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Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

HOW TO DEVELOP AND MANAGE YOUR OWN COMMUNITY SEED BANK

Farmers' handbook (updated version)



BOOKLET

1

of 3

ESTABLISHING A COMMUNITY SEED BANK

Ronnie Vernooy, Guy Bessette, Bhuwon Sthapit
with Angeline Dibiloane, Nkat Lettie Maluleke, Lehlogonolo Abner Matelele,
Mpolokeng Mokoena, George Phora, Precious Sema and Thabo Tjikana

**HOW TO DEVELOP AND MANAGE
YOUR OWN COMMUNITY SEED BANK**
FARMERS' HANDBOOK (UPDATED VERSION)

BOOKLET 1 OF 3

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Bioversity International 2020

The Alliance of **Bioversity International** and the **International Center for Tropical Agriculture (CIAT)** delivers research-based solutions that address the global crises of malnutrition, climate change, biodiversity loss, and environmental degradation.

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The Department of Agriculture, Forestry and Fisheries (DAFF) is a national sphere of the South African government, responsible for implementing the laws and policies decided by the South African parliament. It specifically derives its core mandate from section 27 (1) (b) and (2) of the South African Constitution which is to: "...take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of the...right (of everyone) to have access to sufficient food." Within the DAFF, and more specifically the Agricultural Production, Health and Food Safety Branch of the DAFF, the Directorate Genetic Resources is mandated to regulate and provide an integrated national management system in support of the conservation and sustainable use of genetic resources for food and agriculture. This involves the development and implementation of policies, legislation, strategies and norms and standards on the management of genetic resources for food and agriculture, the regulation and promotion of propagating material of genetic resources for food and agriculture and to provide for a risk mitigating system in support of agricultural biodiversity.

This work contributes to the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), which is carried out with support from the CGIAR Trust Fund and through bilateral funding agreements. For details, please visit <https://ccaafs.cgiar.org/donors>. The views expressed in this document cannot be taken to reflect the official opinions of these organizations.

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ACKNOWLEDGEMENTS

This handbook is a companion to *Community seed banks: concept and practice. Facilitator handbook (updated version)* by Ronnie Vernooy, Bhuwon Sthapit, and Guy Bessette (Bioversity International 2020). The three booklets making up this handbook were written and designed for rural producers who are interested in establishing, supporting, and managing a community seed bank.

This work is an outcome of the research and capacity-development activities surrounding community seed banks supported by the Department of Agriculture, Forestry and Fisheries (DAFF) of the government of South Africa. We thank DAFF for giving us the opportunity to produce this handbook, which we hope will be used by farmers around the globe. Opinions expressed here are those of the authors only.

This work contributes to the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), which is carried out with support from the CGIAR Trust Fund and through bilateral funding agreements. For details, please visit <https://ccafs.cgiar.org/donors>. The views expressed in this document cannot be taken to reflect the official opinions of these organizations.

Before finalizing the handbook, we field-tested a prototype in Zimbabwe with the guidance and involvement of the staff of the Community Technology Development Trust (CTDT) and the participation of community seed bank members from Uzumba Maramba Pfungwe and Mudzi. We are grateful for the many valuable comments and suggestions they made. We thank CTDT for their interest in field-testing the handbook, for the text on organizing seed fairs (booklet 3), and for their generous collaboration.

We thank Anna Porcuna Ferrer, Arnab Gupta and the Deendayal Research Institute for sharing their photos with us.

We also thank the many women and men farmers who pioneered the establishment of community seed banks around the world. We have tried to incorporate their knowhow and reflections on their practical experience, including challenges and successes in establishing, supporting, and managing a community seed bank. Setting up and keeping a community seed bank alive requires the commitment, time, and efforts of many. We hope that, through this handbook, many more farmers will become involved in community seed banking.



We thank Sandra Garland for editing the text and Luca Pierotti for designing the handbook.


PHOTO CREDITS BOOKLET 1


- Front cover:** Founders of the Gumbu community seed bank. Bioversity International/R.Vernooy
- Page 8-9:** Bringing the first seeds to the Gumbu community seed bank. Bioversity International/R.Vernooy
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HOW TO DEVELOP AND MANAGE YOUR OWN COMMUNITY SEED BANK

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and a final checklist**

A NOTE ON PREPARING THIS PUBLICATION FOR USE IN COMMUNITIES

1. INTRODUCTION

This publication consists of three booklets that are a companion to the handbook for facilitators updated version *Community seed banks: concept and practice* (Vernooy et al. 2020). These booklets were written and designed to be used by community members involved in or wanting to be involved in a community seed bank. Each focuses on a theme presented by the members of a community seed bank in Africa, Asia, and Latin America.

Before using the booklets in communities, we recommend some preparatory work.

Option A: Translation and adaptation to local language

You may translate and adapt the content to the local language of the community or communities where you work, but please retain the descriptions of experiences from across the world to share with local farmers.

