‘SIRI SAMA’

An Innovative Method to Improve Yields in Little Millet … With Natural Farming Methods

Reduced Costs
Less Labour
Healthy Crop
Increased Yields

WASSAN

RAINFOREST ALLIANCE

Cultivating Little Millet

Advantages – Experiments

Little Millet is an important crop grown for food and feed; it is one of the course cereals consumed in the form of rice. The extent of Little Millet cultivation in India is nearly 3 lakh Hectares. Comparing to Rice and Wheat, it contains more Carbohydrates, Proteins, Minerals and other essential Vitamins. It is being cultivated by farmers in several states, like -Andhra Pradesh, Odisha, Karnataka, Maharashtra, Madhya Pradesh and Gujarat. This crop requires less water; it can withstand drought and dry conditions. It also grows in places where water stagnates. It can be cultivated even at an altitude of 2000 meters above sea level. Lands in the tribal and dry land areas are also suitable for its cultivation.

Little Millet cultivation has certain advantages. Feasibility in terms of late sowing, ability to withstand to the rainfed conditions, possibility to take it as an alternative crop etc are some of positive factors for this crop. Unfortunately, the yields and productivity are not at expected level at this time. This is mainly due to – inherent gaps in its traditional cultivation methods and not practicing more efficient techniques. If such issues are addressed, farmers can improve the productivity andyields in cultivating this healthy millet. Farmer level field experiences are amply demonstrating this aspect. Reducing costs in cultivation, practicing natural farming principles, naturally managing pests and diseases are some of the key points in these experiences, with which farmers could improve crop productivity by overcoming some critical unfavorable conditions.

Crop Cutting Experiments in 'Siri Sama' Method: Farmers Experiences in Andhra Pradesh

Some farmers in North Coastal Districts of Andhra Pradesh have been cultivating Little Millet in 'Siri Sama' method for the last 2-3 years. They could improve the crop yields significantly in this method. Agricultural Research Station, Vizianagaram has conducted crop cutting experiments in these farmer's fields during October-November, 2023. These experiments revealed that 'Siri Sama' farmers could get 1745 Kgs of yields per hectare in this method. Those who have used 20-25 days old seedlings have got yields in the range of 1485 Kgs to 2000 Kgs per hectare. These yields are more than double when compared to yields in traditional method of cultivation.

The crop cutting experiments were carried out by Scientists Suresh Kumar and Ujwala Rani from Regional Agricultural Research Station, Chinthapalli, Raj Kumar (KVK, Kondepudi), Neelaveni (MAO, Dumbriguda), Jagannath (Eruvaka Centre, Paderu), Devullu (Senior Resource Person, RYSS), M. Bhaskar Rao (Deputy Project Manager) and T. Narsing Rao (WASSAN). Based on these results, Scientists of Chinthapalli Agricultural Research Station have presented a research paper in HAT Zone National Conference. All these results were also given space in their annual report. Crop Cutting Experiments: Snapshot of Results

Plot	Crop Type	Group	5*5 m^2 - Yields in Kgs	5*5 m^2 Yield in Kgs with 12% moisture	Net Grain YieldsQuintal/ acre(@12% moisture)
1	Pedda Sama	Experiment	5.59	5.16	8.36
2	Pedda Sama	Control Plot	2	1.41	2.29

Siri Sama Method: Crop Cutting Experiments in 10 Plots – Average Yield 18.27 Quintals/ Ha.
Traditional Method: Crop Cutting Experiments in 10 Plots – Average Yield 9.69 Quintals/ Ha.

‘SIRI SAMA’
An Innovative Method to Improve Yields in Little Millet

Little Millet is mostly cultivated in rainfed conditions. But, it can be cultivated any type of land. Traditionally yields are low, mainly due to the broadcasting method, usage of old age seedlings and improper spacing in transplantation. Yields are not more than 2-3 quintals per acre, mainly due to these reasons. Farmers always try some innovations at their level to improve the yields. Siri Sama method of cultivation is also one of such innovations by farmers in Andhra Pradesh. Some farmers in Alluri Seetharama Raju District of Andhra Pradesh are practicing this method for the last 3-4 years. By combining Natural Farming Principles to ‘SRI’ method of cultivation, these farmers have improved Little Millet yields in a significant manner. And, they have been successfully getting good yields for the last 3-4 years.

