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Abbreviations

APPSA	Agricultural Productivity Programme for Southern Africa
CCARDESA	Centre for Coordination of Agricultural Research & Development in Southern Africa
COMESA	Common Market for Eastern and Southern Africa
CSIR	Council for Scientific and Industrial Research, South Africa
CWR	Crop Wild Relative
DRC	Democratic Republic of Congo
EAC	East African Community
FAO	Food and Agriculture Organisation (United Nations)
IIA	Instituto de Investigação Agrária de Moçambique
FOFIFA	National Centre for Applied Research & Rural Dev., Madagascar
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
ISGAC	Independent Staff Grievances Appeals Committee, SADC
ITPGRFA	International Treaty for Plant Genetic Resources for Food and Agriculture
Kbps	Kilo-bit per second
NPGRC	National Plant Genetic Resources Centre
NPGRCom	National Plant Genetic Resources Committee
PGRFA	Plant Genetic Resources for Food and Agriculture
RAP	Regional Agricultural Policy, SADC
RUFORUM	Regional Universities Forum
SADC	Southern African Development Community
SANBio	Southern African Network for Biosciences
SDC Swiss	Development Cooperation
SDIS SPGRC	Documentation and Information System
SPGRC SADC	Plant Genetic Resources Centre
SPO	Senior Programme Officer, SADC
TCP	Technical Cooperation Programme
TEEAL	The Essential Electronic Agricultural Library
TO	Technical Officer, SPGRC

SPGRC Profile

Vision, Mission and Objectives and Objectives

Vision: *Be the lead institution in the conservation and sustainable use of plant genetic resources, contributing to the enhancement of food security and livelihoods in the SADC region*

Mission: *Mobilise, conserve and make available plant genetic resources using state-of-the-art technologies and standards, contributing to sustainable development, environment and food security for the well-being of the people of SADC*

Objectives:
- *Reduce plant genetic erosion and increase options of PGR and seed systems to enhance productivity*
- *Promote generation of knowledge and exchange of information on PGR*
- *Influence policy environment so as to improve access to and use of PGR in the region*
- *Mobilize adequate financial resources for conservation and sustainable use of PGR in the SADC region*

Background

The Centre was established in 1989 as a 20-year project, initially funded by Nordic donors and, later supplemented with SADC member country contributions on an increasing scale - until the end of the project in 2011when Member States started to fully fund SPGRC.

Located about 25 Km off Great East Road in Lusaka on an 89ha land, generously provided by the Government of Zambia on a 99-year lease, the Centre has been entrusted and mandated with the conservation and evaluation for sustainable utilization of regional plant genetic resources for the present and future generations thus contributing to food security and improved livelihoods; and coordination of all activities through the network of National Plant Genetic Resources Centres (NPGRCs).

Achievements and challenges

Though challenged by lack of adequate funds, low germplasm utilization and domestication of the ITPGRFA, outstanding construction of the biotechnology facility at SPGRC; the Centre has trained staff up to PhD level, collected over 45,000 germplasm samples from the region, implemented several projects in developing policies, strategies, provided equipment o NPGRCs, etc.

1. Management and Administration

1.1 32ND SPGRC BOARD MEETING

The 32nd SPGRC Board meeting was held in Windhoek, Namibia between 27th and 29th October 2015under chairmanship of Mr Godfrey Mwila who in his opening remarks reminded his fellow Board Members that the role of the Board was to provide guidance to SPGRC. He said there was need to place SPGRC in a viable and sustainable position. He also said SPGRC had the capacity to demonstrate its relevance at regional and international levels. The Chairperson also said that the Board had a huge task of restructuring the SPGRC Board and also emphasized on resource mobilisation by the network.

2015 Board Members in Windhoek, Namibia

The Chairperson then thanked SPGRC Management for providing necessary documentations for the meeting and also for the logistics. He also thanked Namibia for hosting the meeting.

Representing the SADC Director of Food Agriculture and Natural Resources (FANR), the Senior Programme Officer (SPO) – Food Security, Mr Bentry Chaura informed the Board that the Director FANR could not attend the SPGRC Board Meeting because shewas preparing for the forthcoming Environmental Ministerial Meeting. Mr Chaura hoped that SADC (FANR) would have a draft of the Regional Agricultural Policy (RAP) Investment Plan by December 2015. He informed the Board that SADC had introduced a Paperless Meeting Policy whereby no papers will be used in the meetings with effect from 2016 with the expectation that participants to meetings will use laptops to access documents for the meeting.

The official opening remarks were delivered by the Namibian Deputy Director – Forestry and Botanical Research, Mr Vincent Louw on behalf of the Acting Permanent Secretary of Agriculture who was on other official duties. Mr Louw read the speech after which he wished the Board fruitful deliberations.

On behalf of other Board Members, the Swaziland Board Member, Dr Innocentia Kunene thanked the Deputy Director for Forestry and Botanical Research, Mr Vincent Louw for giving the opening remarks for the 32nd SPGRC Board Meeting on behalf of the Acting Permanent Secretary, Agriculture. Besides feeling honoured, she mentioned that the Board was thankful to the Namibian Government for hosting the meeting. She said the Board would make use of the two days of the meeting to guide SPGRC on different issues regarding its mandate, its workplans and budgets, *etc*.

The Head of SPGRC informed the Board of the Decisions of the SADC Council of Ministers, made at its meeting held in Gaborone, Botswana in August 2015 some of which were of direct relevance to the mandate of SPGRC. These decisions were on agriculture and food security in the region and human resources management within the SADC Secretariat. The Board was further informed that Council considered the Report of the Independent Staff

Grievances Appeals Committee (ISGAC) that was constituted in 2014 to address grievances made by staff in relation to Job Evaluation undertaken by consultants engaged by SADC Secretariat earlier on.

The Board noted that the Council approved changes made to employment contract frameworks, making regionally recruited staff serve for 4-year term, renewable once for a 4-year term; based on satisfactory performance and age limit of 60 years; whereas, locally recruited staff: will have 4 year term contracts, renewable based on need for the position, satisfactory performance and to a maximum of 60 years age limit.

Board meeting in session

The Head of SPGRC also informed the Board that the organisational structure of the SADC Secretariat was being reviewed and that the Council approved the terms of reference towards the review of the SADC Secretariat organisational structure and institutional infrastructure.

