

Integrated Ag Options for Sustainable land used: Foundation For Farming (FFF) & Gasified Stove



**ECHO Asia Impact Center
270/5 Tonghotel soi-6
Watgate, Maung, Chiang Mai 50000**

**Boonsong Thansrithong
ECHO Asia Impact Center
Boonsong@echone.org
+66 (0) 818829094**

Rationalized

In order to help vulnerable people to have the sustainable agriculture practice, Integrated ag is one of the option among others. Vulnerable people faced land-used problem such limited land, poor soil, etc. Climate change had also impacted to most parts of the world. To combat with these two challenges I would like to introduce Integrated Ag Option for Sustainable land used : FFF and Gasified Stove.

Objective

- **To introduce FFF**
- **To demonstrate gasified stove**

Goal

- **Participant leaned and understand “FFF”**
- **Participants sustainable energy (recourses) used consciousness.**

Method

- **Slide presentation (power point)**
- **Demonstration**

FFF's History: Brian Oldreive, Zimbabwean Farmer, developed Foundations for Farming (FFF) as a **no-till system. The method encourages faithfulness with all that God has given us—**sun, soil, rain, time, seed and harvest**—in order to experience the God-given potential of the land. Emphasis on a God-honoring lifestyle and referred to as Conservation Farming.**

FFF vision statements

FFF mentions —an emphasis on **sustainable agriculture** as a model for life transformation of individuals, communities and nations.||

FFF System's Principles

- Spiritual Training.**
- Careful management-faithful stewardship.**
- Wisdom in caring for the soil.**
- Wisdom in caring for the crop.**
- Giving and Generosity.**
- Hope for the extremely vulnerable.**

Spiritual Training

Careful management-faithful stewardship (of the LAND) Activities are done:

- 1. On time**, (timing in Agriculture is critical) plan ahead, prepare well, start early and never belated.
- 2. At high standard**, Do every operations and details as well as you can with no shortcut. Be honest and honorable in all you do.
- 3. Without Wastage**, Don't waste time, Soil, Water, Sunlight, Nutrition, Labor, Energy, Opportunity....
- 4. With Joy**, Do 1-3 with joy and **thankfulness**. No need to fear and hopeless. **Than Hope will gave you Strength.**

*Being Faithful with the little that God has entrusted to us.
To begin with; Faithful with soil, rainfall, sunlight, heat-
units, seed and manpower. (Brain Oldreive)*

Wisdom in caring for the soil.
Included minimum tillage and use **mulch**. The fact is **Earth covered with natural layer of munch**. Minimum tillage help soil retains its natural structure with plenty of oxygen, microorganisms and humus. Mulch protect soil form runoff and erosion.

Wisdom in caring for the crop

Seeds are planted and fertilized precisely and accurately. Weeding is done conscientiously at key times.

Giving and Generosity

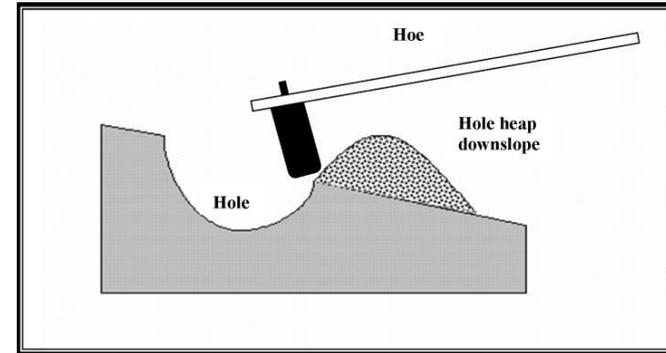
If you do not give you can not expected to keep receiving. You can not keep taking from the land without giving back to it. “What can I give rather than What can I get” Don’t think in terms of money only for the type and timing of God’s blessing are in His hands. Give your effort to do things well. give your actions and knowledge to other.

Hope for the extremely vulnerable.

They are people who have little resources. FFF requires less hand labor, fuel and/or animal power than conventional agriculture (though the labor input per hectare is higher)

FFF Step by Step Instructions; Become learner (plant manageable demonstration garden) Note: FFF not require tractor but simple tools such hoes, measuring taps, seed, Compost etc. Activities record to determine which practice work best

Land preparation (do not plow or burn) Identify land to be cleared, fenced, mulch the field as much as possible (blanket), used the permanent planting stations (rows or contour). Soil analysis. Fertilizer (compose should be applied before the rains. with mulch in place, a month ahead of planting .



