DEVELOPING RADIO PARTNERS

The Weekly

Information Resource Bulletin

The goals of the Weekly Bulletin are:

- Bring listeners in the project area the latest information on natural resources, the environment and agriculture
- Focus on solutions, what works and what people can do
- Encourage listeners to share both their questions and solutions (African solutions for African problems)
- Raise awareness of issues that need to be discussed to affect public policy.
- Bring the latest solutions and practices that have relevance to this region from around the world
- Identify and link other NGOs working in the region share the project interests and goals
- Give the participating journalists guidance and tips on their reporting on these issues

BioChar Focus

Biochar is charred organic waste material and can be used to enrich the soil.

It is created when waste materials such as sawdust, plants and manure begin to decompose.

As biomass products break down, they go through a process called carbonization. The gas produced by carbonization has a high content of carbon dioxide and other pollutants – which are a huge contributor to global warming.

Biochar can reduce these emissions from biomass that would otherwise naturally degrade to greenhouse gases and thus promote climate change.

Biochar can increase soil fertility, increase agricultural productivity and provide protection against some soil-borne diseases.

In Rwanda, for instance, Re:char, which designs and makes biochar kilns, has found that farmers who use biochar in their soil have seen a 30% increase in crop yield and are using 50% less fertilizer.

The Problem: Biomass

Biomass is organic materials such as animal manure, plants and forest debris – such as logs, saw dust and lumber.

The estimated biomass production in the world is a whopping 146 billion tons a year.

When these products break down they produce a gas that has a high content of carbon monoxide and other contributors to global warming.

Scientists estimate that humans are responsible for about 90% of biomass burning around the world.

Studies suggest that biomass burning has increased on a global scale over the last 100 years, and computer calculations indicate that a hotter Earth resulting from global warming will lead to more frequent and larger fires.

Since fires produce carbon dioxide, a major greenhouse gas, biomass burning emissions significantly influence the Earth's atmosphere and climate.

Vegetation acts as a natural storage area for carbon dioxide -- storing it over time through the process of photosynthesis. As burning occurs, it can release hundreds of years' worth of stored carbon dioxide into the atmosphere in a matter of hours.

Activities for Journalists

Use your community radio station to help citizens understand that the process of biochar is good for the environment by keeping harmful pollutants from contributing to global warming and because of its ability to make soil fertile for a long, long time.

The Norwegian Geotechnical Institute has conducted 18 field tests on biochar in several locations across Zambia. They include Mkushi, Kaoma and Mongu.

The findings were: biochar can strongly improve maize growth. The strongest effect was observed for the low nutrient, low water holding capacity sandy and clay soils of Kaoma.

In high quality, loamy soils biochar showed no or an even slightly negative effect.

Some farmers in Mkushi are already making biochar as part of the field testing with NGI using corn cobs and pigeon peas.

Making biochar is simple:

1. Take a 55 gallon drum, flip onto its side and punch holes in one side of it.
2. Fill the drum with wood and other organic materials and seal it shut.
3. Start a small fire and place four bricks around the fire to serve as a cradle.
4. Now, place the drum on the fire and make sure the side with the holes is over the fire.
5. After several hours, roll the drum off the fire onto a small bed of sand – make sure the side with the holes, are facing down.
6. Once the contents of the drum cool down – wet the char, grind it and work it into your soil.

Something interesting happens when biochar is produced through the heating up of biomass in the absence of oxygen. As a result of this process, the carbon in biochar does not break down and can actually hold carbons in soils for hundreds to thousands of years. In other words, there is no release of carbon dioxide and other pollutants into the atmosphere.

- Is biochar being used in your community?
- Is anything being done in your community to encourage the use of biochar?
- If anyone is using biochar to enrich their soil, have they noticed an increase in crop yields?
- Is the government encouraging the use of biochar?

Community Engagement

Urge listeners to send SMS, call or stop by the radio station to talk about the use of biochar to enrich their soil and their own experiences with it.

Useful Links

Information about farming and the environment: Makweti Sishekanu, National Farmers Union Zambia: +260-211-252-649 or +260-965-098-360. Email: makwetiskanu@yahoo.com

Illustrations on how to make biochar: http://www.instructables.com/id/Make-your-own-BioChar-and-Terra-Preta/

Info on Re:char: http://www.re-char.com/2013/03/11/black-earth-kicks-off-in-rwanda/

More on harmful effects of biomass burning: http://earthobservatory.nasa.gov/Features/BiomassBurning/

Background material on how biochar reduces global warming and fertilizes the soil: http://www.ngi.no/en/Project-pages/Biochar/Background/

Ongoing field tests in Zambia on biochar: NGI: Gerard Cornelissen, Expert Adviser, gerard.cornelissen@ngi.no Tel: +47 97724503: Presentation on biochar: http://www.ngi.no/upload/76829/Presentation_Gerard1.pdf or try NGI Head of Information Kjell Hauge, +47 934 49 533, kjell.hauge@ngi.no

Good source of information: Vincent Ziba, National Coordinator, Community-based National Resource Management Forum, Zambia; Email: vinceziba@vahoo.com. Phone: 0966-246-924

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