

GRAMMA SEVA SANGAM (GSS) ANNUAL REPORT 2023-24



Area treatment /SWC structures:

1. Farmpond:

Amburpatti, Avvaiyarpatti and Mampatti area are domestic to people who consider agriculture as their most imperative provision of income. Since rainfed agriculture takes place in the region, it is necessary to store water during the rainy season. Although the rainfall rate here is average, they do not know the strategy of properly storing and using it. From our organization we dug 17 farmponds (1 farm pond/beneficiary) for 4275 cum). It extended their cultivated area and their yield. It also helps in increasing of groundwater recharge and increase the water level in bore wells. The farmpond water were enriched in nutrients, when it used for irrigation the productivity and yield was increased. Moreover, farmers are using these ponds as fish culture to earn additional income along with agriculture. Awareness has been created among farmers in nearby villages and they themselves plan to implement this philosophy in their own agricultural area.

S.NO	WATERSHED AREA	NO. OF BENEFICIARIES	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	07	214326	40824	255150
2.	AVVAIYARPATTI	10	312984	59616	372600

2. Landlevelling:

Most of the land in amburpatti and avvaiyarpatti area was found barren. Most of the farmers were unable to level the land and kept it fallow. The selected farmers from our organization levelled the land and the land was prepared for farming. By this the barren land was converted into agriculture land. It helps to preparing the irrigation plot in a way that no high and/or low spots disturb the uniform distribution of irrigation water on the field. Leveling shortens the time required for transplanting and direct seeding. Reduction of farm operation times by 10-15 %. Average yield increase of 10- 20 %. With those lands they earn income in all three seasons.



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	5.95 ha	13388	4463	17850
2.	AVVAIYARPATTI	15 ha	33750	11250	45000

3. Micro irrigation (Drip & Sprinkler irrigation):

Farmers of amburpatti and avvaiyarpatti practice open irrigation for all crops, resulting in large amounts of water being evaporated and wasted. Many improved technologies have been introduced to irrigate without wasting water. One of the most important ones is Drip irrigation and Sprinkler irrigation. Water is saved by these only apply water to the places where it is needed. Drip and sprinkler irrigation systems were provided to the farmers from our organization and installed in the farmers' field. The water requirement is less compared to conventional irrigation method. Prevents disease by minimizing water contact with the leaves, stems, and fruit of plants. Allows the rows between plants to remain dry, improving access and reducing weed growth. Saves time, money, and water because the system is so efficient. Decreases labor. Increases effectiveness on uneven ground. Reduces leaching of water and nutrients below the root zone. No loss of cultivable area due to channel construction. This not only reduced their water requirement but also increased their yield. Knowing its use other farmers have also started adopting this technology.



S.NO	WATERSHED AREA	No of Beneficiaries	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI				
	Drip Irrigation	2	105000	35000	140000
	Sprinkler Irrigation	10	165000	55000	220000
2.	AVVAIYARPATTI				
	Drip Irrigation	2	105000	35000	140000
	Sprinkler Irrigation	10	165000	55000	220000

4. Deepening of tanks:

There are 8 tanks for irrigation in both the watersheds. Since desilting work has not been undertaken for many years, the capacity to store water in the tanks is decreasing. This year, these 8 tanks will be deepened to store more water for irrigation purposes. So, despite deficient rainfall this year, 2,500 farmers benefited from this water and got good yields.

The people of both these regions depend only on water tanks for drinking water. During the rainy season, rainwater is stored and used throughout the year. In order to provide adequate drinking water to the people, 8 tanks were deepened. With this, drinking water was supplied throughout the year. It has become a great resource for irrigation purpose. It helps all the livestock's in the village to drink water.



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI (4 nos)	10000 cum	362880	69120	432000
2.	AVVAIYARPATTI (4 nos)	5800 cum	263088	50112	313200

Soil fertility & productivity enhancement measures

5.SOIL TESTING & SOIL HEALTH CARDS:

We collected 250 soil samples for each watershed and tested them in the soil testing laboratory and gave the results of soil testing to the farmers. Soil Analysis leads to more informed fertilizer decisions, reducing risks in the soil such as soil erosion, soil infertility and degraded lands and increasing farm profitability in the long-term. This helps farmers identify the exact need of their land and reduce the use of unnecessary fertilizers. Improves soil health by required amount application of fertilizers to field. Getting higher yield of crops. Decreases environmental damage due to optimum fertigation.



