulture production with emphasis on the subsistence farmer.
3. That MOA should provide guidelines to establish priorities in planning of Horticultural Unit activities.
4. That the MOA Horticultural Unit make more effective use of Horticulture Research Advisory Committee in determining ministerial priorities.
5. Efforts to localize the Horticulture Research Officer position should be intensified.
6. The Horticulture Extension Unit/KRDA is making a valuable contribution to the community. Their limited manpower should be better utilized by providing motorbikes for transportation and a clerk/enumerator for routine collection, recording, filing and collating of data.
7. IVS supports KRDA's decision to convert the Horticulture Site into a village allotment scheme and suggests that the Unit Manager position be abolished after the current contract ends in August 1980.



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

The second report was prepared by the AID Regional Agricultural Officer REDSO/EA for USAID/Botswana. It should be noted that this report was prepared concurrently with but independently of the IVS officers assigned to conduct their own interim evaluation. There was a mutual exchange of ideas as both reports were being prepared. Both reports are based on joint discussions with GOB, NGOs, and IVS/B, and USAID/B.

The major findings and recommendations of the AID evaluation report are summarized as follows:

1. That USAID/Botswana continue to fund the IVS Operational Program Grant for two more years, as was originally proposed.
2. The focus of future project activities should be more sharply directed toward expanding the family vegetable garden effort, so as to improve the nutrition and welfare of the small farmers.
3. The "Activities and Objectives" document prepared by the IVS Director and the Department of Field Services for each IVS volunteer, should in the future be tied more directly to the project outputs, detailed in the logical framework.
4. Project resources should be more narrowly focused on important and relevant crops for Botswana farmers.
5. The IVS research officer should maintain closer contact with the international research centers such as AVRDC and CIP.
6. IVS volunteers should work more closely with the National Horticultural Conference Committee as the potential of this organization to promote the industry appears vital at this time.
7. Two IVS professionals provided to the Kweneng Rural Development Association appear to be more resources than the organization can utilize effectively. Hence, consideration should be given to assigning the Horticultural Unit Manager to another facet of the project activities.
8. The IVS Horticultural Officer should continue to work closely with USAID/Botswana in planning academic training programs for participants at the B.S. and M.S. levels.
9. It is recommended that future volunteer staffing of the project for years three and four remain at the current level of four horticulturalists.

The PES face sheet accompanying this memorandum is designed to collate those recommendations that USAID believes will be useful in the second phase of the project. It is noted that based on the review of both of these reports IVS has prepared a request for an OPG for the period January 1, 1981 through Dec. 31, 1982 which incorporates many of the recommendations of both reports.

This request has been reviewed by USAID staff and negotiations of the new OPG are substantively complete.

USAID will continue to use the substance of these two reports as guidance in monitoring progress of implementation of the new OPG project.

IVS has concurred in the PES facesheet recommendations.

# IVS BOTSWANA HORTICULTURE DEVELOPMENT PROJECT

## Project Activities Review Report

October 1, 1979 - September 30, 1980

### 13. SUMMARY/INTRODUCTION

The IVS Botswana Horticulture Project, funded by USAID OPG No. 78-633-30 involves IVS recruitment and administrative support of experienced horticulturists assisting the Botswana Government and private host institutions in developing vegetable and fruit crops production and supply capabilities in both the commercial and subsistence sectors. This IVS involvement in supporting vegetable and fruit crops production in Botswana does not involve any formal management responsibility in host institution programs.

As originally envisaged the project was intended to contribute to the overall Government objective of expanded horticultural production leading to near self-sufficiency in vegetable and fruit production and to contribute, through horticulture development at both the commercial and subsistence levels, to the creation of employment opportunities, improved nutritional levels and increased levels of income among small-scale cultivators.

During the first two years of the project, the emphasis was to be on the development of commercial-production units, with a focus on community-based commercial production units, and on experimentation, research and training. The emphasis was expected to shift in the third and fourth years to extension activities aimed at encouraging smaller-scale horticulture production, with an emphasis on the subsistence farmer.

This report describes the progress made towards achieving Project objectives, analyses project constraints, re-examines important assumptions, and presents recommendations to facilitate both IVS and host project activities.

After two years of project activities, considerable progress has been made towards achieving project goals, although a substantial revision of the Project's implementation plan is necessary.

While the development of the MOA program of support of the horticulture industry has generally equalled expectations, largely through the efforts of the IVS Senior Horticulture Officer, MOA, the projected focus of IVS participation in rural production and extension positions has not developed as planned. At this phase of the Project, two years in a four year IVS commitment, IVS had originally anticipated supporting eight horticulture technical assistance positions. Current IVS involvement is limited to the support of four horticulturists. Constraints that have contributed to this reduced level of IVS involvement in the development of a horticulture industry in Botswana were largely due to administrative and management decisions by the Botswana Government, private host organisations and IVS.

While the formal review of Project activities carried out in October/November 1979 (after one year of Project activities) resulted in considerable revision of the Project plans and its development schedule, the findings of this second review determine that Project activities must be further consolidated to effectively support the horticulture industry and achieve an acceptable relationship of costs and benefits.

#### 14. REVIEW METHODOLOGY

The purpose of an evaluation of this IVS Project at that time, two years into an initial four year IVS commitment, is to:

- A. Review progress towards achieving project objectives as revised in October/November 1979, and,
- B. Review IVS administrative and recruitment performance as it relates to horticulture activities in Botswana.

A result of the review of progress towards, and constraints to, host project development will be an assessment of the host organization's capability to manage, institutionalize, and sustain their horticultural activities. This assessment will be used by IVS in decision-making regarding continued support of these host institutions, and in determining the scope of IVS' future involvement in the overall development of the horticultural industry in Botswana.

This review does not include an indepth analysis of the impact of host institution projects. Each host institution has accepted this responsibility, and only through the review of progress towards achieving host project implementation objectives should IVS suggest, and when requested, assist in comprehensive evaluations of host institution projects. At the end of the third year of IVS Horticulture Project activities a more detailed review (more detailed than in years one and two) will be conducted to determine the need for:

- 1) An extension of Project activities, and
- 2) The cost effectiveness of project activities.

The format for the review of second year project activities included formal sessions with host institution representatives and IVS volunteers. Four formal sessions were held:

- 1) Horticulture Unit, MOA, Keith Morris, Senior Horticulture Officer (IVS volunteer).
- 2) Department of Agriculture Research, MOA. Geoff Wiles, Horticulture Research Officer (IVS volunteer), Sonia Foster, Asst. Research Officer.
- 3) KRDA. Lala A. Kumar, Horticulture Extension Allotment Advisor (IVS volunteer).
- 4) KRDA. Dio Indicar, Horticulture Extension Project Leader (IVS volunteer); Keith Morriss (MOA/IVS); Robert Ntsima, Acting Secretary of KRDA; David Inger, Executive Trustee KRDA; David Nkobela, Horticulture Extension Project Demonstrator (MOA/KRDA).

After the formal sessions, three discussion sessions were held with the KRDA Executive Trustee, David Inger; the MOA Director of Field Services, Peter Nelson and Tom Taukobong, Chief Crops Improvement Officer; and the Director of Agriculture Research, MOA, K. Oland.

IVS staff participants in all sessions were IVS Field Director for Botswana, Lowell Histan, and IVS/ Washington Program Officer, Heather Clark.

Ms. Senny Matswe, Research Officer, MOA, Dept. of Planning and Statistics participated in all formal discussions.

The USAID Regional Agriculture Officer, REDSO for East Africa, Calvin Martin, participated in all formal review sessions and field visits. The USAID Botswana Asst. Agriculture Development Officer, Helen Gunther, and the Agriculture Development Officer, Douglas M. Jones, participated in one formal session each. IVS understands that as a result of their participation USAID will produce an OPG review document.

15. EXTERNAL FACTORS

Originally Identified  
July 1978

External Factors:  
Identified End of Year I  
October/November 1979

External Factors:  
Identified End of Year II  
September 1980

I. GOAL/PURPOSE

- Expanded horticultural production leading to near self-sufficiency in vegetable and fruit production.
- Support the efforts of Botswana Government and Community Development Associations (c.d.a.'s) to expand both commercial

A. Drought conditions  
Unusual weather conditions in the country caused both lowered individual and community interest in starting vegetable and fruit crop activities, as well as actually delaying previously planned placements.

A. Drought conditions were not a significant external factor affecting project activities during this year.

and subsistence horticulture crop production in Botswana through the provision of technical services.

B. Botswana Government's Policies and Priorities. Financial constraints throughout the Botswana Government caused reductions in departmental budgets and a postponement in the recruitment of technical assistance personnel for new positions during most of FY 1979-80. These financial constraints were the result of unplanned spending for drought relief; foot and mouth disease relief programs, and increased defense needs. Constraints on the Botswana Government's finances were further compounded by loss of revenue normally earned by the cattle industry due to drought and the foot and mouth disease outbreaks.

