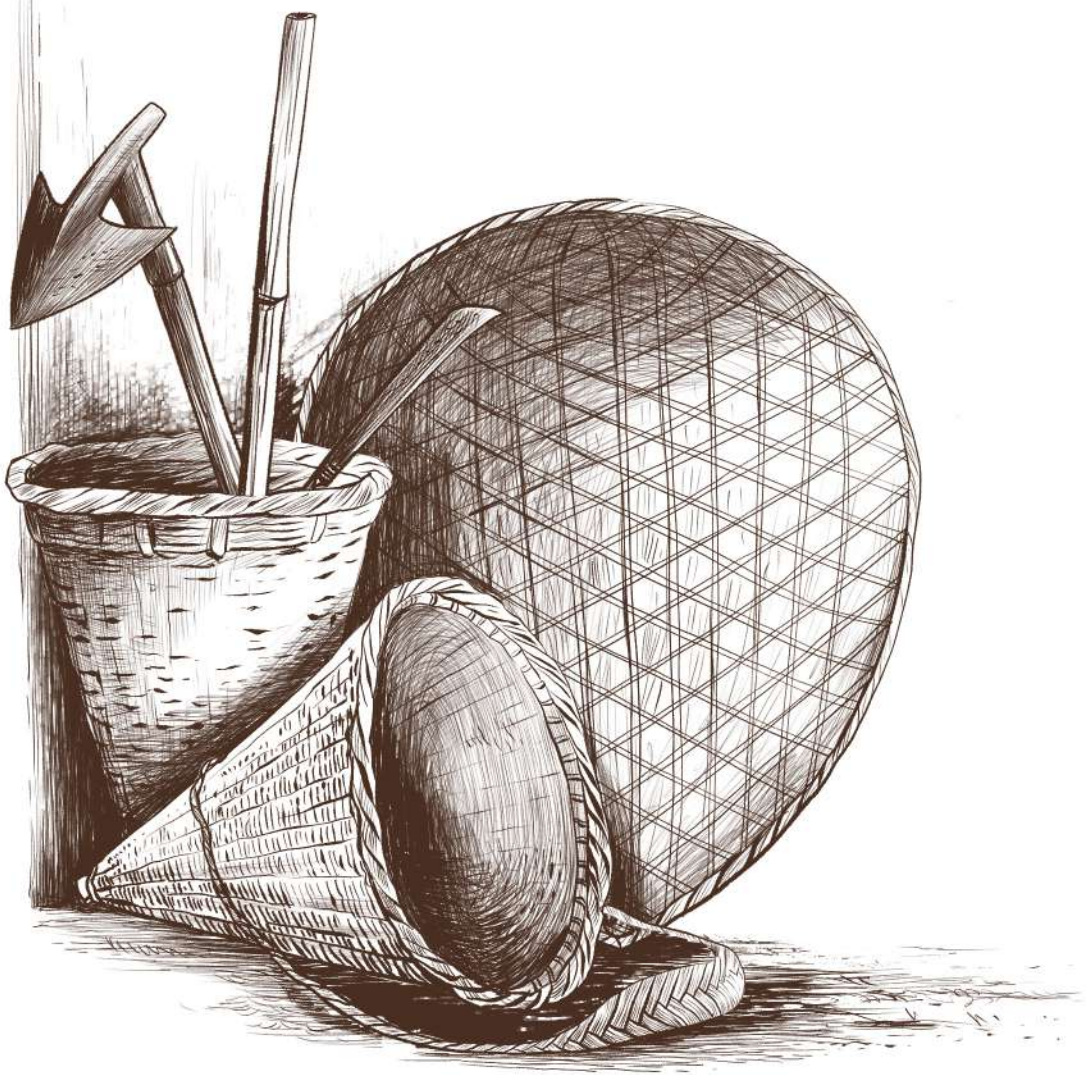


Natural Farming

MANUAL



ग्रामीण विकास मंत्रालय
भारत सरकार
**MINISTRY OF RURAL
DEVELOPMENT**
GOVERNMENT OF INDIA



