



Indo-Global
Social Service Society



LIVING SOIL, LIVING SEEDS FOR FOOD AND FREEDOM -ISSUES AND TECHNIQUES

20th to 22nd June 2016 | Sambhav, Nayagarh

2016

Training on Living soil, living seeds for food and freedom: Issues and techniques

20th -22nd June 2016 | Sambhav, Nayagarh Odisha



Organised By-



About the Training

A field training on Living soil, living seeds for food and freedom, was organised by AJSA in joint collaboration with Sambhav Nayagarh. Sambhav is based in a remote hilly terrain of Nayagarh district in Odisha. During the training participants were practically and involved and trained on Organic Farming. During the training Seven participants from IGSSS were attended the training. The training was facilitated by Ms. Namita and Ms. Sabarmatee of Sambhav, Nayagarh.

The report is being prepared after having conversation with the participants and the trainers, which explains about their experience, what they had learnt during the training.

DAY- 1 (20th October 2016)

The training was started with a brief round of introduction and Ms. Sabarmatee explained about the basic campus rules and gave an introduction to inception of the organization. The whole training was based on the concept of “learning by doing” and on-field demonstration.

The participants walked with Sabarmatee to learn about living by experiencing and observing.

Understanding living soil – All the participants were distributed into three groups and

were asked to go in different direction and collect the soil from specific point's and observed the quality of soil. Then they came back to one point and explained what they had experienced with that specific soil. They had not only saw things, also touched and smelled and compared with the kind of soils they had seen. They understood how the



moisture content was different, how the soil smelt, how so many life forms were found under the heavy mulch around the trees, how the weight was lighter there, how the colour

was different and so on. They also came to know about- what exactly a good living soil is like. For many of us such experience was unique. This changed our perception of good soil and attitude towards soil at the first place.

Feeding of soil and plants: Some insights For trees, we have to see the spread of the canopy or the shade of the tree in the middle of the day. Draw an imaginary straight line



from the trunk to the end of the canopy. Most of the feeding roots lie between the middle portion and the end of the canopy. Make a circle around the tree anywhere within that area which need not be more than 9 inches deep and 9 inches wide. It will look like a channel around the tree. While digging the channel, keep the upper half portion of the soil in one side and the lower half of the soil in another side. Make holes with crowbars at the bottom of the channel. Sprinkle some

compost first. Then fill up the channel with various organic matters such as weeds, crop residues and so on. If available, sprinkle some ash. Keep in mind not to put feet on the area where all these materials are given. If space is not available to make circle around the plant, then we can make semi-circles, smaller pits also at convenient points.

In case of creeper vegetables, we have to see the first 3 to 4 big leaves and take the judgment of the circle accordingly

Basket Compost: This is one of the methods to provide in-situ nutrients to tree crops.

Materials like compost, grasses, crop waste, cow dung, cow urine, and charcoal in a basket-like space between two or four trees. Then water is added to the heap of these materials. We do not have to take away anything from here like we do in compost. Here, composting is an on-going process. We just have to go on adding all such materials continuously and slowly they get decomposed from below. The heap also



keeps the root zone moist. In the photo below, such basket compost is seen which was made between two coconut trees.

Weed Management: Weeds are not considered as enemy in organic farming, rather used to enrich soil. Nature has created them with a purpose. We can remove them from around the planted crops, mulch them which can conserve moisture and also after getting decomposed, provide nutrition to the plants. It provides habitat for soil life which help in decomposing the organic matter and also make the soil porous resulting in better water infiltration and soil aeration.

Stone / brick mulching: If there is stone or a brick lying in a place and there is no rain



for 2-3 months, if we turn that we can observe, the area below the stone or the brick is moist, we may find some soil organisms, no grass comes through it and the soil is also highly porous. We simply use this knowledge to help a planted seedling to survive in a place where watering is difficult in dry season and stones are available in that area. We just need to put the stones around the plants in a circular manner which is called stone mulching.

Micro Basin: This is a very simple method for harvesting water in the slightly sloppy area. Just by digging by 1 foot wide and 9 inches deep channels towards the plant and a semi circular bund behind the plan joining the channels in the front. It captures the top soil as well.



