The Academic
International Journal of Multidisciplinary Research

An Online Peer Reviewed / Refereed Journal
Volume 4 | Issue 3 | March 2026
ISSN: 2583-973X (Online), SJIF IF: 5.6
Website: www.theacademic.in

Agriculture and Agricultural Crisis in Digha Region of East Medinipur, West Bengal in Contemporary Period.

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DOI : https://doi.org/10.5281/zenodo.19654662

ARTICLE DETAILS

Research Paper

Accepted: 30-03-2026

Published: 10-04-2026

Keywords:

Cultivation, Cashew nut, Betel leaf,Coastal Salinity Increase,Labor shortage, Local Economy

ABSTRACT

For decades, Digha sea coast has held a significant place in West Bengal's tourism and development industry.The cashew industry is a traditional and historically important industry here,contributing significantly to the state economy. Cashew production is closely linked to agriculture,and many farming families in Digha are involved in the agricultural economy.Along with cashews, crops like rice, betel leaf, cocos, medicinal plants and vegetables are cultivated in the coastal areas ,driving the local agricultural economy. The coastal soil is suitable for cashew nut growth, and the state-run Cashew nut Garden promoted cashew cultivation . However , increasing soil salinity,frequent natural disasters, climate change and inadequate rainfall have hindered agriculture since colonial times.Presently,Digha's agricultural economy faces a severe crisis , mainly due to labor shortages.Many farmers are shifting to alternative livelihoods due to uncertainty in agriculture.Local farmers are losing interest in farming and turning to fish farming or tourism.The combination of natural disasters, increasing soil salinity and labour shortages has put the agricultural economy in crisis.

Introduction: Digha, a renowned seaside resort in East Midnapore,West Bengal,India,attracts tourists with its golden sand and sea waves .While tourism has grown, traditional farming remains challenging.Agriculture is a key sector, with cashew nut and betel leaf cultivation being prominent.However, climate change ,rising sea levels and soil salinity have led to a crisis.Many farmers

are shifting to other jobs, affecting agriculture. Despite this, cashew and betel leaf production contribute significantly to the local and state economy.Apart from cashew and betel leaf production, rice, vegetables, potato and maize cultivation also play a significant role in Digha's agriculture. It fulfills local demands and boosts the economy.

Methodology: The present study is primarily based on primary data collected through field surveys reports. Secondary data has been sourced from textbooks , articles , various documentary sources like newspapers,internet sources etc.

Discussion:

History: Digha was discovered in the late 18th century,originally known as Bircul. In 1772, Warren Hastings, Bengal's first Governor -General ,built a bungalow on Digha's coast for vacationing and planned entertainment activities .But it wasn't implemented due to sea erosion and land subsidence, which submerged much of Bircul. In 1923 British traveler John Francis Nixon,owner of Hamilton Company ,settled in Digha and wrote about its beauty,sparking interest.Nixon learned about Digha from a customer,a local landlord. In Post - independence,he encouraged West Bengal's Chief Minister,Bidhan Chandra Roy ,to develop tourism,leading to its growth.Traditionally , rice and vegetables were cultivated here.Locals grew rice and coconut.Now ,modern coastal fishing and scientific farming , especially cashew,betel leaf and vegetables are notable.High-yield maize and potato cultivation meet local demands.

Cultivation: Digha's crop cultivation includes salt-tolerant rice, cashew nut,betel leaf,cocos,and vegetables, despite challenges like soil salinity and climate change.Local farmers grow fragrant,flood-tolerant rice varieties like Laxmi Digha,Boga Digha and Hijol Digha.These varieties can withstand flooding and require minimal care.

