

CONSERVATION AGRICULTURE NEWSLETTER



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Conservation Agriculture in Wet Environments

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Eastern Africa*

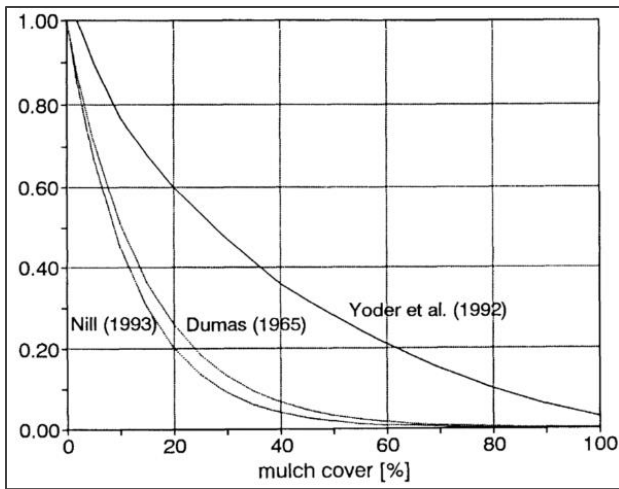
Eunice Mwalimba Wanyeta, a lead farmer in the CARD project in Mulanje, Malawi, has been using Conservation Agriculture (CA) on small plots for four years. Her land is in a low-lying area prone to flooding, and on her conventional fields she plants on ridges to prevent water logging. When we visited her in February, her conventional maize looked much healthier than her CA plot, which was planted on flat soil rather than ridges. Germination in the CA plot was poor, and she had been forced to replant in the gaps.



Eunice Mwalimba Wanyeta (r) in her CA plot with conventional maize behind.

CA practices can dramatically increase soil water availability by increasing infiltration and decreasing evaporation. In dry environments this can lead to significant yield increases. However in wet environments, increased water retention can lead to problems like those experienced by Eunice.

While the CA *principles* of reducing soil disturbance, maximizing soil cover, and diversifying crops are universally sound; the *practices* of CA need to be adapted to each agro-ecological environment. While much of sub-Saharan Africa suffers from inadequate rainfall, some areas receive enough rainfall that water logging sometimes damages crops. In these environments, CA practices need to be adapted.



Even relatively small amounts of soil cover can dramatically reduce soil erosion (from Nill, D. et al., 1996 in [Soil Erosion by Water in Africa](#))

HOW MUCH SOIL COVER IS ENOUGH TO BENEFIT THE SOIL?

In dry environments, farmers should maximize soil cover using crop residues, cover crops or mulch. In addition to improving water retention, soil cover reduces soil erosion, increases biological activity, and provides habitat for beneficial insects. In wetter environments, CA farmers may need to reduce their soil cover, especially in the early stages of plant growth.

CA farmers in a high-rainfall area of Burundi, for example, pull residues away from their planting stations at planting time and leave them between the rows. During and after the first weeding, when plants are well established, they move the residues back to the row, and add additional mulch when available. This method helps them to avoid germination problems, but protects against later-season dry spells.

How much can farmers reduce their soil cover and still profit from benefits like reduced soil erosion? [Several studies](#) on the continent have shown that as little as 30% soil cover can reduce soil erosion to just 10% of that on bare ground. For this reason, in wet environments, farmers should still maintain some soil cover, albeit less than 100% coverage.

PERMANENT RAISED BEDS FOR DRAINAGE -

Another solution for using CA in wet environments is to grow crops on raised beds or ridges so that excess moisture drains off. Waterlogged soils, plants are deprived of oxygen, but by raising them allows oxygen to get to their roots. Furthermore, in waterlogged soils, plant-available nitrogen is denitrified (converted to a form unavailable to plants) so better drainage can also reduce nitrogen losses.

Many traditional farming systems include some form of raised bed or ridging. However, often these structures are re-dug each year violating the core CA principle of minimizing soil disturbance. CA projects in Rwanda and Ethiopia have adopted use of traditional raised beds, but promote making them permanent rather than rebuilding them each year. In this way, they benefit from both the improved drainage of raised beds during wetter seasons, but also benefit from soil cover during drier periods. Permanent raised structures also reduce the labor needed to re-dig every year.



Permanent ridges (*derdero*) under CA in Ethiopia



Permanent raised beds (*imitabo*) under CA in Rwanda

Tips for Effective Storytelling

**Christina Philips, Foodgrains Bank
Communications Manager**

Implementing effective agriculture and livelihoods projects is only the first step in assuring sustainable food security. Communicating your successes to supporting partners, government officials and other stakeholders will go far to assure that your efforts continue to serve your community far into the future. Here are some tips to help you tell your story effectively:

SETTING UP THE INTERVIEW

- **Be careful that sharing stories will not put anyone at risk.** If you need to assure their security, change the name of the participant and use general geographic locations.
- **Is the person comfortable?** Follow their cultural norms so they are comfortable and know they are respected. When people are comfortable, they are more likely to share.
- **Explain why you are gathering stories and that their story is important!** Let them know that their photograph or videos may be used in brochures, social media, print newsletters and more.
- **Ask for consent.** Once they understand how their story may be used, ask them to decide if they'd like to participate. Obtain permission in writing, verbally or by video. This action empowers them, and lets them know that their story is their own.
- **Provide needed support.** Some project participants may be triggered or retraumatized by sharing their stories. If a participant is becoming upset, ask if they'd like to take a break. Having a family member, neighbour, or other emotional support person present may be helpful.