Be prepared to have the translation checked by someone who is knowledgeable about community seed banks to make sure that all concepts and suggestions are properly captured. Some are difficult to translate, and ways of describing processes might vary across cultures.

OR

Option B: Translation and adaptation to local language and photo replacement (a 100% country-based handbook)

You may also translate the content into the local language of the community or communities and replace the photographs and introductions to each booklet with examples from community seed banks in your own country. The handbook will then be truly country based.

2. USING THE HANDBOOK ALONE OR AS PART OF A TRAINING PROGRAMME

The booklets can be used independently or as part of one or more training sessions on establishing and managing a community seed bank.

If you are planning such training, you may want to use the companion community seed bank facilitators' handbook published also by Bioversity International.

If the booklets are to be used directly by farmers, then the following steps are useful:

- Plan to introduce the handbook to the community before handing over the booklets.
- After some time, collect feedback from users, so that the booklets can be improved if needed.

3. PREPARING AND COPYING THE BOOKLETS

Once the translation and/or adaptation have been finalized, it is important to communicate specifications to the printer:

- √ The quality of printing should be that used for booklets (similar to children's books), not an office document.
- √ Enlarge photos to fill most of the page.
- √ Use a large font size.
- √ Use strong paper.
- √ Print a sample copy of the booklet for approval before doing the full print run.

4. SENDING FEEDBACK TO BIOVERSITY INTERNATIONAL

Please send any feedback or suggestions for improvement to Bioversity International at the following address: r.vernooy@cgiar.org

Reference

Vernooy, R., Sthapit, B., Bessette, G. 2020. Community seed banks: concept and practice. Facilitator handbook (updated version). Bioversity International, Rome, Italy. Available at: <https://hdl.handle.net/10568/81286>





BOOKLET 1

ESTABLISHING A COMMUNITY SEED BANK





AN EXPERIENCE FROM AFRICA

Who we are

We are a group of mostly women farmers from the village of Gumbu in the province of Limpopo, South Africa, near the border with Zimbabwe. We are situated in a dry and remote area, far from government agencies and services, and with poor access to the market.

We govern and manage our own community seed bank. We preserve seeds of local crops and varieties for our own use. We conserve seeds of Bambara nut, various kinds of beans, cowpeas, gourds, groundnuts, maize, melons, peas, pumpkins, sorghum, and wheat. We also have seeds of a local tree species called Moringa. Our community seed bank has a spacious building for storing seeds, an attached meeting area, and some land where we can reproduce seeds. We are receiving support from the Department of Agriculture, Forestry and Fisheries of South Africa, the agricultural extension service in Limpopo, and Bioversity International.



What we want to share with you

We would like to tell you how you can establish and support your own community seed bank.

A community seed bank is a local organization whose core functions are to **maintain, safeguard, and exchange** local and farmer-preferred seeds for local use. It is managed collectively by women and men farmers from the community who care about seeds, often but not always with the support of an organization working in agriculture.

It usually performs the following three functions:

- **Conserve** local varieties and **restore** varieties that have disappeared from the community.
- **Provide access to good quality seeds and make them readily available** at a low cost to farmers who are interested in or in need of seed.
- **Serve as a platform** for community development.

Here are four practical steps that you may follow in establishing your own community seed bank.



Step 1: Assessing crop diversity and raising awareness

This first step involves four activities: assessing local crop diversity, conducting a trend analysis, looking closely at the current seed system, and raising awareness.

ASSESSING LOCAL CROP DIVERSITY

First, we want to understand **the amount and distribution of crop diversity** in our locality.

To do this, we draw a 2×2 matrix on the ground and use the four squares to identify:

1. Crops that are grown in a large area by many households
2. Crops that are grown in a large area by few households
3. Crops that are grown in a small area by many households
4. Crops that are grown in a small area by few households



MANY FARMERS
SMALL AREA

MANY FARMERS
LARGE AREA

LOST
DIVERSITY

Step 1: Assessing crop diversity and raising awareness

This 4-cell analysis (the four squares in a quadrant) helps us understand our agricultural diversity: whether crop varieties are abundant or rare, localized or widespread, or perhaps becoming endangered. We can add a fifth small square in the middle of the matrix to identify crops that have disappeared from the community. It then becomes the 5-cell analysis.

Other communities use a “biodiversity wheel” with four spokes to create four quarters similar to the squares of the quadrant. In this case, there is a small circle in the middle of the wheel where farmers can record crops that have disappeared from the community.

We can repeat this exercise for each of the main crop varieties in the community (for example, all the maize varieties) and ask about their relative presence.



MAIZE
MMIDI
WHITE

MAIZE
MMIDI
YELLOW

CALABASH
LERAKA

Compea
Dinana

Watermelon
Mocapu o
Sefinana

Amaranthus
hepe

Chocobelis
THELELE

PUMPKIN
MADHOTS!

