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Successful cultivation of Organic Paddy at KVK, Kalikiri

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Krishi Vigyan Kendra (KVK), Kalikiri successfully demonstrated organic paddy cultivation during the Kharif season of 2025. From nursery establishment to harvest, the crop was grown without the use of chemical fertilizers, herbicides, or pesticides. A systematic cultivation plan was developed by the Programme Coordinator and scientists using natural resources, bio-fertilizers, and organic inputs produced at KVK.

The paddy variety Koonaram Sannalu (KNM-1638) was cultivated by integrating various organic practices, resulting in an impressive yield of 30 bags per acre. Notably, no pest or disease incidence was observed throughout the crop period. The organic paddy cultivation recorded a net income of Rs.51,400/- per acre, proving its economic viability. Encouraged by this success, KVK Kalikiri is also planning organic cultivation of Groundnut and vegetable crops. Scientists advised farmers of Annamayya district to adopt organic farming practices to conserve biodiversity, protect the environment, and reduce health risks.

Organic Practices followed in Paddy Cultivation

- Application of well-decomposed farmyard manure @ 3 tonnes per acre during field preparation.
- Regular removal of weeds on bunds using a brush cutter to prevent weed spread.
- Spraying of neem leaf powder extract (shade-dried) @ 5 g per litre during the nursery stage.
- Broadcasting of Azolla at 10 kg per acre one day after weeding. Azolla spread throughout the field within a week and helped in biological nitrogen fixation, supplying nitrogen to the crop.

- Twenty days after Azolla application, a 200 kg of organic nutrient mixture per acre was uniformly broadcast, consisting of:
    - Shade-dried neem and Calotropis (Jilledu) leaves and tender twigs were chopped into small pieces using chaff cutter @ 50 kg
    - Residue left after vermicompost sieving @ 50 kg
    - Farmyard manure enriched with bio-fertilizers (PSB, KSB, Azospirillum) @ 100 kg

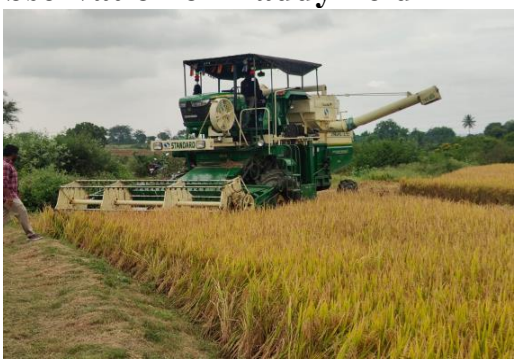
Spray this mixture evenly throughout the field. Neem and Calotropis possess natural biopesticidal properties that help to suppress pests by destroying insect shelters and pupae. Neem leaves also supply nitrogen and other nutrients, while Calotropis contributes phosphorus and acts as a botanical pesticide. Vermicompost residues supply both macro and micronutrients and enhance earthworm activity, thereby improving soil fertility. Azolla, phosphorus-solubilizing bacteria, potassium-solubilizing bacteria, and Azospirillum were found to be effective bio-fertilizers for paddy cultivation.

During the panicle initiation stage, neem leaf powder extract (shade-dried) was again sprayed @ 5 g per litre.

Release of Azolla in Paddy field

Observation of Paddy field

Organic paddy at panicle initiation stage



Harvesting of Paddy

Harvesting of Horsegram reaper

100% Organic paddy seed