B. Financial constraints were not a significant factor negatively affecting project implementation, as resources were allocated for 3 new local posts in Field Services and Agricultural Research.

C. Security. Incidents near the Zimbabwe/Rhodesia border have caused abandonment and delays in starting horticulture crops activities in the area, an area previously identified for Project activities.

D. Energy. Substantial increases in the price of petroleum based fuels have changed the economics of producing crops in Botswana through the utilization of underground water supplies. It is still uncertain how these increases in costs will affect competition with imports, and thus affect prospects for the long-term growth of a horticulture industry in Botswana.

C. Security problems continued to be a factor in causing postponement of horticulture activities along the border. As a result of Zimbabwe's independence in April 1980, this factor has been largely eliminated.

D. The cost of water available from local authorities has increased by approximately 50% from the previous year, thus small-scale commercial enterprises which are dependent on these community water supplies became more risky.

## II. VALIDITY OF ASSUMPTIONS

Original - July 1978

Year I: October/November 1979

Year II: September 1980

### A. Goal Assumptions:

- continued economic and political stability of the country.
- Botswana Government able to mount a sustained extension program beyond the period of the program.

A. The goal and purpose assumptions stated in the original proposal appear to remain valid, although project activities are not advanced sufficiently to conclusively test these assumptions.

Assumptions remain valid. The MOA has fielded three horticulture specialists extension agents within the past year. The MOA is effectively administering a pilot horticulture extension program which will guide its long term commitment. The MOA has placed three additional people in horticulture specialist training abroad, and has committed to an improved program of in-service training to agriculture extension personnel by instituting a regional program to more effectively deal with regional constraints to horticulture production.

### B. Purpose Assumptions:

1. Given availability of inputs and appropriate techniques production of horticulture crops can be profitable and compete with imports.

1. No comment

1. Assumption incomplete. The assumption must include cost of inputs and availability of effective management.

B. 2. Subsistence farmers are receptive to growing new crops and adopting new farming practices. 2. No comment

3. Expatriate volunteer technicians are an appropriate source of manpower for horticulture development in Botswana 3. No comment

4. Weather conditions follow normal patterns and permit the expansion of commercial and wide-spread subsistence vegetable and fruit crops production.

2. A limited sample, (over 100 farmers presently participating in the KRDA-MOA horticulture extension program and other extension programs in Mochudi, Selebi-Phikwe, etc.) indicate that to date, this assumption remains valid.

3. Valid assumption, given that volunteer technicians are carefully selected for their horticulture skills, motivation and commitment.

4. This assumption remains valid.

C. Output Assumptions:

1. Government and c.d.a.'s remain committed to state priorities and programs for horticultural development.

1. Remains valid.

C.2. IVS volunteer technicians are able to transfer skills to their counterparts.

2. Remains valid, although substantial transfer of skills is dependent on effective selection of expatriate and counterpart staff.

3. Government and c.d.a.'s are capable of effectively utilizing expatriate volunteer technicians.

3. Remains valid, some clarification necessary: in the horticulturist positions currently sponsored by IVS, personnel have been effectively utilized. Through IVS experience in developing new positions for support it has become clear that many of the prospective private organizations planning horticulture activities lack the managerial capacity to effectively supervise and support these activities.

3. This original assumption does not remain entirely valid:  
1) due to lack of managerial expertise, c.d.a.'s are largely incapable of effectively utilizing expatriate technicians, and  
2) there are clear weaknesses in the management capability that affects the utilization of expatriate technicians in the Botswana Government.

D. Input Assumptions:

1. IVS capable to recruit suitably qualified volunteer technicians on schedule.

1. In view of limited recruitment activities for the Project, it is not yet clear if IVS offers the required recruitment capability. IVS recruitment experience for the two positions identified in year one indicate an underestimation of the difficulty of recruiting

1. The original assumption and the first year qualification remain valid.

personnel with the scope of skills and personal qualities that IVS has set as minimum qualifications.

2. C.D.A.'s capable of providing suitably qualified counterparts on schedule.

2. IVS supported host institutions have employed counterparts on schedule, although it is questionable if counterparts can acquire the necessary experience and technical information in the time-frame originally planned. Only through further experience can the validity of the localization schedule be ascertained.

2. Original assumption and first year qualifications remain valid, however project plans and implementation schedule for localization during the 2nd Phase of the Project will change substantially (See Section 22 D).

The time frame originally stated for the completion of the transfer of skills to counterparts (four years) was underestimated by generally applying a best case scenario to all positions.

Unavoidable delays have occurred and should be anticipated in the future.

These delays which will lengthen the period required for localization include:

- 1) delays in the selection of counterpart candidates,
- 2) delays in the organization of formal training abroad, and
- 3) unanticipated personal developments.

The period required for localization will differ for each position, depending on the required degree of specialization, the level of experience, and the length of formal training. A realistic estimate of the time required for localization of positions requiring training is five-six years.

3. ~~Ear~~marked financial and other material inputs made available to the Project.

3. Remains valid.

3. Remains Valid.

4. Technically viable projects are planned by host institutions that appear to offer an acceptable minimum of administrative and managerial support.

4. Remains valid.

16. INPUTS

Original

Year I

Year II

A. Volunteer Technicians:  
6-8 volunteer technicians placed by July 1979.

A. Four volunteer technicians have been recruited by November 1979, versus planned placement of eight volunteer technicians by July, 1979. This

A. IVS envisaged placing 2 - 3 volunteer technicians in horticulture positions in private organisations during the second year

discrepancy between planned implementation targets and actual performance is due to the following:

- 1) a delay in recruitment by IVS for one position (Kanye Brigades Development Trust)
- 2) a delay in recruitment for the KRDA Horticulture Extension Project Leader position due to the lowest rainfall in recorded history in the area, the position was formally postponed 6 months by KRDA until weather conditions improved.
- 3) failure of Botswana Government to establish two new Regional Technical Specialist/Horticultural positions as proposed.
- 4) Positions identified by private host institutions were considered unviable. (Shashe Brigades Trust, Kgatleng Development Trust, Chobe Brigades Trust and Tsweletopele Center Trust).

of the project. This discrepancy between planned and actual placements is due to the following:

- 1) a delay in the planning and establishment of the Mogobane Horticulture Estate.
- 2) one position requested by a private host organization was considered by IVS to be unviable.
- 3) recruitment for one position was postponed indefinitely due to a reassessment of host institution priorities (Maun Brigades Development Trust).

B. Counterpart Personnel

from Government and C.D.A.'s assigned within first year of volunteer activities.

B. Counterparts for the four positions supported have been employed on schedule, although one counterpart may have to be replaced.

B. Counterparts for the four positions supported have been employed on schedule, although:

- 1) the counterpart for the Horticultural Research position may not be available for further training and to localize the position on schedule. (Refer to Section 22D, and 2) the counterpart being trained by the KRDA will be employed by the MOA upon completion of formal training in Kenya, in view of the phase-out of KRDA commercial Horticulture Unit activities.

C. Government and c.d.a. financial and material inputs supplied to support project activities.

C. Provided on schedule.

C. Provided on schedule.

D. IVS management support of IVS personnel.

D. IVS/Botswana and IVS/Washington support has proven to be adequate.

D. IVS volunteers and host institution representatives feel that IVS/Botswana and IVS/Washington support have proven to be adequate.

E. Changes required in Inputs to produce outputs.

1. Management of Community Development Associations. A major constraint to achieving Project implementation targets is the lack of management expertise on the part of c.d.a.'s. C.D.A.'s otherwise possess many of the resources needed to establish rural horticulture crops production units. In order to achieve Project goals it is necessary to link the support of c.d.a. management to horticulture production activities.

1. IVS continues to perceive that c.d.a.'s do possess the physical resources and interest to establish horticulture crops production units, however the review at the end of the first year of Project activities overestimated the management and planning capabilities of interested c.d.a.'s.

As a result of this second year review IVS concludes that only through a program of long-term management and training to c.d.a.'s will these institutions be capable of contributing substantially to project goals.

Program plans for IVS/Botswana do include a focus on the provision of managerial support/training to c.d.a.'s, although these program plans are not likely to have a short-term impact of increasing the establishment of viable c.d.a. managed horticulture units. Accordingly, IVS does not envisage additional involvement in the support of c.d.a. horticulture activities.

2. Financial Support

Major capital support of host institutions' projects is available through existing donors and is not a common constraint, however, minor unanticipated costs often delay the development of project activities.

