

SUCCESS STORY (2025-26)

Harvesting Prosperity: Success Story of Summer Groundnut Production with Kadiri Lepakshi Variety in Gurundia Block of Sundargarh District"

Groundnut cultivation scenario in Sundargarh District of Odisha

Sundargarh district, located in the north-western plateau region of Odisha, has favorable agro-climatic conditions for *Summer* Groundnut (*Arachis hypogaea*) cultivation in irrigated areas. Groundnut is cultivated in all three cropping seasons in Sundargarh district, but its distribution differs significantly by season. . According to the Directorate of Agriculture and Food Production, Government of Odisha (2019–20) *Kharif* accounts for the largest cultivated area (2.42-2.64 thousand ha) with productivity of 3.9-4.0 thousand tonne, *Rabi* occupies a smaller irrigated area (0.44-0.93 thousand ha) with productivity of 1.0-2.0 thousand tonnes, and *summer* groundnut is grown only in limited irrigated pockets. Although paddy dominates the *kharif* season, groundnut is increasingly being promoted as a high-value oilseed crop during the summer season because of its profitability, lower pest incidence, and better market demand. *Summer* groundnut is cultivated mainly in irrigated pockets after the harvest of *rabi* crops. The crop is expanding in blocks such as Gurundia, Kutra, Rajgangpur, Nuagaon, Lathikata, and Lephripa, where farmers have access to lift irrigation, bore wells, check dams, and other irrigation sources. Sandy loam to red lateritic soils with good drainage, Availability of assured irrigation during February to May, Warm temperatures (25–35°C) that favour vegetative growth and pod development Bright sunshine during pod filling, which improves seed quality and oil content are favourable Conditions for Summer Groundnut in Sundargarh.

The journey of Transformation



Groundnut is an important oilseed crop for the tribal farmers of Gurundia Block in Sundargarh district of Odisha. Mr. Dileshwar Behera of Village- Bada Turamura, GP- Narendra, Block- Gurundia of Sundargarh district was cultivating traditional low yielding local crop varieties of Groundnut in his 1.5 acre of land. However, the productivity of local groundnut varieties has remained low due to the use of poor-quality seed, erratic rainfall, and limited adoption of improved crop management practices.

To address these challenges KVK SUNDARGARH-II introduced the improved groundnut variety K-1812 (Kadiri Lepakshi) among farmers through Cluster frontline demonstrations (CFLD) on Oilseeds during summer season (2025-26), a flagship programme of the Indian Council of Agricultural Research (ICAR) supported by the Department of Agriculture &

Farmers Welfare (DAF&W), Government of India. The variety is developed by the Acharya N.G. Ranga Agricultural University, Andhra Pradesh and it was released on 2020 and at present scenario it is only 6 years old variety. It is a high-yielding, drought-resistant groundnut variety and highly prized for its 51% oil content, shelling percentage is 70%, resistance to pests, and ability to produce stable yields of 14 to 30 quintals per acre, even under severe water scarcity.

Mr. Dileswar Behera participated in demonstration and trainings in CFLD oilseed (*summer*) program and Under the guidance of Scientists from KVK Sundargarh-II, he replaced the local variety and adopted the improved variety K-1812 (Kadiri Lepakshi) along with the recommended package of practices, including quality seed, Seed treatment-with Bavistin @2g/kg of seed, Application of Herbicides Oxyfluorfen, Line sowing at a spacing of 30X10 cm. Application of IFFCO Sagarika and Bentonite Sulphur and Boron 14.5%, Hoeing, weeding and earthing up at 20 DAS ,Need based plant protection measures by Hltcel and Ridomil. Scientists from KVK Sundargarh-II was rigorously visited the field and farmer always took advice regarding the crop and carefully followed the recommended production technologies throughout the cropping season. Despite the challenges posed by variable weather conditions, the crop established well, showed vigorous growth, and produced healthy pods.



Tangible Impact:

The groundnut variety K-1812 (Kadiri Lepakshi) along with the recommended package of practices, scientific advices from scientist can substantially improve groundnut productivity and farm income in the rainfed conditions of Sundargarh district. Mr. Dileswar Behera recorded a pod yield of 17.6 q/ha, which was significantly higher than the yield generally obtained from locally cultivated varieties which was 11.4 q/ha .The demonstrated yield also exceeded the district average of 12.5 q/ha and the state average of 10.9 q/ha. Overall, the intervention resulted in a 54.3% increase in yield over the traditional practice, clearly demonstrating the superiority of the improved variety and recommended production technologies. Farmer fetched the Net income of Rs. 77000/-, while the Benefit-Cost (BC) ratio improved to 2.6, indicating higher profitability.



Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Specific Technology	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	11.4	42100	79800	37700	1.89
Demonstration	17.6	46200	123200	77000	2.6
% Increase	54.3%				

Intangible Impact

At harvest, The improved productivity resulted in better returns and increased confidence of Mr. Dileswar Behera in adopting improved technologies. Encouraged by the excellent performance of K-1812, a Field day was conducted where neighbouring farmers visited the demonstration field during the crop season and more that 20 farmers expressed their interest in cultivating the variety in the coming season.

Success beyond the Demonstration

Mr. Dileswar Behera , who took risk by replacing his local variety of groundnut by adopting Kadri lepakshi along with scientific agricultural practices sets a good example of a progressive farmer. His story reflects how scientific interventions can transform the summer Agriculture in Riches. Groundnut is mainly grown in *Kharif* season but Successful cultivation of Groundnut in *summer* season in Gurundia block of Sundargarh district has demonstrated the immense potential of cultivation on groundnut in the region. The substantial increase in productivity and profitability not only improved his household income but also make him the role model for other tribal farmers. The successful cultivation has become a motivating example for the farming community of Gurundia Block, highlighting the importance of quality seed and scientific crop management. The success of this demonstration demonstrates that adoption of improved varieties like K-1812 (Kadiri Lepakshi), continued extension support, timely availability of quality seed, and farmer-to-farmer dissemination are expected to accelerate the spread of this promising variety across the region. With expanding irrigation facilities, improved varieties such as Kadiri Lepakshi, and scientific crop management, *summer* groundnut offers significant scope for enhancing farm income and strengthening oilseed production in Sundargarh district of Odisha.