In ‘Siri Sama’ method, marking is done in square shape in the field; seedlings are transplanted where the converging points of four lines, maintaining a distance of one feet, from row to row and plant to plant. Farmers follow natural farming principles like – application of Ghana Jeevamruth, Drava Jeevamruth and intermittent weeding in specified regular intervals. Less seed is required in this method. Practicing natural farming principles reduce the pest incidence and costs for chemical inputs. Though there is little more labour required, it is nothing if we consider the incremental yields in this method.

Key Principles in “Siri Sama’ Method”

- Transplanting young seedlings
- Ensuring a feet distance between the plants
- Enabling the plants to get enough sun light
- Application of Bio-fertilizers
- Inter cultivation using Weeder like equipments, to enable healthy root growth
- Providing protective irrigation as per crop growth requirements
- Naturally managing Pests and Diseases

‘SIRI SAMA’

Mandatory Natural Farming Principles

Natural Farming Principles

1. Cover the soil with crops

2. Avoid deep ploughing

3. Use Desi Seeds

4. Application of Bio-Stimulants (Eg: Jeevamrutham)

5. Ensure Crop Diversity (15-20 varieties of crops)

6. Integrate Livestock into the farming

7. Increase organic matter – both on and in the soil

8. Use Bio-Concoctions for Pest Management

9. Completely avoid chemical fertilizers, pesticides & weedicides

Some Key Points:

* Ensure application of Beejamrutham, Ghana Jeevamrutham and Drava Jeevamrutham even in Pre- Monsoon Dry Sowing (PMDS) and also during main crop season.
* Before cultivating Little Millet, go for PMDS crops with 9-18 varieties of seeds, till the second week of July (75 days). Varieties may include – vegetables, leafy vegetables, pulses and fruit bearing plants.
* Once these crops attain a certain height, they may be harvested and used for household needs or as a feed for livestock.
* If any crop residues are still there in the field, plough and mix them into the soil.

Key Steps in
'SIRI SAMA' Method

Seed Selection:

Quality seeds are selected; Seed treatment is done with Beejamrutham; Nursery Bed is prepared to raise seedlings; 500gm of seed, 40 (10x4) square feet Nursery Bed is sufficient for one acre of cultivation.

Marking for Transplantation:

Marking is done with a help of Marker/Rope in the field, ensuring a distance of 1 feet in between plant to plant and row to row. Transplantation is done on crossing points of such marking. A fistful Ghana Jeevamruth can be used to mark the crossing points.

Transplanting young seedlings:

Young seedlings of 21-25 days old are used for transplantation. One or two seedlings are transplanted at a place. 45 days after the transplantation, plant edges need to be cut so as prevent linear growth. If it is not done, plants may fall down due to wind. Once the crop attains 2 feet height, half feet has to be cut from the edges.

Inter Culture Operations:

Intermittent weeding is done in between rows. Weeder like equipment can be used for this purpose. This process facilitates removal of weed and also enable the root system to get sufficient air, water and nutrients from the soil. It results into healthy growth of roots. As seedlings are transplanted at a certain distance, it will be easy to operate Cycle Weeder. After transplantation, weeding need to be done thrice in between 15 – 45 days. Weeds are to be incorporated into the soil. It enables the availability of more nutrients and more tillers.

‘SIRI SAMA’

Natural Farming Principles & Management Methods

1. Seed Selection

It is very critical to select suitable seeds considering the nature of soil and local conditions. Factors like crop duration, soil suitability also need to be evaluated. Based upon farmer’s experiences, it is inferred that the local varieties and long duration crop varieties are giving better results in Siri Sama method. It is found that ‘Pedda Sama’ variety of Little Millet is more suitable for the tribal rainfed areas of Andhra Pradesh.