2. Availability of financial resource has not been a significant constraint to project activities.

3. Multi-Skilled Agricultural Support

In some cases the perceived potential for fruit and vegetable production does not clearly support the need for full-time horticultural technical assistance. Technical assistance which includes more general agricultural skills, could explore and develop horticulture activities in addition to other agricultural production activities and services.

3. This change in inputs was primarily based on the plans of specific c.d.a.'s, thus the IVS recent assessment of the general weaknesses in c.d.a. management precludes the necessity of this revised input.

17. OUTPUTS

Original

A. Introduction and adaptation of proven techniques for horticulture crop production,

Year I

A. In view of only one year's experience in Project activities, and in view of recruitment delays,

Year II

A. With the establishment and full staffing of the Horticulture Research Unit, DAR/MOA, three of four IVS personnel supported

experimentation in cultivar varieties and planting techniques.

substantial progress has been made in introducing and testing crops and production techniques.

(Refer to quarterly reports).

All three units supported by IVS horticultural personnel have published results of experimentation covering crops and techniques that are widely acceptable in Botswana. Some horticulture techniques (mulching, composting, plant breeding, biological pest control, etc.) & crop varieties (i.e. those crops that do not already have an established market) will only be investigated in a later phase of the Project.

under the Project have terminated formal experimental activities in variety and cultivar testing, comparisons of irrigation techniques, cultural techniques and plant environments. This development is seen by the two host institutions concerned as being appropriate, efficient and a cost effective use of the scarce resources available. For detailed information on specific techniques for horticulture crops production refer to the technical report, Attachment A).

B. Transfer of skills through counter-part training:  
1) Comprehensive training to 6-8 counterpart personnel who will replace the IVS volunteer technicians.

B. Progress towards achieving outputs continues as planned, but is proportionate to present IVS placements versus planned involvement:  
1) Comprehensive training of three counterpart personnel is in progress.

B. Progress towards achieving outputs continues as planned as a result of the first year's review:  
1) Comprehensive training of 5 counter-part personnel on the job and abroad, including research, production, marketing and extension.

- |   |   |   |
|---|---|---|
| 2) On-the-job training for an average of 4-6 employees within both government and c.d.a. horticulture projects. | 2) On-the-job training is provided to an average of seven employees per position (4-6 planned).   | 2) On-the-job training is provided to a total of 17 full-time local staff. During the 2nd year of the Project the three IVS volunteers involved in extension work have regularly directly assisted more than 120 producers. |
| 3) Two in-service training courses per year for an average of 20 government extension agents per course.        | 3) Two in-service training courses were held during the first year of the Project, actively involving 84 participants (versus 40 participants planned.)   | 3) One in-service training course was held during the second year of the Project activities in which 30 Agricultural Field Staff received specialist training in horticulture.  |
| 4) Preparation and publication training materials.  | 4) The following material and publications were produced: a new series of <u>Agrifacts</u> publications on vegetable and fruit crops production, a monthly Setswana radio program on vegetable and fruit crops production, and a vegetable and fruit crops planting calendar produced for 1979. | 4) Materials produced in the first year of the Project continue to be widely used, although these materials will be updated this coming year.   |

C. Advisory Services in training, extension and research:

1) Policy statement by the Botswana Government governing horticulture development in Botswana.

1) Although the MOA Horticulture Unit has not produced a comprehensive development plan on schedule, due to an initial underestimate of the complexity of the task, many components of the plan have been separately articulated by the end of year one of the Project. The preparation of the comprehensive plan is now set for June, 1980.

1) The preparation of a comprehensive horticulture development plan document was not produced on schedule. The preparation of the plan was postponed until two consultancy studies were carried out:

- 1) the Economic and Social Analysis of the Horticulture Industry in Botswana and
- 2) a marketing study of horticulture crops in Botswana.

The study of Economic and Social issues of the horticulture industry was completed in September.

2) Policy guidelines for C.D.A. horticulture activities (training, extension, production, marketing).

2) Policy guidelines for community development associations projects are available and in use, although these are preliminary and will be revised as further experience is accumulated. The following c.d.a.'s have relied heavily on the guidelines of the M.O.A. Horticulture Unit for planning horticulture activities: Kanye Brigades Development Trust, KRDA and Shashe Development Trust.

2) Policy guidelines for c.d.a. horticulture projects have been revised substantially during the year in view of availability of more detailed information through the experience of c.d.a.'s, operating commercial projects. The following c.d.a. have relied heavily on the guidelines of the MOA Horticulture Unit for planning horticulture activities: Kanye Brigades Development Trust, KRDA, Shashe Development Trust, Kasane Brigades Trust, Tutume Trust Maun Brigades Development Trust.

D. Management of Horticulture Projects:      D. Management of Horticulture Production Units.

1) Management of 4-6 horticulture production units for both Botswana Government and c.d.a. projects until management function can be transferred to counterpart personnel.

1) One one IVS volunteer technician is managing a horticulture crops production unit. IVS expects to place 2-3 technicians in similar positions in the second year of the Project. The expected output of 4-6 personnel in horticulture crops production units will likely not develop until year three. The cause of this output target not being reached is the apparent unviability of several host institutions' projects.

1) At the end of this second year of the Project, IVS is not directly involved in supporting a commercial horticulture production unit. The one IVS volunteer involved in managing a production unit (KRDA) was transferred in August 1980 to the KRDA-MOA Horticulture Extension Unit. This development was determined by the results of an evaluation of the production unit, which concluded that the commercial unit was not economically viable in the long-term.

In the second Phase of the Project (years 3 and 4) IVS expects to place only one horticulturist with a production unit Mogobane Horticulture Estate.

This shortfall in expected placements with production units is primarily the results of IVS's assessment of inadequate c.d.a. management and planning expertise. Secondly, it is envisaged that c.d.a.'s starting horticulture production activities in the next few years will be able to recruit local staff to support their programs.

2) Management of Government Horticulture Research Unit.

2) An IVS horticulturist is presently managing the DAR/MOA Horticulture Research Unit.

2) An IVS horticulturist continued to manage the DAR/MOA Horticulture Research Unit.

E. Extension Services:

1) Extension support to about 4-6 privately owned horticulture production units, 3-4 community development associations, and about 20-30 subsistence farmers in years one and two of the Project.

1) The Horticulture Unit, MOA is providing the scope of extension services planned in the Project proposal for year one.

1) The Horticulture Unit/MOA, also in conjunction with the KRDA horticulture extension Unit is providing the scope of extension services planned in the Project proposal for years one and two:

- 6 privately owned horticulture production units.
- 7 c.d.a.'s.
- 120 subsistence farmers
- 22 secondary schools
- 13 general hospitals and clinics
- 17 prisons
- 5 farmer training centres.
- 90 4-B Clubs with Gardens
- 10 primary schools

2) In years 3 and 4, expanded support to subsistence farmers (undetermined) and continued support to the recipient groups of the first two years.

F. Research Activities

- |   |  |  |
|---|--|--|
| 1) Initial research focused on 4 crops - tomato, cabbage, onions, potato. | 1) The Horticulture Research Unit is an established program conducting the evaluation of different varieties of six crops (tomato, cabbage, onion, carrot, potato, maize) versus the four crops originally planned.            | 1) The Horticulture Research Unit continues the evaluation of six different crop varieties (tomato, cabbage, onion, carrot, potato and maize).   |
| 2) Establishment of research priorities.                                  | 2) A Horticulture Research Advisory Committee, comprised of producers and MOA representatives, is actively involved in planning the horticulture research program so that experiments meet the priority needs of the industry. | 2) The Horticulture Research Advisory Committee comprised of producers and MOA representatives is designed to assist in the planning of horticulture research program so that experiments meet the priority needs of the industry. An IVS assessment after 2 years of project activities is that the horticulture office MOA should accept as a priority the co-ordination of the Horticulture Research Advisory Committee, so that it operates more effectively and so that it more representative of producers needs and problems. |
| 3) Irrigation and shading techniques evaluated in first two years.        | 3) Evaluation of nethouse and irrigation techniques began in the second half of year one.  | 3) Evaluation of nethouse and irrigation techniques continued through the second year of the Project. The Research Unit plans to expand efforts in running   |

regional trials and economic trials to increase ability to recommend practical programs to farmers.

