Natural Resource Management Programmes

- **All year round vegetable production using underground water in dry season**
- **Harvesting run-off rain water**
- **Smokeless briquettes and energy saving stoves (reduction in tree cutting for charcoal use)**
- **Use of IMO - Indigenous Micro Organism** ***(this presentation is going to concentrate on IMO)***

IMO

Indigenous Micro Organisms

What are IMO?

- Indigenous micro organisms are naturally occurring indigenous, organic bacteria that have uniquely evolved and thrived in your own local area – in other words, living bacteria in the soil or in the air.
- Indigenous micro-organisms are a powerful and effective natural resource that improves the soil conditioning and crop health.

The micro-organisms are easily collected from local woods or fields using a simple wooden box containing steamed rice. These are micro-organisms that exist in the land, in the air and have survived and adapted to the local environment for hundreds or thousands of years.

Ingredients !

The IMO is made from a mixture of cooked rice, sugar, maize bran and water

The process will be outlined later – let's first look at the uses of IMO.

Uses of IMO ?

- IMO is a natural environmentally friendly, anti-bacterial farming method which can be used as an organic fertiliser
- One can use IMO for vegetable growing, pig and poultry rearing, making of cheap pig, chicken and fish feed and also for hygiene in pit latrines ……

and get results in days/weeks/months that would otherwise take years.

Other Uses of IMO ?

- In pig rearing IMO is used for spraying the piggery house to control the smells and reduce the spread of diseases.
- Pig feed is made by adding saw dust, maize or rice bran to the IMO liquid.

Look how clean the pig stys are !

Mama enjoying a little feed made from IMO !

Other Uses of IMO ?

- In fish farming IMO is used to improve poor water quality as result of ammonia gas produced from fish excretion which affects growth of fish – simply pour the IMO solution into the fish pond.
- Used as a good fertilizer to improve soil fertility and crop growth.
- Acts as disinfectant to piggery house and removes smells.
- Eradicates insects e.g. flies, mites, jiggers from the piggery units hence preventing an outbreak of parasites and diseases
- Natural heating system, it helps the livestock to develop the natural resistance against cold.
- IMO is use as a de-wormer for animals, drink the liquid IMO.
- Used as liquid fertiliser, IMO improves vegetables production.
- Removes smells from pit latrines – households discovered this for themselves.

Beneficiaries using IMO in their garden

In urban areas households can use IMO for vegetable growing in kitchen gardens (pots or bags) outside their houses

Improving Household Food and Economic security – a ready supply of vegetables for sale through using IMO

IMPACT OF IMO

In the Mukono area of Uganda during an outbreak of swine fever – the only pigs that survived were those where IMO was used by the beneficiaries of CHIN, the SSHJM Children in Need Programme,

Proof of Impact

Bananas (matooke) is the staple food in many parts of Uganda. During an outbreak of wilt at banana plantations one of our groups tested the use of IMO solutions by spraying the IMO liquid on the banana leaves - the beneficiaries discovered that the entire weevil was dead while the rest of the IMO was put on a wilted banana plant and it was revived.

Another 12 beneficiaries reported that previously their banana plantation gave them only 7 bunches of bananas in a month, but at the time of recording they are able get 13 bunches. This really improved household income.

PROCESS OF MAKING IMO

1. Prepare 1kg of steamed rice [or cassava, matoke, Irish potatoes, sweet potatoes} and leave it to cool
2. Mix in tea spoon - 50g of salt, then make a ball (see following slide of basket of little balls)

PROCESS OF MAKING IMO

3. Place it in grain bag or piece of cloth such as mosquito netting and tie.

4. Protect the grain bag against rats and insect bites by hanging from roof of building for about one week

PROCESS OF MAKING IMO

5. Select ground with shade, dig 6-7cm deep loam soil because the loam soil contains micro organisms (loam soil - top soil, black soil)

6. Place the ball in the hole and cover with loam soil and leave for between 5-7 days to attract micro organism from the soil

PROCESS OF MAKING IMO

7. After 5-7days remove the fermented steam rice ball from the soil and break the steam ball rice into small particles.

8. Mix with 1 kg sugar and put in a porous bag,(could be a polythene bag with holes) tightly sealed and hang up in a dark place (no sunlight) and leave for 7 days. This is mainly to attract micro organisms from the air. Micro-organisms need sufficient temperature and humidity to survive. The mixture is now fermented.

PROCESS OF MAKING IMO

9. Fill a 250 litre water drum with water. Add in the fermented contents of the porous bag together with 3kg of maize / rice bran (this acts as a food for the micro organisms). Stir the liquid every day for 3 days.

10. After 3-4 days, you will get a sour smell - this proves that IMO is ready for use.

PROCESS OF MAKING IMO

11. IMO liquid will last for one month if you put in sugar and stir.

12. To make more IMO, just keep on adding liquid as you have the micro-organisms already.

13. It can be mixed with rice bran or maize bran to make feed.

Information on other Environmentally Friendly Activities is available separately such as **all year round vegetable production** as a result of the underground water initiative - digging underground water wells during the dry season as a collection point, low cost irrigation machines (manual treadle pumps and extension pipes) are used to draw up water from the water well to the vegetable garden

Vegetables available all year round

Full Details on the process of making the smokeless briquettes and energy saving stoves will be given separately- just giving a brief overview here

Carbonising the waste material such as dry leaves, maize cobs, grass etc from which the briquettes are made

Making the energy saving stoves

While groups were initially trained in using iron sheets to make the stoves, community members are now making stoves simply using local clay material – more sustainable and less costly.

Details on the process of making the briquettes and stoves available separately