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Advocating for Conservation Agriculture Promotion

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Farmer facilitators visit a CA plot in Huye District, Rwanda.

Scaling out Conservation Agriculture (CA) adoption requires more than good technology and an effective extension strategy. Despite all CA's benefits of increased production, climate resilience, erosion control, and cost savings; the transition from conventional agriculture to CA has been difficult for small-scale farmers. In this context, having an enabling environment of positive government policies and broader stakeholder support (researchers, extension agents, input suppliers, etc.) can make the difference between a few farmers adopting CA and whole communities being transformed by the approach.

Effective advocacy strategies can help to create this enabling environment. Advocacy aims to influence decisions within political, economic, and social institutions. Activities may include researching new solutions, creating

Canadian Foodgrains Bank
A Christian Response to Hunger

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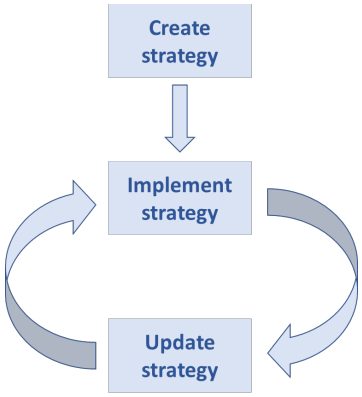
coalitions, lobbying and campaigning to raise awareness, documenting and communicating evidence of impact, and much more. Policy advocacy is used to influence policies that generate positive changes for people and their living conditions.

THREE STEPS DRIVE ADVOCACY WORK FORWARD:

1. *Strategizing*: Developing a plan defining your goals and your audience, formulating your message and communication method, and identifying your allies and supporters.
2. *Implementing the strategy:* The best way to find out whether an advocacy message is effective is by actually implementing it and seeing how your audience responds.
3. *Updating the strategy based on feedback:* Based on the responses, you should evaluate what worked well and what needs improvement.



Advocacy goals differ depending on the context. For example, when there is a lack of supportive policies, advocacy work may seek to create new laws or reform existing ones. Where policies exist, but are not being implemented, advocacy campaigns may call for more effective implementation.

CA ADVOCACY SUCCESSES WITHIN THE FOODGRAINS BANK NETWORK

Canadian Foodgrains Bank partnered with the African Conservation Tillage Network to promote policies that support CA from 2015-2020 during the Scale-up of CA (SUCA) program in East Africa. Key activities included forming coalitions of like-minded stakeholders, developing CA guidelines and policy briefs, experience-sharing visits for government officials to CA project sites, etc. The SUCA end-line evaluation concluded that the combination of widescale CA adoption (54,376 farmers), institutional support, and policy-maker exposure worked together to influence policy changes. CA was mainstreamed in the extension messages of both Ethiopia and Kenya, and the Tanzania Ministry of Agriculture issued a supportive policy document.

A high-level CA workshop for Rwandese government officials, WFP and NGO agronomists

In Rwanda, Foodgrains Bank supports CA programming primarily through Mennonite Central Committee, Peace and Development Network (PDN), Canadian Baptist Ministry, and Association des Eglises Baptistes au Rwanda (AEBR). These Partners are working collaboratively to advocate for government policies that provide a better enabling environment for CA and other good agricultural practices. This collaboration is guided by an MOU between the organizations, and as a result of their CA adoption success (7,314 farmers to date), one-on-one meetings with officials at different levels, and media coverage of CA activities including the work of CA Master Trainers; the Government of Rwanda has begun promoting CA to cope with climate change, improve yields, and reduce soil erosion. Additionally, these efforts led to a request from World Food Program to train 90 of their lead farmers and 26 agronomists who have since trained some 6,000 more farmers. Finally, MCC and World Food Program helped 14 organizations form a Regenerative and Conservation Agriculture coalition to support the government efforts to scale-up climate resilient agriculture and carry the policy agenda forward.

Influencing policy change is a long-term undertaking. Research evidence and showcasing community impact are key but not enough alone. Building stakeholder coalitions and developing relationships with key policy makers takes time and patience. The potential impact of these activities is, however, well worth the effort.

Introducing Lidet Sitatow, Agriculture and Livelihoods Technical Advisor for Ethiopia

We are very pleased to welcome Lidet Sitotaw Ejigu to our team of ALTAs! Lidet comes from Ethiopia, and brings with him a rich background of both agriculture research and extension. He will primarily serve the growing number of projects supported by Canadian Foodgrains Bank and her Members in Ethiopia, and will ultimately support a smaller number of projects in neighboring countries.

Lidet spent the first half of his career as an agronomist and plant breeder at the Melkassa Agriculture Research Center in central Ethiopia. There he worked on horticulture and field crops, and provided training to government and NGO staff. For his MS, he studied the use of neem seed (Azadirachta indica) as a locally-prepared insecticide.