G. Institutional Linkages

- |   |  |   |
|---|--|---|
| 1) 50% of IVS field staff time to develop linkages between government and c.d.a.'s and between various c.d.a.'s | 1) The level of IVS Field Staff involvement in developing linkages between the MOA and c.d.a.'s was limited to approximately 25% of the time available, due primarily to the reduced level of IVS recruitment for c.d.a. projects. | 1) The level of IVS Field Staff involvement in developing linkages between the MOA and c.d.a.'s was reduced to 10%. due primarily to the substantially reduced level of IVS recruitment for c.d.a. projects (IVS supported two c.d.a. projects and recruited for only one new project during the year.) |
|   |  | 2) IVS assessment is that the linkages between the IVS supported project are unusually effective (because of the IVS identity), although there are some examples where improvement is necessary. (See Attachment C)   |

18. PURPOSE - Progress Towards Reaching End of Project Status Conditions.

Original	Year I	Year II
"Support the efforts of Botswana Government and Community Development Associations to expand	Same.	Same.

both commercial and subsistence horticulture crop production in Botswana through the provision of technical assistance services",

A. IVS Project Personnel:

- 150 mm for first two years.
- 150-190 mm for years 3 and 4.
- 12 mm IVS staff, years 1 and 2.
- 12 mm IVS staff, years 1 and 2.

A.

- 36 mm year one (actual).
- 56 mm year two (estimate).
- 180 mm total for years 3 and 4 (est.)
- 12 mm IVS staff year one (actual).
- 12 mm IVS staff year two, three and four (est.)

The shortfall in progress towards achieving EOPS conditions is discussed in sections 15, 16 and 17.

A.

- 36 mm year one (actual).
- 48 mm year two (actual).
- 12 mm IVS staff years one and two (actual)
- 177 mm volunteer technicians years three and four (estimate).

Using actual experience in years one and two of the Project, and projections for expected placements and terminations in years three and four of the Project, IVS plans to have supported Botswana Horticulture efforts for a total of 177 mm (horticulturist technicians) versus a total of 300 mm projected in July 1978, and 272 projected in November 1979. This shortfall in progress towards achieving EOPS conditions is discussed in sections 15, 16 and 17.

B. Community Development Associations:

4-6 profitably operated horticulture production units managed by Batswana, providing jobs, extension services and meeting local market demands for fruits and vegetables.

B.

Only one c.d.a. with I.V.S. support is making substantial progress towards achieving the stated EOPS condition, and in this case, the project will not be fully localized until the end of year five. (KRDA).

It should be noted that the KRDA project was the first project that attempted to develop a replicable model for a rural small scale production unit. The training requirement for localization could only be identified once the experimental stage was completed. In the case of c.d.a.'s first receiving IVS support in years two and three, it is expected that IVS technical assistance will be required for four-five years. The first year includes recruitment of the counterpart and on-the-job training, the second and third years include formal training abroad, and the fourth year involved

B.

The c.d.a. that IVS continues to support (KRDA) found it necessary to terminate its commercially organized production activities, and has advanced its plans to utilize this site and IVS technical assistance to establish a village horticulture allotment scheme. This allotment scheme was formally established in August 1980, and is administered by the KRDA-MOA Horticulture Extension Unit. The revised plans affect the localization schedule (projected in 1979 to be 5 years) The full-time IVS technical assistance position will be eliminated in August 1981 after which the expanded KRDA-MOA Horticulture Extension Unit will take over the provision of technical assistance to allotment holders.

It should be noted that the KRDA project was the first project that attempted to develop a replicable model for a rural small scale production unit. Thus, the failure

handing over the position to the counterpart.

of this unit to reach its commercial objectives has provided invaluable information for the use of the MOA and other c.d.a.'s in planning new commercially organized horticulture activities.

In the second year of the project, IVS began supporting c.d.a. Horticulture Extension Unit (KRDA-MOA) and the review of this position indicates that common c.d.a. objectives and resources may be better suited to support extension versus commercial activities.

With information provided by the MOA Horticulture Extension Program and the Horticulture Research Program it should be possible for the positions in c.d.a. horticulture extension projects to be filled by local staff in the near future.

C. Botswana Government

- |  |   |  |
|--|---|--|
| 1) On-going horticulture research program managed and staffed by Botswana. | 1) The Horticulture Research Unit program was established on schedule in May 1978. Progress in localization planning is | 1) It is not clear if the counterpart Assistant Horticulture Research Officer will be available for further training required to |
|--|---|--|

behind schedule, due to MOA appointing an unsuitable candidate. With promised selection of a suitable counterpart for the Horticulture Research Officer in early 1980, localization is planned for 1985.

localize this position. The Department of Agricultural Research has committed to clarify this situation in early 1981. This further delay in localization plans is considered acceptable by IVS in view of several points:

- 1) the ambitious experimental program undertaken by Host research,
- 2) the recent permanent employment of one other agricultural diplomat who can provide support to the program, and
- 3) the newness of the Horticultural Research Program (2 years) necessitates a certain amount of continuous program re-design.

Particularly in view of the Social and Economic Analysis of the Horticulture Industry and the proposed marketing study, it is deemed appropriate to postpone for another year the formal training of the Assistant Horticulture Research Officer.

- |   |  |   |
|---|--|---|
| 2) Motswana Senior Horticulture Officer co-ordinating all government horticulture programs. | 2) The IVS Senior Horticulture Officer, MOA, is co-ordinating all government horticulture programs with the assistance of the counterpart Assistant Horticulture Officer. Informal MOA evaluation of the | 2) During the second year of Project activities IVS Senior Horticulture Officer/MOA has co-ordinated all government horticulture programs with the assistance of the counterpart Assistant Horticulture Officer. With the placement of the Assistant Horticulture |
|---|--|---|

Horticulture Officer's activities in support of counterpart training are extremely positive. Localization of this position is currently planned for 1983-84, years four and five of Project activities.

Officer in an MSc. (Horticulture) course in the US in September 1980, it is planned for this position to be localized in January 1983.

3. 100-150 government Agricultural Demonstrators completed in-service training in horticulture extension.

3. In-service training of MOA extension staff is ahead of schedule, (84 agricultural field staff trained in the first year of project activities) and stated EOPS conditions will be achieved in years two and three of the Project. Feedback from Agricultural Field Staff has not yet clearly indicated the usefulness of their training or the impact on horticulture producers. Beginning in year two of the Project, in-service horticulture training will be conducted in regional centers.

3. In-service training of MOA Extension staff continues to be ahead of schedule. 30 MOA extension agents have completed in-service training seminars in the second year of the Project.

Further planned in-service horticulture training seminars will be conducted at the regional level where particular regional problems can be addressed and where follow-up activities can be conducted by Regional Horticulture Officers and Regional Crops/Horticulture Officers.

4. Horticulture training and instructional material completed and in regular use.

4. Important training and horticulture instructional materials are completed and in use in year one of the Project, though these will be revised and expanded as research

4. Training and instructional materials have been revised and expanded on the basis of new research and experimentation results (see section 17), although they have not yet been published.

and experimentation continues.  
(For details see section 17).

Through the collaboration of the KRDA and MOA Horticulture Extension Units detailed information is being collected that will be primarily useful in preparing training and instructional materials for extension staff.

5) Extension materials and illustrated manuals for community development associations and subsistence farmers available and in regular use.

5) As extension programs are intensified in years three and four of Project activity, extension materials will be produced and more widely available to subsistence farmers. This EOPS condition is expected to be achieved on schedule.

5) Same.

6) Government Horticulture Plan approved through 1985.

6) Government Horticulture Development Plan through 1982 expected to be produced by June 1980. Rapid and changing developments in the horticulture industry prevent production of a five year plan at this time.

6) Government Horticulture Development Plan 1981-1985 expected to be produced by June 1981 when final results of the Economic and Social Analysis of the Horticulture Industry in Botswana and the Horticulture Marketing Study are complete.

The set of EOPS conditions stated in the Project document remains a valid description of what will exist when Project purpose is achieved, although the target date for localization of

At the end of two years of Project activity IVS concludes that Project purpose can be achieved, although the EOPS conditions originally planned for by IVS will not have been fully met. The number of IVS voluntee

each position is after 4 - 5 years of initial IVS involvement.

technicians needed to achieve EOPS conditions is lower than originally envisaged because

- 1) c.d.a.'s management and planning capabilities are only likely to improve to support viable production units by the time local horticulture expertise became available, thus expatriate technical assistance will become unnecessary.
- 2) the MOA and c.d.a. organised training abroad will produce two unattached horticultural specialists (diploma) by 1982, who will be qualified candidates for managing c.d.a. horticulture activities.
- 3) the MOA-established Regional Horticultural Officers and Regional Crops Horticulture Officers can provide more effective support promoting earlier localisation.

19. GOAL - Progress Towards Goal Achievement

Original	Year I	Year II
Expanded horticulture production leading to near	At the end of the 1st year of the Project, progress towards goal	At the end of the second year of the Project, progress towards goal achievement is deemed

self-sufficiency in vegetable and fruit production.

1) Increase in production of fruits and vegetables.

2) Decrease in imports of fruits and vegetables.

achievement is deemed satisfactory. The IVS Project has contributed to the achievement of this goal, and the following are specific indicators:

1) Feedback from agriculture demonstrators indicates more subsistence farmers are engaging in vegetable and fruit crops production, although data is not yet available to identify how widespread these new activities are.