Following the Board's directive for SPGRC Management to draft Terms of Reference for a Task Force on the Restructuring of the SPGRC Board in 2014, the constituted Board Task Force met in July 2015 at Protea – Chisamba in Lusaka, Zambia. The Task Force on concluded its work and produced an Addendum to the MoU Establishing SPGRC to be adopted by SADC Member States.

Upon presentation of the Addendum to the Board by the Head of SPGRC, it was agreed that the Draft Addendum be taken to each respective national government for further consultations before considering and recommending it for approval by SADC Ministers Responsible for Agriculture and Food Security. The Board agreed that outputs of national consultations be sent to SPGRC by Board Members by December 2015 and that resources be mobilized to facilitate holding of an Extra Ordinary Board meeting in Aprill 2016 for it to make make decision on the matter.

The Board was informed that the Head of SPGRC attended the 6th Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture in Rome, Italy in October 2015 as an observer, with ten (10) SADC Member States also attending. The meeting deliberated on a number of issues including:

- Enhancement of the Functioning of the Multilateral System of Access and Benefit-sharing
- The Funding Strategy
- Development of the Global Information System
- The Programme of Work on Sustainable Use
- Farmers' Rights
- Compliance
- Cooperating with International Instruments and Organizations

The Governing Body adopted many resolutions on the issues discussed, but did not conclusively agree on the Enhancement of the Functioning of the Multilateral System of Access and Benefit-sharing, particularly on which model of user-based payment to adopt, although the subscription model received much support from the delegates. This outstanding issue has been referred to the next session of the Governing Body.

The Board was notified that the SPGRC Head presented a statement to the Governing Body that was well received. As a result of the statement, several countries and organizations approached the Head of SPGRC to learn more about the Centre and its network.

The Board was informed that SPGRC had prepared a few documents that would require approval by SADC Ministers Responsible for Agriculture and Food Security at their next meeting later in 2016. These include: SPGRC Sustainability Strategy 2015 – 2025 and the generic programme proposal entitled "Enhancing Capacities for Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture in the SADC Region (2015 - 2020)" both of which were approved by the Board at its meeting in October 2014 in Johannesburg, South Africa.

The Board was also informed that besides the two documents mentioned above, SPGRC intends to also present to the SADC Ministers Responsible for Agriculture and Food Security the Addendum to the MoU Establishing SPGRC after conclusion of the national consultations.

Lastly, the Head of SPGRC informed the Board that following the new approved SADC Human Resources Policy, three Members of Staff at SPGRC will be retiring in 2016. These include the Driver - Mr Alexius M Nyambe, the General Worker – Mr Wale Banda and the Head of SPGRC – Dr Paul M Munyenyembe.

1.2 WORKSHOPS AND MEETINGS

1.2.1 2015 Regional Technical Review and Planning Workshop

The SPGRC/NPGRCs annual technical review and planning workshop was held on 8th – 10th September 2015 at Protea Hotel, in Lusaka, Zambia. SPGRC being an important unit of Food Agriculture and Natural Resources (FANR) Directorate of the SADC Secretariat and more so of the region as it is mandated to and does maintain and conserve for present and future generations plant genetic material from the region works very closely with NPGRCs and meet annually to compare notes on achievements and plans.

Participant's group photo

In attendance were forty three (43) participants from NPGRCs and SPGRC. Due to logistics, Mauritius and South Africa did not attend the meeting. Madagascar attended the meeting after along absence. There were also representatives from Bioversity International, FAO (represented by the Sub-Regional Office for Southern Africa), and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).

Delivering his welcome remarks, Head of SPGRC, Dr Paul Munyenyembe thanked the Multi-Donor Trust Fund coordinated by the World Bank from which SPGRC accessed the funds facilitated by the SADC Secretariat that supported the holding of the meeting.

Dr Munyenyembe detailed some of the important achievements made by the network during the year (2014/2015) that included: successful conclusion the FAO-funded Technical Cooperation Programme (TCP) on the development of National Strategies for PGRFA for 6 participating countries, namely, Botswana, Lesotho, Malawi, Mozambique, Tanzania and Zambia. He reported that a new proposal for TCP Phase II incorporating lessons learnt from the first Phase was in the pipeline. The FAO-TCP Phase II was later discussed at the meeting and was left for finalization by SPGRC before submitting it FAO Sub-Regional office in
Harare, Zimbabwe.

The Head reported finalization of the development of the SDIS, which was laterpresented and adopted for use by the network. SPGRC finalized both the generic proposal on conservation and sustainable utilization of PGRFA and SPGRC Sustainability Strategy, which were approved by the SPGRC Board and were to be presented to SADC Ministers Responsible for Agriculture and Food Security at their coming meeting.

SPGRC also hosted a meeting of the Africa Group in preparation for the Open-Ended Working Group-3 in Brazil on Access and Benefit Sharing.

Planning meeting in session

In her remarks, the FAO Representative, Ms Joyce Mulila-Miti said FAO will continue to support the SPGRC and NPGRCs through TCP-Phase II project whose main objectives will be: to develop, adopt and publish National Strategies for PGRFA for the effective and efficient conservation and use of PGRFA in selected countries within SADC, to increase significantly the scope for using PGRFA in crop improvement as means for addressing climate change threats, to strengthen linkages between conservation, use and seed delivery as means to ensuring that farmers access high quality seeds and planting materials of the most suitable crop varieties, to strengthen national and regional capacities for the conservation and sustainable use of PGRFA, and to improve and strengthen information exchange and sharing mechanisms between communities, countries and globally.

In her greetings and remarks to the meeting, the ICRISAT representative, Ms Sakule Kudita said ICRISAT will continue to do research on five selected crops in the region that include sorghum, finger millet, groundnuts, pigeon peas, and chickpea; with main objective of characterization of genetic resources of the selected crops to molecular level, conservation and promotion of sustainable utilization of the same to farmers, breeders and scientists.

Remarks by representative of Bioversity International, Dr Ehsan Dulloo highlighted on the collaboration of NPGRCs with Bioversity International which has reviewed their objectives and have come up with new ideas for establishing a new project that will be enhancing the link between in-situ conservation and use of crop wild relatives in the SADC region to address the regional food security and mitigate predicted adverse impact of climate change.

1.3 VISITORS

During the reporting period, SPGRC received many visitors including school pupils, university students, scientists, farmers and prominent individuals. These are listed in the Appendix III.