Rice : Digha's rice cultivation meets local demands.Varieties like Laxmi Digha ,Boga Digha and Hijol Digha can survive floods and grow with rising water levels. Lal Bhowala rice is grown without chemical fertilizers. BRRIs Gopalganj regional office is researching 15 Digha rice varieties to develop high-yielding strains.Scientific Officer Faruk Hossain Khan notes that local rice varieties have high nutritional value. The coastal soils salinity, natural disasters,and climate change make farming challenging.However, Digha's rice varieties are flood- tolerant and require minimal care,producing8-10 maunds per bigha.

Cashew cultivation: Digha's cashew cultivation, supported by government initiatives, thrives in the tropical climate and fertile soil.The cashew industry employs many, boosting the local economy. The

cashew gardens and availability of cashews attract the tourists of Digha.The coastal soil, sunlight and warm weather are ideal for cashew growth.

Government efforts have led to large -scale cashew cultivation in Digha,Kanthi,Tajpur ,Majna etc.Cashew processing units have also been set up with over 700 units in Kanthi subdivision alone, providing employment and improving livelihoods. The high demand for cashews ensures good profits for farmers, encouraging further cultivation.However,the government -run cashew nut garden in Digha faces labor shortages.Kanthi in East Midnapore district is the hub of the cashew industry, providing an alternative economy.Many people are involved in cashew cultivation and processing.Casheware processed and packaged in Digha and exported to various parts of India and abroad.

Betel leaf cultivation: Digha is famous for betel leaf (Pan) production, with vast areas dedicated to its cultivation.Sonali Mitha Pata and other varieties are grown in high and medium lands with proper drainage.Cuttings from 2year old vines are used for planting.Sheds are organic manure and fertilizers are applied. Farmers apply 3kg mustard/ neem cake per katha annually. Watering and fertilization are done regularly, maintaining humidity in the shed. Excess water is drained during monsoons. Betel leaf cultivation is a primary livelihood for locals in Digha, Ramnagar -1and 2 blocks.The produce is exported nationally and internationally.However,high maintenance costs, cyclone risks,and soil salinity pose challenges. Post - independence, theke abolition of zamindari led to more small- scale farmers to cultivate betel leaves, making it a commercial crop.This has diversified local agriculture and improved small farmers' economic status.

Coconut: Digha is a major coconut producer supplying to East Midnapore and nearby districts including Kolkata. The cookies are in high demand among tourist and local Elite who buy them as refreshers or for cooking. These has encouraged farmers to increase producing fetching good prices in the market. High jail varieties like Vietnam and Kerala work are planted and farmers are advised to up keep the fertilizer use like potassium and nitrogen rich once the boost yield. INI suitable geographical Indira aviralment this high yielding variety sapling play a supportive role. Coconut trees required regular maintenance involving the use of potassium and nitrogen reach fertilizer to promote grow. Document disturb and plans improved varieties like Kerala's DRC saplings. Administrative efforts advice producers on regular maintenance and using the right amount of fertilizer like urea tsp mop and potassium reach fertilizers for better yields. The local Agriculture Department recommends coconut varieties suitable for Digha coastal soil and human climate which can produce up to 200 cocos per year with proper care. These generates good income for the government. Coconut trees also play a crucial role in environmental protection

particular in preventing coastal erosion and withstanding cyclones. The west bengal government has initiated coconut tree planting in Digha coastal area for this purpose. The trees aesthetic appeal also boost Digha tourism industry attracting visitors with the scenic coconut lined coast.

Medicinal plant: several medicinal plants grow in Digha saline soil ,including notable ones like jhau, Keya ,Hogla ,Nishinda.The coastal area is lined with rows of jhau trees ,who have medicinal properties and add to Digha's natural beauty.

Jhau (Casuarina): Its bark is medicinal and has antioxidant properties .It relief constipation and its roots have antipyretic properties .

Keya(Pandanus): Its fragrant flowers are used in ayurvedic medicine for eye and respiratory issues. It also helps prevent postal erosion .

Nishinda (Vitex Negundo): Its leaves are used to treat arthritis, skin disease and insomnia.