2. While imports of certain crops appear to have decreased in some

satisfactory, and the following indicators are presented in support of this statement:

1) The MOA Hort. Unit estimates that institutional producers assisted by the Unit comprise the following:

- 22 Secondary Schools.
- 13 general Hospital and Rural Clinics
- 17 Prisons
- 5 Farmers Training Centres
- 90 4-B Clubs
- 7 C.D.A.'s
- 10 Primary Schools

As a conservative estimate, these institutions represent in the region of some 30 ha. in horticulture crops production. Assuming that production, particularly from schools and 4-B Clubs is low because of the influence of school terms, etc. at an average of 10 tons per ha. per year, this represents some 300 tons annually.

2) Total consumption of horticulture crops is estimated by the MOA of 20,000 tons

areas (Molepolole, Kanye, Gaborone) statistical information concerning country-wide import levels is currently unavailable to substantiate this.

annually. Of this amount 2,500 tons are produced locally.

The MOA estimates indicate that during the first two years of Project activities, local production of horticulture crops increased by 500 tons, or 25% while total consumption of horticulture crops over the period remained approximately the same.

3) Increase in remunerative employment in programs directly related to horticulture development.

3) Remunerative employment opportunities in horticultural crops production seem to have increased significantly in some areas (above), though statistical information is not yet available to quantify this increase nationwide.

3) The MOA Horticulture Unit estimates that increased production activities of the first two years of the Project have created approximately 75 additional full-time formal employment opportunities.

4) Improved nutritional level among subsistence farmers.

4) Information is not currently available to support the claim of the IVS Project to improve the nutritional level and cash income of subsistence farmers.

4) As a result of preliminary information compiled by the KRDA Horticulture Extension Unit, approximately 120 producer grow horticulture crops primarily for improved family nutrition and for sale.

General Hospitals and rural clinics primarily produce vegetables for feeding programmes for malnourished children.

5) Increase cash income of subsistence farmers.

5. See point four.

5. Information from Livestock Advisor Centers and the Botswana Marketing Board estimate that 17,000 packets of vegetable seeds were sold in the 12 month period from August 1979 to August 1980, the majority to subsistence farmers.

The Botswana Agricultural College has revised its curriculum in the last year to include courses on horticulture production and extension techniques.

Over the period of the Project, three Annual Horticulture Conferences have been held. Increasing interest on the part of Botswana in horticulture crops production can be demonstrated by the approximate three-fold increase in participation by Botswana producers (as opposed to government civil servants and academics).

In an evaluation of the Project in years three and four, all measures of goal achievement will be explored through actual field surveys. Host institutions have been encouraged to collect impact data for use in project planning, however, manpower

Attachments:

- A. Horticulture Research Unit Annual Report
- B. Letter of Project Recommendations to P. Nelson and T. Taukobong, MOA
- C. Letter of Project Recommendations to K. Oland, DAP
- D. Letter of Project Recommendations to D. Inger and R. Ntsima, KRDA (Horticulture Extension Project)
- E. Letter of Project Recommendations to D. Inger and R. Ntsima, KRDA (Horticulture Unit, Allotment Scheme)
- F. Examination of OPG Cost Overruns
- G. Financial Status Report through June, 1980
- H. Schedule of Formal IVS Review Sessions
- I. Statement of Approved IVS Review Purpose and Methodology
- J. Approved Outline of Volunteer Position Discussion Content

constraints postponed realization of these surveys to date.

It should be noted that while host institutions' projects that are not supported by IVS personnel are contributing substantially to increases in horticultural crops production, it is widely recognized that the contribution of the IVS Senior Horticulture Officer in the MOA has been and is crucial to the achievement of the Project goal.

20. BENEFICIARIES/BENEFITS

Year I

The development of a vegetable and fruits crop production industry in Botswana offers the potential to benefit Botswana through the creation of productive employment opportunities, the improvement of nutritional levels and the increase in cash income for subsistence farmers. While Project activities are benefitting Botswana in all these ways, statistical data is not available to determine the number of people affected and the magnitude of impact. This will be covered in the third and fourth year field survey.

Year II

As a result of two years of Project Activities, the following benefits have accrued:

- 1) Creation of productive employment opportunities. MOA Horticulture Unit estimates that approximately 75 new formal employment opportunities were created during the period. The Egner/Martin report estimates that it costs approximately P5,000 to establish a permanent employment opportunity in horticulture (in Tuli Block, and including essential permanent infrastructure). Average wages for individuals in these new employment positions are approximately P500/year.

Activities in the first year of the Project tended to focus on the needs of the small commercial producers, both individuals and groups. This development is seen as appropriate due to commercial producers' ability to absorb the economic risk of experimenting with new inputs and techniques. Extension activities to subsistence farmers will progressively increase during future years of the Project.

2. Improvement of nutritional levels: Experience of rural medical officers indicates that there are measurable improvements in the nutritional level of subsistence farmer families producing vegetable crops, particularly in young children. Direct and indirect beneficiaries of IVS horticulture extension and promotion activities are estimated at between 5,000 and 10,000 individuals. This estimate is based primarily on the monitoring of horticulture crops seed purchases (17,000 sold packets during the second year of the project), and results of subsistence production and conditions observed by extension staff.

Twenty general hospitals and rural clinics are involved in horticulture production activities primarily to provide improved diets to malnourished children.

3. Increased cash income of subsistence farmers: Practically all subsistence growers derive some cash income from vegetable

production. It is estimated that at the end of two years of Project activities there are between 1,000 - 2,000 established subsistence growers. A conservative estimate of the average cash income derived by these growers is P25/year.

4. Training of Extension Agents: The In-service horticulture training to 114 agricultural demonstrators through the first two years of the project was conducted by the Horticulture Officer and Horticulture Research Officer. This training is not available from other sources in Botswana. The cost of organizing and importing horticulture expertise to conduct similar seminars would have cost between P5,000-P10,000. The effectiveness of imported expertise would be substantially lower than that provided by IVS because of a lower awareness of local conditions and problems.
5. On-the-Job training:
  - a) Specialist Horticulture Extension Training of one individual (MOA assigned to the KRDA Extension Unit) would have cost a minimum of P2,000-5,000 if provided abroad.
  - b) KRDA Commercial Horticulture Unit has employed and trained 10 individuals in the past two years. Five of these employees are presently operating their own horticulture plots in the KRDA village allotment scheme. At the

present time the village allotment scheme is projected to provide land to 35 producers. Although it is impossible to obtain exact estimates of production levels at this time, the potential production is likely to average 600 Kgs per plot/year, valued at P200 per plot/year.

A direct benefit to the local economy of establishing these private producers should be seen in terms of increasing horticulture production for home consumption, the local market and in support of new local entrepreneurs.

c) Training in Horticulture Research Unit: During the first two years of the Project 12 individuals have been employed by the Unit and have been trained to carry out their job responsibilities.

Training of one Technical Officer, one Assistant Research Officer, and one Trials Recorder has continued through the second year of the Project activities. The estimated value of training abroad for these 3 positions is approximately P 5,000 - 10,000.

6. Training in horticulture abroad: IVS volunteers have organised specialist horticulture training abroad for counterpart staff. At the end of two years of activities, five Batswana are in training courses in Kenya, Tanzania and the USA.

7. Financial Benefits of Commercial Unit (KRDA): From December 1979 to August 1980, the Commercial Horticulture Unit has produced 16 tons of vegetable crops, and expects to have produced a total of 20 tons once all crops are harvested. At the estimated wholesale value of 30 thebe/Kg, total gross profits of the Unit will be P6,000 for the agriculture season December - September 1980. Previous production of the Commercial Unit was 17 tons, valued at P5,000.

Over the past year KRDA Horticulture Unit has provided 2,000 kgs of good quality vegetables to Molepolole per month, thus contributing to satisfying the local demand for produce through local production.

21. UNPLANNED EFFECTS

Year I

Not pertinent at this time.

Year II

At the end of two years of project activities IVS concludes that there have not been significant unplanned effects of the Project. Changes in Project activities mentioned in previous sections are attributed to causal factors.

22. LESSONS LEARNED

Year I

As a result of IVS' one year's experience in supporting horticulture activities in Botswana through this Project, several important lessons have been learned. These lessons require that Project activities be revised and that

Year II

IVS has re-examined the lessons learned from Project activities over the first year, and has re-assessed the validity of these lessons at the end of two years of Project activities. For the most part the lessons learned at the end of Year I remain valid, but have become clearer as a result of two years experience.

and that implementation targets be re-scheduled.

A. Host Institution Management Capability

An important conclusion gained from IVS experience in the administration of this Project is the need to assess the management capability of host institutions requesting support, both prior to and during a project's implementation.