Local varieties of Little Millet like *Pedda Sama, Nalla Sama, Teting Sama, Chimpiri Sama, Leleburi Sama, Mai Sama/Korra Sama* are short duration crops. The entire crop cycle will be completed in 3 months in these varieties. All other varieties in Little Millet are 150 days long duration crops. The names of local varieties are popular based on the size, shapes of the grains.

Half Kg/ 500 gm of seed is sufficient for one-acre land. A nursery bed of 40 Sq.ft (4 feet width and 10 feet length) is sufficient for this one acre to raise seedlings.


Pedda Sama


Nalla Sama


Mai Sama


Pedda Sama
(150 days duration)


Titing Sama

2. Seed Treatment

Seed treatment is done mainly to prevent seed borne diseases. A chemical free Bio-input, Beejamruth is used for this purpose. Entire treatment is done in a natural process. Selected seeds are soaked in Beejamrutham till they are completely wet; then they should be dried under a shade. 25-30 kg of seed can be treated with 5 Liters of Beejamruth. This treatment enhances seed germination, apart from arresting seed borne diseases.

Preparation of Beejamrutham

Required Material:



1. Cow dung : 5 Kgs
2. Cow Urine : 5 Litres
3. Water : 20 Litres
4. Soil : A fistful
5. Lime : 50gm

Process:

Take cow dung in a thin cloth and tie the cloth. Hang this pack in 20 liters of water with the help of a stick. The essence of dung would slip into water. Add cow urine, a fist of soil and lime to that water mixed with cow dung. Remove the cloth pack from the water after 12 hours. Then rinse the mixture thoroughly. This liquid mix can be used for seed treatment, as Beejamrutham.


3. Preparation of Nursery Bed

For the treated seeds, add sand, soil and Ghana Jeevamruth in the ratio of 1:1:1. It enables easy broadcasting of seeds on the bed. See that the bed has height of 0.5 feet. For one acre of land, a bed with an extent of 40 square feet is enough to raise seedlings. While preparing bed, add 50 Kg of Ghana Jeevamruthto the soil.

After broadcasting seeds / transplanting in rows, apply Ghana Jeevamruth as a thin layer on the bed. Spray Jeevamrutham on the nursery bed by mixing it with water in the ratio of 1:10. This would help in healthy growth of the seedlings. Shade-net can be used to protect the seedlings from sun heat and birds. 21-25days' age seedlings can be used for transplantation in the main field. It would be much better if tender seedlings are used. if older seedlings are used, it will affect productivity.

Preparation of Jeevamrutham

Required Material:

1. Desi Cow Dung : 10 Kgs
2. Desi Cow Urine : 10 Litres
3. Black Jaggery : 2 Kgs
4. Besan Flour : 2 Kgs
5. Fertile/Bund soil : A fistful
6. Water : 200 Litres
7. Plastic Drum

Application:

200 liters of Jeevamrutham is sufficient for one acre of land. It can be released along with irrigation water; or, basal application can be done; or, can be sprayed on the crop.

Method of Preparation *(for one acre)*:

Add 10 Kgs of Cow Dung, 2 Kgs of powdered Jaggery, 2 Kgs of Besan Flour (2 Kgs) to 200 Liters of water. Then add 10 liters of Cow Urine and a fistful of soil to it. Thoroughly mix it. Cover the bucket/vessel with a cloth. Keep it aside for a week. For every 2-3 days, thoroughly mix these ingredients with a stick. After 7-8 days, this liquid mix can be used as Jeevamruth.

Number of micro-organisms would increase immensely in a week time. It can be released through irrigation water into the field. Otherwise, it can be filtered and added to the water that can be sprayed through Sprinkler or Drip. Basal application can also be done with a sprayer.

