



Status Of Rice Cultivation Among Major Food Grains In Assam

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1. Introduction:

Agriculture continues to play a dominant role in the Indian Economy both in terms of share in the National Income as well as the economic activity for a majority of the rural population. Even though, presently this primary sector's contribution in India's Gross Domestic Product is 12.7 per cent during 2019-20, with a share of employment to around 70 per cent of the total workforce and accounts for around 13.6 per cent of the total value of the country's exports. The transition towards faster and more inclusive growth calls for significant thrust on Agriculture Sector.

The economy of Assam is mainly dependent on agriculture sector. Agriculture is the principal occupation of the rural population in the state in terms of employment and livelihood. The contribution of Agriculture and its allied sectors towards State GDP was about 15.64 per cent in the year 2019-20. However, Agriculture sector continues to support more than 75 per cent population of the state directly or indirectly providing employment to about 50 per cent of the total workforce.

In Assam, the soil, topography, rainfall and climate in favorable for agricultural activity mainly for rice cultivation and concentration is high on rice production both for farmers and the Agriculture department. As per final estimates, the total area under cropped during the year 2018-19 was 40.04 lakh hectare where total rice area was 24 lakh hectare or 60 per cent of the total area under crops area in the State. During this time rice production of the state was 52.14 lakh MT. The area covered under HYV rice cultivation was 18.28 lakh hectares was 76.17 per cent of total Rice area under cultivation. This paper attempts to discuss status and productivity of Rice cultivation in Assam and its various challenges faced by it and will make suggestion to overcome from those challenges.

2. Importance of the Study:

Agriculture has made significant progress in the economics of Assam. Assam's natural resources, raw materials or mainly agricultural fields have considerable potential. In fact, if the scientific reforms are carried out in the name of science, then the economic sector of Assam will definitely be strengthened. This research paper has great importance in terms of the feasibility of the agricultural sector of Assam and the adoption of good ideas and policy implementation. The proposed paper will examine the status of rice cultivation in Assam and its various challenges and make their solution. So this study will be beneficial for future research workers and policy makers.

3. Objectives of the Study:

- To examine the status of Rice cultivation among major Food grains in Assam.
- To examine the use of HYV seeds and their productivity in rice cultivation in Assam.

4. Methodology of the Study:

The descriptive research methodology has been used to collect the data. To evaluate the trend of cropping and rice productivity in Assam, secondary data has been collected from various published sources and websites from year to year till 2020. The required data has been collected from various sources i.e. books, journals, newspapers, government and semi-government publications and websites of various agencies etc. from year to year. The collected data would be tabulated and analyzed in the completion of the Study.

5. Presentation and Analysis of the Study:

To know the cropping pattern and position of the rice cultivation in Assam, it should be studied statistical data on cropping pattern along with rice productivity in Assam to make the study meaningful. The main features of the study have been analyzed in the following sections.

