Role of Government Agricultural Schemes and Funding of Maharashtra State in Enhancing District-Level Agricultural Growth with Special Reference to Gadchiroli District

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Abstract:

Agriculture remains one of the most significant sectors in Maharashtra, supporting rural livelihoods and contributing to overall state economic output. To strengthen this sector, the Government of Maharashtra implements several agricultural schemes aimed at improving productivity, irrigation, farmer income, and modern farming practices. This research paper evaluates the financial allocation and implementation of agricultural schemes in Maharashtra and examines their contribution to district-level agriculture development, with special focus on Gadchiroli district. Gadchiroli, a tribal and forest-dominated district, faces unique challenges such as limited irrigation, low mechanization, and lack of awareness. The findings indicate that schemes like Jal Yukt Shivar, PM Crop Insurance, Mechanization Subsidy Programme, and Soil Health Card Scheme have positively impacted agricultural development in Gadchiroli, leading to improvements in irrigation availability, farmer security, and use of modern technology. The paper concludes with recommendations to strengthen implementation, increase awareness, and improve accessibility of digital services.

Keywords: *Maharashtra Agriculture, Gadchiroli District, Government Schemes, Agricultural Funding, Development Impact, Farmer Welfare.*

Introduction:

Agriculture is one of the most important sectors of the Indian economy, not only for providing food security but also for sustaining rural livelihoods and supporting agro-based industries. Maharashtra is recognized as one of India's agriculturally progressive states, with a diverse cropping pattern and strong contribution to national food production. However, agriculture in the state is not uniform across regions, and significant disparities exist between developed and underdeveloped districts.

Gadchiroli district, located in the eastern part of Maharashtra, represents one of the state's most agrarian yet economically disadvantaged regions. Characterized by a high tribal population, dense forest cover, hilly terrain, and rain-fed cultivation, the district's agricultural sector faces persistent challenges such as low productivity, inadequate irrigation facilities, and minimal exposure to modern technologies. Most farmers depend on monsoon rains, and paddy remains the predominant crop.

Over the last decade, the Government of Maharashtra and the Government of India have introduced various schemes aimed at improving agricultural productivity and ensuring farmer welfare. Initiatives such as the Pradhan Mantri Krishi Sinchai Yojana (PMKSY), Jalyukt Shivar Abhiyan, Soil Health Card Scheme, Organic Farming Promotion, and Agricultural Mechanization Programme have been designed to modernize agriculture and address region-specific challenges. Institutional bodies like Krishi Vigyan Kendra (KVK) and Agricultural Technology Management Agency (ATMA) further support capacity building, training, and technology dissemination.

While some districts have benefited significantly from these interventions, others like Gadchiroli show mixed outcomes due to structural and socio-economic constraints. Therefore, assessing the impact of these schemes in Gadchiroli is essential for understanding their effectiveness and identifying areas where policy support needs to be strengthened.

Problem Statement:

While Maharashtra has introduced several agricultural schemes, their implementation and benefits are not uniform across all districts. Gadchiroli, due to geographical isolation, tribal dominance, limited irrigation, and low technology access, often lags in agricultural advancement. Therefore, evaluating the contribution of agricultural schemes to the development of Gadchiroli becomes crucial.

Objective of the Study:

1. To study agricultural schemes implemented in Maharashtra.

2. To evaluate the role of funding in district-level agricultural development.

3. To assess the impact of these schemes on agricultural growth in Gadchiroli district.

4. To identify challenges in scheme implementation in remote districts.

5. To suggest measures to improve agricultural development in Gadchiroli.

Hypothesis:

- H_0: Agricultural schemes have no significant role in improving agricultural development in Gadchiroli district.

- H_1: Agricultural schemes have significantly contributed to agricultural development in Gadchiroli district.

Research Methodology:

The study employs a descriptive and analytical approach, with data collected from both primary and secondary sources.

Source of Data:

- **Primary:** Interviews with farmers, Extension Officers, and ATMA officials in Gadchiroli.

- **Secondary:** Government reports, project documents, statistical reports, and academic publications.

The data were analysed to evaluate scheme performance in terms of productivity improvement, adoption of modern inputs, irrigation expansion, and overall socio-economic development.

