

## **BACK TO OFFICE REPORT**

### **IMPROVING THE LIVELIHOODS OF PERI-URBAN VEGETABLE GROWERS THROUGH MARKET PROMOTION OF FRESH AND PROCESSED INDIGENOUS VEGETABLES**

**A0892**

**Visit to Zimbabwe from 16<sup>th</sup> to 29<sup>th</sup> September 2001**

**By Rudy Schippers**

#### **Background**

After the workshop that was held in December 2000, a decision was made to work on a number of traditional vegetables in urban and peri-urban areas of both Mutare and Bulawayo. The major constraints and opportunities identified related to lack of seeds of the target crops and lack of information on how to add value by means of processing and other post-harvest related issues. The main crops would be spider plant, jute and cowpea whilst some attention would be paid to the cucurbits that are mainly found near Bulawayo, e.g. calabash gourds, cooking melons and kiwano.

#### **Visit objectives**

The main objectives of this visit were:

1. Discuss the programme for landrace enhancement of the main target species
2. Check the new seed cleaning equipment
3. Visit and discuss with collaborators in Mutare and Bulawayo
4. Stimulate activities with traditional crops both on-station and off-station
5. Assist Ben Mvere with his study on edible bottle gourds
6. Check the finances of the project
7. Discuss a possible extension of the project and re-set the milestones for the remaining project period

#### **Landrace enhancement**

Suggestions were made during a previous visit on how to combine characters of various spiderplant accessions by making crosses and new ideas were suggested on ways to experiment with vegetative propagation. No follow-up could be made since the previous visit in April, partly because no crops could be grown during the recent cold season. A decision was made to spread the activities beyond the research station at Marondera because the remaining time is too limited to be able to come up with a selection of pure varieties. At Marondera, spiderplant seeds of a compound variety consisting of lines that were originally coming from various places in Tanzania and Zimbabwe are currently being multiplied. This is done jointly between Fabeon Chigumira and Edwin Marongwe, the new staff member who was appointed by the project to work on indigenous vegetables. This new compound variety was shown to be superior when compared with local Zimbabwean landraces. A separate programme was discussed for Mutare where staff would be working on seed multiplication of selected local lines of spiderplants as detailed below.

Discussions were also held with Mrs Rosalia Madamba of DR&SS's Crop Breeding Institute in Harare. Mrs Madamba has been working with cowpeas for a number of years and was therefore requested to present the findings of her staff and herself in an article to be used as a basic document from which to start new activities. Mrs Madamba would like to continue her work with leafy vegetable varieties of cowpeas under the auspices of the project for which she will present a proposal to the project leader in Marondera. This work will likely take place at the Matopos Research Station near Bulawayo.

### **Seed Cleaning equipment**

The new equipment has just been unpacked but has not been tried out yet other than by making a few experiments which worked well. The South African Company Filtec, which supplied both the air column seed cleaner and vibratory seed sizer was found to be reliable and their equipment looks to be robust and efficient. The equipment will be tested further once seeds from the various trials will become available.

### **Discussions with collaborators in Mutare**

Mr Mutimutema from Agritex in Mutare has been a valuable source of information for the project and a keen supporter for its activities. He once again stressed the importance of weedy vegetables like blackjack, *Bidens pilosa* and gallant soldier, *Gallinsoga parviflora*, which are commonly consumed wild vegetables during the rains. During this visit he mentioned that some farmers have started to offer spiderplants at the market, indicating that these crops are now being produced out of season because this commodity is usually only found during the rains. An agreement was reached whereby Mr Mutimutema would visit these farmers and arrange to make a selection of Cleome lines that were chosen by those farmers. It was further agreed that these accessions should be multiplied for seed in such a way that the crop should be isolated from other plants. When this can be done out of season under irrigation, there is a much better chance to end up with a uniform crop. Mr Mutimutema will be collecting some promising lines that could be multiplied on different farms, thus ensuring that there won't be a mixture of the various accessions. He was asked to submit a proposal together with a request for funding to enable him to establish about 3-5 different plots for seed production of spider plants and possibly *Corchorus olitorius* as well.

A second visit was made to Africa University, based near Mutare, where mainly methodist students from many African countries can study a range of topics including horticulture at the faculty of Agriculture and Natural Resources. The senior lecturer in horticulture, Mr T.A. Mtaita, was keen to include traditional crops in the curriculum especially since some of his students are already working with indigenous vegetables, e.g. bottle gourds and spiderplants. It was agreed that Mr Mtaita could present a proposal to carry out a number of studies together with his students, which would be related to the aims of our project. The proposals together with a budget should then be sent to Mr Ngoni Nenguwo for consideration as potential outputs of the project.

