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# THE COVID 19 PANDEMIC

A Review of the Social, Economic  
and Environmental Issues/Challenges



Madhusudan Karmakar

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# Production of Pineapple in Uttar Dinajpur District: Pre and Post Covid-19

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## Abstract

Horticulture requires the static and demands the dynamic of horticulture requires the static and demands the dynamic world population is rising, the horticultural products will also to its demand. Uttar Dinajpur occupies a pivotal position in pineapple producing states in India. The paper studies the production of horticulture of Uttar Dinajpur with special reference to pineapple cultivation in the pre and post COVID-19 period and how the COVID-19 pandemic has adversely affected the production of pineapple. The pandemic has not only affected the production adversely, it has also affected the lives of the farmers economically and socially. The pandemic has also brought some changes in the cropping pattern.

*Keywords: Agricultural productivity, pineapple cultivation, horticulture, pandemic, growth rate.*

## Introduction

Horticulture is that branch of agriculture which is related to the production, storage, marketing of fruits, vegetables, spices and plantation crops and floricultural products along with nursery crops. The field of horticulture requires the static and demands the dynamic (Christopher, 1958). Horticulture is a part of individual's daily diet and promotes physical and mental wellbeing of an individual. As the world population is rising, the horticultural products will also rise due to its demand. This increase in demand will help the farmers and all the associated sectors (like processing and packaging) creating a large number of employment opportunities. Horticultural foods are excellent sources of energy and provide proteins, carbohydrates, vitamins, minerals and bulk for the diet. To obtain the maximum return on investments, the horticulture industry seeks ways to produce optimum yields while the factors that influence

yield are geographical location, method of growth, soil, pruning methods, pest control, storage and marketing etc.

The COVID-19 pandemic also known as the SARS-COV-2 has impacted negatively in all sectors of the economy. Since agriculture is the mainstay of the Indian economy and more than half the population depend on it for livelihood, the COVID-19 pandemic has brought the agricultural sector to a standstill and affected the economy of the country. Uttar Dinajpur, which is the second largest pineapple producing district in the largest pineapple producing state in India, has also been affected adversely by the COVID-19 pandemic.

## Objectives

- To study the horticulture of Uttar Dinajpur district with special reference to pineapple cultivation during the pre-COVID-19 and post-COVID-19 times.
- To study the impact of COVID-19 on pineapple production in Uttar Dinajpur.

## Data base

Data on the various horticultural crops were collected from the Bureau of Applied Economics and Statistics from 2006 to 2019. Block wise data on horticultural production were collected from the Horticulture Department, Uttar Dinajpur.

## Study area

Uttar Dinajpur district lies within the coordinate of latitude 25°11' N to 26°49' N and longitude 87°49'E to 90°00'E occupying an area of 3142 km<sup>2</sup>. The district has been subdivided into two sub-divisions viz. Raiganj and Islampur. Further the district is sub divided into nine blocks - Chopra, Islampur, Goalpokhor-I, Goalpokhor-II, Raiganj, Kaliaganj, Hemtabad, Karandighi and Itahar. Pineapple is cultivated in the blocks of Chopra, Islampur, Goalpokhor-I and Goalpokhor-II and in Raiganj.

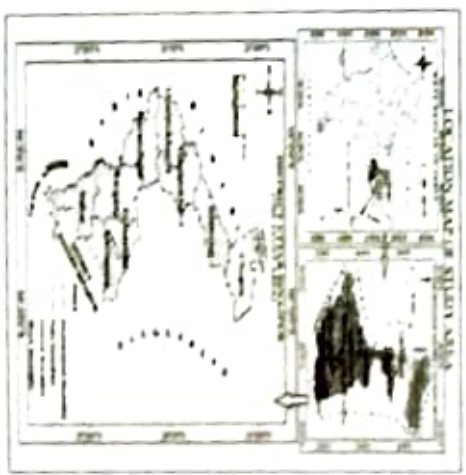


Fig. 1: The Present Study area

### Production of Pineapple in Uttar Dinajpur district

The percentage share of horticulture in Indian economy was very low in earlier plan periods. Table-1 shows that in VIII plan period the share of horticulture was only 3.51% and it increased to 11.6% in XI plan period. The share of horticulture declined sharply in XII plan period and it reached to only 4.6%.

