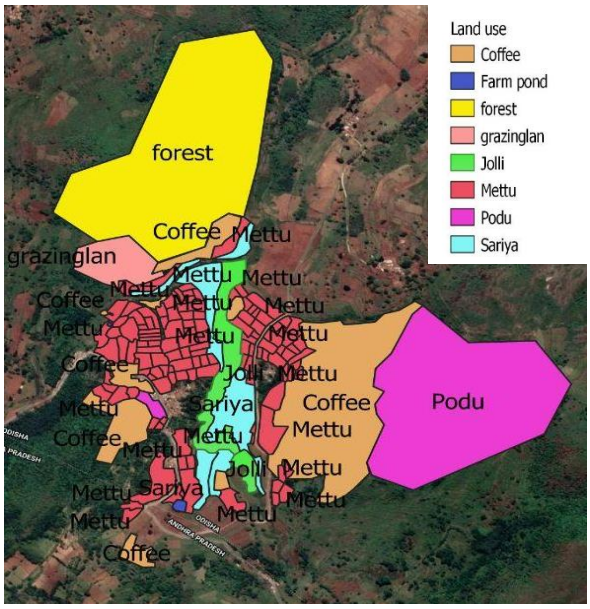
Transitional Efforts of a Tribal Village to evolve as a 'Bio-Village'

Community level initiatives in Goppulavalasa

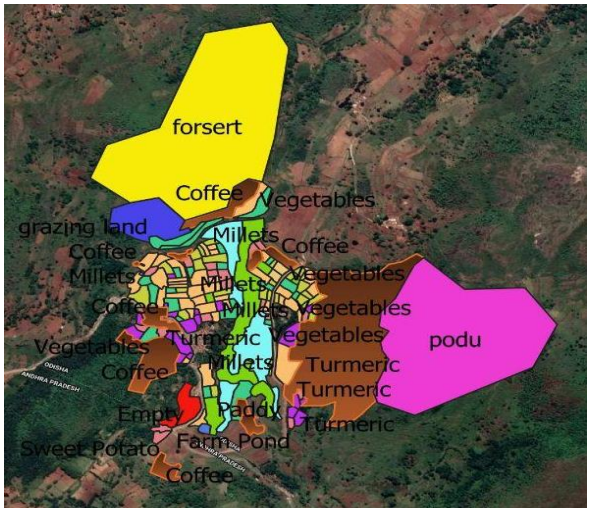
Goppulavalasa, a remote tribal habitation in Dumbriguda Mandal of Alluri Seetharamaraju District in Andhra Pradesh, is setting a trend in that area by gradually becoming as a **'BIO- VILLAGE'**; several farmers in that habitation are renouncing the exploitative agricultural practices and shifting towards Natural Farming. They have realized that adoption of natural farming practices is the only way, for sustaining their resources in a more productive way. Within no time, half of their irrigated area has come under the natural farming practices; farmers are integrating poultry, livestock and fisheries in their farmlands, for additional income and security. With the support and guidance of Andhra Pradesh *Rythu Saadhikaratha Samstha* (RySS) and resource organizations like WASSAN and Sanjeevani, farmers under the aegis of local FPO are determined to make their village as a **'BIO- VILLAGE'**.

Goppulavalasa is one of the 21 tribal habitations of SOVVA Gram Panchayat; it inhabits 64 tribal families. The total geographical area of the village is 381.25 acres, Coffee and Pepper plantation covers 73.97 acres while 97.67 acres are under forest cover. It has a grazing land to an extent of 10.69 acres and Podu in extent of 81.37 acres. Nearly 21.83 acres of land is under stream beds (*Sariya*). Cropping pattern consists of diverse crops that includes - vegetables (31.36 acres), Turmeric (18.05 acres), Paddy (17.98acres), Millets (27.2 acres), Pulses and oilseeds (80.04

acres), Sweet Potato (6.76 acres), Ginger (9.72 acres) and Dry paddy (1.03 acres). Currently 3.62 acres is kept as fallow. Out of the total 64 families, 35 families have cattle, and they own a total of 117 cattle. 21 families have small ruminants and 26 families maintaining backyard desi poultry.



[1. Land classification in this village]



[2. Crop wise land use in this village]

Traditionally these tribal areas reflect rich diversity, both in terms of cropping patterns and food systems. Their production systems are normally in harmony with nature and non-exploitative. Over the years, the

situation has changed due to the influence of various factors that includes modern / market based agricultural practices. Application of external inputs, in the form of fertilizers and pesticides, has increased with an expectation of higher yields. This not only put them in financial troubles, but also contributed to decline in soil health as reflected in reduced yields over the time.