S.NO	WATERSHED AREA	No of Beneficiaries	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	250 nos	75000	0	75000
2.	AVVAIYARPATTI	250 nos	75000	0	75000

6.SUMMER PLOUGHING:

Farmers in Amburpatti and Avvaiyarpatti watershed only plough during the season times just before the planting. They didn't do summer ploughing. We have summer ploughed 80 hectares of cultivable land. Summer ploughing increases in-situ moisture conservation. Consequently, plant roots will get more moisture with less effort. It improves soil structure due to alternate drying and cooling. Organic matter decomposition is hastened resulting in higher nutrient availability to the plants. It increases soil fertility. Due to overturning of the soil in summer ploughing the sharp rays of sun enter the soil and kill the eggs, larvae and pupae of soil-borne insects and pests, thereby the hazards of insects and pests on subsequent crop are reduced. Deep ploughing and overturning uproot the weeds. Consequently, the roots and stems of the weeds get desiccated and die.



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	125 ha	375300	125100	500400
2.	AVVAIYARPATTI	127 ha	379875	126625	506500

7.DISC PLOUGHING:

The people of Amburpatti and Avvaiyarpatti areas, they only use primary plough to their field. Over few years there was a reduction in their yield. Due to the accumulation of fertilizers to their soil get polluted. Some of them didn't cultivate their land for past few years. We have ploughed 140 ha of land area with disc plough. By this, Soil inversion with reversible disc plough helps to control the weed population. Furthermore, it also buries the weed seeds deep into the soil and bring the nutrient-rich layer to the surface. Disc restrict soil erosion. It breaks the infertile tough surface and brings the nutrient-rich layer onto the top, improving water penetration and root development of plants.



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	126 ha	391441	130480	521921
2.	AVVAIYARPATTI	125 ha	388596	129532	518128

8.COMPOST PIT:

The people of Amburpatti and Avvaiyarpatti areas, despite being farmers and cattle rearers, are unable to use the waste properly. The initiative to excavate compost pits (15 nos.) and efficiently utilize decomposable waste by our institution is a significant step towards promoting sustainable agricultural practices in the Amburpatti and Avvaiyarpatti watershed area. By actively engaging in composting for 4-5 months and utilizing the resulting compost in their fields, the farmers are not only effectively managing livestock waste but also enriching their soil with organic nutrients.

This proactive approach aligns with the principles of sustainable agriculture and organic farming, and it's encouraging to see the positive impact of these efforts in the community. It sets a great example for other farmers in the area and demonstrates the tangible benefits of utilizing composted livestock waste as a valuable resource for agricultural productivity. By promoting the efficient use of livestock waste as a fertilizer, farmers can reduce their reliance on chemical inputs, improve soil fertility, and contribute to more sustainable agricultural practices in the both watershed area. It reduces fertilizer cost considerably at the rate of Rs.1000/acre.



S.NO	WATERSHED AREA	No of Beneficiaries	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	97.2 cum (15 nos)	4409	3561	7970
2.	AVVAIYARPATTI	377.8 cum (5 nos)	17136	13841	30977

9.GRASS SEEDING ON BUNDS:

It is evident that animal husbandry plays a significant role in the livelihoods of the people in the Avvaiyarpatti and Amburpatti watershed villages. The increased cost of fodder, particularly during certain times of the year, can significantly impact the finances of the farmer families. The reliance on milch animals as a consistent income source highlights the importance of effective fodder management and disease control in ensuring the profitability and sustainability of animal husbandry and thus conforming the resilience of farmer families, particularly during periods of agricultural uncertainty.