For the past 12 years, Lidet has worked in the NGO sector, including SOS Sahel, Sasakawa Africa Association, and Dan Church Aid. In these roles, he carried out training for government, NGO personnel, and farmers; prepared extension manuals, and spearheaded the introduction of quinoa as a new crop for small-scale farmers in Ethiopia. He states that he was drawn to the ALTA position because of the “values and vision, which are focused on restoring God's plan (nature) to solve the current complex problem of the world.”

Lidet lives in Addis Ababa with his wife and two children.

Fall Armyworm Management Update

By John Mbae and Neil Rowe Miller, Agriculture and Livelihoods Technical Advisors

In 2016, the fall armyworm (FAW), Spodoptera frugiperda), an insect pest native to North and South America, was first detected in Africa. It spread quickly from West Africa across the continent, causing extensive damage to crops, though in subsequent years damage has seemed to be more variable, due in part to an increase in the populations of natural enemies in the years since its introduction.

In the Americas, FAW feeds on over 350 plant species, but in Africa damage is still mostly confined to maize and rice, likely due to the fact that the specific strains which were introduced to the continent prefer these two crops. Nonetheless, it has been estimated that FAW could cause up to $US13 billion per annum in crop losses across sub-Saharan Africa (Abrahams et al., 2017). Moreover, due to the high consumption of these cereal crops, particularly maize, in smallholder diets, FAW could have a substantial negative impact on food security in some years and locations.

AN INTEGRATED PEST MANAGEMENT (IPM) APPROACH TO FAW MANAGEMENT utilizes multiple strategies to prevent the FAW population from reaching damaging levels. Several of the most proven strategies, include:

- ***Maintaining good soil cover:*** Mulched soils create habitat for insect predators of FAW and have been shown to significantly reduce FAW infestations. This is a principle reason why conservation agriculture (CA) plots tend to experience less FAW damage.
- ***Legume Intercropping:*** By planting FAW-susceptible crops with legumes, FAW damage is reduced through multiple mechanisms including disrupting egg laying of female moths and reduced dispersal of young caterpillars from plant to plant.
- ***Habitat for beneficials:*** Maintaining flowering plants, including weeds, trees, etc. on the borders of fields creates habitat for beneficial insects that prey on FAW caterpillars.
- ***Good soil fertility:*** Healthy plants are able to better withstand FAW damage and produce grain despite foliar feeding.

When FAW caterpillars grow, creating larger holes like this, they enter deep into the stalk where insecticides are ineffective. Scouting at this state is too late!!!

WHEN TO SPRAY FOR FAW:

The above strategies effectively reduce FAW populations, but the pest may still reach levels where it is cost-effective to spray. The decision to spray should be based on scouting results. Procedures for scouting FAW in maize can be found in Appendix C of our publication on *Insect Identification and Monitoring* in English, French, and Kiswahili. Begin scouting from emergence of the crop, and continue each week until flowering. **It is critical that you identify FAW infestations when the caterpillars are still very small and easy to kill!!** When the FAW infestation in a field reaches 20% of young maize plants (less than 7 leaves), the field should be sprayed. From the 7-leaf stage to flowering, the treatment threshold increases to 40% of plants with live caterpillars. After maize flowering, spraying will be less effective. Spraying indiscriminately, without using thresholds, wastes money and risks killing the beneficial insects which help keep FAW populations in check. More information on thresholds can be found in *Fall Armyworm in Africa: A guide for integrated pest management*

Small, elongated holes created by young armyworms are easy to overlook when scouting. However, this is the critical stage when treatment is most effective.

WHAT TO SPRAY?

Many local remedies are promoted as treatments for FAW. Most common among these are wood ash and preparations of various leaves (e.g. neem, tephrosia, etc.) While these materials can help reduce FAW damage, many farmers mistakenly believe they can be used in the same manner as synthetic pesticides (i.e. as a once-off or twice-off treatment). In reality, natural pesticides need to be applied repeatedly in order to effectively control most pests. For example, one of our Kenya Partners (see Partner Profile in this issue) showed that neem leaves, wood ash, and a biopesticide called Achieve Mazao all provided as good protection as a synthetic pesticide, and far better protection than the negative control. However, the natural pesticides were applied to their maize every week until tasseling stage.

If you choose to use a synthetic pesticide, be sure to check with local extension advisors to know which chemicals are both effective and safe. Throughout Africa, unscrupulous vendors are selling pesticides which can

be harmful to those using them and to the consumers of the food crops they treat. As always, be sure to observe safety precautions when using synthetic pesticides. We have prepared training guides on pesticide safety in English, French, and Kiswahili which can be downloaded here.

Table 1. Summary of FAW Action Thresholds. Thresholds are expressed as percentages of plants with typical FAW damage/injury symptoms.