Hogla(Typha): This plant grows abundantly in Digha's coastal wetlands and is used in herbal medicine .

Trees like Jhau ,Keya,Hogla etc grow abundantly in Digha .The importance of these medicinal plants is undeniable.They play a huge role in maintaining the ecological balance of Dighas ecosystem .During floods or tidal waves these trees help hold the seaside soil in place ,preventing erosion .That's why they are planted and carried for .In 2002 ,a Medicinal Plant Garden was set up in Digha to research and conserve rare species of medicinal plants. This herbal garden is a vital resource for local healthcare.The state government distributes saplings of these plants .There also an effort to provide saplings and technology for commercial cultivation .Government efforts are quite visible. However It is always best to consult an expert before taking any herbal medicine.

Other products: In Digha coastal areas local farmers produce potatoes ,maize and various vegetables to support local demands.The sandy loam soil is suitable for year -round cultivation of cauliflower, cabbage,bitter gourd and other vegetables.Organic manure and improved drainage are necessary for optimal yields.

Crisis for cultivation: Digha's agriculture faces significant challenges due to saline water intrusion, coastal erosion and climate change.Rising soil salinity affects rice and other crop yields. Untimely rainfall and droughts further impact production, threatening local farmers livelihoods and the economy.Many farmers and labours have shifted to alternative jobs due to Agricultural uncertainty.The government -run cashew garden faces labor shortage, impacting production.The agrarian crisis poses a

significant threat to Digha's local economy. In the recent past cyclones like amphan and yes have caused CVR damage to agriculture including paddy vegetables and other crops in Digha coastal and surroundings areas. Mini crops has been destroyed leaving farmers are in dire straits. The intrusion offline in water has also degraded and fertility of mini lens reducing long term production. Another factors contributing to the agriculture crisis is the lack of suitable freshwater for irrigation. Due to this shortage farming is being severely impacted particularly the cultivation of boro rice. Most farmers are all small and mariginal forcing them into debt. The struggle to copy with market price fluctuations leading to financial deterioration. Crop damage exacerbates this loss. If other reason for the growing crisis in Digha agriculture is the popularlity of local tourism industry with many agricultural lands being converted into research and hotels rapidly reducing the amount of arable land.

Evaluation: Despite being a coastal area Digha is quite significant agricultural land especially for meeting local demands. Paddy, betel leaves, Cashewnut, Medicinal plants ,Cocos and Vegetables grown here are most important. Some flood tolerant paddy varieties are grown , which feeds the locals. The betel gardens are a major cash crop, in demand across the state .Digha Cashew is a key cash crop too and governments set up cashew plantations here. We will also find various medical plants that support the ecosystem and are used in local treatments.

But Digha’s agricultural crisis is a complex issue rooted in environmental ,economic and social factors. The increasing salinity of agricultural land, natural disasters, labour shortages, market problems and changes in land use due to tourism are all contributing to the crisis. Soil salinity is reducing fertility and crop yields. Natural disasters like cyclones and floods are damaging agricultural land .Labour shortage is disrupting timely cultivation . Market issues are preventing farmers from selling their produce at fair prices. Tourism is altering land use ,reducing agricultural land . Addressing this requires joint efforts from the government and farmers .Encouraging modern farming techniques, improving market systems and promoting tourism that compliments agriculture are needed.

Conclusion: Digha in East Midnapore,West Bengal is known for its tourism and agriculture.The coastal areas produce rice , cashew, betel leaf,cocos and vegetables. Despite natural challenges,local farmers meet local demands. Cashew cultivation is a mainstay,attracting tourists and supporting the local shortage, climate change and natural disasters threatening agriculture.Many farmers are shifting to alternative livelihoods. To revive Digha's agriculture government intervention is crucial.This includes providing new technology,high quality seeds,and insurance schemes.Raising awareness about modern

technology and increasing access to government benefits can help.Boosting cashew and betel leaf production, along with food crops,will support the local and state economy.

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