

## Climate Change Focus

Climate change happens in different ways, ranging from increased climate variability and gradual changes in temperature and precipitation, to increased frequency and intensity of extreme events.

Ninety percent of the rural populations rely on rain-fed subsistence farming to survive and small-scale farmers in Malawi are among the first to feel the impact of climate change because of their greater dependence on rain to nourish their crops.

The best way to ensure that a farmer has a healthy, productive field is provide the crops with rich fertile soil. It is important to restore and maintain the soil so that it provides the essential air, water and nutrients crops need to survive.

A farmer can improve the soil with manure. Dried animal manure supplies nutrients to plants and microorganisms and helps to aerate the soil.

Manure helps to prevent soil and wind erosion by binding sandy soil particles together. It also prevents cracking and water run-off that occurs when clay soil dries out.

*(Field Guide to Compost Use; 1996)*

### The goals of the Weekly Bulletin are:

- To discuss the advantages of using manure instead of chemical fertilizers to add nutrients to the soil.
- To discuss how organic manure that could help in restoring soil fertility
- To learn from farmers about the types of organic manure that are working for them

### The Problem: Climate Change

Malawi's soils are losing their ability to produce. Declining soil fertility is reducing food production and has been for a number of years now.

As the depletion and degradation of Malawi's soil continues, people who depend on farming for survival are finding that their options are severely limited.

Soil fertility loss is caused by erosion which is triggered by heavy rainfall, deforestation, and among other things, poor agricultural practices..

The loss of soil nutrients has forced some farmers to start using chemical fertilizers, which most people can't afford.

The excessive amounts of and longtime usage of these

fertilizers results in a long-term decrease in soil fertility.

Different types of manure can be used to supplement the chemical fertilizers. Manure is a natural fertilizer that can restore the soil structure, improve moisture retention and increase the biological activities in the soil resulting in healthier topsoil.

Manure improves soil by stimulating or feeding the life in the soil.

It provides nutrients to bacteria, fungi, earthworms and other organisms in the soil, which in turn recycle the nutrients into forms that are readily available for plants to absorb through their roots – leading to healthier plants and larger crop yields.

## Activities for Journalists

Use your community radio station to help listeners understand the benefits of using manure to regain soil fertility instead of using chemical fertilizers. You should also explain to them the types of manures and how they should be prepared to enhance soil fertility.

### Types of manure:

#### Farmyard Manure

Farmyard manure refers to the decomposed mixture of dung and urine of farm animals along with litter and left over material from food that is fed to livestock.

#### The Process

Litter and refuse are mixed with soil and spread in the shed so as to absorb urine. The next morning, urine soaked refuse along with dung is collected and placed in a ditch. Once the ditch is filled up to a height of between 45 and 60 centimeters above the ground, the top of the heap is shaped into a dome and plastered with cow dung. This process is continued and when the first ditch is completely filled, a second trench can be prepared. The manure becomes ready for use in about four to five months. Partially decomposed farmyard manure has to be applied three to four weeks before sowing while fully decomposed manure can be applied immediately before sowing.

#### Sheep and Goat Manure

The droppings of sheep and goats contain higher nutrients than farmyard manure and compost. It can be applied to the field in two ways.

The droppings of sheep or goats can be placed in pits for

decomposition and it is applied later to the field.

The second method involves placing the sheep and/or goats directly into the field for several weeks and their droppings are then turned into the soil with a cultivator.

#### Chicken Manure

Chicken manure is a good soil nutrient. It adds organic matter to the soil and increases the water holding capacity of soil. However, it is best not to put fresh chicken manure around young, tender plants. Fresh chicken manure is "hot," meaning it is very high in nitrogen and will "burn" the growing plants.

Have a voxpop with people from your community and find out if they use manure for farming. Also find out what kind of manure they use. What kind of results are they getting?

Have an interview with two farmers from your area who use manure in their gardens/fields. Ask them why they decided to use manure instead of chemical fertilizers, what kind of manure they use and do they recommend it.

Interview an Agricultural extension officer from your community and ask him/her about the advantages of manure over chemical fertilizers.

#### Community Engagement

**Urge listeners to send SMS, call or stop by the radio station to talk about the advantages of drought tolerant maize varieties in their community.**

### Useful Contacts

- Sustainable rural community development organization (SURCOD) Malawi; +265888745752
- McSweeney et al, 2008, UNDP climate change country profile: Malawi. [www.geog.ox.ac.uk/research/climate/projects/undp-cp/UNDPCCCP\\_documentation.pdf](http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/UNDPCCCP_documentation.pdf)
- World Food Programme .October 2012. Global food security update. [www.reliefweb.int/sites/reliefweb.int/files/resources/wfp251749.pdf](http://www.reliefweb.int/sites/reliefweb.int/files/resources/wfp251749.pdf)
- Reddy, S.R.2005. Principles of Agronomy. Kalyani Publisher, Ludhiana.
- <http://seattletilth.org/learn/resources-1/city-chickens/compostingchickenmanure>



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