NATURAL FARMING

Field Manual

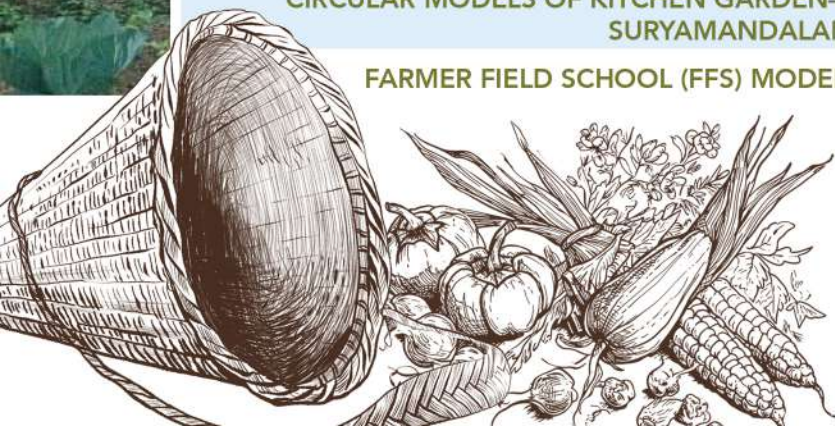


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Designed by KMC Unit, Meghalaya State Rural Livelihoods Society (MSRLS)
with inputs from State Anchor, APCNF

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GENESIS

Natural farming is a traditional method followed from our ancestors—It is a holistic land management practice that leverages the power of photosynthesis in plants to close the carbon cycle, and build soil health, crop resilience and nutrient density.



OBJECTIVE

Transform farmers into Natural farming by increasing their income along with Sustainable agriculture practices & improve Nutrients quality.

WHY NATURAL FARMING?

Farmer Distress

- High costs of Cultivation
- Acute water shortages
- Droughts, crop failures
- Unseasonal rain
- Market uncertainty



Consumer Food Plate

- Food scarcity
- Chemical residues
- Lack of Nutrients



Environment Crisis

- Soil degradation
- Water stress
- Global warming
- Decreased bio diversity & air pollution



STRATEGY FOR SENSITIVE SUPPORT & CONTINUOUS HAND HOLDING OF FARMERS

- A. Selection & Deploying Internal CRPs from the Lead farmers within the Village/ Cluster -with the support of the External CRPs from APCNF
- B. The External CRP rounds will be every year comprising of 45 Days/round
- C. Internal CRPs paid according to working days in a Month
- D. Transforming Internal CRPs to Master trainers
- E. Saturation of all households in Natural farming villages
- F. Models developed in a Resource Blocks are Exposure site for other Districts/other states



Rolling out of Natural Farming in Meghalaya



ICRP

**MASTER
TRAINER**

**Block/District
Resource
Person**

ICRP PROTOCOL

- I. Selected from Krishi Sakhi/Lead farmers
- II. Handhold support to community farmers along with ECRP
- III. ICRPS—Active engage during round break of ECRP
- IV. Practice own land in Natural farming by developing models
- V. Weekly conducting of Farmer field schools -regular maintenance of register/record
- VI. 38 Colum register to be updated every month-record data of farmers, models etc. by the ICRP, handhold support will be given by ECRP
- VII. NPM shop, Seed bank &CHC regular follow-up
- VIII. Submission of monthly reports to BMMU/ DMMU/SMMU

ECRP PROTOCOL



- I. Identifying new lead farmers and transforming them to NF
- II. Trainings & Demonstrations of NF-principles along with ICRP
- III. Conducting farmers field school
- IV. Developing NF Models
- V. Trainings on record keeping & registers
- VI. Convergence with allied departments by explaining NF methodology
- VII. Responsible for Melas, Exhibitions and Demonstrations in any meeting at Village/Block /District level



ECRP providing on-field demonstration



BMMU SUPPORT

1. Fund flow for conducting Farmer field schools & Training material cost for demonstrations -Mobilizing the SHG/VO/ Lead farmers to participate in live demonstrations of bio-stimulants and Models
2. Analyzing any difficulties in adopting NF-techniques at the field thus by providing appropriate support to the community
3. Weekly/fortnight review of cadres
4. Convergence at block level with allied departments for Cattle sheds/CHC/NPM shops seed banks any other required materials
5. Monthly reporting status update to DMMU/SMMU.

DMMU SUPPORT

1. DMMU are expected to conduct district debriefing & field visits to the project sites
2. Payments of ICRPs& other cadres Honorariums timely any advances, Expenditures as per approved cost norms
3. Identifying new villages for scaling up of Natural farming.

SMMU SUPPORT

1. Monitoring & Debriefing at state level
2. Coordinate with APCNF & other GoVT.agencies for bringing new resource pool and timely execution of programme.
3. Addressing any challenges and sort out timely for the effective implementation of the programme.