In Ethiopia, Meserat shares her success with CA farming as Bereket from TDA translates for Andy from Foodgrains Bank.

CONDUCTING THE INTERVIEW

Accuracy is respectful. A good place to start capturing relevant information is by asking who, what, when, where, why and how.

- **Who is involved?** Capture important details about the person: name, age, gender, occupation or grade level, and familial relationships. Describe how they sound or what they look like when they are talking.
- **What is happening?** Identify what relevant events have taken place. What changed in their life? (training, savings groups etc.) If talking about crop yields, how much did they have before compared to now? What has led to their success? What are their challenges?
- **When did this happen?** Relevant timelines can provide context. Was there a flood/drought/hail - when? Are there seasonal impacts? How long has the participant experienced certain successes or faced any challenges?
- **Where did this take place?** Include where the participant lives and works. Describe the setting and any relevant information that helps set the scene for the audience. Remember that the audience has probably never visited the area.
- **Why did this happen?** Provide context around the participant's story. What was the 'before' like? Why did they participate in an initiative? Are there historical, cultural or regional details that have led to the current situation?
- **How is this happening?** Describe how the participant is changing their lives. This may include how they provide for their family and how they work to achieve food security.

More tips for getting detailed responses in an interview:

ASK OPEN QUESTIONS THAT ELICIT ANSWERS BEYOND 'YES' OR 'NO.'

"What have you learned through this experience?"

ASK FOLLOW-UP QUESTIONS THAT GIVE THE INTERVIEWEE AN OPPORTUNITY TO INTERPRET THEIR OWN EXPERIENCES.

"What has been most interesting to you?"

ASK IF THE PARTICIPANT WOULD LIKE TO SHARE ANYTHING THAT HASN'T BEEN DISCUSSED ALREADY.

"Is there anything else you'd like to add?"

Direct quotes. Don't paraphrase or add technical terms. Instead, report their quotes as they are said.

WRITING THE STORY

One story is just a glimpse of a multi-dimensional person with a full life. The more details you give about their personality, their life, and their story; the fuller picture you are providing.

- **A person's struggles do not define the person.** Explain their difficult circumstance, but don't exploit it. The participant is the hero because they chose to participate and are taking actions to achieve food security.
- **What makes this person special to you?** When you write from the heart, your story will better capture the hearts of the reader.

DOS AND DON'TS OF RESPECTFUL STORYTELLING

DO	DON'T
Portray project participant as the hero in their own lives.	Make the funding organization the hero of the story.
Provide information of a participant's history and context so the reader has a good idea of what is happening.	Assume your audience knows the history and cultural context of the story.
Include direct quotes of participants and the facts speak for themselves.	Paraphrase the story or include your own interpretations.
Discuss the different and complex reasons why someone may be facing hunger.	Oversimplify complex issues.
Ask follow up questions or clarify information with your interviewee.	Fill in gaps based on your own experience or understanding of the interview.
Show the positive alongside the negative.	Focus only on the negative side.
Share the participant's goals and dreams for the future.	Portray the project as the final achievement in the participant's life.
Try and portray the participant's personality. (Are they happy, sad, excited, or angry?)	Portray the person as if they are the same as anyone else in their community.
Let your heart be moved by this person	View this person as an object – they are made in the image of God.



A group of lead farmers in Chambo, Malawi.

CA Farmer Profile: Chrissie Stackio, Malawi

Chrissie Stackio, a small-scale farmer from Chambo, Malawi, used to cultivate three and a half acres of her land. It generally yielded less than seven 50 kg bags of maize. For some, this may seem like a lot, but for a single mother of six trying to feed her family, it wasn't enough. And she could only afford to send two children to school.

Some regions of Malawi grapple with persistent drought, crop and livestock disease and degraded soil. The result? Families like Chrissie's, worrying on a regular basis if they will have enough food.

Foodgrains Bank member The Salvation Army (TSA) in Canada is working with The Salvation Army in Malawi to implement the Sustainable Agriculture and Food Security (SAFS) project in the Mangochi District. The three-year project is providing 450 farmers and their households (about 2,950 people) with training in conservation agriculture (CA). CA techniques can help boost soil fertility, increase food production, and build resilience into local agriculture systems by minimizing tillage and rotating crops. 30 lead farmers promote CA in their communities, and SAFS training also includes gender equity awareness.