1.4 RESOURCE MOBILIZATION FOR SPGRC

In 2014, SPGRC managed to secure US$200,000 from the Programme on Climate Change Mitigation and Adaptation in the Eastern and Southern Africa (COMESA-EAC-SADC) Region. The funds were to be used on a project entitled "Screening of climate adaptive seed and vegetative materials for multiplication and conservation to support climate smart Agriculture" to be implemented in four SADC countries, namely, Angola, Botswana, Namibia and Zambia. However, due to some administrative challenges, funds were not released that led to premature closure of the project without really benefitting the region.

During the year, SPGRC concluded implementation of the FAO-funded Technical Cooperation Programme (TCP) and was now finalizing development a follow-up phase of the FAO-TCP that is envisaged to run between 2016 and 2018.

The generic project proposal entitled "Enhancing Capacities for Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture in the SADC Region (2015 - 2020)" developed by SPGRC and approved by the Board in 2014 will now be submitted for approval to the Ministers Responsible for Agriculture and Food Security at their forthcoming meeting early in 2016.

SPGRC Management is also negotiating with the Swiss Development Cooperation Agency (SDC) on the possibility of funding of a project on Strengthening of the Informal Seed Sector in Southern Africa through promotion of on-farm conservation and seed production.

1.5 SPGRC STRATEGIC SUSTAINABILITY PLAN

SPGRC Management developed a strategic sustainability plan for the years 2016-2020 and presented it to the Board in October 2014. The Board approved the strategy with some comments and the plan will be updated andpresented to the SADC Ministers Responsible for Agriculture and Food Security during their forthcoming meeting.

2. Personnel, Equipment and Supplies

2.1 SPGRC PERSONNEL

There was change in the staff compliment at SPGRC as reflected in Appendix II. Two Members of Staff at SPGRC retired according to the new SADC Council rules which stipulate that employment contract framework, as follows: regionally recruited staff will serve 4 year term, renewable once for a 4-year term; based on satisfactory performance and age limit of 60 years, whereas; locally recruited staff will serve 4 year term contract, renewable based on need for the position, satisfactory performance and to a maximum of 60 years age limit.

The two retirees are the Driver - Mr Alexius M Nyambe, and the General Worker – Mr Wale Banda.

2.2 STAFFING IN NPGRCS

The staffing in most NPGRCs remained unchanged except for the few instances where either vacant positions could not be filled up (Lesotho, Swaziland) or staffs have either retired, transferred or went for further studies.

Dr Lawrent Pungulani successfully finished his PhD in New Zealand in 2014 and Ms Tiny Motlhaodi defended her thesis later in 2015 at the Swedish Agricultural University. Ms Modester Kachapila-Millinyu completed her MSc studies in Australia.

2.3 EQUIPMENT AND SUPPLIES

In general, as the network embraces to uphold standards in conservation and sharing/exchanging of germplasm materials, countries are challenged with the depreciated genebanking equipment and facilities that need servicing and/or replacement.

With the background of dependency of supply and servicing/repairing by donors, the network is seriously considering contracting alternative local sources of technical support for the genebank equipment and facilities. Countries have started prioritizing maintenance in their future projects that could attract support equipment/facilities supply and maintenance.

SPGRC has shared with Member States a list of local supply and maintenance companies available in the region, information which is available at the back of the "Manual for Seed Handling in Genebanks: Handbooks for Genebanks No. 8" published in 2006 by Bioversity International.

Funds were sourced for upgrading of PGR conservation equipment at SPGRC and in six NPGRCs. This is part of the initiative to ensure that genebanking physical facilities are expanded at SPGRC through acquisition of new and replacing the worn-down facilities. Through the SADC Asset Replacement Fund, SPGRC expects to benefit in terms of genebanking equipment and facilities in 2016/2017.

2.4 SPGRC BUILDINGS (OFFICES AND STAFF HOUSES)

In terms of office and staff residential houses, there has been no change to improve or upgrade the facilities, pushing SPGRC to continue paying heavily for frequent and expensive

maintenance of office buildings due mainly to initial poor workmanship. Major maintenance work on buildings including replacement of substandard materials is required to solve the problem of frequent breakdowns of infrastructure once and for all. A more rational and economical way of maintaining and repairing staff houses might need to be sought through various organisations and institutions that deal in construction and estate management industry.

3. Meetings, Training and Education

3.1 TRAINING AND EDUCATION FOR NPGRC STAFF

A number of network scientists and technicians attended a variety of training workshops and meetings that aimed at building capacity in conservation and sustainable utilization of PGRFA. A number attended workshops on Biodiversity, traditional knowledge and intellectual property, implementation of national biosafety frameworks, amongst others.

While Mr S. Kabululu (Tanzania) and Mr K. Kusena (Zambia continued with their PhD study programme; Mr C. Gwafila (Botswana), Ms R. Hilukwa (Namibia), and Ms. G. Kanyairita (Tanzania) continued with MSc studies at various universities. Malawian Ms Ireen Nyirenda and Jackson Chikasanda as well as Mr F. Reis (Mozambique) continued with BSc studies.

3.2 TRAINING OF SPGRC STAFF

Due to financial constraints, no training of staff from SPGRC took place during the reporting period.

3.3 SOME IMPORTANT MEETINGS ATTENDED BY SPGRC STAFF

Table 3.1: Meetings attended by SPGRC Staff

April 2015	– SPO - In-situ attended a regional training workshop on predictive characterisation and pre-breeding of crop wild relatives in Pretoria, South Africa – SPO & TO - Doc & Info had a short working retreat for SDIS databases in Siavonga, Zambia
May 2015	– SPO - Ex-situ participated in a Germination Project in Reunion Island – SPO-Doc & Info participated in a capacity building workshop: SANBio results and impact measurement systems held in Salima, Malawi – SPO - In-situ participated in conducting impact assessment on disaster prone/flood areas in Malawi
June 2015	– SPO - In -Situ participated in Zambezi on-farm conservation survey done in in Namibia – SPO - In-situ attended a training course in Access and Benefit Sharing from genetic resources and associated