4. Field Preparation - Marking

Apply 1-1.5 of Ghana Jeevamruth (Type 2) per acre in the field; Plough and level the land so that it is properly mixed with the soil. Then go for Marking with the help of markers. Considering the soil conditions, ensure 1 x 1 feet distance between the rows during the Marking. Makers can be made with wood; considering their suitability in maintaining distance (12 x 12 inches) for transplantation. When marker is pulled across in both ways, it would give square type of marking. If some Ghana Jeevamruth is placed on these points, it would help in identifying the marking points during the transplantation. Some farmers even followed 18 x 18 inches rows and got good yields.

If markers are not available, rope can be used for marking. Place some Ghana Jeevamruth at crossing points of Marking. Basing upon their own experiences, farmers can decide on the choice of distance between plant to plant and row to row.

It is better to create furrows using Cycle Weeder or Bullocks.As transplantation is done in molds at crossing points, it will be easy to operate Cycle Weeder. It would help in reducing labour costs.

Method of Transplantation:

If it is in rows, ensure 30 cm distance between rows and 25 cm between plants. In Siri Sama method, the distance should be 30 cm in between rows and also from plant to plant.

5. Transplantation

Normally 21-25days'age seedlings are used for transplantation. To the extent possible, it is better to use tender seedlings. Water the nursery bed at least 2 hours before picking seedlings. Carefully uproot the seedlings from bed. Ensure root system is not damaged. Seedlings should be taken along with the soil. A shovel or broad iron sheets can be used for uprooting the seedlings.

Once seedlings are picked from the bed, they should be taken to the main field within 30 minutes. Ensure that the seedling or its roots are not dried.

Transplant the seedlings at the marked cross points, in between rows, with utmost care and concentration. Ensure the seedling or its root system is notdamaged either during the uprooting process or while transplanting in the main field.

If the seedling is transplanted on the slope of the furrow in between the rows, root system will be safe. Application of Ghana Jeevamruth on the points of transplantation and at the basal of the plants would enable healthy growth of the plants.

6. Weed Management

Intercultural operations would help in healthy growth of root system. it would also help in enabling proper aeration to the soil and roots.

Labour costs ae more for farmers who cultivate Little Millet in broadcasting method. This is mainly due the weed removal process.

If transplantation is done in rows, in square shape, it would be easy to manage weeds with Cycle Weeder. This would reduce costs significantly. It is possiblecomplete this process with the help of just 2-3 persons.

It is important to cut the edges of the plants after 45 days of the transplantation.

Ensure weed management at regular intervals; 15, 25 and 35 days after transplantation.

- Use Cycle Weeder
- Apply Jeevamrutham

If sowed in rows;

- Two times – inter culture operations
- Once – Hand picking

In broadcasting method:

- Two times – Hand picking

After initial weeding operation, provide Type 1 - Ghana Jeevamruth to the plants. 200 Kg of Ghana Jeevamruth is required per acre. Basal application can be done.

Application of Bio-Stimulants

Preparation of Type 1 Ghana Jeevamrutham:

Required material:

100 Kg fresh Cow Dung, 5 Liters Cow Urine, 2 Kg Jaggery, 2 Kg Pulses powder, fistful of fertile soil

Method of Preparation:

Mix all the above mentioned ingredients and prepare cow dung cakes. Let them dry under shade; or, these cakes can be done on the wall itself. Do this process with mentioned quantities 4 times; it would be sufficient for application in an acre.

For more details, see the videos:

https://youtu.be/YurIXrOIMJw,

https://youtu.be/a_5DerUwzZo

Preparation of Type 2 Ghana Jeevamrutham:

Required material:

200 Liters of Drava Jeevamrutham, 1 Tonne Farm Yard Manure, Paddy Grass

Method of Preparation:

Cover the Farm Yard Manure with Paddy Grass, in layers; applying Drava Jeevamrutham in between the layers; it can be used after 3 months.

In one acre of land, 2- 4 Tonnes of farm yard manure can be applied. Otherwise, mix Drava Jeevamurth with one Tonne Ghana Jeevamruth to prepare Type-2 Ghana Jeevamruth for application.