During the year 2021, WASSAN and local organization SANJEEVANI facilitated landscape mapping exercises in all the tribal habitations of SOVVA Gram Panchayat; in that process, habitations like *Goppula-valasa*, *Karakavalasa*, *Demuduvalasa*, *Kutra-gondi*, *Malivalasa*, *Panasavalasa* have been identified for intense promotion of natural farming practices. While there are 873 households in entire Panchayat, covering 21 habitations, these 6 selected habitations have a total of 378 households. Subsequently, WASSAN facilitated a series of meetings with local NGO and leaders of DIMSA FPO; possibilities were explored to make SOVVA Gram Panchayat as Model Panchayat by ensuring the coverage of 100% of lands into natural farming. Strategically,

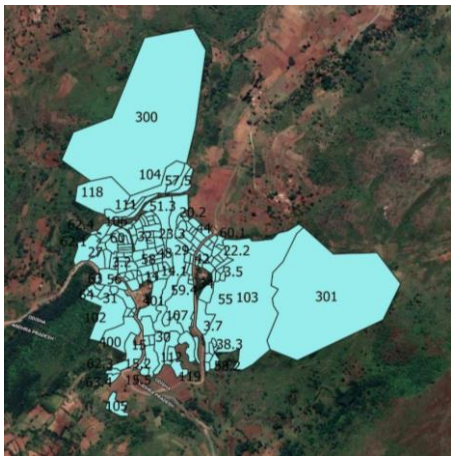
it was decided to put elected Gram Panchayat representatives in the forefront to steer the process. Sarpanch and Ward members were made as Campaign Ambassadors to initiate the discussion for making SOVVA GP as Natural Farming GP. Interactions were facilitated involving Gram Panchayat leaders, members of local FPO, DHIMSA and representatives of local Village Organization (an umbrella of local women self-help groups). The focus was on to build confidence and commitment towards natural farming practices and also to explore the needed support systems for ground level activities.

The consistent efforts yielded desired results; Gram Panchayat leaders enabled the villagers to come forward and make a self-declaration towards their commitment for natural farming. A Gram Sabha was held on 15th August 2021, coinciding with the Independence Day celebrations, to inform the villagers about the decision to move towards Natural Farming. Community unanimously agreed to practice Natural Farming principles and expressed their willingness to work intensively with RYSS, WASSAN and Sanjeevini and FPO leaders. Though they made a declaration to make entire Gram Panchayat, it was decided to start the initiative with Goppulavalasa village, considering more inclined interest of its local people. The idea was to make this village as a demonstration model for other habitations to follow the suit. Initial focus in this village was to bring back fallows into cultivation and enable the farmers to practice natural farming principles in that process.

CONSOLIDATING MICRO LANDSCAPE WORKS

Plans emerged during the participatory planning exercise were consolidated and presented to the Sarpanch, Ward members and local CBO/FPO leaders. Stakeholder's workshop was held with Spice board, Coffee Board, Horticulture and Agriculture departments for sharing these plans and finalizing as per their format to submit. Soil Moisture Conservation and water works have been consolidated and submitted to NREGS through GP Sarpanch.

[3. Goppulavalasa boundary]



[4. Goppulavalasa farmer wise plots]

LIFE TO FALLOWS WITH SOLAR IRRIGATION SYSTEM AND NATURAL FARMING

As per the landscape mapping assessment, a total of 53 acres of land is left as fallow in Rabi, out of the total 198.42 acres cultivable land available in the village. It was decided to bring these current fallows into production; several meetings were held with FPO leaders and farmers to evolve a strategy; their knowledge and innovations were explored in that regard. During such interactions. It came out that two village farmers, Korra Nageswarao and his brother, made a significant effort to make a canal from the stream that flows through the village, so as to bring water to their field. They made a canal of 500 meters length, with one meter depth and half meter width. Their effort was so inspiring to the facilitating team, and it triggered a thought in their minds. This experience was put before the farmers for discussion; a question was placed before them on what additional income a farmer can get if an acre of land is provided with irrigation support in Rabi, using the same technology applied by Nageshwara Rao and his brother. Farmers felt that each of them could get an additional income of Rs 20000/-. They expressed their willingness to apply the same above technology, provided they are supported with some repayable capital investment. They were willing to repay that financial support in instalment basis.

Accordingly, DIMSA FPO leaders and the WASSAN team did the feasibility assessment for that proposition. Considering the farmers willingness to repay the capital, DIMSA FPO agreed to extend such financial support. An agreement was made between DIMSA FPO and beneficiary farmers, detailing the contribution and

repayment process. WASSAN explored a model to for providing irrigation covering entire fallow lands of 43.12 acres to grow crops in Rabi and also in Summer. A solar based lift irrigation system was established for this purpose with a cost of R. 12.82 Lakhs, to cover 53 acres of 26 farmers. The community paid 10% (1.28Lakhs) of the total project cost and the remaining capital investment done under loan. Farmers agreed to repay the cost to DIMSA FPO in 4 instalments. There was a specific mandate for the beneficiaries to go compulsorily for less water consuming crops like vegetables, sunflower and cultivating Ragi in *Guli* method, along the lines of natural farming principles. Most of the farmers went for growing vegetables and *Guli* Ragi.