Providing Co-4 napier grass seeds to Farmers in Avvaiyarpatti and Amburpatti watershed villages is a commendable initiative. Co-4 napier grass is known for its high productivity and nutritional value, making it an excellent choice for fodder production. By offering these seeds, we are supporting the sustainable management of fodder resources for their two dairy cows and five goats. This can contribute to improved livestock health and productivity, ultimately benefiting Farmer's livelihood. Co-4 napier grass that is known for its high productivity and nutritional value. This type of grass is often favoured for livestock feed due to its palatability and high nutrient content, making it a valuable resource for feeding milch animals, sheep, and goats. If this is indeed the case, it's great to hear that such high-quality fodder is available for livestock in your area.

Feeding 15Kg of CO4 grass can increase milk yield by almost 200 ml per cow. CO4 grass is a perennial grass which can be retained on field for 4 to 5 years. It is juicier and succulent at all stages of growth. It reduces the cost of fodders upto 40 rupees/ day.



S.NO	WATERSHED AREA	UNIT	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	87 kg	43500	4350	47850
2.	AVVAIYARPATTI	90kg	45000	4500	49500

10.VERMICOMPOST DEMO UNIT:

We have set up 10 vermicompost demo units in each watershed. We guided them to produce vermicompost on their own. After using it for the first time, seeing the benefits it brings to the land, they started producing it and using it regularly. Moreover, by explaining to many people about the mode of production and its benefits, they also educate other farmers. The cost of production of vermicompost is less. It has increased soil fertility, so the production capacity automatically increased. When vermicompost is added to soil, it boosts the nutrients available to plants and enhances soil structure and drainage. Vermicompost has also been shown to increase plant growth and suppress plant disease and insect pest attacks. It acts as an organic fertilizer, enriching the soil with essential nutrients, humic acids, growth-regulating hormones, and enzymes, improving plant nutrition, photosynthesis, and overall crop & soil quality.



S.NO	WATERSHED AREA	No of Beneficiaries	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	10	86416	2562	88978
2.	AVVAIYARPATTI	10	86418	2563	88980

11.APPLICATION OF VERMICOMPOST:

Avvaiyarpatti and Amburpatti watershed area have good fertile soil. There is no need to put high amount of fertilizer for yield. But the farmers of those villages put high amount of fertilizers to get high and quick yield. So, the soil gets highly polluted and needs reclamation. Vermicompost is an organic fertilizer which was naturally decomposed by earth worms. We gave individual beneficiaries a count of vermicompost bags based on their land availability (1t /ha). It regulates the growth of the crop better than before. It reduces amount of basal dose fertilizer application and reduce weed population compare to before. It reduces amount and cost of basal dose application Rs.2000/acre. It slightly increases the yield (1bag/acre). It increases soil fertility, so the production capacity automatically increases. After the success of vermicompost farmers believe that organic fertilizers and organic methods can increase the yield and income.



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	50 ha	242000	14000	256000
2.	AVVAIYARPATTI	50 ha	242000	14000	256000

12.AZOLLA DEMO UNIT:

The farmers of Amburpatti watershed area only use inorganic fertilizers for fields and feed ordinary animal feed to their livestock. Azolla is used as organic feed for cattle and poultry. It increases milk yield capacity of milch animal and meat capacity of poultry. We gave artificial azolla bag set up to individual beneficiary and fit the bag in suitable place. Because it requires both sunlight and shade in limited level. And also, we provide azolla seed to individual beneficiary. In the field level, it gives N (nitrogen) content to soil. It reduces level of urea application to soil. In 25 to 35 days azolla can easily fix enough nitrogen for a 4 to 6 ton/ha rice crop during the rainy season, or a 5 to 8 ton/ha crop under irrigation during the dry season. Azolla also contributes to maintaining soil fertility, by providing nutrient-rich humus through its decomposition. It reduces fertilizer cost Rs.120/acre. It reduces weed growth in field. So, it also reduces weedicide/hand weeding cost Rs.1500/acre. In poultry feed, it increases milk yield and reduce feed cost Rs.40/day. By feeding azolla to milch animals the price per litre was increased. Now they get extra 5-6 rupees per litre.