For more details, see the videos:

https://youtu.be/1kmMJTFDLKk

Required quantity of Ghana Jeevamrutham: (Basal application)

* During final ploughing - Apply Type 2 Ghana Jeevamrutham (1000-1500 Kilos / Acre) -
* During transplantation - Apply Type 1 Ghana Jeevamrutham (200 Kilos /Acre)
* 15 days after the transplantation and also after the first weeding - Apply Type 1 – Ghana Jeevamrutham (200 Kilos / Acre)

Application of Drava Jeevamrutham:

* Spray it on the crop three times – 7th day, 14th day and 21st day- after transplantation
* On 7th day – 10 liters of Drava Jeevamruth mixed with 100 liters of water – Spray on crop
* On 14th day–15 liters of Drava Jeevamruth mixed with 100 liters of water – Spray on crop
* On 21st day- 20 liters of Drava Jeevamruth mixed with 100 liters of water – Spray on crop
* After that, once for every 10 days - during weed management - 20 liters of Drava Jeevamruth mixed with 100 liters of water (1:5 ratio) – Basal application

UsingPanchagavya and Saptha Dhaanyaankura Concoction:

* **Panchagavya :** 45 days after transplantation – 4 Liters of Panchagavya mixed with 100 Liters of water – Spray on crop.
* **Saptha Dhaanyaankura Concoction:** Spray at seed germination stage: 700 gms of Concoction mixed with 200 Liters of water / acre

CROP SEASSON:

Kharif: From Jun – July
to October - November

7. Water Management

In rainfed agriculture, there will be crop loss due to intermittent dry spells. It would be better if protective irrigation is planned to address this issue.

Constructing a farm pond with a capacity of 250 Cubic Meters (10 x 10 x 2.5 meters) for each 5 acres of land would solve that problem.

A full pond with water can provide protective irrigation to 3-5 acres of land. If organic matteris more in the soil, it would retain the moisture for a long duration.

8.Harvesting

Harvesting should be completed in time. Crop should be cut when the grain turns to brown color. After harvesting, it should be kept in the field for drying. Then grains should be separated. Otherwise, cut the panicles and keep them in the field for 2-3 days to dry. When they get completely dried, they can be threshed either using a stick or by running a tractor over them. See that soil or sand particles are not mixed with grains. It would be better if tarpaulin is used while threshing as it would enhance the quality of yields. While selling the produce, ensure that there should be 12 percent moisture.

Earlier, post harvesting/ threshing used to be done with the bullocks or autos. Now farmers are using Multi Grain Threshers for this purpose. These machines are now widely available. For processing at domestic level, women are using "Millet Mixies' to prepare Little Millet rice.

Pests in Little Millet

Shoot Fly (Atherigona Pulla):

The damage of this pest is observed within six weeks after sowing the crop. Pest incidence would be more during the late July to early August.

Damage:

Damage is obsereved at the early stage of the crop. As a result of it's feeding the centrel shoot starts drying and shows the typical symptoms of dead heart in the early stage; there would be profuse tillering in the later stage, which are also affected. Damaged tillers may produce ear heads, but with no grains (white ears).

Management:

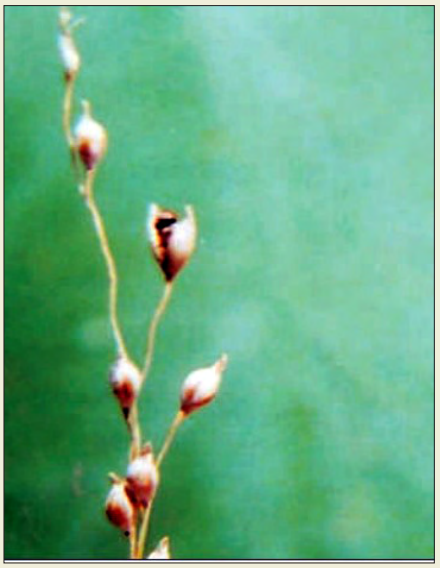
- **Early sowing:** Sowing the crop early I;e during second fortnight of July or with the onset of monsoon.
- **Adopt higher seed rate:** Use 1.5 times more seed than the recommended seed rate; it would address the issue of mortality in seedlings.