Table 1: Percentage share of horticulture in different plan periods in India

| Plan           | Outlay in Agriculture and Allied activities (Rs. Crores) | Share of Horticulture (Rs. Crore) | Percentage Share |
|----------------|--|-----------------------------------|------------------|
| VIII 1962-1967 | 22457  | 789                               | 3.51             |
| IX 1967-2002   | 37545  | 1453                              | 3.9              |
| X 2002-2007    | 58933  | 5025                              | 8.5              |
| XI 2007-2012   | 136381   | 15800                             | 11.6             |
| XII 2012-2017  | 363273   | 16840                             | 4.6              |

Source: *Major Horticulture Database & Dept. of Agriculture Govt. of India (2018)*

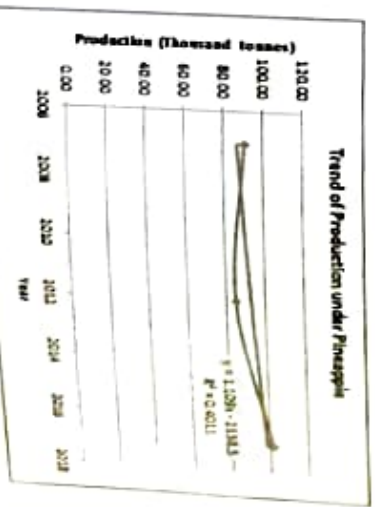
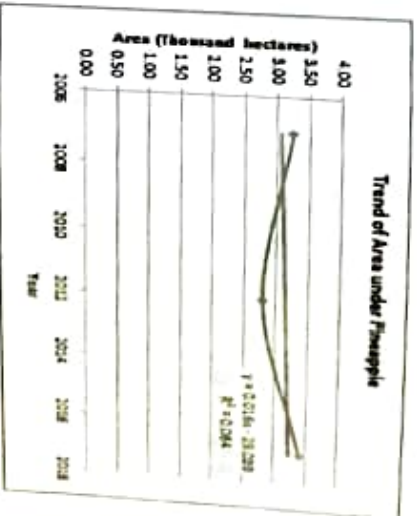
According to the Dept. of Horticulture, Uttar Dinajpur contributes 7.47 percent of the total fruits cultivation in West Bengal in 2015-16. After the Green Revolution, the horticultural sector started in India in the mid-eighties. Since the district of Uttar Dinajpur came into existence on the 1<sup>st</sup> of April 1992, after the bifurcation of erstwhile West Dinajpur district, its horticultural department was formed much later. Uttar Dinajpur is strategically located in between two big towns namely, Siliguri and Malda and hence the demand for fresh, horticultural products will never decline. Uttar Dinajpur ranks 9<sup>th</sup> in the cultivation of fruits, producing 1.57% of the total fruits in the State.

The importance of pineapple can clearly be observed in Figure-2 where it is shown that over a decade, the production of pineapple has always been way above any other cultivated fruits in Uttar Dinajpur.



Source: Dept. of Horticulture, Uttar Dinajpur district (2020)

Fig. 2: Pomological Production in Uttar Dinajpur



Source: Dept. of Horticulture, Uttar Dinajpur district (2020)

The past two decades show that there has been a rise in area as well as agricultural production in the cultivation of pineapple in Uttar Dinajpur. It takes about eighteen months for the pineapple fruit to ripen and be

harvested. The pineapple plants are planted in the month of January & February. The field is prepared manually by labourers and no modern mechanization is used. 77.7 per cent of the farmers have small farms of less than 2 hectares. Mulching is practiced to hold moisture and control weeds and pests. The pineapples are harvested by hand in the summer season.