Maize Crop Stage	V Stage	Action Threshold for Smallholder Farmer	Action Threshold for Village-Level Progressive Farmer
Early Whorl Stage	VE-V6	20% (10-30%)	20% (10-30%)
Late Whorl Stage	V7-VT	40% (30-50%)	40% (30-50%)
Tassel & Silk Stage	R1-R3	NO SPRAY Unless low-toxicity & supportive of conservation biological control	20% (10-30%)

Treatment thresholds for Fall Armyworm. From USAID/CIMMYT. 2018. Fall Armyworm in Africa: A Guide for Integrated Pest Management.

Partner Profile: Anglican Development Services - Central Rift, Kenya

John Kimathi Mbae, Agriculture & Livelihoods Technical Advisor for Eastern Africa

Anglican Development Services (ADS) is the development arm of the Anglican Church of Kenya. ADS-Central Rift serves the counties of Nakuru, Baringo, Samburu, Laikipia, and Nyandarua, as an affiliate of the Dioceses of Nakuru, Baringo, Maralal and Nyahururu. ADS-Central Rift has undertaken community development programs since 1961. They receive support through Canadian Foodgrains Bank as a partner of World Renew.

The organization envisages transformed communities with a mission to improve the livelihoods of marginalized communities in central Kenya through integrated development programs. Since its establishment, ADS-Central Rift has promoted sustainable agriculture to address food insecurity and poverty reduction. The organization has been promoting Conservation Agriculture (CA) to smallholder farmers from poor and vulnerable communities which have long been affected by environmental challenges including drought attributed to climate change.

ADS-Central Rift was involved in the Scaling-Up Conservation Agriculture (SUCA) program from 2015 to 2021. As part of this project, they enabled 1,987 smallholder farmers (842m, 1145f) to implement CA. Due to the success of this project, they recently received a five-year grant from USAID to scale up the adoption of CA in Nakuru.

FALL ARMY WORM (FAW) RESEARCH PROJECT

In 2022, ADS-Central Rift received a one-year Tearfund Innovation Challenge Grant titled “Using Environmentally-Friendly Bio-Pesticides to Control Fall Armyworm to Increase Maize Yield in Kenya Sustainably.” The research was carried out by 10 farmers and 10 scouts trained in scouting and data collection. The research used five different treatments: neem leaves, wood ash, a biopesticide called Achieve Mazao, a synthetic chemical called Belt, and a negative control. The results of this project demonstrated that natural pesticides can provide control equal to chemical pesticides if they are applied on a weekly basis.

A scout checks for Fall Armyworm damage

ALTA TRAVEL SCHEDULES

Jean Twilingiyumukiza:

14-23 January, 2024
Watamu, Kenya
CFGB Africa Staff Retreat
Nature+ Meetings
ALTA Team Building

26-27 February, 2024
TBD, Rwanda
MCC Guests Learning Tour

4-8 March, 2024
Kampala & West, Uganda
LWF-Burundi Exchange Visit

21-22 March, 2024
Muhazi, Rwanda
Capacity Building Planning Discussion

Lilian Zheke:

14-23 January, 2024
Watamu, Kenya
CFGB Africa Staff Retreat
Nature+ Meetings
ALTA Team Building

3-6 March, 2024
Gutu & Chimanimani, Zimbabwe
GAC Visit

11-15 March, 2024
Zambesia, Mozambique
ADRA Technical support visit

John Mbae:

9-13 January, 2024
Tharaka Nithi, Kenya
CA training for Yemen Partner

14-23 January, 2024
Watamu, Kenya
CFGB Africa Staff Retreat
Nature+ Meetings
ALTA Team Building

12-16 February, 2024
Embu, Kenya
ACC&S Support- Training

26-29 February 2024
Busia, Kenya
NCM Kenya visit

5-8 March 2024
Wote Makueni, Kenya
Country-Wide Networking Workshop

11–15 March, 2024
Soroti/Karamoja, Uganda
Training and Support to PAG Kotido & COU TEDDO

Neil Rowe Miller:

11-13 January, 2024
Tharaka Nithi, Kenya
CA training for Yemen Partner

14-23 January, 2024
Watamu, Kenya
CFGB Africa Staff Retreat
Nature+ Meetings
ALTA Team Building

12-18 February, 2024
Ethiopia
New ALTA on-boarding
LWF Partner Project visit

2-7 March, 2024
Geita, Tanzania
AICT-Geita Project visit

11-15 March, 2024
Zambesia, Mozambique
ADRA Technical support visit

Lidet Sitotaw:

5-9 February, 2024
Adama, Ethiopia
CA Master Training

12-18 February, 2024
East Bale, Ethiopia
LWF Partner Project visit

February 26- March 8
Wolaita Zone, Ethiopia
TDA Project visits

March 9 – 16
Gamo Goffa Zone, Ethiopia
EKHC Zala Project Visit