Monitoring by Fishmeal Trap

- **Adopt higher seed rate:** Use 1.5 times more seed than the recommended seed rate; it
- **Bio-inputs:** 400 Kg Neem or Pongamiapowder per acre

Diseases in Little Millet

1. Grain Smut (Macalpino mycessharmae):



Symptoms:

When affected with this disease, 50 percent plants/ grains will be affected/damaged. The affected overy is converted into smut sorus; the size of the grains will not increase in the affected plants. The glumes are pushed apart by the transformed spore balls.

Management:

* **Suitable cultivars:** Select and cultivate disease resistant cultivars like Pedda Sama
* **Cultural practices:** Practicing late sowing
* **Seed Treatment:** Treat the seeds with Beejamruth.

2. Brown Spot / Seedling Blight or Leaf Blight (Alternaria sp)

Symptoms:

Appearance of Brown to Darl Brown spots on the leaf lamina; especially in older plants where in the wooly growth of the fungus can be seen in the centre of the lesion. Incidence is more intense under high humidtyu conditions.

Pest & Disease Control through Natural Farming Methods

* Cultivate diverse crops along with Little Millet
* Ensure one feet distance compulsory in between plants and rows
* Remove and destroy the effected plants immediately.
* As a preventive measure, spray Neemastra or Neem Seed Concoction; it would control the pest during egg and larvae stages.
* If pest incidence is severe, pull the rope on the crop; or, pull with thorny branches. With this, larvae and pupae residing in leaf folds will fell down. As the folds are open, concoction will have its effect.
* If pest is severe, spray Brahmastra or Agneyastra

Pest Control Methods:
1. CultivatingTrap Crops like Marigold and Ladies Finger
2. Creating environment for friendly insects like Spider and Ladybird Beetle
3. Usage of Light Traps

Disease control methods:
1. Seed treatment with Beejamrutham
2. Using disease resistant varieties
3. Application of Dry Ginger and Milk Concoction
4. Proper weed management
5. Separate &burn affected plants

Preparation of Concoctions

Dry Ginger Milk Concoction:

It can be used to control all types of diseases. Add 5 liters of concoction to 200 liters of water; It can be sufficient for one acre.

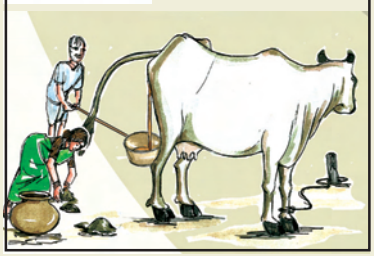
Required Material:

1. Powdered Dry Ginger – 200 gms
2. Water – 2 liters
3. Milk or Sour Butter Milk - 3 liters

Preparation Method:

Mix the dry ginger powder with 2 liters of water and boil the vessel by covering with a lid. Let it cool down. Take milk or sour butter milk in another vessel and boil it. Mix these two liquids to prepare dry ginger concoction. Use it immediately after preparation. Do not store it.

Neemaasthra:



It effectively controls Thrips and larva of different pests. 200 liters of Neemastra should be applied directly, without adding water

Required Material:

1. Neem leaves –10 Kgs
2. Water – 200liters
3. Cow Urine - 10liters
4. Cow Dung – 2 Kgs

Preparation Method:

Grind the neem leaves and add water to it. Then, add cow dung and cow urine to that mix. Stir the mix thoroughlywith a stick daily. After 1-2 days, it gets soured; then it should be filtered. The filtered liquid can be used as Neemastra concoction.

Brahmastra:

It would effectively control larva and adult moths. Add 2-3 liters of Brahmastra to 100 liters of water and spray it on the crop.

