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foodgrainsbank.ca

## Savings Group Support CA Programming

A growing number of our partner organizations around the world are promoting some form of savings and credit group in conjunction with their CA programming. Savings and credit groups are a tool primarily used to help poor households build savings and better manage their financial lives. Savings groups are designed to be wholly managed by local group members, and to reach impoverished people in remote rural areas who lack other financial services. Members apply for loans with a group-determined interest charge paid back to the group itself. There are many different models of savings and credit groups that are currently being promoted, but most fall into two main categories: Self-Help Groups and Savings Groups.

Self-Help Groups were originally developed in the 1980s in India, where they are still the dominant community managed micro-finance model. There are currently well over [100 million Indians](#) who are members of a Self-Help Group. Self-Help Groups usually have 15-30 members who meet together every one or two weeks. Each member is required to save at least a minimum amount determined by all the members. Groups also decide their loan terms, and financial records are kept in individual books. If members require funds, they are encouraged to access a loan from the group and not withdraw their savings in order to allow the group's loan fund to build. Funds which are not loaned out to members are usually kept in a group bank account and dividends from interest earned are paid out periodically to members.

Savings Groups are adapted from traditional African savings circle groups and were pioneered by CARE Niger in the 1990s with their rotating savings and credit associations (ROSCAs), also known as Village Savings and Loan Associations (VSLAs). The millions of individuals involved in these groups (totalling [over 9 million in Africa](#) alone) follow a standard model in which groups of 15 to 30 self-selected participants meet regularly, contributing a standardized sum of cash. If they loan money, it is generally for only one to three months. They are fundamentally different than Self-Help Groups in that the money invested in the group is not kept for many years but



*Weekly contributions to a SHG in Kenya*



*SHG in Ethiopia show off livestock they've bought with their savings*

completely divided out amongst group members every 9-12 months. This 'share-out' is often timed to coincide with seasons where households require additional cash such as the planting season.

There is good evidence that both Self-Help and Savings Groups can contribute positively to women's empowerment, food security, health and education, and community and individual resilience. There is also great potential for these groups to support Conservation Agriculture implementation. Group members often save or take out a loan in order to buy agricultural inputs such as improved seeds or fertilizers, to buy CA equipment such as rippers or direct seeders, or to invest in improved storage facilities. Many groups also buy needed inputs together in bulk, or market their crops collectively, thereby increasing the profits of farmer-members.

For more information, consult the following:

[Community-Managed Loan Funds: Which Ones Work?](#)  
[VSL Associates](#)  
[VSLA Facilitator Guide](#)

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## Natural Pesticides

Pest problems affect farmers throughout the world, reducing production by an estimated 25-40% globally (Oerke, 2006). As noted in our last newsletter, insect pests are a major limiting factor in production of leguminous cover crops, a key tool in the successful implementation of Conservation Agriculture. Unless we develop effective methods of controlling such pests, farmers will struggle to keep their soils covered, improve fertility, and keep their families fed.

Integrated pest management (IPM) is widely accepted as the most sustainable way to manage agricultural pests. IPM combines **cultural & physical methods** of control (e.g. crop rotation, intercropping, etc.); **biological methods** (e.g. resistant varieties, habitat enhancement, etc.); and **chemical methods** (synthetic and/or natural pesticides). Chemical methods are often used as a last resort if or when other methods don't provide sufficient control. Use of chemicals should be triggered by thorough scouting and identification of what pest levels will lead to economic losses.

Natural pesticides are often promoted as alternatives to synthetic chemicals, especially in developing countries where chemical supplies are unreliable, and where the dangers of pesticides are poorly understood. In addition to human health risks, synthetic insecticides usually have broad spectrum activity, and kill beneficial insects as well as pests. While some natural pesticides also carry similar risks, their negative impacts are generally less severe than synthetic products.

### Which pests can be controlled by natural pesticides?

Synthetic pesticides are used by farmers to control rodents, insects, diseases, weeds, etc. Natural pesticides are mainly effective against insects, whereas they are much less effective on weeds and diseases. For this reason, the rest of this article will focus on natural insecticides.

## Discussions From the Network

**Angela Coupe Boss:** Farmers in Mecanhelas, Mozambique have been experimenting with a multi-crop CA system. In year one, fields are mulched and planted with maize. Fifteen days later, 60-day cowpea are planted in the field between maize. The cowpea covers the soil as the mulch breaks down. Once the cowpeas have been harvested, farmers plant pigeon pea between rows of maize along with mucuna... There was an impressive amount of mulch left behind.

**Dominic Musyoka:** This is very encouraging...sustainable agriculture.

**Neil Miller:** Very impressive! What is the maturity of the pigeon pea variety they're planting? I would have expected to see them still alive and growing in April.

**Angela Coupe Boss:** They were alive in April...I'm not sure of the maturity. The goal was to then coppice the PP at the start of the next season but this farmer cut them down in September.

**Neil Miller:** Most farmers in E. Africa replant every year rather than coppicing. I've seen the latter promoted in the interest of drought tolerance, but farmers here are concerned about competition with the following maize crop, and they say they get higher yields from replanting.

**Putso Nyathi:** Thanks for sharing Angela. Other than soil cover and fertility improvement do farmers there grow mucuna for food? In Southern Zambia they use mucuna to make coffee.

