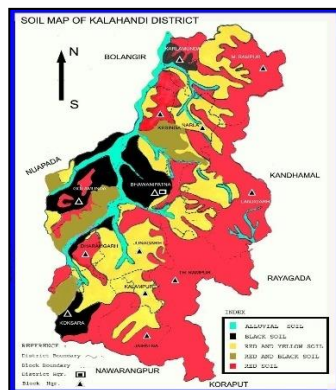


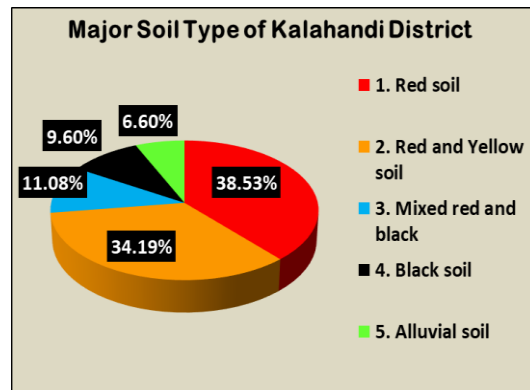
Soil Health Management for Sustainable Agriculture in Kalahandi

-KVK Kalahandi initiatives for improving soil fertility, productivity and farmers' income

Soil health is the foundation of sustainable agriculture and plays a vital role in determining crop productivity, nutrient use efficiency and farm profitability. In Kalahandi district, soils are predominantly **acidic with low organic carbon and imbalanced nutrient status**, which often leads to poor crop performance and low input efficiency.

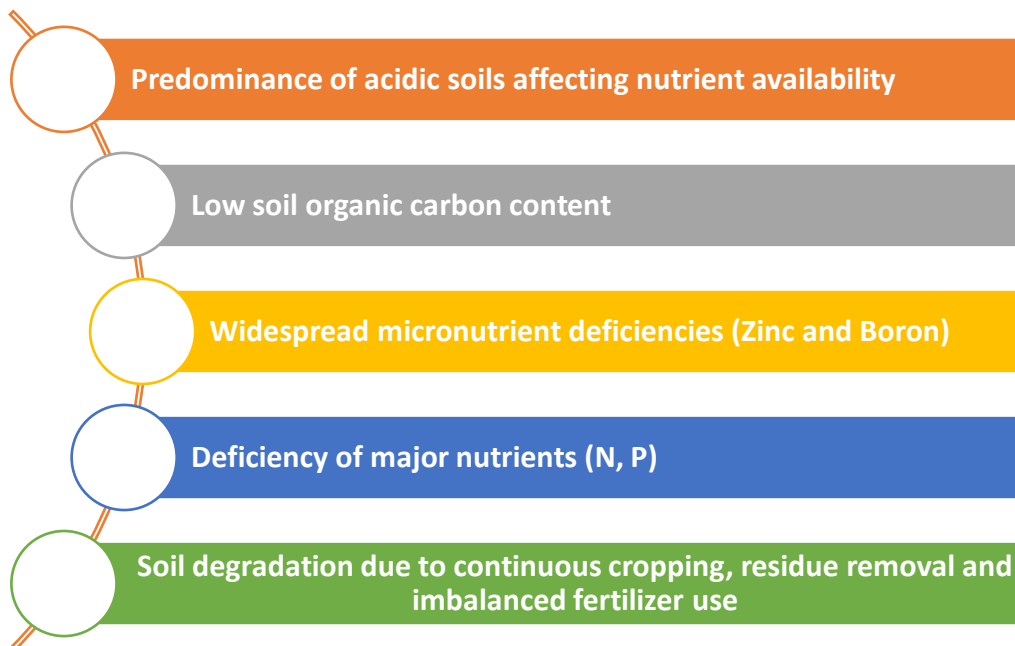


Soil Map of Kalahandi District



Major Soil Type of Kalahandi District

KrishiVigyan Kendra (KVK), Kalahandi is actively engaged in improving soil health through **soil testing, promotion of balanced nutrient management, organic and natural farming practices, frontline demonstrations and capacity building programmes**. The interventions aim at enhancing soil fertility, restoring soil biological activity and ensuring sustainable crop production in the district.



Major Soil Health Issues in Kalahandi District

Soil Testing and Soil Health Card Based Advisory

KVK Kalahandi undertakes **regular soil sample collection and analysis** from farmers' fields to assess soil fertility status. Based on laboratory results, **soil-test-based fertilizer recommendations** are provided to farmers for different crops. Emphasis is given on **balanced nutrient application, correction of soil acidity and efficient use of inputs** to enhance crop productivity and soil health.



Soil Sample Analysis at Soil Testing Lab Of KVK



Distribution of Soil health card

Integrated Nutrient Management (INM)

Integrated Nutrient Management is promoted to maintain soil fertility and productivity through the judicious use of chemical fertilizers along with organic and biological sources. KVK Kalahandi advocates:

- Balanced application of N, P and K based on soil test values
- Use of farmyard manure (FYM), vermicompost and green manuring
- Application of biofertilizers such as *Azotobacter*, *Azospirillum* and Phosphate Solubilizing Bacteria (PSB)
- Identification of micronutrient deficiencies through soil testing
- Crop-specific soil and foliar application of Zinc and Boron
- Special emphasis on banana, paddy, pulses and vegetable crops

These practices help improve soil organic carbon, nutrient availability and microbial activity.