June 2015 (contd)	traditional knowledge held in Harare, Zimbabwe – SPO - Ex-situ undertook a technical support and evaluation mission in South Africa
July 2015	– SPO - Ex-Situ, SPO & TO - Doc & Info and TO - In-situ conservation attended and participated in the Zambia International Trade Fair in Ndola, Zambia – SPO-In-situ participated in rice collection mission done in the Northern and Western Provinces of Zambia
September 2015	– SPO In-situ attended a training course on synthetic biology - biosafety and its contribution to addressing societal challenges held in Potchefstroom, South Africa.
October 2015	– SPGRC Management Team attended 32nd Board meeting in Windhoek, Namibia – All SPGRC staff attended the FANR Directorate Retreat Workshop in Victoria Falls, Zimbabwe
November 2015	– SPO - In-situ participated in a training workshop on climate smart agriculture practices and seed multiplication held in Rufunsa, Zambia – SPO - In-situ attended and participated in a meeting of the SADC Ministers of Environment and Natural Resources held in Gaborone, Botswana – SPO & TO - Doc & info undertook a technical support (Web-SDIS installation and user training) mission in Luanda, Angola
December 2015	– SPO - Doc. & Info. attended a SANBio/BioFISA Illaunchat CSIR, Pretoria, South Africa – SPO & TO - Doc & info undertook a technical support (Web-SDIS installation and user training) mission in Gaborone, Botswana
February 2016	– SPO & TO - Doc & info undertook a technical support (Web-SDIS installation and user training) mission in DRC and Seychelles
March 2016	– All SPOs together with Asst Admin Officer attended SADC FANR Retreat held in Rustenberg, South Africa – SPO - Doc & Info attended an expert meeting on the impact of seed laws on smallholder farming systems in Africa: challenges and opportunities in Cape Town, South Africa

4. Technical Activities

4.1 GERMPLASM COLLECTING AND IN-SITU CONSERVATION

4.1.1 On-farm Conservation

With ultimate target of strengthening conservation and utilization of plant genetic resources (PGR), SPGRC strived to minimize genetic erosion of crop diversity by supporting conservation and sustainable utilization of PGR at farmer level. It promoted on-farm conservation, seed restoration and access to planting materials in the region through established farmers groups that maintain local crop diversity.

Farmers' Field Day, Rufunsa, Zambia

Field days and seed fairs were conducted for farmer-to-farmer information and seed sharing within the communities. This also helped to improve access to planting material in the rural areas.

The SPGRC revised the On-farm and Crop Wild Relatives Conservation Strategy which was presented to the SPGRC/NPGRC Technical meeting in October 2015 when it was adoptedand is intended for use as a guidingtool in the implementation of activities in the region.

Some crops and tree seedlings were distributed to farmers' groups in Namibia, Malawi, Tanzania and Lesotho for farmers'groups for multiplication and distribution listed for the enhancement of crop diversity under the receive-plant-return seeds in multiplier arrangement. Field days were held in Malawi and Zambia where farmers shared seeds and expertise in crop management practices, storage and utilization of selected crops. Malawi, Tanzania and Zambia are currently implementing donor supported onfarm management activities that involve characterization of farmers' varieties, strengthening of the capacity for local seed systems and the mitigation of effects of climate change. Community seed banks activities were promoted in South Africa, Swaziland and Zimbabwe during the reporting period.

Disaster impact assessments were carried out in flood affected sites in Nsanje Province in Malawi (floods) and the Zambezi Region in Namibia (drought) in order to identify lost crops and through SPGRC recommendations were made on proposed intervention programmes on seed restoration activities to be developed, implemented and supported by respective NPGRCs.

4.1.2 Climate Smart Agriculture for Sustainable Use of PGRFA

The Centre was engaged in promotion of Climate Smart Agriculture for sustainable use of PGR to mitigate negative effects of unreliable rain patterns that affect the agricultural productivity of small holder farmers. Agroecological

farming practices are promoted within on-farm management groups for the improvement of degraded soils and to increase the resilience to climate change. This involves the use of well adapted planting material/crops suitable for the local conditions, mixing wild legume trees with crops and practicing other cultural farming practices. Site visits and training workshops were carried out in Namibia (Zambezi region) and Zambia (Rufunsa). The major objectives were to sensitize small holder farmers on the impacts of climate change, equip them with the knowledge on Climate Smart Agriculture and to promote on-farm crop diversity management.

Under in-situ conservation, efforts continued to maintain threatened plants in their natural habitat. In order to identify crop wild relatives (CWR) for conservation and use the Centre developed a checklist for them. It is common knowledge that there are about 500 CWR species that occur in the SADC region and 20% of them have a strong potential for use in crop improvement and are therefore, of great socio-economic importance. A regional priority crop list has been drawn from the material deposited by Member States for long-term conservation at SPGRC. It will be used to match related wild plants to come up with a regional wild crop relatives' checklist.

4.1.3 Germplasm Collection

During the reporting period, 72 rice samples were collected from the Northern and Western Provinces of Zambia. The negative impacts of climate change are threatening the production of paddy rice along the low lying areas of the Zambezi River. The Sefula village in Mongu has a rich diversity of rice varieties, some introduced in the 1960s, and farmers were encouraged to continue maintaining the diversity. As regards other collection mission, 9 countries (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Tanzania and Zambia) carried out mixed crop/wild species collections and a total of 775 mixed crops samples and 29 wild tree seedlings were collected forconservation and use in the national genebanks.

4.1.4 Field Genebanks and SPGRC Multiplication Farm

The Centre continued promoting establishment of field genebanks for the conservation of vegetatively propagated material especially for root and tuber crops in Member States. NPGRCs like Lesotho, Malawi, Swaziland, South Africa and Zambia have established field genebanks with live clones of crops and some with medicinal plants. The rest of the countries keep their material in specialized institutions. Locally, at the farm, SPGRC continued to maintain 25 species of wild fruit trees and medicinal plants. A total of 105 plants, all collected from various parts of Zambia are in the arboretum.

Sharing and exchanging experience and expertise during Field Day

The materials have been used for

educational purposes particularly to students visiting the institution. A variation of local crops has also been planted for educational purposes and to enhance the institutional visibility at agricultural shows. Crops grown include: local maize, sorghum, pearl millet, beans,chick pea, pigeon pea, green gram, okra, Corchorus spp.,amaranths, melons and gourds.

4.1.5 Farm Activities

Last season's soya bean harvest yielded 75 bags of 50 Kg each. The panel that was used for soya was left for growing green manure (sun-hemp) during the current planting season. About 2 ha of land was planted with sun-hemp and has since been ploughed under to improve the soil structure and fertility. The perimeter fence of the farm was also rehabilitated.