9 PRINCIPLES OF NATURAL FARMING

1. Cover Crops

Covering soil with live crops is one of the key practices that build soil in less time by adding carbon to the soil, besides giving additional income from the crops. Live crops increase soil carbon in a short time through a phenomenon called Rhizodeposition (releasing of photosynthates through the root hairs into soil). For all the living organisms, energy is obtained by consuming food. Plants are the primary producers of food (by means of photosynthesis) and every other organism derives energy by consuming food prepared by plants eventually.



The food material (carbon substances) is prepared by plants by using CO₂ gas from atmosphere. Around 40% of the food material is utilized for shoot development, around 30% is utilized for root development and the remaining 30% is released into the soil from the root hairs. These root exudates start the soil food web in the soil.

The quantity of residues exuded from roots is more while the crop is in vegetative stage. A portion of these exudates, being rich in carbon also convert to soil organic carbon which contributes to (i) improved soil biology (2) better soil structure resulting in improved water holding capacity of the soil; and better infiltration capacity of the soil; (3) and plant roots easily grow deep in such soil. For these benefits, soil should be ensured of living roots throughout the year so that Soil Organic Carbon continuously increases.

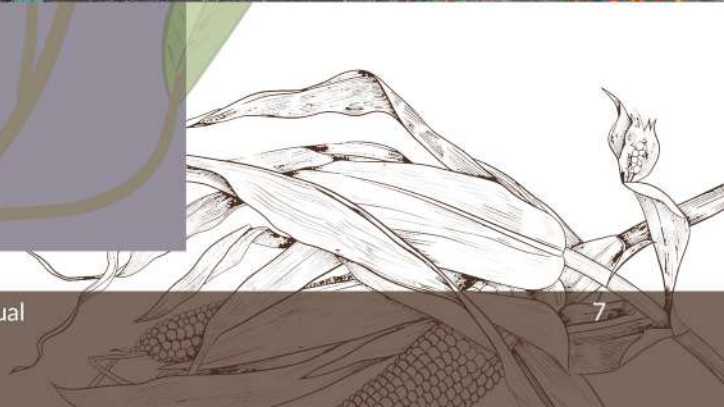
2. Crop Diversity

Ensuring diversity while growing crops is very important for the following reasons:

- (1) diverse food available for consumption
- (2) Different root depths of root systems of different crops improves the depth of soil quickly
- (3) crop losses due to specific insects, diseases is minimized
- (4) pest build up is slowed down or stopped in fields with diverse crops
- (5) productivity (yield) of whole land increases

with increase in diversity. Crop diversity increases the total yield of the land (Jena's experiment in Germany).

Here diversity should be from 4 different plant groups, and a minimum of 12 crop species at any given time. Each crop has specific microbial associations with their roots in the soil. Ensuring diversity of crops ensures microbial diversity in the soil also. Above ground diversity reflects soil microbial diversity.



3. No/Minimal tillage

The following results will be obtained if a soil is not tilled.

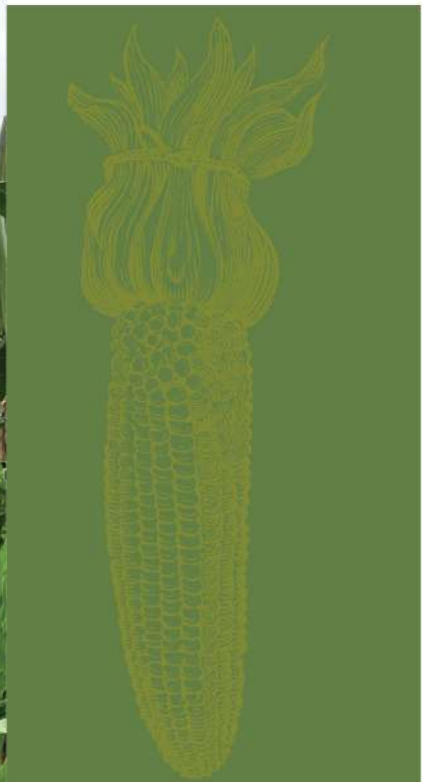
(1) due to activity of crop roots, earthworm activity and other insects' activity, the tunnels will become strong if they are no destroyed by tillage.

(2) the tunnels allow lot of water to absorb into soil and reduce run off

(3) the tunnels will help crop roots to grow deeper very easily and —provides better anchorage to plants in times of floods, allows roots to access nutrients and water from deep layers.