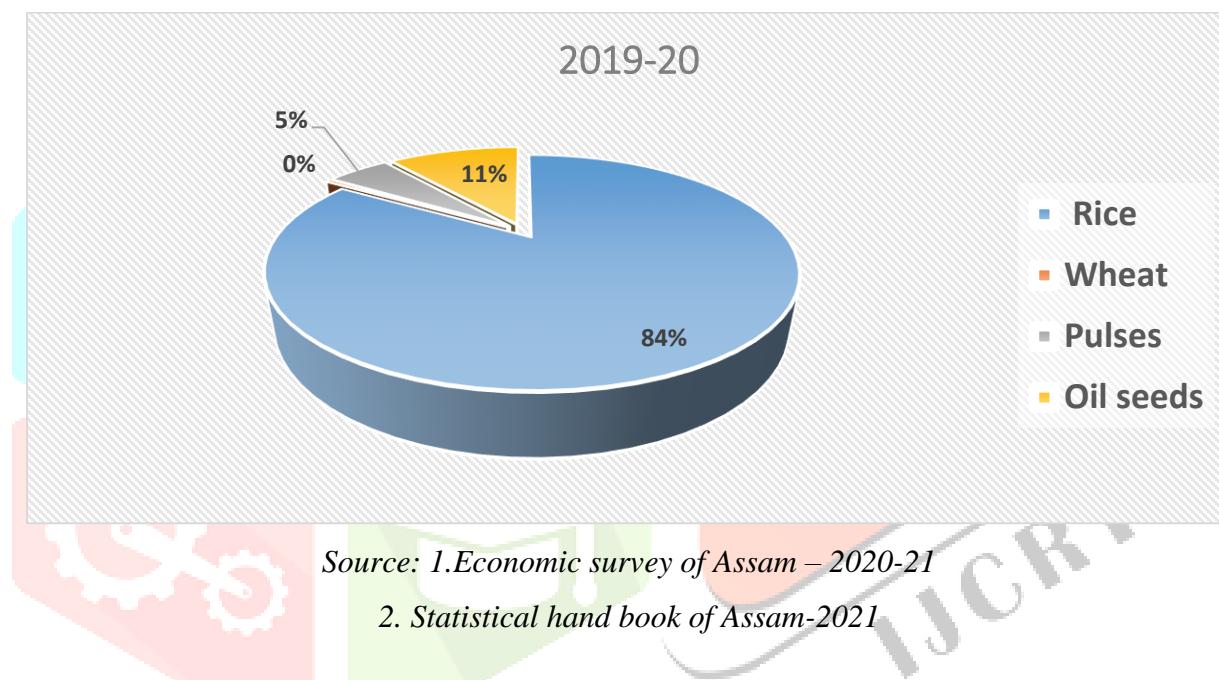
5.1 Changing of cropping pattern in Assam:

The cropping pattern is an important indicator to show the proportion of area under different crops at a definite point of time. At the beginning of the present century about 90 per cent of cultivated land of Assam was put under food crops and remaining 10 per cent was put under cash crops. But after 1961 there was a change in the cropping pattern in Assam due to increase in prices of cash crops. The following table shows the change in cropping pattern in Assam since 1980-81. It has been seen that area in rice cultivation increased marginally from 22.75 in 1980-81 to 24.01 lakh hectares in 2019-20, area of pulses and oilseeds increased from 1.13 to 1.44 and 2.33 to 3.63 lakh hectares during that period. But area of wheat cultivation only decreased from 1.02 to 0.11 lakh hectares at the same period.

Table-I
Area under production of some major crops in Assam during 1980-81 to 2019-20

(Lakh hectares)

Year	Rice	Wheat	Pulses	Oil seeds
1980-81	22.75	1.02	1.13	2.33
1990-91	25.26	0.84	1.13	3.20
2000-01	26.46	0.70	1.11	3.22
2004-05	23.83	0.64	1.08	2.77
2008-09	24.84	0.50	1.14	2.65
2013-14	25.03	0.31	1.50	3.25
2016-17	24.67	0.17	1.46	3.18
2019-20	24.01	0.11	1.44	3.11



The area in rice cultivation in Assam marginally increased 22.75 lakh hectares to 26.46 from 1980-81 to 2000-01, further it decreased to 24.01 lakh hectares in 2019-20 due to increase the demand for cash crops like oilseeds, jute sugarcane etc. Out of total cultivated area 84 per cent occupied by rice, 11 per cent oilseeds and 5 per cent pulses in 2019-20.

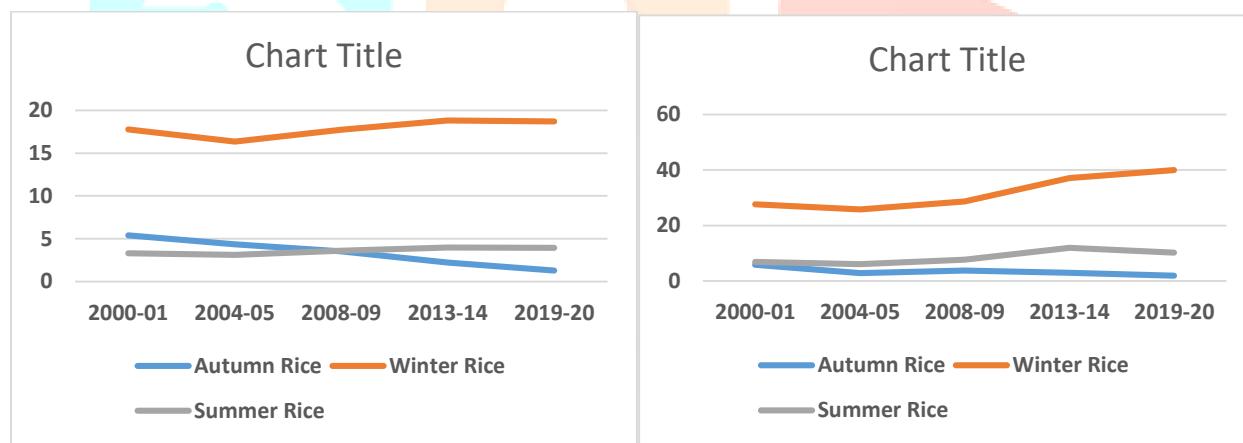
5.2 Changing Trend of rice cultivation and their Productivity in Assam:

The rice is the main food grains of Assam. The environmental condition of Assam is favorable for rice production. The rice cultivation, during the year 2019-20 occupies 84 per cent of the total food grains area in the State.

Table-II

Table-3 Area and productivity of rice in Assam since 2000-01

Year	Area in lakh hectare				Production In lakh MT			
	Autumn Rice	Winter Rice	Summer Rice	Total Rice	Autumn Rice	Winter Rice	Summer Rice	Total Rice
2000-01	5.40	17.77	3.29	26.46	5.88	27.60	6.81	39.99
2004-05	4.36	16.36	3.12	23.83	2.86	25.74	6.10	34.70
2008-09	3.51	17.73	3.60	24.84	3.74	28.66	7.68	40.08
2013-14	2.23	18.81	3.99	25.03	2.94	37.09	11.90	51.93
2019-20	1.27	18.72	3.95	24.00	1.93	39.96	10.26	52.15



Source: 1. Economic survey of Assam – 2020-21

2. Statistical hand book of Assam-2021

Three varieties of seasonal rice viz. autumn rice, winter rice and summer rice cultivated in the state. The following table shows the trend of rice production in Assam since 2000-01.

The total production of Rice in the State was 40.08 lakh MT in 2008-09 compared to 39.99 lakh MT in 2000-01. It was further increased to 52.15 lakh MT in 2019-20. Thus, it has been seen that the Rice production of the state allows maintaining rising tendency and it has occupied about 80 per cent among all crops, about 90 per cent among all food grains. Thus, the rice cultivation occupied as a principal crop in Assam during 2000-01 to 2019-20. In 2019-20, area of winter rice occupied 78 percent out of total rice but produced only 76 percent but during this time, summer rice occupied 17 percent and produced 20 percent out of total rice.

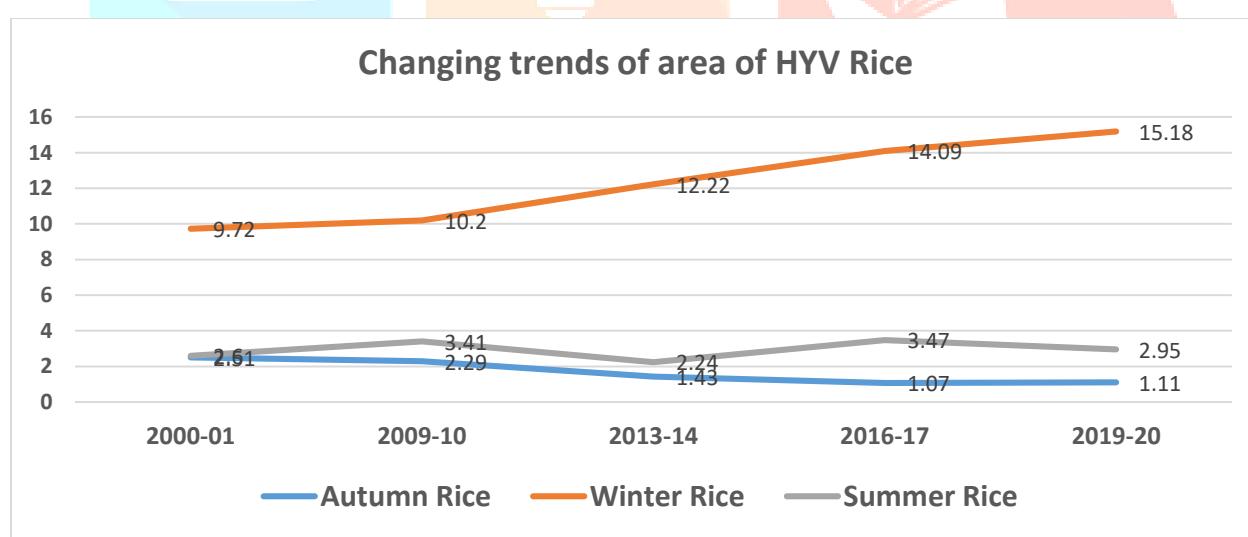
5.3 Area under high yielding variety (HYV) of rice in Assam:

According to the Agriculture Department, increasing concentration of area under HYV Rice assisted to bumper production of rice in the State for enhancing productivity and farmer's income. Moreover, the productivity of HYV summer rice is more than winter rice and autumn rice due to of package of practices during summer season as free from any risk. Considering the productivity, cultivators preferred the seed of HYV rice viz., Mala, IR-36., Lachit, Masuri, Joya, Ranjit, Ratna, China Boro, Biplov, Bahadur, Kaveri, Krishna etc.

Table-III
Area under high yielding variety (HYV) Rice

(Area in lakh hectares)

Year	Autumn Rice	Winter Rice	Summer Rice	Total HYV Rice	% of total Rice
2000-01	2.51	9.72	2.60	14.83	60.2
2009-10	2.29	10.20	3.41	15.90	62.8
2013-14	1.43	12.22	2.24	15.89	63.5
2016-17	1.07	14.09	3.47	19.18	77.76
2019-20	1.11	15.18	2.95	19.24	77.92



Source: 1. Economic survey of Assam – 2020-21

2. Statistical hand book of Assam-2021

Total area under HYV of Autumn Rice, Winter Rice and Summer Rice was 19.24 (77.92%) lakh hectares during the year 2019-20 compared to 14.83 (60.2%) lakh hectares during 2000-01. The area coverage under HYV Rice increased by 17.9 percent of the total area under rice during the said year. During that period autumn rice and summer rice reduced from 2.51 to 1.11 lakh hectares but winter and summer rice increased from 9.72 and 2.60 lakh hectares to 15.51 and 2.95 during the same period.

6. Findings of the study:

- In Assam, the soil, topography, rain and climate in general favorable for agricultural activity mainly for rice cultivation and concentration is high on rice production both for farmers and the Agriculture department.
- Contribution of Agriculture Sector towards State GDP was about 23.02 per cent at present. However, Agriculture sector continues to support more than 75 per cent population of the state directly or indirectly providing employment to about 50 per cent of the total workforce.
- The cropping pattern in Assam changed after 1981 due to increase in prices of cash crops. During this period area of rice, pulse and oilseed cultivation marginally increased but wheat cultivation significantly decreased.
- It has been seen that trend of rice production of the state allows maintaining rising upward and it has occupied about 80 per cent among all crops.
- The pulses and oilseeds production increased, but wheat production decreased to at the same time in plan period.
- There are three varieties of seasonal rice viz. autumn rice, winter rice and summer rice cultivated in the state. The total area of winter rice was 85 per cent of total rice area and contributed was 71 per cent of total rice production of Assam in 2023-24.
- The area coverage under HYV Rice was 77.92 per cent of the total area under rice during 2019-20 in Assam. It is evident that area under HYV has risen 17.9 per cent during the period 2000-01 to 2019-20.

7. Conclusion:

Agriculture is the principal occupation of the rural population in the state in terms of employment and livelihood. A well-defined and focused plan should be used for improving the agricultural sector of Assam. The rice cultivation has taken vital role among all crops in Assam. The agricultural research in eastern India requires particular emphasis on boosting research and development efforts for rained rice research system. Although late, but due to the implementation new agricultural strategy the area under HYV rice in Assam gradually increased, which is around 34 per cent of the total cropped area of the state at present. The agricultural department of the state has made an attempt for adopting new agricultural strategy on a large scale to attain some degree of success towards green revolution, but it has achieved only rice production. Moreover, efforts should be made to encourage contract farming and strengthening of rural infrastructure such as roads, irrigation structures and communication networks. However, the government, farmers, Agricultural Universities, Rural and Commercial Banks as well as the general people of the state should cooperate and work hand in glove for overall agricultural development in Assam.

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