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Low Agricultural Productivity of Food Grains in Marathwada: Issues and Remedies

Dr. Kendle V. N.
Associate Professor, Dept. of Geography,
RMIG College, Jalna (MS)

Introduction:

Agricultural productivity refers to the measurement of output obtained from agricultural activities in relation to the inputs used. It shows how efficiently land, labor, capital, and technology are utilized to produce crops. High productivity means producing more output from the same amount of resources. It is generally expressed in terms of yield per hectare or output per worker. Agricultural productivity is a key factor in ensuring food security for a growing population. It directly influences the income levels of farmers and the rural economy. Productivity also reflects the technological advancement and modernization of agriculture. Improved irrigation, use of fertilizers, and high-yielding varieties raise productivity levels. On the other hand, poor soil quality, inadequate inputs, and outdated techniques reduce it. Regional variations in productivity are seen due to differences in climate, resources, and infrastructure. In developing countries like India, productivity improvement is a major challenge. Low productivity affects national growth and increases dependence on imports. Enhancing productivity is crucial for poverty reduction and rural development. Balanced use of inputs, mechanization, and scientific farming practices are vital to improve it. Thus, agricultural productivity is not only an economic indicator but also a measure of overall agricultural progress.

Marathwada Region:

Marathwada is a region in central Maharashtra consisting of eight districts namely Aurangabad, Jalna, Beed, Latur, Osmanabad, Nanded, Parbhani, and Hingoli. It has a semi-arid climate with low and uncertain rainfall, making droughts a common feature that affects farmers' livelihoods. Agriculture is the main occupation and the region produces jowar, bajra, cotton, soybean, and pulses. Sugarcane is also cultivated in some irrigated parts where water is available. Farming here depends heavily on monsoon rains due to limited irrigation facilities. Groundwater is widely used as surface water is scarce, leading to over-extraction. Frequent crop failures due to drought have caused agrarian distress among farmers. Despite these problems, Marathwada contributes significantly to Maharashtra's food grains and cash crops.

The region's agriculture reflects both traditional practices and modern challenges. Sustainable irrigation and water conservation are crucial for its future. Use of drought-resistant crops and improved farming techniques can help reduce risks. Government support and farmer awareness are needed for stability. Overall, Marathwada's progress depends on strengthening agriculture along with water management.

Low productivity of food grains Marathwada:

The issue of low productivity of food grains is a serious problem in the Marathwada region of Maharashtra. The region faces frequent droughts and erratic rainfall, which directly affect crop yields. Farmers depend heavily on monsoon rains as irrigation facilities are limited. Over-extraction of groundwater has led to depletion and poor availability for farming. Soils in the region are often degraded, lacking essential nutrients due to continuous cropping. Farmers mostly follow traditional farming methods with limited use of modern technology. Small landholdings make it difficult to invest in advanced irrigation or mechanization. Use of chemical fertilizers is often imbalanced, harming soil fertility in the long run. Lack of access to quality seeds and timely credit also reduces productivity. Crop failures force farmers into debt, worsening their economic condition. Despite being agriculturally important, Marathwada lags behind other regions in yield levels. Addressing water scarcity, soil health, and modern techniques is vital to overcome this challenge.

Reasons for low productivity of food grains in Marathwada region:

1. Erratic and Low Rainfall

Marathwada lies in a semi-arid zone with highly uncertain monsoons.

Frequent droughts cause crop failures and reduce yields drastically.

Most farmers depend only on rainwater for cultivation.

This makes food grain production highly unstable.

2. Limited Irrigation Facilities

The region has very few large irrigation projects compared to demand.

Canals, dams, and other water resources are insufficient for farming needs.

Groundwater is overused, leading to falling water tables.

As a result, food grain crops suffer from water stress.

3. Soil Degradation

Continuous cropping without proper soil management reduces fertility.

Excessive use of chemical fertilizers harms the soil structure.

Deficiency of micronutrients like zinc and iron is common.

This directly lowers crop yields in the region.

4. Small and Fragmented Landholdings

Farmers in Marathwada own small, scattered plots of land.

This limits their ability to use modern machinery or irrigation systems.

Economies of scale in farming cannot be achieved.

Thus, productivity remains low compared to large farms.

5. Traditional Farming Practices

Many farmers rely on age-old cultivation methods.

Limited use of mechanization results in low efficiency.

Modern practices like drip irrigation or precision farming are rare.

Hence, crop output remains below potential levels.

6. Poor Access to Quality Seeds

High-yielding and drought-resistant seed varieties are not widely available.

Farmers often reuse old seeds which give poor results.

Seed replacement rate is much lower than the national average.

This reduces the scope of improving food grain productivity.

7. Imbalanced Use of Fertilizers

Nitrogen fertilizers like urea are overused by farmers.

Lack of proper application of phosphates and potash creates imbalance.

Soil health deteriorates due to continuous misuse of inputs.

This results in declining yields over the years.

8. Lack of Institutional Credit

Many small farmers depend on moneylenders for loans.

High-interest rates push them into a cycle of debt.

Without timely credit, they cannot buy inputs or technology.

This financial stress lowers overall farm productivity.

9. Inadequate Market Support

Farmers often sell crops at low prices due to poor infrastructure.

Lack of storage and transport leads to distress sales.

Minimum Support Price (MSP) benefits are not fully reached.

Low returns discourage investment in productivity improvement.

10. Climatic and Pest Attacks

Frequent droughts, hailstorms, and unseasonal rains damage crops.

Pest attacks like pod borer and bollworm harm yields badly.

Farmers lack awareness about integrated pest management.

This results in heavy losses in food grain cultivation.

Remedies to increase productivity of food grains in Marathwada region

 Expansion of irrigation through canals, drip irrigation, and rainwater harvesting will ensure reliable water supply for crops in drought-prone Marathwada.

 Adoption of drought-resistant and high-yielding seed varieties will help farmers sustain production even under erratic rainfall conditions.

 Balanced use of fertilizers along with organic manures, bio-fertilizers, and micronutrients will improve soil fertility and long-term productivity.

 Promotion of mechanization through subsidies on tractors, harvesters, and modern tools will increase efficiency on small and fragmented farms.

 Training and awareness programs for farmers about modern scientific farming methods will help them adopt new technologies effectively.

 Strengthening institutional credit facilities and timely loans at low interest will enable farmers to buy inputs and reduce dependence on moneylenders.

 Development of storage, cold chains, and transport facilities will prevent distress sales and encourage farmers to invest in productivity.

 Implementation of integrated pest and disease management techniques will reduce crop losses and ensure better yields of food grains.

Conclusion:

Low productivity of food grains in Marathwada remains a serious challenge for farmers and the regional economy. Frequent droughts, poor irrigation, and soil degradation have worsened the situation. Traditional practices and small landholdings prevent the adoption of modern methods. Lack of quality seeds and imbalance in fertilizer use further reduce yields. Financial stress and inadequate market support discourage farmers from investing in productivity. However, solutions like drip irrigation, soil health management, and high-yield seed varieties can bring change. Government schemes, credit facilities, and MSP support are crucial for farmer confidence. Farmer training and awareness of modern techniques will

improve efficiency. Sustainable agriculture combining science and traditional knowledge can revive productivity. Thus, with coordinated efforts, Marathwada can overcome challenges and achieve food security.

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