Deep summer ploughings are banned in Natural Farming. Every farmer will be encouraged to develop models that will be permanent and will not involve land preparation or intercultural operations that involve tillage.





4. Integrate animals

In nature, trees and animals depend on each other to grow. In APCNF practices, it is important that crop planning should include fodder crops, and also integrate animal (buffaloes or cows) by-products (such as dung and urine) to be used in the preparation of NF inputs (like Jiwamrit ,Bijamrit, etc) in agriculture crop production. In situations where PMDS crop is being grown for green manuring purpose, allowing cattle to graze in the fields is much better than incorporating the crop in the soil. Cattle will eat healthy grown fodder.



5. Bio Stimulants

Bio stimulants work by enhancing the plant's ability to absorb nutrients so it can develop properly. When applied to soil, bio stimulants improve the soil's complementary microbes that help a plant's roots thrive and form a beneficial symbiotic relationship. Applied in large quantities. But in Natural Farming, only small quantities are being used. Biostimulants are all natural and biologically derived.

Examples of bio stimulants – Bijamrut, Jiwamrit, Panchagavya, Saptadhyanua kashyam, etc.

6. Addition of diverse organic residues

Besides a live crop, having organic residues spread on soil as a mulch is very beneficial. Mulch provides the following benefits:

- (1) avoids compaction of soil caused by beating action of rain.
- (2) protects soil from the heat of the sun and it helps retain more soil moisture, and provides better living conditions for the soil organisms.
- (3) the nutrients and water in the residue stocked in the residues are gradually released into soil upon decomposition.
- (4) during rains, presence of mulch on soil surface reduces the erosion of soil and reduces runoff of rainwater.



7. Local Seeds

Farmers generally have been using and reusing seeds that they select and develop. Local seeds have many benefits like: (1) resistance to pests & diseases (2) tolerance to droughts and flooding (3) inexpensive (4) respond well to natural farming practices (5) nutritionally and taste wise better .Using local seeds for poly cropping situations is economically doable.

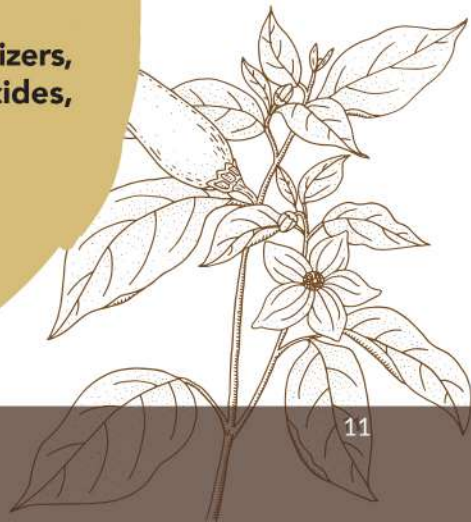
8. Pest & Disease Management

Yellow/Blue/White Sticky Traps: To Monitor the incidence of white fly, Jassids, and other sucking pests. In Chilli Blue Sticky traps used to know the incidence of Thrips
How: Apply Grease or Castor oil to yellow, white or blue Plates and install in the field little above the plant's height.

Pheromone Traps: To know the incidence of yellow stem borer in paddy Diamondback moth in brinjal, Helicoverpa in pulses, and Spodoptera in chilli. In creepers Install Pheromone traps for Fruit flies.

Trap Crops: While sowing the main crop ,Marigold seedlings, Castor Seeds, Mustard seeds to be sown. Harmful insects like Helicoverpa, Spodoptera attracts to these trap crops and Lays eggs on these trap crops We can observe those eggs and destroy them immediately

9. No use of Agrochemicals (Fertilizers, Insecticides, Fungicides, weedicides, etc.



FOUR WHEELS OF NATURAL FARMING

1) *Bheejamrutham*

Ingredients Required for
Bheejamrutam:

For 100 kg seed use water 20
liters

Use cow urine 5 lit

Use Cow dung 5 kg

Use Lime 50 gm

Use handful of virgin soil



2) a) *Jeevamrutham*

Take 200 liters of water in the
drum.

Add 10 kg of cow dung to it and mix
well.

Add 10 litres of Cow urine

Add powdered jiggery and chick pea flour,
mix it well.

Cover the drum with jute bag and let it
ferment for a week by mixing every two
days.