BEANS
WA

MELON
LEROTSE

MURINGA

Groundnuts
Matakombane

SWEET
SORGHUM
NTSHE

Bambara
Ditloo

Cleome
gynandra
Lerotho

NOW

Sorghum
Polystium
Lebelebele

Hem
Ronde

Mungbean
Lethodi

Melon
Lerawane

Wild cucumber
phare

Phafane
Calabash

Modutwane
Calabash

MINO
CROP

15-20 YEARS AGO

JERICHO
NORTH-WEST
PROVINCE

Step 1: Assessing crop diversity and raising awareness

CONDUCTING A TREND ANALYSIS

After completing the 4-cell technique, we conduct a trend analysis.

This exercise can tell us what crops and varieties have been lost over the years and why.

In many places local biodiversity is **changing over time and in terms of land area**. Often, the number of crops or crop varieties is shrinking or the total area devoted to a crop species or crop variety is diminishing.

For example, we can compare crops grown in the community in the last 5 years with those in the 10 years before that and then go back another 10 years. Comparing the situation at three points in time helps us identify the trend. The steps are:

- First list the main crops grown right now.
- Recall cultivation in earlier times, for example, 10 years ago and 20 years ago, and identify the trend: no change, a decrease, an increase.
- Highlight the major reason(s) for the identified trends.

Step 1: Assessing crop diversity and raising awareness

LOOKING CLOSELY AT THE SEED SYSTEM

We now identify the **key actors** in our seed system and how they relate to the farmers, describe their roles, and determine whether they are making a positive or negative contribution to supporting our seed system.

The goal is to identify how farmers select, save, conserve, and exchange seeds over time, and where, with whom, and how they interact with others in the seed system. The goal is to uncover the main difficulties associated with conserving and using seeds in the current system so that they can be overcome and everyone can benefit.



Step 1: Assessing crop diversity and raising awareness

RAISING AWARENESS IN THE COMMUNITY

Assessing crop diversity and analyzing trends reveal the current status and changes in terms of crops and agricultural biodiversity in the community. Carrying out these activities also contributes to making the community more aware of the importance of conserving seeds and replenishing local biodiversity.

Visiting farmers in other localities to learn from their experiences is also useful. Such visits, especially to areas where biodiversity is richer and better conserved, also contribute to raising awareness in your community.



Step 2: Deciding to establish a community seed bank

After the awareness-raising process, some farmers in the community may take the lead in convincing the community to establish a community seed bank. In Gumbu we organized a meeting with as many farmers as we could and asked them to vote. Farmers strongly supported the initiative to establish a community seed bank.

Contacts can also be made with external organizations and local authorities to look for support.



Step 2: Deciding to establish a community seed bank

The next step is to decide on a location for the community seed bank. Several factors must be taken into account before making a decision:

- The ownership and current use of the land
- The centrality of the site for the participating community/communities
- The possibility of transportation
- The presence of water
- The presence of a shop to buy food for times when there are activities and meetings
- The proximity of the local extension agent



Step 3: Motivating and organizing farmers and building the community seed bank

Usually, organizations that support the establishment of community seed banks will ask for a contribution in kind from the community. Farmers must be motivated to offer their labour for this community initiative.

At home in Gumbu, we organized a community meeting to discuss what was required and what the community would contribute. We invited the whole community, making sure that women and men, young and old, farmers close to or far from the venue could participate, voice their opinion, and contribute to the decision-making process.



Step 4: Organizing training

Training in selection, cleaning and drying, storage and recording of seeds will be beneficial. It will be good to contact the local extension officer and ask for support to organize tailor-made training.

Some community seed banks collaborate with a farmers' field school in the community to deliver training and learn how to collect and multiply seeds in an efficient and effective way.

In parallel, it will be beneficial to identify small groups of motivated and experienced farmers who are interested in locating interesting crops and crop varieties, collecting seeds on behalf of the community seed bank, and multiplying them.



Summary

In this booklet, we introduced you to four steps in establishing a community seed bank.

Step 1: Assessing crop biodiversity and raising awareness that involves four activities:

- **Assessing local crop diversity** is about understanding the amount and distribution of crop diversity in the area.
- **Conducting a trend analysis** leads to an understanding of how biodiversity is changing over time and in terms of land area.
- **Looking at the seed system** is about identifying the key actors and their relationships regarding the conservation and exchange of seed.
- **Raising awareness** is about spreading that knowledge.

Step 2: Deciding to establish a seed bank involves not only making the decision, but also making contact with external organizations and local authorities to get support, and selecting a site for the future seed bank.

Step 3: Motivating and organizing farmers and building the bank

Step 4: Organizing training

This is the end of our first booklet on developing and managing a community seed bank,

Establishing a community seed bank.

We will now turn to booklet 2, **Technical issues.**

On to the next booklet!

About the authors

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