These farmers were provided with needed support systems for following natural farming practices. Kamaraju, an entrepreneur farmer of nearby Devuduvalasa village, was attached for getting needed herbal concoctions like Agnastrama and Bhrahmastram; he supplied these concoctions on a payment basis.

A Drava Jeevamrutham (DJA) Unit was established in Killoguda village to supply cow urine. Nearly 1000 liters of cow urine was procured by Goppulavalasa farmers to prepare Drava Jeevamrutham which they applied in their fields. Thus, as of 1st April 2022, half of the fallows have got new life with these natural farming practices, as 21 acres were brought into production out of the 43 acres of fallow land.

FACILITATION OF INTEGRATED NATURAL FARMING COMPONENTS

Apart from ensuring application of Drava Jeevamrutham and Ghana Jeevamrutham, farmers were encouraged to integrate several components in their farming, so as to enable supplemental income, strengthen household nutritional security and ensuring soil and crop health, as outlined below,

- **Ensuring Supply of Cow Urine:** DIMSA FPO planned to the farmers for getting cow urine from DJA unit enterprise established in Killoguda, so as to prepare Drava Jeevamrutham (DJA) and Ghana Jeevamrutham (GJA).

- **Establishment of DJA Unit**: Goppula-valsa cattle owners realized the importance of DJA unit for easy availability of cow urine and DJA; and they invested in renovating their cattle sheds; 22 cattle sheds connected with pipeline and an automated DJA unit was established. WASSAN supported the establishment of DJA unit.
- **Ensuring application of DJA and GJA**: 28 farmers cultivated vegetables in an area of 21 acres; in total, they applied 1500 Kgs of GJA and 6000 litres of DJA.

Application of DJA on Black Pepper was done and an effort was made to check the crop performance and as well as fruit growth. Village Farmers, Rambabu and Nageswara Rao, have conducted these trials in their fields. There is significant growth in fruit size, and its scientific analysis is yet to be done.

- **Multiplication and revival of local / Indigenous seeds / crops:** Multiplication of *Muntha Vankaya*, a Desi Brinjal variety has been undertaken in Demuduvalasa village; A farmer, Kamaraju, has tried out this process. Another farmer, Nageswara Rao, was encouraged to go in for revival of Indigenous paddy variety called *Isuka Ravvalu* (Scented Rice).

- **Promotion of Kitchen/Nutri-gardens**: Seeds supplied to 32 households through Dimsa FPO for crops like Ridge gourd, Bottle gourd, Chilly, *gongura*, Amaranth, Okra, Beans, Brinjal, Tomato. These gardens are promoted as Nutri-gardens. DIMSA will recover seeds from these farmers and supply them to other farmers the next season.

- **Ensuring vaccination to Livestock and Backyard Poultry**: With the support of *Rythu Bharosa Kendras* (RBKs), vaccination was ensured for Small / Large ruminants. A total of 21 households owning Small Ruminants could access regular health care services.26 households owning backyard poultry, with a total of 186 birds, got vaccination services.

- **Establishment of Custom Hiring Centre:** DIMSA FPO and Individual entrepreneurs were party of the Custom Hiring Centre established in Devuduvalasa sub-centre. It has got 8 Ladders, 2 Pepper Threshers and One Multi-Grain Grader. It is also equipped with fish harvesting tools like Dragnet, moisture meter and weighing scale etc. A total of 7 farmers availed pepper thresher services, processing aa total quantity of 2100 Kgs.

- **Integrating Fisheries:** KilloDasu, a farmer having half acre water spread area water body took up fish rearing activity. He was extended support with supply of fingerlings and demonstration of NF practices in fish culture. He earned Rs 9600/-by selling 80Kgs of fish, harvested this year. There are 17 such water bodies available in 6 habitations of SOVVA GP, which have potential to take up fish rearing. 7 ponds were newly constructed as part of the ongoing program. Linkages are being established with nurseries entrepreneurs for timely access to fingerlings. ■

A BEGINNING IS MADE, WAY TO GO....

With the active participation of Gram Panchayat leaders and community, Goppulavalasa village has made a new beginning towards natural farming. A clear direction is emerging for the local farmers to make their village as a Bio- Village. Much more intense efforts are to be done in that process. A google map-based exercise is done to mark plots with help of farmers who are doing natural farming, traditional farming practices with chemical application. It is observed that chemical application is almost nil in Millets, Coffee and Pepper; however, few farmers who are cultivating Cabbage, Cauliflower etc. are still applying commercial pesticides.