4.2 DOCUMENTATION AND INFORMATION

4.2.1 Hardware and Software

SPGRC routinely updated its software (applications, antivirus, etc.) during the reporting period. The Centre continued with technical maintenance of a mail server which also acts as a domain controller. The SPGRC Local Area Network and associated IT equipment and facilities are running smoothly thus enhancing sharing of information and data resources across local and outside clients. The Centre procured seven (7) desktop computers and four (4) laptop computers to replace the depreciated machines. It also procured a mobile data router as a backup measure for Internet access against the frequently experienced Internet unavailability through the current service provider.

4.2.2 Database Development

A completed new webbased SPGRC Documentation &Information System (SDIS) that was presented to stakeholders during the annual technical review and planning meeting in September 2015, was adopted and members of SPGRC network agreed to start using it once installed intheir respective countries.

Screenshot of the web-SDIS online portan for global access of SADC data on PGRFA

The region will be able to share information on the global platform, GENESYS. The database is thus globally accessible with a link at SPGRC website (www.spgrc.org.zm) or directly to http://sdis.spgrc.org.zm

The system has already been installed in nine Member States (Angola, Botswana, DRC, Malawi, Mozambique, Namibia, Seychelles, Tanzania and Zambia) and is functioning well while SPGRC is looking into sourcing more funds that will facilitate installations and

training.

4.2.3 Network News and Publicity

The SPGRC Annual report for 2015/16 is in preparation and should be ready for printing and distribution by July 2016. Meanwhile, the SPGRC website has remained a major conduit for updating information regarding activities and achievements made by SPGRC.

The Internet access at SPGRC was upgraded to 1,000 Kbps using optic fibre and with an increase in demand for speed; discussions are underway with the service provider to cost-effectively upgrade subscribed bandwidth.

4.2.4 SPGRC Library

The SPGRC purchased new books, and journals and serial titles as well as other publications while renewing the existing subscribed titles. A few new titles related to biodiversity management were purchased and added to the library collections that serve network scientists to keep themselves abreast with new information, technology and other developments in PGR conservation, management and utilization.

During a training session on web-SDIS features, use and maintenance in

The Essential Electronic Agricultural Library (TEEAL) database (stationed at SPGRC), continued to provide service to scientists who can have full-text articles from more than 200 world-renowned journals in agricultural researchand production. The library management software (Surpass) has assisted ineffectively managing the SPGRC library that serves the SPGRC network.

4.2.5 Publicity and Awareness of SPGRC

The Centre could not participate in publicity events such as national and regional shows/exhibitions, as well as media coverage events due to limited funding towards that expenditure. However, it is the wish and commitment that SPGRC participates in such national, regional, global publicity and scientific events.

4.3 EX-SITU CONSERVATION

Conservation of germplasm materials ex-situ is one way to ensure that SADC food security needs are met in future without compromising current food security needs by maintaining a working regional genebank that conserves SADC Base collection supplied by Member States.

4.3.1 Seed Handling and Storage

In terms of seed exchange, handling, and processing management, significant improvements were made in exchanging samples from national genebanks to the Regional Genebank. Seven Seed Import Permits were acquired by SPGRC for six member states that were ready to exchange a total of 274 materials and were issued and materials received (Angola-10, Malawi-82, Mozambique-78, Namibia-24, Swaziland-15, and Swaziland-65).

To further improve seed handling and processing management system, 25 new chest freezers were replaced in genebank and four new air-conditioners installed and well maintained, all in order to create desired ambient climate suitable for seed preservation. The germination cabinet was replaced with a new one. A new microscope was procured and various seed treating chemicals were also acquired to facilitate seed testing processes.

With dwindling support by external funding, the national plant genetic resource centres have been alerted of their responsibility to self sufficiency with conservation resources in this era of climate change. However, in order to promote efficiency, NPGRCs that expressed inability to access aluminum foil packets were assisted and issued foil packet and pollination bags as a way to continue in promoting efficiency for the network.

A new drier has been ordered but has is yet to arrive thus affecting the normal conservation processes as some collections are awaiting to be dried first before they can be passed into the genebank for storage. The delay has affected operations as most genebank operations are intertwined to each other.

A total of 262 seed samples were received from NPGRC during the period under review. Six countries took part in sending seed samples to SPGRC as shown in figure below:

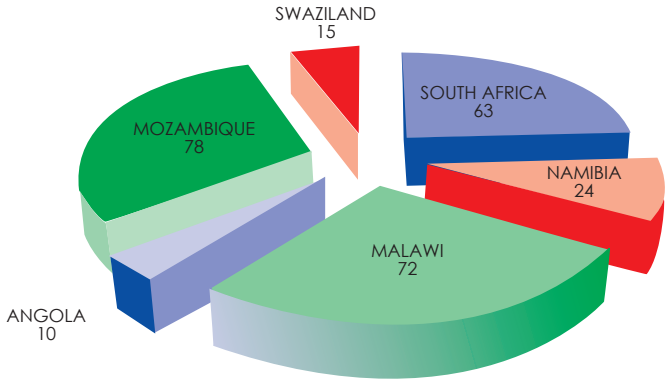

Fig 1: Number of Accessions received from Member States in 2014/15

Drying of these seed samples awaits the arrival of the new seed drier as the olddrier broke down. Testing of seed for germination did not take place as seeddrying has not yet been done.

Table 4.1: Accessions received by SPGRC from MS over the past 11 years (2005-2015)

Accessions Received per Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Angola	50	43	590	71	140	68	65	45	35	-	10
Botswana	-	-	199	-	159	130	-	216	284	-	-
DRC	-	-	-	-	-	-	-	-	-	-	-
Lesotho	64	75	183	169	-	490	-	-	-	-	-
Malawi	34	113	-	126	95	14	30	13	9	-	72
Mauritius	-	23	-	38	-	-	-	38	-	42	-
Mozam-bique	27	38	-	28	158	-	311	-	-	-	78
Namibia	500	714	95	192	-	-	-	-	-	31	24
Seychelles	-	-	-	-	-	-	-	-	-	-	-
South Africa	256	-	189	-	-	-	-	-	-	-	63
Swaziland	-	20	-	36	-	-	51	-	-	-	15
Tanzania	68	-	84	-	126	-	358	72	-	-	-
Zambia	162	22	34	-	293	-	-	-	-	-	-
Zimbabwe	30	-	-	-	-	-	281	-	-	-	-
Total Accessions received at SPGRC	**1191**	**1048**	**1374**	**660**	**970**	**702**	**1092**	**384**	**328**	**73**	**262**

4.3.2 Facilities and Equipment

SADC Regulations and Procurement Manual were followed as per availability of funds to replace the equipment. Twenty-five (25) chest freezers that were purchased earlier have since been installed in the gene bank, i.e. replacing the same number of old freezers.