Step 2: planting eg. plant three *maize* seeds to a hole (these will be thinned to two seeds per hole when the plants are still young and the soil is damp, for a total of 44,000 plants/ha). Seeds in each hole should be planted in a straight row and covered carefully with soil (make sure there are no clods of soil or rocks placed over the seeds).
Plant maize 5 cm deep

Soybean and wheat are planted in furrows rather than in the planting stations. For soybean, dig furrows 75 cm apart and plant seeds a matchbox thickness deep, 2-3 cm apart within the furrow

Step 3: Potential pest problems

Two possible ways to minimize this are to **plant as early** as possible, once the rains start, and to put **cobs** of maize directly on the surface of the ground so that rats and mice don't dig for seeds.

Step 4: Weed Control

Remove when small much easier to get rid of. Most weeds can be hoed just below the surface to cut off the roots, but creeping grasses will need to be pulled out. Weeding should not be much of an issue if you have a thick layer of mulch on the surface of the field.

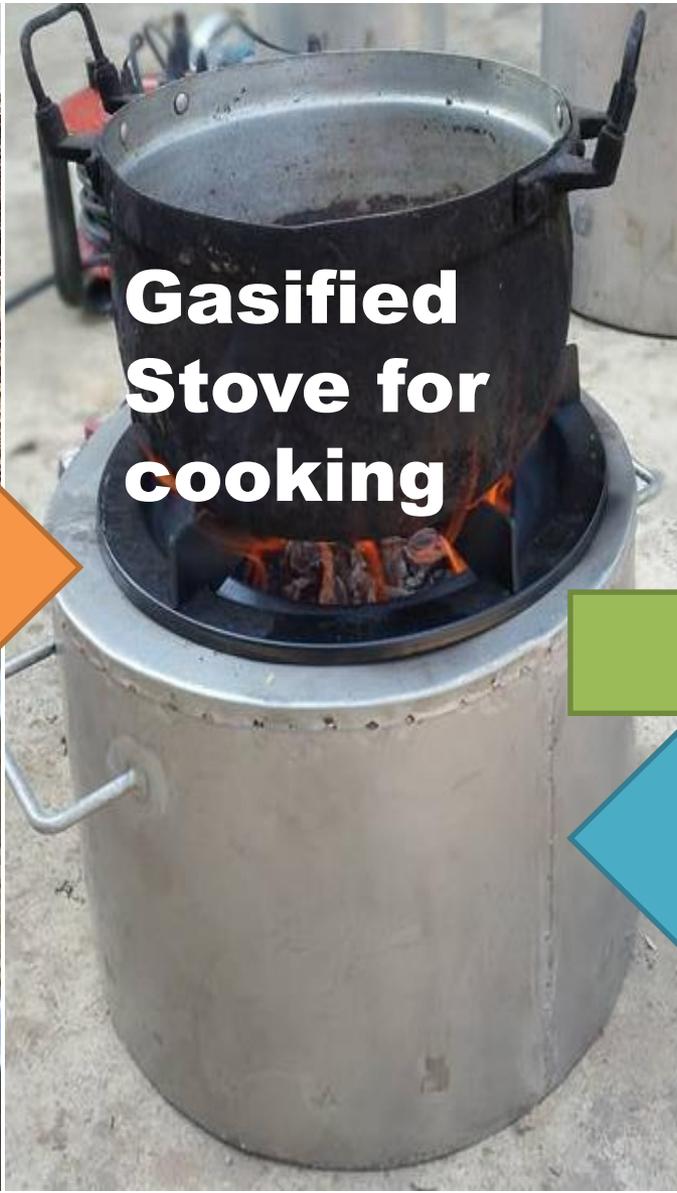
Step 5: Harvest and post harvest

After harvested, step on the base of the maize stalks so they lie on the ground between the rows. Leave them on the surface of the soil to improve the mulch and to help reduce weeds. This process also [breaks the life cycle of the maize stalk borer](#), because the borer pupates in the stem at the very base of the plant. If the stump is left upright, the pupa survives.

Step 5: Harvest and post harvest (Continuing)

A final weeding just before harvest (while maize cobs are drying on the plants) is **extremely important** to minimize the amount of weed. It is necessary in preparing the field for next year's crop. **The weeds left on the soil at the end of the season produced the seeds for next year's weeds. If left standing in the field, just one plant can it can produce 600,000 seeds! Or WEEDS**

Gasified: Energy, Biocha



Foods and Drinks

Soil Amendment



Formula

Charcoal
powder 4 kgs

Water 4
Liters

Cassava flour
200 grams

MIX together

How to produce Smokeless Charcoal





Download from
Dreamstime.com

This watermarked comp image is for previewing purposes only.



id 35336465

Madpixblue | Dreamstime.com