Required Material:

1. Cow Urine - 10 liters
2. Neem Leaves – 2 Kgs
3. Seethafal leaves – 2 Kgs
4. Pongamia leaves – 2 Kgs
5. Lantana leaves – 2 Kgs
6. Dathura leaves – 2 Kgs

Preparation Method:

Grind all the leaves and make it as a paste. Take that mix into a pot or a vessel and add cow urine to it. Cover it with a lid and boil it for 30 minutes, till it is bubbled5 times. Then cool it and keep it at a place for 2 days. Filter it and use it. It can be stored for nearly 6 months.

Non-Negotiable Principles:

1. **Inter Cropping** – Cultivating Little Millet with Pulses (6:2)
2. **Protective Crops** - Jowar/Maize/Bajra in 3 rows, along with Little Millet
3. **Trap Crops** - Castor, Marigold
4. **Yellow, White Sticky Plates** – Place them in the field 10 days after transplantation; 20-25 plates per acre.
5. **PheromoneTraps** - Put 8 Pheromone Traps in one acre; place them in different places in the field, 20-30 days after transplantation.
6. **Bird Perches** - Place them in the field in different locations; 20-30 days after transplantation; 10-15 in one acre of land.
7. **Light Traps** - One per acre

Inter Cropping Systems in Little Millet

Andhra Pradesh	:	Little Millet, Redgram + Maize (6:2)
		Little Millet + Finger Millet, Redgram + Maize (6:2)
Odisha	:	Little Millet, Blackgram + Maize (2:1)
Madhya Pradesh	:	Little Millet, Sesame/Soyabeen/Redgram (2:1)
South Bihar	:	Little Millet, Redgram (2:1)

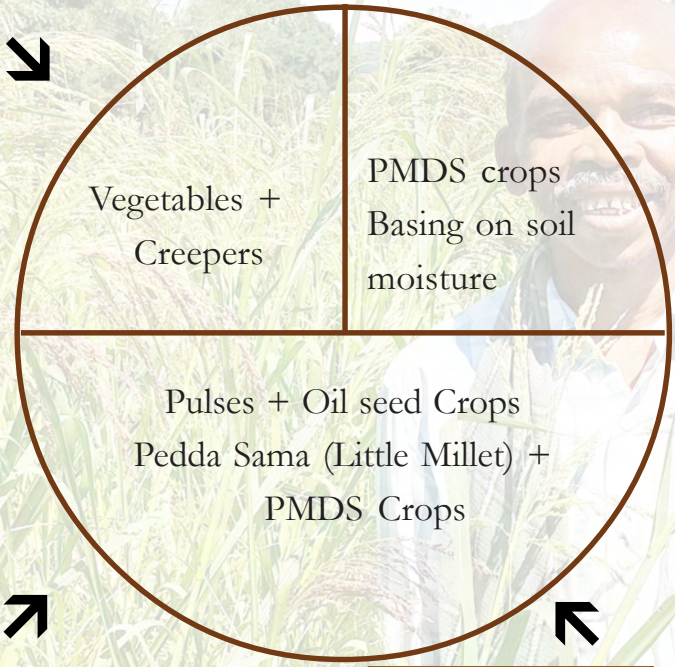
365 Days Green Cover Plan for Soil

Pedda Sama (Little Millet) & Pre-Monsoon Dry Sowing Crops (PMDS)

Feb- May

May-Jun to Aug- September

September - December (upto January)



Experiences of 'Siri Sama' Farmers

Thangula Tulasi

Karakavalasa village, Sovva Panchayat,
Dumbriguda Mandal, Alluri Seetharamaraju District, Andhra Pradesh

"… We could get three times more yields in Little Millet this year, with shifting to Siri Sama method. As there is Bio Resource Centre in our village, we didn't face any difficulty in procuring bio-inputs like Ghana Jeevamruth, Drava Jeevamruth and other concoctions. Cycle Weeder was also available to us, which helped us in proper weed management. If such facilities and feasibility is there in villages, it would be more beneficial to the farmers who cultivate Little Millet and other Millets. Farmers like us would get good yields, with less costs, with such bio-resources…"