This mixture can be used after 4-5
days of mixing.



b) *Ghanajeevamrutham*

Cow Dung 100 Kg and Cow urine
10 Liters

Besan (Pulses flour) 2 Kg

Black Jaggery 2 Kgs

Virgin soil (500 gm)



3)

Acchadana - Mulching

There are three types of mulching:
a. **Soil Mulch:** This protects topsoil during cultivation and does not destroy it by tilling. It promotes aeration and water retention in the soil.

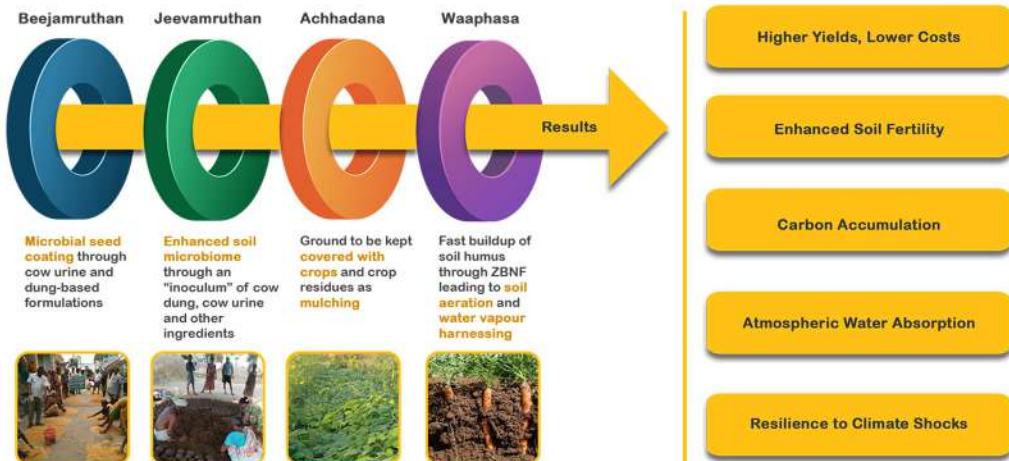
b. **Straw Mulch:** Straw material usually refers to the dried biomass waste of previous crops, but as Palekar suggests, it can be composed of the dead material of any living being (plants, animals, etc).

Live Mulch (symbiotic intercrops and mixed crops): It is essential to develop multiple cropping patterns of monocotyledons (monocots; Monocotyledons seedlings have one seed leaf) and dicotyledons (dicots; Dicotyledons seedlings have two seed leaves) grown in the same field, to supply all essential elements to the soil and crops. For instance, legumes are of the dicot group and are nitrogen-fixing plants. Monocots such as rice and wheat supply other elements like potash, phosphate and sulphur.

4) Whapasa - Moisture

Whapasa is the condition where there are both air molecules and water molecules present in the soil, and encourages reducing irrigation.

Four Wheels of APCNF



BOTANICAL EXTRACTS

1) Chilli Garlic Solution

Alkaloids like Capsaicin and Allesin present in chillies and garlic respectively will act through contact. These will create tingling effect on the insects and will make them become sluggish, inactive and fall from the plant tree and die.

Required Materials

- Green Chillies - 3 Kg
- Garlic - ½ Kg
- Kerosene – 250 ml
- Soap nut powder – 50 gm

Method of Preparation:

- Grind the chillies after removing the petioles and add 10L of water to it. Keep this solution overnight.

- Grind the 1/2 kg garlic and add 250 ml kerosene and keep overnight. Next day morning filter the chilli solution through a thin cloth. Do the same for garlic solution.

- Mix chilli solution, garlic solution and soap nut powder thoroughly and make a mixture

- Add 100 Lts of water to the above solution. This can be applied for one acre

Precaution:

- Apply oil to the body while preparing this decoction
- Cover the body while spraying
- Apply this solution only one or two times during the cropping season.



2) *Neemasthram*

Used against small and sap sucking pests.

Method of Preparation:

- Mix 10 Kg of grinded Neem leaves into 200 L water.
- Add 10 L cow urine and 2 kg of fresh cow dung to this mixture and mix well.
- Let it ferment for 48 hrs 24 hrs and filter through a cloth.
- Spray the solution directly on the crop without mixing the water in the fields.



3) *Agniastram*

Presence of Alkaloids makes this concoction effective in pest control
This decoction is effective against the most of lepidopteron pests like Helicoverpa, Spodoptera and Red hairy cater pillar etc.