The assessment of the host institution's managerial capability is necessary in the light of the sensitivity of commercial horticulture activities to timely management decision-making due to the vulnerability of plants and crops to pest, extreme weather conditions or inadequate husbandry. An individual, a group or an organisation that does not possess or have adequately planned for effective management control or supervision does not offer the necessary resources to sustain horticulture project activities past the period of expatriate involvement.

Due to a negative assessment of host institution

Two years experience require that Project activities be revised and implementation targets be re-scheduled.

A.

The assessment at the end of one year of project activities remains valid and is a strong principle of IVS operations in Botswana.

During this year IVS applied this criteria when considering recruitment requests for positions in Kasane, and Maun. As the institutions concerned did not meet this IVS program criteria, IVS either declined to recruit or terminated recruitment activities.

While IVS remains committed to participating in c.d.a. institution-building (through the provision of senior management staff) limited financial resources do not enable IVS to expand its activities in this area at any time.

management capabilities, IVS has withheld or withdrawn support from positions originally intended to comprise part of this Project. In view of the potential danger of destroying, through failure, a spirit of self-reliance, these actions on the part of IVS are generally supported as being in the long-term interests of the development of the horticulture industry in Botswana.

It should be noted that IVS is exercising its perceived responsibility to limit support to projects that are assessed as offering long-term viability. Thus, quantitative measures of Project Achievement alone cannot measure IVS' contribution towards achieving overall Project goals.

In view of the likelihood of poor management of c.d.a.'s causing the implementation of rural horticultural activities to remain unrealized, it is important for the management skills of c.d.a.'s to be improved.

B. Evaluation

It is widely accepted that comprehensive formal evaluations of host institutions' projects should

B.

This assessment remains valid.

be carried out by the host institutions themselves. These evaluations are seen as being essential for effective planning, implementation and institution-alization of project activities, as well as for providing a source of information for project impact analysis.

C. Economic and General Feasibility of Horticulture Activities

The economic viability of commercial horticulture and the general viability of subsistence horticulture was initially projected using primarily short-term weather statistics and water supply information. The magnitude of increase in the costs of imported fuel was unanticipated.

Experience in the first year of the Project with natural cyclical drought conditions indicates that the general potential and economic feasibility of horticulture in Botswana may have been over estimated. It is now clear that the initial focus of horticultural activities must be in projects utilizing the most reliable and inexpensive water supplies in a particular area.

During this year formal studies commissioned by host institutions were conducted that substantially contributed to the review and planning of all four IVS horticulture positions and host institution projects.

C.

During the second year of the Project activities these observations and assessments were accepted and included in new and on-going project implementation plans.

D. Transfer of Skills

The timeframe originally stated for the completion of the transfer of skills to counterparts (four years) was underestimated by generally applying a best case scenario to all positions. Unavoidable delays have occurred and should be anticipated in the future. These delays which will lengthen the period required for localization include:

- 1) delays in the selection of counterpart candidates,
- 2) delays in the organization of formal training abroad, and
- 3) unanticipated personal developments.

The period required for localization will differ for each position, depending on the required degree of specialization, the level of experience, and the length of formal training. A realistic estimate of the time required for localization of positions requiring training is five - six years.

E. Implementation Schedule

Delays in implementation and slower than expected progress towards achieving EOPS conditions determines the need for an extension in implementation scheduling. If IVS is to remain

D.

The findings regarding transfer of skills and localization at the end of one year of Project activities pertained to IVS expectations of supporting new c.d.a. production activities. In view of no new positions being supported in year two, and in view of the perceived inappropriateness of expatriate technical assistance involvement in c.d.a. projects in the future, IVS does not envisage the length of programme commitment projected at the end of year one.

At the end of two years of Project activities, local institutions hosting IVS volunteers are committed to specific localization schedules:

- 1) Senior Horticulture Officer/MOA: June 1983.
- 2) Horticulture Research Officer/DAR: June 1984.
- 3) KRDA/MOA Horticulture Extension Officer: December 1982.
- 4) KRDA Horticulture Allotment Advisor: August 1981.

E.

The second Phase project proposal will articulate the length and scope of IVS commitment in the development of the horticulture industry in Botswana.

committed to providing the means to achieving project goals a longer period of IVS technical assistance is required. At this time it appears necessary for IVS to continue to support Horticulture Project activities for a minimum period of five years (October 1979 to September 1984). The second Phase project proposal will articulate the length and scope of IVS' commitment in the development of the horticulture industry in Botswana.

F. Managerial Assistance to C.D.A.'s

It appears that horticultural development activities can be more easily expanded to meet the needs of rural communities if the resources of C.D.A.'s are utilized. IVS Inc. and other technical assistance agencies will focus support on strengthening the managerial and planning capabilities of c.d.a.'s in order for c.d.a.'s to expand activities and institutionalise them beyond the period of expatriate involvement.

G. General Agricultural Technical Assistance

In some cases the perceived potential for vegetable and fruit crops production does not clearly support the need for a full-time horticulturist. Technical assistance which

The Phase II Project proposal will include the support for the four existing positions and will propose to include two new positions that are presently viewed as crucial to the support of the national horticulture industry.

F.

During the last year IVS and other technical assistance agencies have not effected significant improvement in c.d.a. management capabilities, although at the end of the second year of Project activities, the Botswana Government and c.d.a.'s are involved in a major effort to strengthen these local institutions.

G.

This assessment, again, was based on the perceived potential and resources available in c.d.a.'s. However, during the second year of Project activities no new c.d.a. requests for general agriculture assistance were assessed as being

includes more general agricultural skills, could explore and develop horticultural activities in addition to other agricultural activities. Where appropriate IVS will consider the recruitment and support of technical assistance personnel to be involved in various agricultural activities, including horticulture.

H. Financial Support

While major capital support of host institutions project is available through existing donors, minor unanticipated costs often delay the development of project activities.

IVS will attempt to provide a small fund for use in support of horticultural crops activities throughout the country, with the exception of private commercial activities. These funds would be disbursed following approved detailed guidelines.

appropriate.

H.

Major capital support continues to be available. Minor unanticipated costs of project were not a significant factor during the year.

In the second year of Project activities IVS reviewed its decision to attempt to provide a small fund for use in support of horticulture crops activities and concluded that other development agencies in Botswana offered an adequate source of funds.

**INTERNATIONAL VOLUNTARY SERVICES, INC.**

Botswana Programme:

P.O. Box 919 Gaborone,

Botswana

23 September 1980

Mr. Peter Nelson,  
Director, Field Services, and  
Mr. T. Taukobong,  
Chief Crops Improvement Officer  
Ministry of Agriculture  
Private Bag 003  
Gaborone

Dear Sirs,

The purpose of this letter is to summarize the impressions that we gained as a result of the annual IVS review of K. Morriss' position, conducted during the week of 15-19 Sept.

As we verbally discussed with you on 16.9.80, we continue to believe that K. Morriss is making excellent progress in supporting the development of a viable horticultural industry in Botswana. The high level of technical skills and energy that Keith has put into his work these past three and one-half years has resulted in impressive growth of horticultural crops production activities widely spread throughout the country.

While we do not possess the technical experience to comment in detail on the MOA Horticulture Unit's program, we do feel it is appropriate to offer one general observation, concerning Keith's work, that came out of this year's review: It appears that Keith has not been given clear guidelines for use in decision-making when planning his activities. We suggest that statements of the Hort. Unit's priorities are regularly formally established and reviewed, and that these priorities are carefully considered when planning Hort. Unit staff activities. We feel that this priority-setting is particularly important in view of Keith's likely termination in mid-1981, anticipating that the activities of the Hort. Unit will have to be reduced during the handing-over and orientation period of a new officer.

As a result of our positive assessment of the MOA's utilization of K. Morriss IVS remains committed to support this position until P. Nkepu is fully qualified. In the event that Keith does decide to terminate at the expiry of his current IVS contract, in mid-1981, IVS will recruit for a similarly qualified individual to take over from him. However, we are not certain that IVS can attract suitably qualified candidates, and thus suggest that the MOA involve other technical assistance agencies in this effort. In order to facilitate the recruitment of a replacement for Keith we request that a job description for his position (covering the period 7.61 - 6.83) be produced and forwarded to us as soon as possible.



**INTERNATIONAL VOLUNTARY SERVICES, INC.**

Botswana Programme:

P.O. Box 919 Gaborone,

Botswana

23 September 1980

Mr. K. Oland  
Director  
Dept. of Agricultural Research  
Ministry of Agriculture  
Private Bag 0033  
Gaborone

Dear Mr. Oland,

The purpose of this letter is to summarize the impressions that we gained as a result of the annual IVS review of G. Wiles' position, conducted in the week of 15-19 Sept.