Recently, ten (10) more deep freezers were purchased. These have also been installed in the gene bank, replacing ten old freezers.

The SADC asset replacement plan in which SPGRC requirements are included is due to implemented in 2016/2017 financial year.

4.3.3 Regeneration and Multiplication

Seed characterization, multiplication, regeneration and pre-breeding
Four crop species namely Zea mays, Sorghum bicolor, Vigna unguiculata and Pennisetum glaucum were sown for seed multiplication during the 2015/16 planting season. A total of 255 accessions were planted of which 65 were Zeamays, 91 were Sorghum, 12 were Pennisetum glaucum and 87 were Vigna unguiculata.

All the accessions of Vigna unguiculata and Zea mays have since been harvested and so far, only Sorghum and Pennisetum accessions are still drying in the field while waiting to be harvested.

4.3.4 Status of Collections in NPGRCs and at SPGRC

During the year, total collections held in NPGRCs remained the same at 44,795 as reported last year; whilst, that of SPGRC rose from 17,329 to 17,613 as reflected in Table 4.4.

Table 4.2: Status of collection: 2014/15

Country	Collections in Country	Collections held at SPGRC	Gap
Angola	4 281	1 391	2890
Botswana	4 480	1 085	3395
DRC	0	0	0
Lesotho	1 519	1 206	313
Malawi	3 917	1 604	2313
Mauritius	4 613	213	4400
Mozambique	2 404	736	1668
Namibia	2 619	1 742	877
Seychelles	0	0	0
South Africa	3 091	1 171	1920
Swaziland	972	498	474
Tanzania	6 001	2 713	3288
Zambia	6 500	3 121	3379
Zimbabwe	6 311	2 133	4178
Total	**44 795**	**17 613**	**27 427**

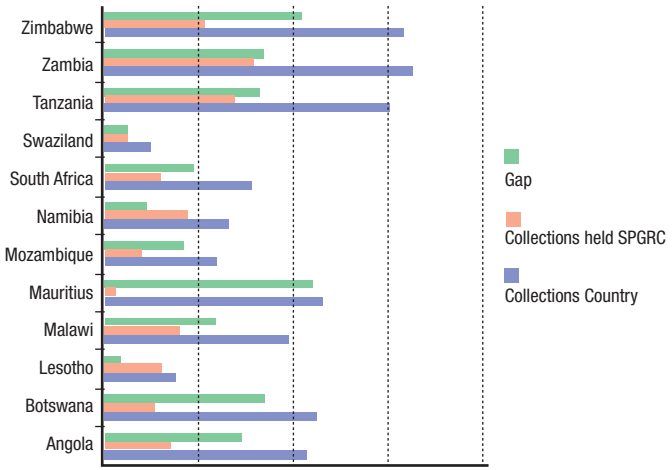

Fig 2: Number of Accessions by country and duplicates at SPGRC

During the reporting period, the accessions holdings and major species at SPGRC are as shown in table 4.5 below.

Table 4.3: Accessions of Major Species held at SPGRC

Species	Common Name	Number of Accessions
Sorghum bicolor (L.) Moench	Sorghum	5 238
Eleusine coracana	Finger Millet	1 164
Zea mays L.	Maize	2 229
Pennisetum glaucum (L.) R. Br.	Pearl Millet	1 641
Vigna unquiculata (L.) Walp.	Cowpea	1 535
Arachis hypogaea L.	Groundnut	805
Phaseo/us vugaris L.	Beans	1 132
Oryza sativa L.	Rice	335
Vigna subterranea (L.) Verdc.	Bambara Nuts	410
Cucurbits (C. Pepo & maxima)	Pumpkin	369
Citrullus lanatus (Thumb.) Matsumura &Nakai	Water Melon	217
Triticum aestivum L.	Wheat	142
Cajanus cajan (L.) Millsp.	Pigeon pea	172
Cicer arien tinum L.	Chickpea	145
Pisum sativum L.	Pea	106
Sesamum indicum L.	Sesame	101
L. siceraria	Gourd	1 121
Others		467
Total		**17 329**

4.3.5 Herbarium

The aim was to increase herbarium specimens and data collection required to improve conservation and utilization of genetic resources. The work initiated and there were challenges in the way that could not be controlled and was postponed to later date.

4.3.6 Arboretum

SPGRC continued to maintain 25 species of wild fruit trees and medicinal plant at the regional centre. A total of 105 plants, all collected from various parts of Zambia are in the arboretum.

4.4 TECHNICAL BACKSTOPPING TO NPGRCs

Compliance to international legal obligations under the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) and Global partnerships including service provision to the SPGRC network guides its coordination and management commitments. The SPOs travelled to the national genebanks during this year and provided technical backstopping on matters relating to commitment to implementation of best genebank standards to ensure longer term conservation and promotion of the use of germplasm, establishment and continuous management on on-farm/in-situ activities, and on standardized information sharing/exchange and propagation of use of ICTs in managing germplasm collections using databases.

Following the re-engagement of Madagascar in SADC community, SPGRC initiated the return of the country into the network and a technical support was provided to Madagascar and preliminary fact finding and technical Evaluation to establish NPGRC were initiated. Madagascar has asked SPGRC to extend the mission widely to other potential parts of the National Centre for Applied Research and Rural Development (FOFIFA) before coming to a conclusion. There is need for further evaluation to assess on how to reorganize and promote transformation in order to adhere well to the newer demands for effective conservation and utilization of PGRFA for the present and future needs.

5. General Discussions on Strategic Issues for the Network

5.1 RESOURCE MOBILIZATION

5.1 .1 FAO-TCP Project

SPGRC coordinated a regional FAO-funded TCP that ended in 2014 and the final Terminal Project Report was compiled and submitted to the FAO subregional office in Harare. A Concept Note was then prepared to mobilize funds for rolling out the second phase of the project to other six Member States.