Required Material:

- Neem leaves – 2-5 kgs
- Tobacco waste – 1 Kg
- Garlic – 1Kg
- Green chillies – 1 Kg
- Cow urine – 10 L

Method of Preparation:

- Grind all the above mentioned materials except tobacco waste.
- Add tobacco waste to the mixtures and boil in 10-15 lts of water for half an hour. Then cool the contents.

- Take 3 lts of filtered extract add 10 L of cow urine, 100 lts of water spray for 1 Acre. The filtered solution can be stored upto 3 months.

- Store it for 10 days.

- Filter this solution after 10 days and add 100 L of water and this can be sprayed in 1 acre of land.

Precaution:

- This can be applied on 1-2 times during a crop period to get maximum benefits.
- Don't store the solution.
- Apply oil to your body while preparing the solution.
- Cover your body while spraying the solution



4) *Fish Amino Acid*

- Take 2 kgs of fish and same quantity of jaggery keep it in a pot.
- Stir it daily for 15 days.
- The entire fish is digested
- Then take 250 ml of Fish Amino acid mix it in 100 L of water and spray in 1 Acre.
- It acts as a growth promoter Veldt grape Concotion – for mealy bug control (veldt grape /devils back bone /Asthi samharaka /Sissu quadrangularus)
- Take 3 kg plant material of Nalleru /veldt grape
- Take 3 kg of tamarind • 500 gm of soap nut
- 300 gm of hing
- 10 litres of cow urine Grind all the above ingredients and keep it 10 litre of cow urine and ferment it for 10 days.

The solution is ready, filter it and take 3 litres of filtered solution add to 100 litre of water and spray in one acre. It effectively controls the mealy bug.



INCOME GENERATED MODELS

ANY TIME MONEY-MODEL (ATM-MODEL)

Purpose:

The majority of farmers are small or tenant farmers who face financial challenges due to uncertainty in cropping methods. The main objective of this cropping system is to provide high yields to farmers with limited land, approximately 20 cents.

Crop Method: In this method, the soil should be lightly plowed, creating a 4-foot bed. Between each bed, there should be a 1-foot

width and a 1-foot deep canal. This design allows water in the canals to reach the root system of crop plants through horizontal flow.

After seed treatment, sow radish in the first row, beetroot in the second, and carrot seeds in the third, maintaining a distance of 4 inches / 10 cm between each seed and row-to-row. For rainfed lands, sow seeds as seed balls. In the centre of the 4-foot bed, sow sorghum seeds, two feet apart, with a one-foot distance in the row.



ATM Model in Umkrem Village, Eastern West Khasi Hills

On the bed, plant greens as companion crops. Apply good quality solid organic fertilizer (Ghana Jevamrutham) at the time of sowing (400 kg/acre). On both sides of the canals, plant income-producing and trap crops such as tree legume, turmeric, ginger, and

border crops like red gram, Pearl Millet, and Jowar, maintaining proper distance.

Spraying Drava Jevamrutham once every 15 days contributes to good yields. The income starts with greens around the first month after

planting and continues monthly from radish, beetroot, carrot, millet, and other crops, respectively.

In this system, intercrop radish with carrot in the first row, beetroot

with radish, carrot with beetroot, and practice relay cropping after their cropping season. Ensure not to repeat the same crop after removing the plants in a row.



ATM Model in Jambal Rongsil Village, East Garo Hills



Why Follow This Approach?

- Income starts from the first month, providing year-round financial stability.
- Ideal for small-scale farmers due to minimal space and investment.
- Cultivating different crops results in a variety of nutrient-rich yields, promoting health.
- Favourable for later storage due to the abundance of tubers.
- Increases nutrient levels, soil water-holding capacity, and biodiversity. Reduces pollution, soil erosion, and water consumption.

- Bedding improves soil uptake of crop products and controls weeds.
- Border and trap crops protect from insects and pests.
- Complete soil coverage provides soil protection.

Crop Details:

1. Radish/Carrot/Beetroot: 4 inches / 10 cm
2. Sorghum/Marigold/ Field Bean /Turmeric/Ginger/Jowar/Pearl Millet: 1 Foot or 30 cm
3. Pigeon Pea/Castor Oil: 1 Meter

INCOME GENERATED MODELS

A-GRADE MODEL

Objective:

To Cultivate crops in an acre to get better yield equal to five-acre (5-acre) land.

What is A Grade?

The method adopted by the farmers to grow five primary crops to earn income is referred to as the A Grade Model.

Why A Grade Model?