As we reviewed with you in your office on 17.9.80, it is IVS' assessment that Geoff has done an excellent job in establishing and managing an Horticulture Research Program that is appropriate to the priority needs of the Botswana horticulture industry. Through the two and one-half years of his work Geoff has continued to invest a high level of energy and technical skill in the DAR, MOA Hort. Research Program.

While we do not feel qualified to comment in detail on the Hort. Research Program, we do feel it is in order to offer a few observations and suggestions that came out of this year's IVS review of G. Wiles' position:

--Geoff feels strongly that the Hort. Research Advisory Committee is neither sufficiently active or representative to effectively fulfill its intended function. It is suggested that discussions within the DAR and between the DAR and the MOA Hort. Unit be initiated with the aim of improving the make-up and functioning of this committee. (It is hoped that through better priority-setting in the MOA Hort. Unit the Hort. Officer will be instructed to attach more importance to his role as convenor/co-ordinator of the Hort. Research Advisory Committee.)

--There is still the uncertainty of S. Foster's interest and availability for further training with the aim of localizing the Hort. Research Officer position. IVS accepts your description of the unanticipated developments that have affected DAR plans to train Ms. Foster, and also we recognize and appreciate the preferential treatment the Hort. Research Unit has enjoyed (in terms of the appointment of other staff, particularly the second diplomat, Mr. Modisa). And we accept that we were being somewhat impractical to expect that the DAR should before now have committed to a training program abroad for this position, in view of the normal 'sorting out' and redesign of any project as new as the Hort. Research Unit. However, it now seems reasonable to expect that a specific commitment is formalized during the next year to localize Geoff's position. IVS support of Geoff (or someone else replacing him) past the expiry of his current contract (May 1982) would be dependent on a specific localization plan being committed to by the DAR, MOA.

P. Nelson  
T. Taukobong  
Page Two

We are preparing a detailed report of this month's review of our four horticulturists working in Botswana (including Keith), and I'll be sending you a copy of this in a week or so.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lowell Hestand'. The signature is written in a cursive style with a large initial 'L' and 'H'.

Lowell Hestand  
Field Director  
(and for H. Clark  
IVS/W Program Officer for Botswana)


**INTERNATIONAL VOLUNTARY SERVICES, INC.**

Botswana Programme:

P.O. Box 919 Gaborone,

Botswana

23 September 1980

D. Inger  
R. Ntsima  
KRDA  
Private Bag 7  
Molepolole

K. Morriss  
Horticulture Officer  
Ministry of Agriculture  
Private Bag 003  
Gaborone

Dear Sirs,

This purpose of this letter is to summarize the impressions that we gained as a result of the annual IVS review of D. Indicar's position, conducted during the week of 15-19 Sept.

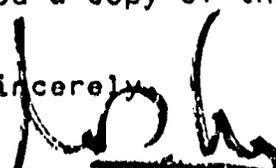
As we discussed with you 18.9.80, we believe that D. Indicar is making a valuable contribution as the KRDA-MOA Horticulture Extension Project Leader.

While we do not possess the technical experience to comment in detail on the development of the Hort. Extension Project, we do feel it is appropriate to offer some general observations, concerning Dio's work, that came out of this year's review:

- In view of the greater-than-planned-for response to the HEP the bicycle transport that the extension team must rely on is now inadequate, we believe. We suggest that the use of two motorbikes for extension travel would yield the HEP more cost-effective, allowing the two staff to regularly support more producers.
- A better investment of resources could also be achieved by freeing the two extension staff from routine collection, recording, filing, and collating of baseline information and producer results. We suggest that an additional staff member is employed in the HEP for this purpose.
- We believe that some improvement in HEP effectiveness can be gained by closer supervision of the staff. This improved supervision can logically be provided by the KRDA Secretariat.

We are preparing a detailed report of the IVS review of our four horticulturist positions in Botswana, and I'll be sending you a copy of this report in a week or so.

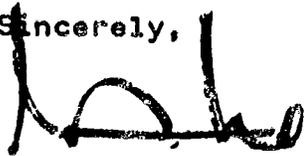
Sincerely,

  
Lowell Hestand  
Field Director  
(and for H. Clark, IVS/W Program Officer for Botswana)

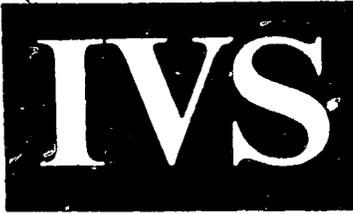
K. Oland  
Page Two

We are now preparing a detailed report of this month's review of our four horticulturists working in Botswana (including Geoff) and I'll be sending you a copy of this report in a week or so.

Sincerely,

A handwritten signature in black ink, appearing to read 'L. Hestand', written over a horizontal line.

Lowell Hestand  
Field Director  
(and for H. Clark,  
IVS/W Program Officer for Botswana)



**INTERNATIONAL VOLUNTARY SERVICES, INC.**

Botswana Programme:

P.O. Box 919 Gaborone,

Botswana

23 September 1980

D. Inger  
R. Ntsima  
KRDA  
Private Bag 7  
Molepolole

Dear Sirs,

The purpose of this letter is to summarize the impressions that we gained as a result of the annual IVS review of L. Kumar's position, conducted during the week of 15-19 Sept.

As we discussed with you on 18.9.80, we regret that it was necessary for the KRDA to close the Horticulture Unit, although we accept the economic basis for this decision. We always understood that the Hort. Unit operated as an experimental commercial model, thus even in its demise the intermediate-term prospects for commercial crops production in Botswana have been improved through the information produced by this KRDA unit.

IVS strongly supports the KRDA decision to convert the 'dam' horticulture site into a village allotment scheme. We believe that if closely supervised, L. Kumar can substantially assist 35 families to successfully establish themselves on this scheme, before the end of his current IVS contract (Aug. 1981). After L. Kumar's departure in August 1981 we suggest that the KRDA-MOA Hort. Extension Project team provide extension support to those allotment scheme producers whose interest compares favorably with other HEP co-operants.

Sincerely,

A handwritten signature in dark ink, appearing to read "L. Hestand", written over a horizontal line.

Lowell Hestand  
Field Director  
(and for H. Clark,  
IVS, w Program Officer for Botswana)

## EXPLANATION OF OPG 78-633-30 COST OVERRUNS

In the original IVS application to the USAID for funding IVS Botswana horticultural development activities, IVS requested \$227,650. to cover direct and indirect costs for 24 months - 1 July 1978 to 30 June 1980. OPG 78-633-30 was actually negotiated in Sept. 1978, retroactive to 1 July 1978, and covering a period of 27 months (1 July 1978 to 30 Sept. 1980). Although the OPG 78-633-30 grant period was three months longer (27) than requested by IVS the total OPG amount (\$227,650) only equaled the amount requested by IVS for 24 months.

See the Financial Status Report on OPG 78-633-30 (Attachment G). You will note that a total of \$169,568. was expensed by IVS during the 24 months of Project activities (1 July 1978 to 30 June 1980). This actual expenditure for Project activities was approximately 25% lower than originally budgeted, compared to approximately 40% fewer man-months (hort. technician-months, 96 actual versus 156 planned) of technical assistance provided through the OPG. Factors that caused the costs of providing this IVS technical assistance to exceed the original OPG budget (calculated on a man-month basis) are:

- No provision was made for changes in the exchange rate between the U.S. dollar and the Botswana Pula. Over the period 1 July 1978 to 30 June 1980 the dollar was effectively devalued (relative the Pula) more than 10%. (Note: Approximately 50% of the \$169,568. expensed (through 30.6.80) was paid out in Botswana.)
- Greater-than-anticipated (budgeted) increases in expenses in Botswana, particularly volunteer allowances (that directly reflect the actual increases in the cost of living in Botswana) and transport.
- Greater-than-anticipated (budgeted) increases in international air transportation.
- The original OPG budget was prepared using the IVS-USAID negotiated provisional overhead rate of \$400./man-month. Actual IVS overhead costs charged to the OPG for the period 1 July 1978 to 30 June 1980 have averaged approximately \$550./man-month.
- With the beginning of K. Morriss' second contract with IVS, his resettlement remuneration was increased with his change in status from 'volunteer technician' to 'technical specialist' (according to IVS policies). Thus K. Morriss' resettlement stipend increased from \$1800./year to \$8,000./year. This increase was not anticipated when the OPG budget was prepared.
- Various minor expenses were incurred for support of technicians and for IVS/Botswana administration that were not anticipated when the OPG budget was prepared.

With the information of the actual expenses charged to the OPG through the end of August 1980, IVS expects that the unobligated funds remaining in the OPG as of 1 October 1980 will be sufficient to support Project activities for a three month extension period (through 31 Dec. 1980).