Following the approval, a project proposal has been developed and shared with the FAO Harare sub-regional office for further processing with anticipation for starting a second phase project in mid 2016.

5.1.2 The Trust Support in Data/Information Management

SPGRC implemented a 21/2 years project with the Global Crop Diversity Trust (Trust) on improving Genebank documentation systems. It had the objective of improving genebank documentation system and enhancing accessibility of Genebank data in the region at a cost of US$ 32,615.

The project provided resources for purchase of basic ICT equipment, installation and configuration of systems and initial training of users at NPGRC in DRC, Madagascar and Seychelles and ends in December 2016.

5.1.3 Future Plans

During the 2016/17 financial year, SPGRC will write an Endowment Fund proposal that will be submitted to different donors for funding consideration.

5.2 DOCUMENTATION AND MAINTENANCE OF DATA FOR IN-SITU CONSERVATION

The meeting observed the importance of proper documentation of in-situ/onfarm conserved materials which many times is ignored.

Against proposal to commit SPGRC find means by which it can document and maintain such data, the meeting agreed that SPGRC should develop indicators and matrix from selected global initiatives to make own reporting format (to clearly inform tools and elements needed in the standard format). The web-SDIS, like its preceding standalone version, did not take into account of in-situ materials but developers have taken this into account.

5.3 FREQUENT DRIER AND COLD ROOM (GENSETS, COMPUTERS, FREEZERS) BREAKDOWNS

The network was advised to seriously consider contracting local sources of technical support for the Genebank equipment and facilities. Countries were advised to prioritize maintenance in their future project proposals that could attract support for equipment/facilities supply and maintenance. SPGRC promised to share with Member States a list of local supply and maintenance companies available in the region, but also reminded them that this is available at the end of the "Manual for Seed Handling in Genebanks: Handbooks for Genebanks No. 8" published in 2006 by Bioversity International.

5.4 EFFORTS TO INCREASE GERMPLASM UTILIZATION

Members were urged to strictly include the issues of sustainable utilization of germplasm in their national strategies thus ensuring increased use of materials from the genebanks. Where there are projects and resources allow, countries were urged to bring in stakeholders including NPGRCom members to increase awareness and advocacy for increased utilization. Countries were reminded that NPGRCom meetings should not necessarily be called upon in full and formally but rather when and where need arises, discounting numbers of attendance.

5.5 GENEBANK MANAGEMENT TRAINING (SHORT AND LONG-TERM)

SPGRC reported that since the ending of the donor funding, it has been difficult to conduct any of the short and long-term trainings it used to due to lack of funds. However, short term courses have been provided through projects with partners such as Crop Wild Relatives Project (Bioversity), FAO-TCP (FAO), APPSA. As for long-term training, SPGRC is in discussions with CCARDESA and RUFORUM for possible joint training programmes within the region.

It was reported that The Agostiñho Neto University in Angola offers MSC degree in Conservation of PGR though in Portuguese, which is a pre-requisite. It was also reported that this programme has just started and that it might be too early to be floated for admission to the region for now.

5.6 ON-FARM CONSERVATION STRATEGIES

This was presented by the Senior Programme Officer – In-Situ Conservation who said the on-farm regional strategy was meant to lay out a road map in the implementation of activities and to provide guidance in the development of national strategies.

In her presentation she mentioned objectives of the proposed strategy as being to reduce plant genetic erosion and increase options of PGR and seed systems to enhance productivity; to improve the local seed systems and Community Seed Banks; to facilitate Climate Smart Agriculture practices and developing regional and national CWR checklists and conservation strategic plans.

6. Financial Report 2014 / 2015

Table 6.1: Statement of Financial Performance for the Year Ended 31st March 2015

	2014/15,US$	2013/14, US$
Revenue from Non-Exchange Transactions	**1,382,650**	**1,178,000**
Member States Contributions	1,382,650	1,178,000
Development Partners' Contributions	-	-
Grant Revenue		
Revenue from Exchange Transactions	**7,256**	**63,680**
Other Income	7,256	63,680
Finance Income		
Total Revenue	**1,389,906**	**1,241,680**
EXPENDITURE		
Operating Expenses	**612,229**	**576,969**
Employee Costs	368,854	365,239
Transport, Subsistence and Conferences	39,806	21,411
Lease Expenditure	-	-
Contingent Rental on Finance Leases	-	-
General Expenses and Supplies	84,999	89,821
Communications	8,169	8,872
Audit and Professional Fees	11,250	6,000
Bad Debts Provision	-	-
Depreciation	92,686	80,906
Finance Cost	6,465	4,720
Programme Expenses	**710,168**	**665,874**
Member States Funded	710,168	665,874
Development Partners Funded	-	-
Total Expenditure	**1,322,397**	**1,242,843**
Other Gains/(Losses)	**10,630**	**(7,459)**
Gain on Sale of Assets		
Gain on Foreign Exchange Transactions	10,630	(7,459)
Surplus/(Oeficit) for the Period	**78,139**	**(8,622)**

Source: *SADC Financial Statements for the Year Ended 31 March 2015*

Table 6.2: Statement of Financial Position as at 31st March 2015

	2014/15,US$	2013/14,US$
ASSETS		
Current Assets		
Cash and cash equivalents	592,490	442,422
Receivables from exchange transactions	45,532	27,980
Receivables from non-exchange transactions	-	10,604
Prepayments	3,900	6,047
Value Added Tax receivables	-	-
	641,922	**487,053**
Non-Current Assets		
Property, plant and equipment	1,916,499	1,698,875
Current Assets	**1,916,499**	**1,698,875**
Total Assets	**2,558,421**	**2,185,928**
LIABILITIES		
Current Liabilities		
Trade and other payables from exchange transactions	76,346	41,335
Trade and other payables from non-exchange transactions	454	5,166
Finance lease liability	-	-
Deferred Development Partners' Funds	-	-
Bank overdraft	-	-
	76,800	**46,501**
Non-Current Liabilities		
Deferred capital grant income	-	1,648,640
Post-employment benefit	268,584	288,282
Finance lease liability	-	-
Total Liabilities	**345,384**	**1,983,423**
Net Assets	**2,213,037**	**202,506**
Reserves	77,053	74,271
Accumulated surplus	2,135,984	128,235
Total Net Assets and Liabilities	**2,558,421**	**2,185,929**