FLD on Integrated Nutrient Management in Chili



FLD on Application of Lime and Sulphur on groundnut



FLD on Integrated Nutrient Management in Potato



Training and field visit on micronutrient management in Banana

Organic and Natural Farming Interventions

To promote sustainable and eco-friendly agriculture, KVK Kalahandi encourages organic and natural farming practices among farmers. Demonstrations and trainings are conducted on:

- Preparation and application of Jeevamrita, Beejamrita, Ghanajeevamrita, Agniastra, Neemastra, Brhmastraetc
- Crop residue incorporation and mulching
- Reduction of chemical input dependency

These interventions contribute to improved soil structure, enhanced biological activity and long-term soil health.

Specific intervention by KVK to promote Natural Farming in 2025-26



Latitude: 19.90547
Longitude: 83.70039
Elevation: 276.47223 m
Accuracy: 4.5 m
Time: 21/06/2025 13:52
Note: National Institute of Natural Farming, at Extension Training Center, Bhanwarpur, Kalahandi-751001, Odisha, India



Latitude: 19.90506
Longitude: 83.70039
Elevation: 276.47223 m
Accuracy: 4.5 m
Time: 21/06/2025 14:07
Note: National Institute of Natural Farming, at Extension Training Center, Bhanwarpur, Kalahandi-751001, Odisha, India



Latitude: 19.90514
Longitude: 83.69947
Elevation: 276.28259 m
Accuracy: 4.5 m
Time: 21/06/2025 13:53
Note: National Institute of Natural Farming, at Extension Training Center, Bhanwarpur, Kalahandi-751001, Odisha, India



Latitude: 19.92811
Longitude: 83.58154
Elevation: 292.81157 m
Accuracy: 3.8 m
Time: 20/06/2025 15:50
Note: National Institute of Natural Farming, at Extension Training Center, Bhanwarpur, Kalahandi-751001, Odisha, India



Latitude: 19.92804
Longitude: 83.58170
Elevation: 292.81157 m
Accuracy: 3.8 m
Time: 20/06/2025 15:28
Note: National Institute of Natural Farming, at Extension Training Center, Bhanwarpur, Kalahandi-751001, Odisha, India



Latitude: 19.91986
Longitude: 83.58389
Elevation: 272.25114 m
Accuracy: 4.5 m
Time: 20/06/2025 15:05
Note: National Institute of Natural Farming, at Extension Training Center, Bhanwarpur, Kalahandi-751001, Odisha, India

1st round training of CRPs/ KrishiSakhis on Natural Farming under NMNF from 21st June to 25th June, 2025



Time: 10/17/2025 16:55
Address: W52+114G6
Bhanwarpur, Odisha, India
Lat/Long: Lat: 19.914144 Long: 83.531995



Latitude: 19.92429
Longitude: 83.51621
Elevation: 279.3415 m
Accuracy: 7.3 m
Time: 07/10/2024 14:01
Note: KVK, Kalahandi, (Farmer Scientific Intervention)



Latitude: 19.961659
Longitude: 83.312673
Elevation: 249.3718.1 m
Accuracy: 2.3 m
Note: JIVA, NABARD, AFC

On campus training program on Natural Farming

NF model farms at Farmer's field Badchiching (Narla)

NF model farms at Farmer's field Dhanrakhman (Karlamura)



Time: 11/28/2025 16:22
Address: W52+114G6
Bhanwarpur, Odisha, India
Lat/Long: Lat: 19.92494 Long: 83.531959



Latitude: 19.92429
Longitude: 83.51621
Elevation: 279.3415 m
Accuracy: 7.3 m
Time: 07/10/2024 14:01
Note: KVK, Kalahandi, (Farmer Scientific Intervention)



Latitude: 19.961659
Longitude: 83.312673
Elevation: 249.3718.1 m
Accuracy: 2.3 m
Note: JIVA, NABARD, AFC

NF Demo farm at KVK Campus

Distribution of NF Inputs among farm women

NF preparation at farmer's field



Vermicompost Production unit at KVK Campus

Capacity Building and Farmers' Training

Regular F &FW training programmes, field days, farmer–scientist interactions training of rural youth and in-service personnel are organized to create awareness on soil health management. Topics covered include:

- Importance of soil testing
- Balanced fertilizer application
- Organic and natural farming practices
- Micronutrient management



Use of Digital and Extension Tools

KVK Kalahandi uses digital platforms to disseminate soil health related information through:

- Educational YouTube videos
- WhatsApp groups for sharing advisories, videos and leaflets
- Distribution of printed extension materials

These tools help reach a larger farming community effectively.

Impact of Soil Health Management Interventions

- Improvement in soil organic carbon status
- Enhanced nutrient availability and uptake
- Increased crop yield and productivity
- Reduction in cost of cultivation
- Improved benefit–cost ratio for farmers

Way Forward

KVK Kalahandi will continue to strengthen soil health management activities through:

- Expansion of soil testing and advisory services
- Promotion of residue incorporation and biochar application
- Greater convergence with line departments
- Climate-resilient soil management strategies

The sustained efforts aim to improve soil health, crop productivity and farmers' income in Kalahandi district.