1. Currently, farmers practice a mono or single cropping pattern on their farms, resulting in over-ploughing of farmland, excessive use of pesticides, and leaving the land barren or fallow (crop holiday). This method leads to a low carbon content percentage in the farm soil. Moreover, the mono or single cropping system attracts increased pests and infestation, high doses of fertilizers and pesticides reduces the level of resilience to natural calamities which leads to economic burden or farmers are losing income.

2. The A Grade Model consists of five main crops and 20 types of biodiversity crops. This farming practice supports the growth of friendly pests and non-friendly pests that create a balance in nature and leads in controlling or decreasing diseases and intensity of pest attack. Growing various types of crops for 365 days not only fetch money on monthly basis to farmers, but also they prosper economically.



3. Seeds Must be made as seedballs by mixing soft soil, Ghanajevamrutham, and ash together as a binder or as seed granules, and then sown. In this method, seeds are protected from higher temperatures and also survive. Seedlings give good yield even in low rainfall conditions. Even if there is no rainfall, the seeds survive for six months through this practice. This method takes seeds to germinate within the 5-10mm rainfall.

4. Plants release thirty percent of food (carbon) into the soil through their roots. This attracts various types of microbes, leading to an increased number of microbes and their biodiversity in the farm. In this form of agricultural practice, soil is covered all 365 days, and this enhances the soil's health. With low investment farmers gain more income.



A Grade has 5 main/primary crops depending upon the situation; this can be practiced in two ways:

1. Rainfed - A Grade
2. Irrigated - A Grade



1. A Grade—Rainfed

Depending upon the characteristics of the plants, the A Grade method must be adopted in rainfed agriculture. In This type, five kinds of primary crop seeds/plants should be selected to sow or plant based on their characteristics. These 5 types of primary seeds are resilient to heat and low rainfall. These five types of crops survive in low rainfall and give good yields.

Seed requirement for per acre A Grade Rainfed Model:

Pearl Millet - 1.6 KGs

Castor - 2.0 KGs

CowPea - Alasanda-2.0 KGs

Red Gram - Kandulu-2.0 KGs

Indian Bean/Lablab- 6.0 KGs

Biodiversity crops - 5% (20 types).

These crops cover the soil for 365 days, require low investment by farmers, and provide good income.

How to Rainfed A Grade Model?

1. Select five types of primary and biodiversity crops to grow in the farm. Depending on their shape, prepare seed balls or seed granules separately.

2. Apply 400 kgs of Ghanajevamrutham per acre.

3. Before the arrival of the monsoon rains, in March, make seed balls of the chosen/selected

seeds and sow them separately with the support of a seeder.

4. All five crops of primary and biodiversity crop seeds must be sown within the 1 square meter plot.

5. Five types of primary crop seeds must be made into seed balls before sowing. This Method protects the seed after seeding; if there is no rainfall and moisture for 25-30 days, these seed balls can survive or be stored for next six months.

Main crops

1. Red Gram

2. Pearl Millet

3. Castor

4. Cow Pea

5. Field Bean

6. 20 types of Biodiversity Crops

Crops and Spacing

1. Red Gram -5"5 feet

2. Pearl Millet – 30*20feet

3. Castor - 5"5 feet

4. CowPea -30*20 feet

5. Field Bean - 5"5feet

Characteristics of 5 primary crops

1. Cow Pea and Indian Beans/Lablab shed their leaves to cover the soil by self-littering.

2. Leaves of Indian Bean crop contain 'lipids' and control evaporation of water from the soil, protecting the crop.

3. Indian Bean/Lablab and Cow Pea cover the soil.



4. Roots of Red Gram go as deep as up to 5 meters within the three months duration. Biomass- Root and Shoot of the plants contain biomass at 1:2 (one kg biomass on the top side of the plant and root contains two kg of biomass).

5. Because Of the these above reasons we select five types of primary crops to grow.

Once after getting the yield, crops must be changed on rotation basis or relay on sowing basis. Different crops must be introduced and sown. The Relay sowing method is used to get yield for 365days and also to get a good quantity of yield.

2. Irrigated A Grade Model

In the irrigated method of A Grade Model, top crops to grow to get good yield are Eggplant, Tomato, Green Chillies, Field Bean, Ladyfinger, Green leafy veggies, and Pearl Millet.