Chrissie was recruited for the SAFS project, where she was trained in CA techniques. Starting with two small plots, she was astounded when she harvested 35 bags of maize. *"God has made a way for me," she exclaimed. "My hopes were gone but I see my children can smile again."*

She kept 15 bags for food for her family, enough for a whole year, and sold 20 bags netting MWK150,000 (C\$195). She used some of the proceeds to send her other four children to school, and saved some through the Village Saving and Loan Association.

This article was originally published in the [Winter 2023 edition of Breaking Bread](#).

Partner profile: Brethren in Christ Church - Compassionate and Development Services (BICC – CODES), Malawi

Lilian Zheke, Agriculture and Livelihoods Technical Advisor for Southern Africa

Compassionate and Development Services (CODES) is the relief and developmental arm of the Brethren in Christ Church (BICC) in Malawi, mandated to reach out to the needy, underprivileged and the oppressed; and to promote developmental initiatives. CODES focus areas include: improving food security, promoting resilience to climate change, and targeted response to emergency humanitarian needs. BICC-CODES is a partner of Canadian Foodgrains Bank through the Mennonite Central Committee (MCC).



Lead Farmers training on Mbeya fertilizer

BICC-CODES is currently implementing a three-year food security project funded by CFGB/MCC. The project started in April, 2021 and intends to reach 400 households in Chikwawa Traditional Authority. The project strategy is to increase food security and resilience to climate change through Conservation Agriculture (CA), improved market access and access to financial resources through Village Savings and Lending groups (VSLs). The project also advocates for gender issues, and gender is mainstreamed across all components with the aim of increasing participation and decision-making of women. To promote natural resource conservation, and also reduce labour burden on women, the project is promoting high-efficiency cooking stoves. CODES work with volunteer lead farmers and gender champions to increase their outreach as well as enable peer-to-peer learning.

While cyclone Ana affected the project participants in the first year, significant impact is already visible in the area. Farmers testify that CA benefits soil moisture retention, reduces weed pressure and improves crop stands. The CA practices together with promotion of drought-tolerant seed and mbeya fertilizer has contributed to an overall improvement in crop performance. A 2021/22 harvests government survey reported an average 67% increase in sorghum yield, 7% increase in cowpea yields and 9% increase in sesame yields). Some project participants have extended their CA plot size to 0.2- 0.4 ha with the hope of obtaining higher production



CA plot under sorghum with cowpea intercrop

Promotion of gender balance and equality have increased joint decision making for household undertakings. Families jointly decide where to farm and what to grow, how to use the income realized, and how to share household roles. For instance, it is now common and acceptable for husbands to help with cooking, fetching

water and firewood - things which, not long ago, would have been taboo for men. Promotion of energy efficient cookstoves has helped conserve natural resources reduced the time spent searching for firewood. Women now have more time to participate in farming activities, attend VSLs and other group meetings; and also to focus on small-scale businesses.



Mr. helps his wife with cooking, a role he would not have played in the past

ALTA TRAVEL SCHEDULES

Lilian Zheke

24-29 April
Mazowe, Zimbabwe
CA Master Trainer Workshop

15-19 May, 2023
Masvingo, Zimbabwe
PAOZ and ZCC partner visits and training

4-18 June, 2023
Winnipeg, Canada
Strategic planning & Growing Projects visits

26- 30 June, 2023
Tete, Mozambique
CCM Partner visit

Jean Twilingiyumukiza:

4-5 April, 2023
Bugesera, Rwanda
CA plus Advocacy workshop

17-21 April, 2023
Northern Rwanda
CA training for WFP & Government staff

1-6 May, 2023
Niamey, Niger
Staff training for Samaritan's Purse

7-12 May, 2023
Ouagadougou, Burkina Faso
Team building for ODE &MCC staff

22-26 May, 2023
Southern Rwanda
Master Trainer Refresher Training

4-8 June, 2023
Rabat, Morocco
3rd African Congress on Conservation Agriculture

9-16 June, 2023
Winnipeg, Canada
Strategic planning & Growing Project visits

John Kimathi Mbae

3-4 April, 2023
Kajiado, Kenya
Master Trainer mentoring visit, MIDI & CITAM

5-7 April, 2023
Makueni, Kenya
Master Trainer mentoring visit, UDO government

8-9 April, 2023
Turkana, Kenya
Master Trainer mentoring visit, ADRA & NCM

11-21 April, 2023
Soroti & Kotido, Uganda
PAG and COU project visits

25-30 May, 2023
Addis Ababa, Ethiopia
NBS launch meeting

4-8 June, 2023
Rabat, Morocco
3rd Africa Congress on Conservation Agriculture

9-16 June, 2023
Winnipeg, Canada
Strategic planning & Growing Project visits

Neil Rowe Miller

11-21 April, 2023
Uganda
PAG and COU project visits

1-5 May, 2023
Hanang, Tanzania
One World project visit

15-27 May, 2023
Ethiopia
Project visits and NBS launch meeting

4-13 June, 2023
Winnipeg, Canada
Strategic planning & donor visits