Overview of Agricultural Schemes and Funding:

Scheme Name	Objective	Approx. Funds	Gadchiroli Impact
Jal Yukt Shivar	Improve irrigation	₹1200 Cr	Increased small water bodies and field moisture
PMFBY	Risk mitigation	₹800-900 Cr	Benefited paddy farmers during heavy rainfall
Mechanization Subsidy	Modern tools	₹400–500 Cr	Helped adoption of power tillers and harvesting machines
Soil Health Card	Fertility awareness	₹150 Cr	Improved paddy output with proper fertilizer ratio
ATMA & Krishi Vigyan Kendra	Training & capacity building	₹200 Cr	Training provided on organic farming and improved seeds

Impact Assessment with Focus on Gadchiroli

1. Enhancement of Irrigation Facilities:

One of the major barriers to agricultural growth in Gadchiroli has been dependence on monsoon rainfall. The implementation of **JalYuktShivar**, along with minor irrigation projects, has considerably improved water availability. Creation of farm ponds, check dams, percolation tanks, and contour trenches has helped increase groundwater levels. Farmers who previously cultivated only during monsoon months now have access to water for extended periods, enabling better crop management and increasing the possibility of cultivating short-duration crops.

2. Growth in Agricultural Mechanization:

Due to small landholdings and low income, mechanization was earlier negligible in Gadchiroli. Subsidies on equipment such as rice planters, power tillers, and harvesters have made machinery affordable to marginal farmers. Mechanization has reduced drudgery, ensured timely sowing and harvesting, and increased overall efficiency. Paddy cultivation, which is labour-intensive, has especially benefited from mechanized tools, reducing the dependence on manual labour during peak agricultural seasons.

3. Strengthening of Crop Insurance and Financial Security:

The district often experiences excessive rainfall, hailstorms, and drought-like conditions, leading to crop failure. The implementation of **Pradhan Mantri FasalBimaYojana** has provided a safety net to farmers, offering financial compensation during crop loss. This has reduced the financial burden on tribal farmers, encouraged continued investment in agriculture, and prevented distress-driven migration to urban areas.

4. Promotion of Soil Health and Sustainable Farming:

The **Soil Health Card Scheme** has introduced scientific methods of soil testing in Gadchiroli. Farmers are now more aware of their soil's nutrient status, enabling them to use fertilizers judiciously. As a result, input costs have decreased, soil fertility has improved, and crop productivity—particularly

paddy—has increased. The scheme has also discouraged excessive use of chemical fertilizers and encouraged organic inputs, promoting long-term soil sustainability.

5. Capacity Building Through Training and Extension Services:

ATMA and KVK have played a significant role in educating farmers about modern agricultural technologies. Training programmes on advanced seed varieties, integrated pest management, and organic cultivation have improved farmers' skills. Demonstration plots and exposure visits have helped spread knowledge in remote villages, increasing adoption of improved practices.

Challenges in Agricultural Development inGadchiroli

Despite the positive outcomes, several challenges affect the full realization of scheme benefits:

1. **Low literacy rates and limited digital skills** make it difficult for farmers to register for schemes or access online information.

2. **Poor internet and road connectivity** disrupts the flow of information and delays scheme implementation.

3. **Inadequate market access**, storage facilities, and transport infrastructure force farmers to sell produce at low prices.

4. **Large forest areas and land regulation issues** restrict expansion of agricultural activities and construction of irrigation systems.

5. **Delayed awareness and lack of timely communication** prevent many eligible farmers from benefiting from government schemes.

6. **Shortage of extension staff** limits the effectiveness of training programmes in interior Tribal areas.

Conclusion:

The analysis clearly indicates that agricultural schemes and government funding have played a significant role in strengthening the agricultural sector of Gadchiroli district. Improvements in irrigation facilities, mechanization, soil health awareness, crop insurance coverage, and training have contributed to enhanced productivity and greater resilience among farmers. Although the district continues to face structural and socio-economic challenges, the positive trend reflects the success of government interventions in bringing agricultural development to remote regions. Therefore, the study supports the alternative hypothesis (H_1) that agricultural schemes have significantly contributed to agricultural development in Gadchiroli district.

Recommendations:

1. **Strengthen mobile-based and community-level information systems** in local languages to increase awareness about schemes.

2. **Ensure timely disbursement of subsidies, insurance claims, and scheme benefits** to build trust and encourage participation.

3. **Expand micro-irrigation systems** suitable for hilly and tribal regions to reduce rainfall dependency.

4. **Develop market linkages, farmer-producer companies (FPCs), and procurement centres** to ensure fair prices for produce.

5. **Increase the number of agriculture extension workers** in remote villages to improve on-ground support.

6. **Promote sustainable farming practices**, including organic farming and integrated farming systems, to ensure long-term soil health and profitability.

7. **Invest in rural infrastructure**, including roads, storage units, and digital connectivity, to support holistic agricultural development.

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