Pongi Purushottam

Gorapur Village, Kuridi Panchayat,
Dumbriguda Mandal, Alluri Seetharamaraju District, Andhra Pradesh

".. Our family has been cultivating Little Millet for generations. We were mainly practicing it in broadcasting method; Till 10-15 years back, there was no proper market for this crop; we used to cultivate this crop for our own consumption. Subsequently, exchange system has arrived wherein we used to get one Kilo Rice for one Kilo Little Millet. We used to call it as 'quota rice'. Since 5-6 years, the market demand for Little Millet has gradually increased. Earlier market rate used to be in the range of Rs 25-30 per Kg. In the last two years, it has reached Rs 33-38 per Kg. As there is market, farmers are now showing interest to get more and more yields. They are trying their best to increase yields in this crop. In 2023, several farmers practiced this innovative method called 'Siri Sama', considering its potential to give Incremental yields. Several farmers got two fold increase in the yields. But, as there is no minimum support price in the market, several farmed sold their produce to the middlemen. It would be better if government announces MSP for Little Millet and purchase our produce through Raitu Bharosa Kendras (RBKs) or Markfed centres…."

Janni Dharma

Pedalabudu Village/Panchayat,
Araku Valley Mandal, Alluri Seetharamaraju District, Andhra Pradesh

".. Little Millet doesn't need heavy investments. Last year, we got better yields in Little Millet, mainly due to this innovative 'Siri Sama' method. Pest and disease incidence was so low. And, there was no need for us to go for any external inputs. There is also a good demand for Little Millet in the market now. In this method, we can reduce costs and increase the yields, using all the available local bio-resources. We can prepare Bio-inputs like Ghana Jeevamruth, Drava Jeevamruth on our own, without any costs. Only thing is we need to follow the principle and practices, as required, in specific time schedules…"

Little Millet – Health Benefits

* Healthy food for people of all ages
* Easy digestible
* Relieves gastric problems
* Avoids constipation
* Addresses mensural disorders
* High amount of fiber prevents body fat

Comparison between Traditional Cultivation & Siri Sama Method

Key Parameter	Siri Sama Method	Traditional Broadcasting Method
Type of Seed	Pedda Sama	Pedda Sama
Crop Duration	150 Days	150 Days
Seed Rate	Half Kg / Acre	3 Kgs / Acre
Seed Treatment	Application of Beejamruth	Farmer's choice
Nursery Bed	0.5 feet height (40 Sq. Feet)	No need of Nursery
Transplantation	20-25 days seedling	-
Fertilizers	1 Tonne Farm Yard Manure (FYM) per Acre during final ploughing; 400 Kgs Ghana Jeevamruth during Transplantation	200 Kgs Farm Yard Manure (FYM) per Acre during final ploughing;
Weed Management	15 days and 30 days after Transplantation; weeding is easy with Cycle Weeder	Manual Weeding; Difficult and costintensive
Drava Jeevamruth	Application at regular intervals – 15, 30 and 45 days after transplantation – each time 200 liters required	Farmer's choice
Number of Tillers	10-15 tillers per Plant	4-5 tillers per plant
Cutting the edges	Need to cut the edges of the plants at the age of 50-60 days.	-
Yields	8.3 quintals / per acre;	2.29 quintals / per acre

Nutrients in Little Millet (100gms)

Healthy and Staple Food

Little Millet is healthy and staple food for pregnant women and lactating mothers. Its intake reduces pain. Little Millet Rice and Porridge are traditional food in the tribal regions and it is part of their traditional life.

Proteins :	8.7 gm
Carbohydrates :	75.7 gm
Fat :	5.5 gm
Minerals :	1.7 gm
Iron :	9.3

RAINFOREST ALLIANCE

Developed by:

WASSAN

WASSAN

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