Source: *SADC Financial Statements for the Year Ended 31st March 2015*

Table 6.3: Statement of Cash Flows the Year Ended 31st March 2015

	2014/15, US$	2013/14, US$
Cash Flows from Operating Activities		
Surplus/(Deficit) for the year	78,139	(8,622)
Adjustments:		
Increase in provision for doubtful debts	-	-
Depreciation	92,686	80,906
Gain on sale of assets	3,337	-
Finance Income	-	-
Exchange Gain/(Loss)	(10,630)	7,459
Finance costs	6,465	4,720
Grant revenue	-	(57,367)
	169,997	27,096
Decrease/(Increase) in receivables	(4,801)	52,049
Increase/(Decrease) in payables	30,299	3,071
Net Cash Flows from Operating Activities	**195,495**	**82,216**
Cash Flows from Investing Activities		
Purchase of property, plant, equipment	(25,259)	(68,301)
Proceeds from sale of property, plant, equipment	(3,337)	-
Transfer to asset replacement reserve	-	-
Interest received	-	-
Interest paid	(6,465)	(4,720)
Exchange gain/(loss)	10,630	(7,459)
Net Cash Flows from Investing Activities	**(24,431)**	**(80,480)**
Cash Flows from Financing Activities		
Member States Special Funds receipts	-	-
Member States Special Funds payments	(4,080)	(18,038)
Loan Fund receipts	2,782	1,762
Reserve Fund	-	-
Gratuity Fund receipts	-	49,879
Gratuity Fund payments	(19,697)	-
Development Partners' Fund receipts	-	61,289
Development Partners' Fund payments	-	-
Net Cash Flows from Financing Activities	**(20,995)**	**94,892**
Net Increase/(Decrease) in Cash and Cash Equivalents	150,069	96,628
Effect of exchange rate adjustments	-	-
Cash and cash equivalents at 1st April	442,422	345,794
Cash and cash equivalents as at 31st December	**592,490**	**442,422**

***Source**: SADC Financial Statements for the Year Ended 31st March 2015*

7. Appendices

Appendix I: Members of the Board of SPGRC, 2015/2016

Mr Godfrey Mwila	–	Zambia (Chairperson)
Dr Pedro Mozambique	–	Angola
Ms Mary K. Molefe	–	Botswana
Prof Jean-Albert M. Nkonko	–	DRC
Dr Lefulesele Lebeso	–	Lesotho
Dr Wiseman Kanyika	–	Malawi
Dr Jacqueline Rakotoarisoa	–	Madagascar
Ms Carla do Vale	–	Mozambique
Mr Nitish Goupal	–	Mauritius
Mr Steve Carr	–	Namibia
Mr Marc Naiken	–	Seychelles
Dr Noluthando N. Nkoana	–	South Africa
Dr Innocentia S. Kunene	–	Swaziland (Vice-Chairperson)
Dr Hussein Mansoor	–	Tanzania
Dr Cames Mguni	–	Zimbabwe

Ex-Officio Members

Mrs Margaret Nyirenda	–	SADC Secretariat
Dr Jojo Baidu-Forson	–	Bioversity International
	–	Donor
Dr Paul M Munyenyembe	–	SPGRC (Secretary)

Appendix II: SPGRC Staff Members, 2014/2015

Dr Paul M Munyenyembe	Head, SPGRC (18 July 2008)
Ms Thandie J Lupupa	Senior Programme Officer – In-Situ Conservation (16 May 2006)
Mr Barnabas W Kapange	Senior Programme Officer - Documentation & Information (09 May 2006)
Mr Lerotholi L Qhobela	Senior Programme Officer – Ex-Situ Conservation (15 May 2006)
Mrs Mary B Phiri	Assistant Administrative Officer (01 March 2000)
Ms Florence C Chitulangoma	Assistant Finance Officer (08 March 1993)
Mrs Peggy S Ng'ono	Technical Officer-Conservation (01 June 2005)
Mr Mike Daka	Technical Officer - Documentation & Information (21 May 2012)
Mr Ferdinand Mushinge	Technical Officer – In situ (01 March 2004)
Mrs Phyllis M Litula	Personal Secretary (12 November 2001)
Mr Wilbroad M Chashi	Senior Finance Clerk (01 July 2002)
Mr Alexius M Nyambe	Driver (01 February 1991) (Retired in February 2016)
Mr Kapelwa E Songa	Typist/Receptionist (01 September 1989)
Mr Gibson Zulu	General Worker (01 August 1989)
Mr John Mfwembe	Worker (04 September 1989)
Mr Wale Banda	General Worker (01 April 1990)(Retired in April 2016)
Mr Olipen Phiri	General Worker (05 January 2009)

Appendix III: List of Some Prominent Visitors to SPGRC (2015/2016)

Tamara T. Kambikambi	UNZA, Dept. Of Plant Science
Donald Humpal	DAI, Sacramento, California, USA
Taylor Foshee	DAI, Sacramento, California, USA
Moses Mwale	ZARI, Mt. Makulu, Chilanga, Zambia
Windu Matoka	AgBIT, Lusaka
Angel A. Daka	AgBIT Board Chairman, Lusaka
Brian Mwanamambo	AgBIT CEO, Lusaka
Nathan Kline	Fintree Inc.
Amy Chambers	Fintree Inc.
Veronique Lee	Chemonics INternational
Georges Dimithe	CNFA
Watson Mwale	ZASTA/CNFA Mission
Aseffa Seyaum	Bioversity International (Consultant)
Musole Siachisa	Chongwe District Commissioner's Office
Fales Zulu Paipi	Ag. Head, Silversrest School, Lusaka
Esmertilda Strauss	National Botanical Research Inst. RSA
Ereck Chakauya	NEPAD/SANBio
Marja Reetta Paaso	NEPAD/SANBio
Zvi Tangawamira	NEPAD/SANBio
Markku-Eemeli Petonen	NEPAD/SANBio
Ignatius Mumba	Cooperative College, Box 50208, Lusaka
Onias Phiri	Cooperative College, Box 50208, Lusaka
Thomson Kalinda	UNZA, P. O. Box 32379, Lusaka
Edo Liv	Budan, France
Immaculee Harushimama	City Univ. of New York, NY
Phillip K. Bash	Harmonized Seed Regs Project, Lusaka
Evans Tembo	SCCI, Box 350199, Chilanga, Zambia