**Angela Coupe Boss:** People do eat mucuna but it is not preferred.

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The CA Technical Officers manage a Facebook Discussion Group from which the above conversations were copied. If you'd like to join the discussion, sign up at <https://www.facebook.com/groups/CAinAfrica/>

## Commercial preparations of natural insecticides

Two of the most widely used organic insecticides have been commercialized and can be found in some African countries. *Bacillus thuringiensis*, also known as “BT” or “Dipel” is a bacterium which is very effective, but only on caterpillar pests. Neem Oil, sold under various names, is a broader spectrum insecticide sold under various trade names. Both of these products are essentially harmless to human beings, though Neem oil can be harmful to bees and other beneficial insects.

## Locally prepared insecticides

These are mostly made from plants. Although hundreds of home remedies exist and are used by African farmers, the best-documented of these products are listed in the table below.

Species	Rate (for 10 liters of spray)	Comments
<b>Neem</b> ( <i>A. indica</i> )	Seed: 500g (dried) Leaves: 1-2 kg (fresh wt.)	Seed has more insecticide than leaves.
<b>Tephrosia</b> ( <i>T. vogelii</i> )	Leaves: 1-2 kg (fresh wt.)	Some plants have no insecticide! Use several plants & test before using wide-scale!
<b>Tobacco</b> ( <i>N. tabacum</i> )	Leaves: 0.5-1.0 kg (fresh wt.)	Very strong insecticide. Use protective equipment. Don't use on solanaceous crops (tomatoes, potatoes, chillis, etc.)
<b>Hot Pepper</b> ( <i>Capsicum</i> spp.)	0.5-2.0 liters depending on strength of the peppers	Repels insects but doesn't kill them, so needs to be applied often.

## Tips for preparing effective natural insecticides

1. Mash or crush plant materials as finely as possible.
2. Add 20 ml liquid soap per 10 liters of water since some active chemicals will not go into solution effectively with plain water.
3. For fresh plant material use 1-5 kg per 10 liters of water. When training farmers you should convert this to a measuring unit they are used to (like a bucket).
4. For dried plant materials use 100-1000g per 10 liters of water.
5. When drying botanical pesticides, avoid direct sunlight which degrades many active chemicals.
6. Spray in late afternoon or evening (since sunlight degrades many active chemicals).
7. Don't expect a quick kill (evaluate after 48 hrs).
8. You will probably need to spray more often than with synthetic insecticides.

## Disadvantages of natural insecticides

The biggest challenge with natural insecticides is their inconsistent performance. The amount of insecticide present can vary from plant to plant (especially with Tephrosia) or with altitude (e.g. Neem has less insecticide when grown at higher altitudes) or with season. Weather can also affect the performance of natural insecticides. Dry, sunny weather often reduces their effectiveness.

For this reason it is **VERY IMPORTANT** that you test natural pesticides in each environment and each season to be sure they are working. You may need to use different dosages in different seasons. Use controlled trials with a positive control (a synthetic pesticide) and a negative control (no spray) to help evaluate the performance of natural pesticides, and don't promote them widely until you are confident that you have a method that is effective.



CA Technical Specialists, John Mbae and Godfrey Magoma, test natural insecticides on lablab

## Partner Profile: The Christian Council of Mozambique (CCM)

The Christian Council of Mozambique (CCM) is the oldest faith-based nonprofit organization in Mozambique and has operated out of Maputo (the capital of Mozambique) since 1948. While its roots began in church collaboration and ecumenical services, CCM expanded its work to development outreach in the 1980s during Mozambique's 16 year war. Today, CCM employs nearly 200 staff members across 10 Mozambican provinces.

CCM –Tete Province has partnered with Mennonite Central Committee (MCC) and the Canadian Foodgrains bank (CFGB) in implementing water and food security projects since 2008. These projects have included the construction of sand dams on seasonal rivers and promoting vegetable production by applying Conservation Agriculture techniques. CCM Tete operates in the Districts of Changara and Marara. These areas are very dry and experience high temperatures averaging between 23 and 45 C. Rain falls between November and March and is usually erratic, averaging 600-800 mm/year.

Due to frequent dry spells, rain-fed agriculture has become very risky. The construction of sand dams helps farmers produce food during the dry period. To date, CCM-Tete has constructed 33 sand dams which help more than 700 farmers achieve better food security through vegetable production (vegetable gardening is not traditionally practiced by most of the farmers). Although in some cases farmers have had to wait for some years before they could use water from the sand dams to produce vegetables, once functional they are an effective way of improving food security.

Insect pests have been a major challenge in vegetable production. To deal with this challenge, CCM-Tete previously supplied chemical pesticides to communities. However, due to the dangers, cost and unavailability of synthetic pesticides in local markets, CCM-Tete has started training farmers on the use of natural pesticides. Farmers have started using tobacco and hot pepper-garlic spray to control insects. This has proved to be cost-effective and sustainable. CCM is still in the learning phase on the use of these pesticides. They hope that after more experimenting, they will be in a position to share their experiences more widely.



*Pounding leaves for natural insecticides*

### CATO Schedule: Neil Rowe Miller

28 November – 2 December  
Nebbi, Uganda  
Multi-Partner CA workshop

13 December  
Embu, Kenya  
ACC&S Project visit

14-15 December  
Nanyuki, Kenya  
CA Service Provider visit

7-9 February  
Arusha, Tanzania  
ECHO symposium

11 February  
Arusha, Tanzania  
CFGB Partner Network meeting

### CATO Schedule: Putso Nyathi

16-20 January  
Mozambique  
Partner Visit

7-9 February  
Arusha, Tanzania  
ECHO symposium

11 February  
Arusha, Tanzania  
CFGB Partner Network meeting

20-23 February  
Lesotho  
Partner Visit



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