# FINANCIAL STATUS REPORT

(Follow instructions on the back)

RECIPIENT ORGANIZATION (Name and complete address, including ZIP code)

International Voluntary Services, Inc.  
1717 Mass. Ave., NW, #605  
Washington, D.C. 20036

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED

AID  
FM/PAD/CSA

2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER

78-633-30

OMB Approved  
No. 80-RO180

PAGE 1 OF 1

4. EMPLOYER IDENTIFICATION NUMBER  
53-0218651

5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER

6. FINAL REPORT  
 YES  NO

7. BASIS  
 CASH  ACC

8. PROJECT/GRANT PERIOD (See instructions)

FROM (Month, day, year)  
7/1/78

TO (Month, day, year)  
9/30/80

9. PERIOD COVERED BY THIS REPORT

FROM (Month, day, year)  
4/1/80

TO (Month, day, year)  
6/30/80

## STATUS OF FUNDS

PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a) IVS (Gaborone)	(b) Vol. Tech	(c) Contingencies	(d) IVS-Wash. Supp.	(e) In-Country Supp.	(f) In-Country Admin.	TOTAL (g)
a Net outlays previously reported	\$ 16,619.41	\$ 36,428.98	\$ -0-	\$ 50,449.19	\$ 25,028.97	\$ 19,457.51	\$ 147,984.06
b Total outlays this report period	3,616.99	4,842.38	-0-	5,410.57	5,042.57	2,672.33	21,584.34
c Less: Program income credits	-0-	-0-	-0-	-0-	-0-	-0-	-0-
d Net outlays this report period (Line b minus line c)	3,616.99	4,842.38	-0-	5,410.07	5,042.57	2,672.33	21,584.34
e Total outlays to date (Line a plus line d)	20,236.40	41,271.36	-0-	55,859.26	30,071.54	22,129.84	169,568.40
f Less: Non-Federal share of outlays	-0-	-0-	-0-	-0-	-0-	-0-	-0-
g Total Federal share of outlays (Line e minus line f)	20,236.40	41,271.36	-0-	55,859.26	30,071.54	22,129.84	169,568.40
h Total unliquidated obligations	-0-	-0-	-0-	-0-	-0-	-0-	-0-
i Less: Non-Federal share of unliquidated obligations shown on line h	-0-	-0-	-0-	-0-	-0-	-0-	-0-
j Total Federal share of unliquidated obligations	-0-	-0-	-0-	-0-	-0-	-0-	-0-
k Total Federal share of outlays and unliquidated obligations	20,236.40	41,271.36	-0-	55,859.26	30,071.54	22,129.84	169,568.40
l Total cumulative amount of Federal funds authorized	22,250.00	69,400.00	8,000.00	67,000.00	44,000.00	17,000.00	227,650.00
m Unliquidated balance of Federal funds	2,013.60	28,128.64	8,000.00	11,140.74	13,928.46	(5,129.84)	58,081.60

ATTACHMENT 9

10. TYPE OF RATE

(Place "X" in appropriate box)

PROVISIONAL  PREDETERMINED  FINAL  FIXED

11. a. RATE

b. BASE

c. TOTAL AMOUNT

d. FEDERAL SHARE

12. CERTIFICATION

I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

*E. G. Walker*  
TYPED OR PRINTED NAME AND TITLE  
ERIC G. WALKER, Director

DATE REPORT SUBMITTED

9/6/80

TELEPHONE (Area code number and extension)  
(202)387-553

NOTE: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with award legislation.

EVALUATION OF IVS, INC. BOTSWANA HORTICULTURIST POSITIONS  
 SCHEDULE OF FORMAL SESSIONS  
 SEPT. 15-19, 1980  
 =====

Mon. Sept. 15	a.m.	- C. Martin (USAID) L. Histan H. Clark (IVS/W)	- Evaluation preview and general discussions
	p.m.	- C. Martin L. Histan H. Clark K. Morriss	- General discussion regarding evaluation and horticulture in Botswana
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Tues. Sept. 16	a.m.	- C. Martin L. Histan H. Clark K. Morriss T. Taukobong	- Formal review of K. Morriss position, at MOA Headquarters
	p.m.	- C. Martin H. Clark T. Taukobong P. Nelson	- Review K. Morriss position, at MOA Headquarters
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Wed. Sept. 17	a.m.	- C. Martin L. Histan H. Clark G. Wiles S. Foster	- Visit and discuss Hort. Research Program, at DAR, Sebele
	p.m.	- C. Martin L. Histan H. Clark G. Wiles K. Oland S. Foster	- Formal review of G. Wiles position, at DAR, Sebele
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Thurs. Sept. 18	a.m.	- C. Martin L. Histan H. Clark D. Indicar K. Morriss R. Ntsima (KRDA)	- Formal review of D. Indicar position, at KRDA, Molepolole
	p.m.	- As in a.m. above	- Visit MOA-KRDA Hort. Extension Project participants, in Molepolole
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Fri. Sept. 19	a.m.	- C. Martin L. Histan H. Clark L. Kumar D. Inger (KRDA)	- Visit Dam Veg. Production Group site, and general discussion, at KRDA, Molepolole
	p.m.	- As in a.m. above	- Formal review of L. Kumar position, at KRDA, Molepolole

IVS/BOTSWANA  
HORTICULTURE PROJECT EVALUATION  
PURPOSE AND METHODOLOGY

IVS has scheduled the annual formal evaluation of its (OPG funded) horticultural activities in Botswana to be conducted in Sept. 1980. The purpose of this yearly evaluation (this is the second formal evaluation of this Project, the first evaluation conducted in Oct./Nov. 1979 after one year of Project activities) is to:

1. Review progress towards achieving originally stated host institution project implementation and development objectives; and to
2. Review IVS administrative and recruitment performance as it relates to horticultural activities in Botswana.

A result of the review of progress towards, and constraints to, host project development will be a useful assessment of the host organization's capability to manage, institutionalize, and sustain their horticultural activities. This assessment will be used by IVS in decision-making regarding continued support of these host institutions, and in determining the scope of IVS' future involvement in the overall development of the horticultural industry in Botswana.

The evaluation will not attempt to make a judgement on the impact of host institution projects. Rather, it is the responsibility of each host institution to explore this question, and only through the review of progress towards achieving host project objectives should IVS suggest and, when requested, assist in comprehensive evaluations of host institution projects. At the end of the third year of IVS Botswana Horticulture Project activities a more detailed evaluation (more detailed than in years one and two) will be conducted to determine the need for an extension of Project activities.

The format for the evaluation will include formal sessions with host institution representatives and IVS horticulturists. IVS staff participants in all sessions will be IVS Field Director for Botswana, Lowell Hestand, and the IVS/Washington Program Officer for Botswana, Heather Clark.

In addition to the formal sessions concerning the individual horticulturist positions supported by IVS, more general discussion sessions will be held with the staff of the KRDA Secretariat, with various officers of the Ministry of Agriculture (representing the Dept. of Field Services, the Dept. of Agricultural Research, and the Crops Improvement Division), and USAID Botswana representatives.

The major conclusions of the evaluation will form an outline for use by IVS in planning the scope of IVS involvement in the development of an horticultural industry in Botswana through the period Jan. 1981 - Dec. 1982

TO: K. Morriss  
G. Wiles  
L. Kumar  
D. Indicar

FR: L. Hestand

RE: EVALUATION OF IVS BOTSWANA HORTICULTURIST POSITIONS

IVS has scheduled, for Sept. 1980, the yearly evaluation of the (USAID funded) IVS Botswana horticulturist positions. The format of the formal evaluation sessions will be much the same as those conducted in Oct. 1979, the content of the discussions with yourselves and your host institution representatives covering the following questions:

Projects/Activities of IVS Horticulturists

- What progress has been made towards achieving the objectives established for your position (these objectives having been formally articulated in position workplans prepared in July 1978 and October 1979)?
- Have the objectives of your work remained appropriate and realistic? How and why have they been changed?
- What constraints to project implementation/development have been encountered? How have these constraints been dealt with?
- What are the major objectives that you expect to achieve in the next year, and through the longer term of your involvement?
- Is the organizational structure of your project appropriate? If not, how should it be changed?
- Is the planning to localize your position/project adequate? If not, how can it be improved?

IVS/Botswana and IVS/Washington Participation

- How do you rate IVS performance in recruiting and placing technical assistance people? How can it be improved?
- Is IVS administrative support adequate? How can it be improved?
- IVS' decision-making regarding projects where IVS support is withheld -- Is IVS' role appropriate?
- Is IVS participation in the evaluation of project and personnel activities substantially constructive (useful)?
- Are there financial, staffing, or other constraints to project development that IVS should attempt to address?