Satavari (*Asparagus racimosa*) Plant: The sequence of flowering of this plant helps us to predict the pattern of monsoon in the next year. If there is flowering in the beginning and then no flowering it means there will be rain in the first part of the monsoons and then in the next month there will be less rain during monsoon. We need to document, observe and understand such indigenous weather knowledge from the people to develop climate resilient strategies.

Asparagus (Shatavari)

➤ **Termite:** As we all know that nature has assigned the 'task of cleaning' to termites. It never eats living things. The soil of termite hill is very useful in organic agriculture like soil amendment or seed treatment.

➤ **Glaricidia :** Glaricidia leaves are used as good materials for green



manure and also used for fencing.

Day – 2 (21st June 2016)

Kitchen Garden Bed: The bed is very useful for plantation of kitchen garden. We understood the concept of preparing the kitchen garden bed. Here we saw two types of kitchen garden preparation. One is a spiral way and another is straight way.



Some planting tips: We understood about planting creeper vegetables in such a way that the shade of sun does not affect the growth of neighboring plants. So it is better to plant creeper vegetables in north south direction. Sowing and harvesting according as per the phases of moon is also helpful. It is better to plant seeds in the brighter phase of moon and also in morning time and plant seedlings in afternoon and in darker phase of moon.

- **Raised garden:** This method of kitchen garden is very simple and requires very less space. Persons having problem with bending and persons on wheel chair can work on this raised garden. By using bricks or stones it can be raised up to a height convenient to work for the person who will use it most. Fill it with soil and compost. On the top, plant species like tomato, brinjal, chilli, ladies' finger etc. and in the holes around the brick structure, more perennial kind and hanging type plants like mint and some leafy vegetables can be planted.



Various types of rainwater usage and erosion control methods for tree crops:

This method is helpful for the slope land area and if we want to do plantation in large field. Mainly it works on the principle of moisture conservation and check soil erosion.

Netting (photo below) is one such method helpful for plantation in the large fields and in slope land preventing soil from erosion and direct the flow of water towards the plant





Day – 3 (22nd June 2016)

- **Bed preparation** : On field preparation of Bed for Kitchen Garden



Selection of good rice seeds before nursery preparation: First we put a potato in the plain water in a container and found that it drowned. When we put a handful of rice seeds in the plain water, some of that floated and some drowned. We removed the floating seeds using a strainer. Those seeds are like chaffy grains which do not germinate when put in nursery. Then we mixed up salt in the water until the potato floated and put the rice seeds that drowned and settled in the plain water. Remove the seeds that floated in salted water and use them which settle at the bottom. Those seeds germinate best. We should remember that we should not soak the seeds in saline water at all for long



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- **Seed Ball preparation:** Here we need cow dung, ash and termite soil to process the paddy seed. First of all mesh cow dung, ash and termite soil using water and prepare a solution. Now take small part of the soil thus formed in one hand and paddy seed in another hand and just rub it like the whole seeds get coated with the preparation. Then dried it completely in the sun so that no moisture available in the seed. This we can use at the time of direct plantation or keeping for a longer duration. This solution can also be used to prepare seed ball and preserve seed for a longer duration.



Tools used in SRI cultivation: Then we are also shown the various models of weeders and markers used for SRI. There are some tools that they have modified also.



➤ **Fish Tonic**

Fish tonic used as a preventive medicine for plant

Material required for preparing this tonic are

- One part Fish feather
- One part jiggery

Method of preparation

Put this into a bottle/jar and keep it. It will become medicine in 15 days' time during summer and 30 days' time during winter.

Method of use

Once it is being done it can be used for 6 months then after this medicine will become expire. In one liter of water 5 to 10 ml of liquid can be added and use as a preventive medicine

➤ **Garlic and Karanj Oil**

Material required

Garlic 250 gm

Karanj oil/neem oil/ kerosene up to 500 ml

Method of preparation

Put all these in to a bottle/jar and keep it for 12 to 24 hour after that it will become medicine

Method of use

This is used as preventive medicine for insects repellent and anti-bacteria. Don't use it for small plant. It can be used only for long term plant. It must be used in the morning and evening hour only. Use up to 5 ml of this oil for preventive measures and upto 10 ml for this oil for curative measures. Spray it in every 15 days up to flowering time only.

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