1. Choose the top 5 primary crop seeds of your choice for the irrigated A Grade Model.

2. Depending Upon the shape, make them as seed balls or seed granules. Seed Treatment must be done with Beejamrutham.

3. Apply 400 kgs of Ghanajeamrutham per acre.

4. Make a two feet bed, and sow Eggplant, Tubers, Field bean, Tomato in the first lane vertically. In the second lane sow Tomato, Tuber, Lady Fingers, Green Chillies and in third Lane sow Green Chillies, Tubers, Field Beans, Eggplant with a distance of 1/2 foot, and horizontally 1foot and also grow green leafy veggies in the gaps between the primary crops. This controls weed.

5. Grow Pearl Millet as a border crop and Marigold as a Trap crop to protect the entire crop.



CIRCULAR MODELS OF KITCHEN GARDEN— SURYAMANDALAM

This model is designed for crop diversity with leafy vegetables, vegetables, creepers, tubers, medicinal plants, flower plants, fruit plants.

7 beds in two rows, suitable for weekly planning of vegetable harvest. Repeat sowing, relay sowing, crop rotation of vegetable crops can be done as per season and family diet requirement.

Designed to address food and nutritional security for entire family and to provide yearlong vegetable and fruit supply.

Raised beds are advised, leaving space for irrigation channels. If model is big, Pandals over walking space/water channels are advised for creeper vegetables. Central point of model is used as washroom which is source of water for model. The central point can be a space for compost pit.

Majority of models have fruit plants at central point. The shade of these plants never hampers the growth of vegetables. Eg. Banana and Papaya or Banana single plant or Papaya single plant.



Preparation of Surya Mandalam at Jambal Rongsil Village, East Garo Hills



Surya Mandalam at Umkrem village, Eastern West Khasi Hills district

The following points may be considered while designing model:

- 1) Creepers on fence (preferably on bio-fencing).
- 2) Crop diversity and layers in each bed/plot
- 3) Inclusion of more fruit plants on outer periphery
- 4) Flowering plants
- 5) Age of the crops is adjusted by changing sowing dates, crop rotation is done, so that yearlong harvest of vegetables.
- 6) 2 cents are minimum for the model.
- 7) As the area increases the diversity and layering of plants increases.

Science behind model:

- 1) Optimal utilization of space, sunlight, water
- 2) Plants grow in harmony, with crop diversity.
- 3) In circular model, all plant roots are inter connected towards centre point, so that benefits of mycorrhizalhyphae, useful bacteria utilised.

FARMER FIELD SCHOOL (FFS) MODEL:



What is 20,000 Sq. ft FFS Crop Model?

It means a complete knowledge hub of Natural farming and Crop Production Centres at farm gate by Conducting Farmer field schools yearlong to the selected farmers through trained CRPs, ICRPS and Professionals (SA, PM, Department Officials).



Who is a Natural Farming (NF) champion:

is a progressive farmer within the selected cluster who are willing to offer her land for conducting the various demonstrations of Natural farming in her plot and also ready to invest her resources and time for developing her land into a model Natural farming . She should be an active member of SHGs or a livelihood cadre who have attend various agro ecological practices trainings and be willing to share her knowledge and technique with other fellow farmers.

Objective

Hence, with the objective to help the farmer realise the benefits of adopting Natural farming technique and thereby reducing the cost of farm input and better Soil Management and for more Production.

The strategy is to show case to farmer the viability of Natural Farming practices in improving the productivity of their farm with limited cost inputs. Facilitating the farmers in adopting good Agri-Practices and planting thereby improve yield and productivity.

In this land the end users will be imparted and hand holding support from the day of site selection to harvesting of crop, The professional and CRP will continuously support and train the end user till they harvest the crop. This Farm will also act as Farmer Field School to train other Farmer on the various technique of Natural farming Principles

The following are the basic training cum demonstration in the farm required:

1. Implementing of all-Natural Farming Package of Practices according to Cultivable Crops
2. Demonstration of Natural Farming 4 Wheels (Bejamrutham, Jevamrutham, Mulching, Waphsa)
3. Compost making by using the available Bio-mass etc.
4. Training Cum Demonstration on 365 days green coverand 365 Days income to farmers
5. Demonstration of Botanical extracts, Making process and its replications in Crops
6. Transformation of this land to Poly-Cropping Model
7. RDS and PMDs Demonstrations
8. Post-Harvest Management Techniques.

Timing of the training at FFS: taking in to consideration and based on learning from the field, it is appropriate to conduct the training from 7: 00 AM to 10:00 AM at FFS so as to ensure better participation and farmer can still go and work in her farm after the training.