### **Discussions with Agritex staff in Bulawayo**

Since the visit in April no further contacts were made with people in the Bulawayo region for which the cold weather was the main reason. There is however a possibility to work with cowpeas as mentioned above. The Bulawayo region and Matabeleland is renowned for its cucurbits as became clear once again during a visit to Gwanda and Tsholotsho. Ben Mvere and the undersigned were accompanied by Mrs Miriam Mahlangu who guided us in the region, helped with interviews and assisted as interpreter. In these dry regions, indigenous vegetables are of great importance for subsistence and even food security where especially cooking melons and gourds play an important role. The vegetable types of bottle gourds are ready some two months before the maize crop can be harvested and many people use these gourds as a main source of food before being able to eat maize. Young fruits are peeled and eaten like a potato and further stages of the fruit have their own use. Also their seeds can be eaten as emergency food. It is interesting to note that this crop, which was probably the earliest crop cultivated by mankind some 18,000 years ago, is hardly known today in the literature and also not or hardly known by today's policy makers. Ben Mvere will prepare a separate report on this commodity as part of his MSc thesis. A range of seed samples was collected for follow-up work.

### **Satellite network of activities**

An effort was made to set up a wide range of project activities through participants of various institutes to further support the project leader, Mr Ngoni Nenguwo, with the outputs of the current project. It was felt that work on the selection of germplasm of spider plants and other target crops would not generate the range of new varieties that was earlier anticipated, within the timeframe of the project. The main reason for that was that not enough time could be spent on this kind of work by project staff and the fact that travel in the country had been hampered by lack of fuel and the current unrest. Therefore, arrangements were made for further support to students of both the University of Zimbabwe and Africa University for which the project would provide technical assistance and help with literature studies. Those students would then select a topic that could be complimentary to the project's activities.

In this connection a visit was also paid to Chiredzi Research Station where staff had shown an interest in indigenous vegetables in the past. It was however found that their list of local crops, generated in 1995, mainly mentioned names in the local vernacular and was difficult to understand for non-native speakers. The interest is still there and Elijah Mwashayenyi would like to make a similar survey again in five districts. A proposal to do so will be prepared whereby it is the intention to collect a sample of relevant plants, dry these and preserve them so that they could be identified at the National Herbarium or elsewhere. It was noticed that many people, especially in the more remote areas, consume a diversity of such plants and that people would appreciate assistance with the development of such crops.

Similarly, the work carried out by Patient Dhliwayo on the Livingstone potato, *Plectranthus esculentus*, could be carried out as a satellite activity within the project.

The satellite network will thus consist of collaborators from universities and research stations (Mutare, Bulawayo, Chiredzi, Matopos, Marondera). The aim is to receive additional information in the form of reports and other study documents that could further contribute to the knowledge on this range of commodities. It was agreed that all proposals will be presented to Mr Nenguwo who will comment on them and possibly recommend their implementation whilst the undersigned would provide technical backstopping when needed. Ben Mvere was asked to assist by liaising with the parties concerned.

### **Ben Mvere's MSc study**

An agreement was reached with Dr (Mrs) Rufaro M Madakadze, head, horticulture department of the University of Zimbabwe, Crop Science Department whereby she would be the in-country supervisor for Ben Mvere. Ben was able to collect a wide range of accessions for the bottle gourd, *Lagenaria siceraria*, during the visit to Matabeleland and will be sowing these at Marondera to allow him to make the necessary observations. Ben will also be in contact with a Japanese PhD student with an interest in the same species. Mr Morimoto is based in Nairobi.

### **Project Accounts**

The balance of funds as at 26 September was Z\$ 62,898 with Barclays bank in Marondera to which 40,000 was added on 27 September as an advance for activities in Mutare. An effort was made to further supplement these funds by exchanging some travellers cheques at a forex bureau. It was however found that on the day concerned, none of the six banks contacted had any local Zimbabwean dollars on offer even though they would have liked to accept the foreign currency. This was seen as an effort by the authorities to reduce the wide gap between the official and the unofficial rate which now stands at some 350 Zim\$ to the pound sterling as compared to the official exchange rate of about 87.

The Z\$102,898 remaining is clearly inadequate to pay for the anticipated activities especially now that the new rainy season is expected to start in about two months time. A request was

therefore made by Mr Nenguwo for any NRI staff member coming to Zimbabwe to bring some £2000 along. Transferring this amount from the U.K. to a local bank in Zimbabwe will not be appreciated considering the big difference between the official and unofficial rate.

### **Extension of the project**

It has become clear that it won't be possible to carry out the tasks as outlined in the project memorandum by 15 November 2002 and a request was made by project staff to extend the project by another six months for which no additional funding has been requested.

Given the many new suggestions and proposals that are currently being prepared it was found to be unrealistic to come up with milestones until a formal agreement for the requested extension has been reached and until there is more clarity about new proposals in the pipeline. Meanwhile however, work on the selection of new varieties and multiplication of the seeds is ongoing as planned.

### **Other business**

#### **Proceedings**

There has been a request for copies of the proceedings of the December 2000 workshop. This will require the printing of some 50 appropriate covers with DFID and other logos. Once these official covers are available, the documents could be photocopied at a multi-copy centre in Harare so that each participant and/or contributor could be sent a copy of the proceedings.

#### **Seed production**

Discussions were held with Ms Marietta van der Werff of East-West Seed Company. This company is very successful in Southeast Asia where they assisted in the development of new varieties of local crops and also with hybrids thereof. The company would like to repeat their success story in Africa and have chosen Zimbabwe as their base for southern Africa. The company would like to collaborate with HRC Marondera and with our project.