

PABITRA NAYAK

At: Gajapitha, P.O: R.K. Patna, Dist: Kendrapara PIN: 754244 (Odisha)

Phone: 8018680404 Mobile: 7326072026

Education: Matriculation

Land holding (acres): Irrigated 0.5 ac + Rainfed: 2.0 ac



Crops grown	Area (acres)	Productivity (kg/acre)
1 Rice	2.0	2100
2 Greengram	1.0	175
3 Blackgram	1.0	180
4 Vegetable	0.5	
5 Livestock (no.): 2 cows, 6 goats, 50 Poultry birds		

Technologies adopted:

- In situ water harvesting: Mulching, Ridge & furrow method of vegetable cultivation
- Ex-situ water harvesting: Farm Pond
- Improved varieties: Swarna Sub-1 (rice), CR-1009- Sub-1 (rice), IPM-2-14 (greengram), PU-31 (blackgram), Grafted Brinjal, grafted tomato (heat tolerant), Kasi Lalima (Okra)
- Farm machinery usage: From CHC (Power tiller, Pump set and Sprayer)
- Any other: Azolla, Poultry breed Kadaknath, Vermicompost production

Climate resilient practices adopted

- Zero energy drip irrigation system for newly established arecanut plantation
- Cultivation of cowpea in grow-bag with drip irrigation under pendal system for flood prone areas

Description of innovation

1. Improved varieties of arecanut are planted. A new concept of irrigation i.e. Zero energy (gravitational flow) drip irrigation system is installed for irrigation of the newly established arecanut plantation. A plastic drum is kept at a height of 5 feet from the arecanut plant which is loaded with water. Low-cost plastic pipe is connected from the drum to each plant in a line. At the point of root zone of each plant a small pin hole is created through which water drops from the pipe in a regulated manner to wet the root zone only. Rice husk also spread over the root zone as mulching to increase the water holding capacity of the soil. In case of excessive watering a tap is there to close the flow at the drum outlet.
2. Improved variety of cowpea is planted in grow bag and allowed to grow over a pendal made up of locally available bamboo and plastic net. This system is also equipped with Zero energy (gravitational flow) drip irrigation system.
3. As Zero energy drip irrigation is advocated there is conservation of 65% of water as compared to flood irrigation. Also, there is no energy consumption, as system is operating under gravitational work force. The labour consumption is very low in this system as a result the cost of cultivation of the crop is reduced.
4. Growing of cowpea in the grow bag enables to raise the height of the base of the plant during flood condition. Also allowing the plant to grow on a pendal protects the crop from vulnerability of the flood. In this system there is less chance of insect and disease infestation as the crop grows at a height from the ground. Previously he has grown bittergourd in the same system and obtained an average of 1.72 kg yield from each growbag.
5. These two technologies are very easy, feasible and low-cost technologies. The neighbouring farmers and farmers from adjacent villages are very much inspired by the innovation. Currently 6 farmers from his village and 28 farmers from adjacent villages have adopted the innovation.
6. For the flood prone rainfed areas these two technologies play a vital role to combat the ill effects of the flood and helps in water conservation during water scarcity period. Mr. Rama Chandra Jena, Addl. Secretary, Dept. of Agriculture and Farmers Welfare, Govt. of Odisha along with heads of the line departments of the district visited his field and highly appreciated the innovation and suggested for replication of such innovations to other small and marginal farmers of the area for their livelihood improvement.