S.NO	WATERSHED AREA	No of Beneficiaries	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	30 nos	108997	9332	118329
2.	AVVAIYARPATTI	30 nos	108997	9332	118329

13.BIOFERTILIZER:

Our institution has identified the reasons behind the reduction in plant population and have recommended a solution in the form of biofertilizers. Training the farmers about the benefits and usage of biofertilizers is a crucial step in ensuring its successful implementation. The provision of specific biofertilizers such as Azospirillum, Phosphobacteria, Azotobacter, Rhizobium, and VAM (2kg/ha) to the farmers of these areas greatly helped in improving soil fertility and promoting plant growth. The increased plant population and higher yield demonstrated the positive impact of using biofertilizers in cultivation. We also ensure that the farmers understand the correct application methods and the appropriate dosage of these biofertilizers to maximize their effectiveness. They get higher yield after application of biofertilizer upto 3 bags/acre. Income increased upto Rs.10000 per acre. Overall, the use of biofertilizers is a positive step towards sustainable and environmentally friendly agriculture in the watershed area.



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	100 ha	150000	100000	250000
2.	AVVAIYARPATTI	100 ha	150000	100000	100000

Sustainable NRM, CCA farming practices and food security

14.ALTERNATE CROPS:



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	6 ha	18000	6000	24000
2.	AVVAIYARPATTI	8 ha	24000	8000	32000

15.INTERCROPPING – BLACKGRAM:

Farmers from Amburpatti, Avvaiyarpatti and other areas took up only single crop cultivation. Depending on only one crop in some seasons can be very dangerous. We advised the farmers to grow black gram as an intercrop in their main crop. This reduces their risk of the main crop. This was the new practice in that area. So, we supported the purchase of inputs and land practices. It works and through this, farmers get additional income. And they follow this practice regularly.

S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	30 ha	60000	30000	90000
2.	AVVAIYARPATTI	30 ha	60000	30000	90000

16.INTERCROPPING GREENGRAM:

Intercropping has significant advantages over monoculture farming, which are aimed at boosting yields and more efficient usage of land and resources. Secondary crops provide more returns and ensure profit even when the primary crop fails. Planting species in-between rows allows utilizing the soil in a more efficient way, unlike monocropping when spaces between rows are unused. Intercropping improves the quality and fertility of the soil through improving the enzymatic activities in the soil. Intercropping helps to conserve soil. When One crop is harvested and it starts raining the second crop grown in that farm will not let to erode the soil easily by water. Legume-based cropping systems maintained greater organic and accessible P levels than non-legumes in rotation.



S.NO	WATERSHED AREA	AREA	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	30 ha	60000	30000	90000
2.	AVVAIYARPATTI	30 ha	60000	30000	90000

17.AGROFORESTRY:

Most of the lands in Amburpatti and Avvaiyarpatti areas were lying fallow. They are not suitable for crop cultivation as they are less fertile. So, we decided to suggest an alternative land use method for those farmers. Under this, we distributed 50 red saplings, teak and vengai saplings to 20 farmers in each watershed. Agroforestry, as a sustainable land management practice, has shown solid evidence of its role in improving soil quality. Presence of trees in the system and enhance soil microbial dynamics. Agroforestry is a practice that offers great promise to improve soil and soil health for current and future generations. They would positively influence soil health. They are wood value trees. This reduces the barren terrain and increases their future monetary value.



S.NO	WATERSHED AREA	No of Beneficiaries	GRANT	SHRAMADHAN	TOTAL AMOUNT
1.	AMBURPATTI	20 (1000 nos)	33640	5880	39520
2.	AVVAIYARPATTI	20 (1000 nos)	33640	5880	39520

18.AGROHORTICULTURE:

The farmers of Amburpatti and Avvaiyarpatti watershed, cultivate only one season. They do not have sufficient amount of water to cultivate agriculture crops. So, we decided to suggest an alternative land use method for those farmers. We have distributed 50 horticulture trees to 40 farmers in both watersheds. (Citrus tree-10nos, Mango-10nos, Sapota-10nos, Amla-10nos, guava-10nos). From this, within 5 years they expect yield from the trees. Within the horticulture trees they intercrop black gram, green gram, chilli, tomato, brinjal and bhendi. Increasing agriculture productivity can improve the efficiency of land use and help in protecting biodiversity. It helps in erosion control and water retention, nutrient recycling, carbon storage, biodiversity preservation, and cleaner air and helps communities withstand extreme weather events.