The pineapples which planted in the month of January 2019 were harvested in June 2020 but the major problems were observed after the entire country went to a complete lockdown from 25<sup>th</sup> March to 3<sup>rd</sup> May 2020 and suggested social distancing. There were insufficient labourers willing to work in the fields. This also resulted in the delay of harvest and post-harvest the farmers have been forced to dump their produce due to lack of processing facilities and buyers.

Uttar Dinajpur ranks second in the production of pineapple, producing 66.84 thousand metric tonnes of pineapple (27.48%) in West Bengal. Pineapple (Ananas comosus) is a tropical fruit, resistant to desiccation. West Bengal has the highest percentage of production of pineapple (19.7 per cent) followed by Assam (17.1 per cent), (Indian Horticultural Database 2013).

In Uttar Dinajpur, Chopra is the leading block of pineapple contributing 28.38 per cent of total production. It is followed by Islampur (27.11 per cent), Goalpokhor-(18.50 per cent), Goalpokhor -II(16.14 per cent) and Raiganj (10.36 per cent).

The Covid pandemic situation led to prices plummeting to around ₹ 50-5 per kg, while the cost of production was around ₹23-24 per kg. The table below shows the monetary loss of pineapple due to the Covid-19 pandemic.

Table 1: Production & Monetary loss of pineapple due to the Covid-19 pandemic.

| Production (kg)                        | Pre-Covid (2015) | Post Covid (2020) |
|--|------------------|-------------------|
| Amount at Raiganj                      | 353445000        | 364233000         |
| Losses (suffered by the grower) (2020) | 19932470000      | 910582500         |

(The table-1) displays that there has been a rise in the production of pineapple at a compound growth rate of only 0.30 per cent. This is because the pineapples were not harvested all at once due to the lockdown and unavailability of trucks and markets to sell the harvest i.e., in Delhi and Bihar. The profit in terms of Indian currency shows that there has been

a decline in compound annual growth rate of 10.12 per cent. Pineapple which was earlier sold at the rate of ₹25-30 per kg was now sold at the rate of ₹2.5 to 3 per kg.

### Impact

The impacts of the Covid-19 pandemic along with the lockdown was devastating. Usually the Indian monsoon characterized with erratic rainfall often makes the farmers resort to irrigation practices. The pandemic has added more problems to the farmers who could not get labourers to work in their fields. Since the cultivation of pineapple involves a lot of manual labour, the pandemic had adversely hit the harvest season.

Pineapple, just like any horticultural produce, is a perishable item and hence, must be dispatched well in time so that it reaches the respective markets and mandis (market yards). Due to the pandemic, the transportation was stalled for a considerably long period during which the harvest could not be supplied to the usual neighboring states or State capital and thus it created irreparable damage to all the producers and harvesters and every individual or organization related to this business. It was much later in the month of June (Unlock 1: 1<sup>st</sup> June to 30<sup>th</sup> June) that there was inter-state movement of agricultural produce.

The pineapple produced in Uttar Dinajpur District is sent to Bihar, Jharkhand, Kolkata, Andaman Islands and Orissa. The cyclone Amphan struck the states of Orissa and West Bengal in mid-May and caused havoc to the lives and agriculture. The coastal regions of West Bengal, Andaman Islands and Orissa were badly struck by the cyclone and were closed for several days. This further aggravated the situation to the demand for pineapple.

There was a direct impact on the lives of farmers as well. Due to the fall in market price of pineapple, many of the farmers were unable to pay off their debts on agricultural inputs. Many of the farmers resorted to an alternative cropping pattern. Some of them changed their agricultural produce from pineapple and planted paddy, while some farmers replanted the pineapple in September instead of the usual June. Irrigation techniques were also not utilized properly due to unavailability of labourers.

### Conclusion

The production of pineapple has been affected badly due to outbreak of COVID-19. The government is doing its best to support the agricultural sector as it is the mainstay of the Indian economy. The scheme 'One



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product One district' has been adopted by the government to create product specific industrial hubs in Uttar Pradesh. It also gives financial aid to farmers practicing horticulture. This method could be undertaken in other states also in order to increase the horticultural products.

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