

## Price Fluctuation in Potato: West Bengal

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### Abstract

Potatoes are a staple food along with rice and also it is an essential cash crop like jute in the state of West Bengal, India. This research paper examines the factors contributing to price fluctuations of potatoes in the state, analyzing some recent price trends over some years, the impact of supply and demand, seasonal variation, and the policy intervention. This study aims to provide a brief and comprehensive understanding over the dynamic price fluctuation of potato in the state of West Bengal.

**Keyword-** Price, Potato, Climatic factor, Storage facility

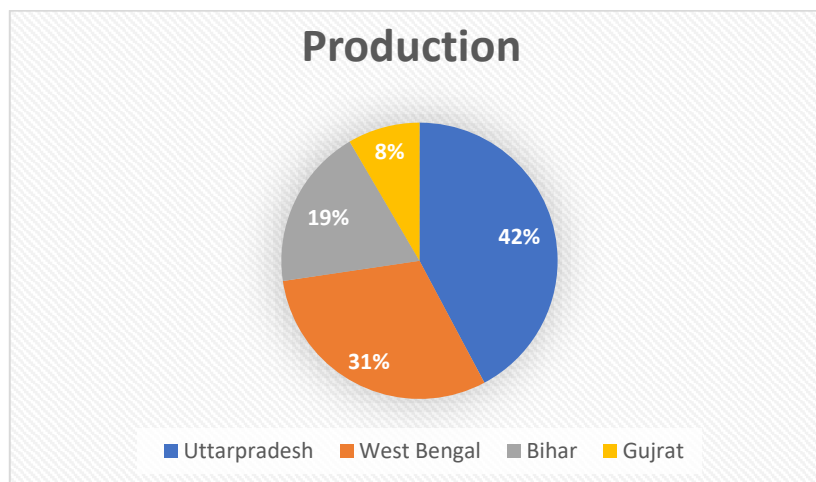
### Introduction

West Bengal is one of the India's leading potato-producing states in the eastern part of the country. West Bengal produced 13.5 million Metric tonnes (MMT) of potatoes on 4.5 lakh hectares of land and contributed approximately 27% of India's total potato production in 2018-19. The proportion of potato production in West Bengal increased from 23.4% in 2011-12 to 29% in 2017. The potato market in West Bengal exhibits significant price volatility influenced by multiple factors, including production levels, climatic conditions, market infrastructure, and government policies. Comprehending this fluctuation is essential for farmers, policymakers, and consumers.

### Potato Cultivation in West Bengal

West Bengal accounts for around a second after Uttar Pradesh of India's total potato production. Hooghly, Burdwan, West Midnapur are the major production districts of potato crop. Potatoes are a winter crop, with planting occurring from October to December and harvesting occurring from January to March (*Mou Shaw & Dr.Sheetal Topno 2022*). Some quantities of potatoes must be sold right away because they can be kept. Potato can be stored in either home stores (where they must be sold within two or three months) or cold storage (where they can last until October when the new planting season begins). Farmers sell their potatoes to local dealers (phorias), who then resell them to larger merchants in adjacent wholesale marketplaces (mandis). These massive

traders then sell them in the capital, Kolkata, or the big retail markets of neighbouring states like Orissa, Andhra Pradesh and North Eastern States.



(Source- Indian potato team (2024))

### Agricultural Economic impact due to price fluctuation in potato in West Bengal

Price fluctuations are a matter of concern among farmers, consumers and policymakers. Farmers of potato are concerned about increased price volatility in the potato market. According to several studies, potato prices fall every other year as a result of the market surplus (*Singh, Pynbianglang, & Pandey, 2017*). Volatility is caused by supply disruptions as well as changes in output and, eventually, market arrivals (*Latwal & Kumar, 2017*). Lack of information on possible markets, as well as potato arrival and price behaviour, exacerbates the situation for vegetable growers (*Singh, Pynbianglang, & Pandey, 2017*). Potato demand is relatively inelastic, and bigger price swings at the retail level reduce the farmer's profit (Bera, Dutta, & Nandi, 2017).

### Objective

1. To analyze the historical trends in potato price in West Bengal.
2. To identify the key factors influencing price fluctuations.
3. To evaluate the impact of government policies on potato pricing
4. To Provide recommendations for stabilizing potato prices.

### Historical Price Trends

Potato price in West Bengal have shown tremendous price fluctuation, with peak prices occurring post – harvest in March and April. A detailed study report revealed that from 2019 to 2021, average prices ranged from INR 996 to INR 1021 per tonnes, with a noticeable spike during lean season (July to October).

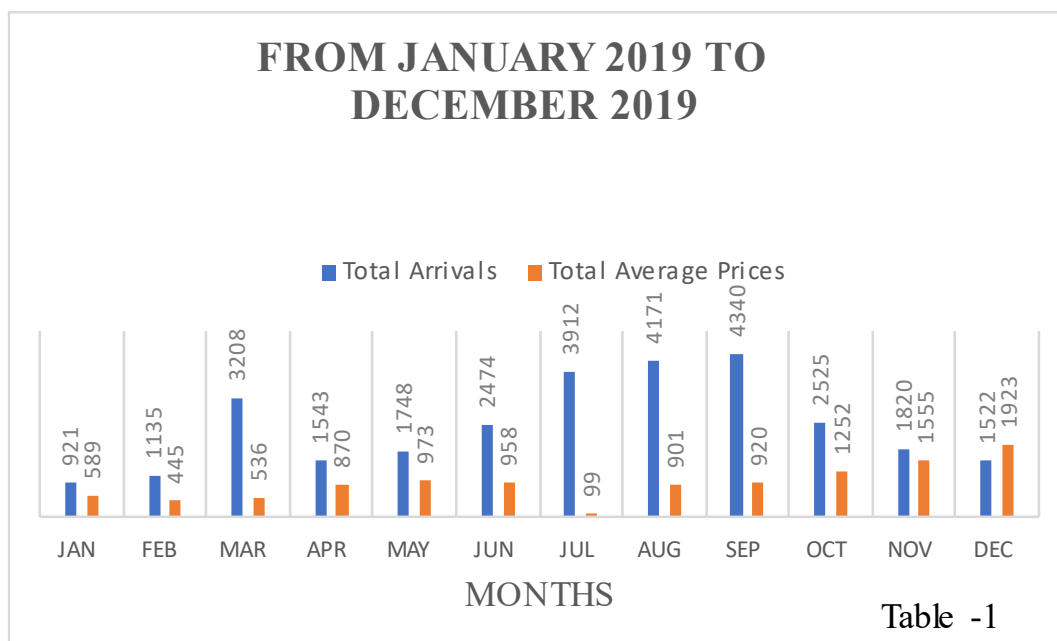


## A case study report on Price Fluctuation in Champadanga, Hooghly market, West Bengal

From January 2019 to December 2019

Source- Mou and sheetal(2022)

Months	Total Arrivals	Total Average Prices
Jan	921	589
Feb	1135	445
March	3208	536
April	1543	870
May	1748	973
June	2474	958
July	3912	909
Aug	4171	901
Sep	4340	920
Oct	2525	1252
Nov	1820	1555
Dec	1522	1923



From January 2020 to December 2020

Source- Mou and sheetal(2022)

Months	Total Arrivals	Total Average Prices
Jan	808	2026
Feb	1206	1255
March	1507	1302
April	1067	1650
May	1040	1739
June	1122	2008
July	1503	2322
Aug	1777	2747
Sep	1989	2786
Oct	2162	2830
Nov	2296	3514
Dec	2344	2067

## FROM JANUARY 2020 TO DECEMBER 2020

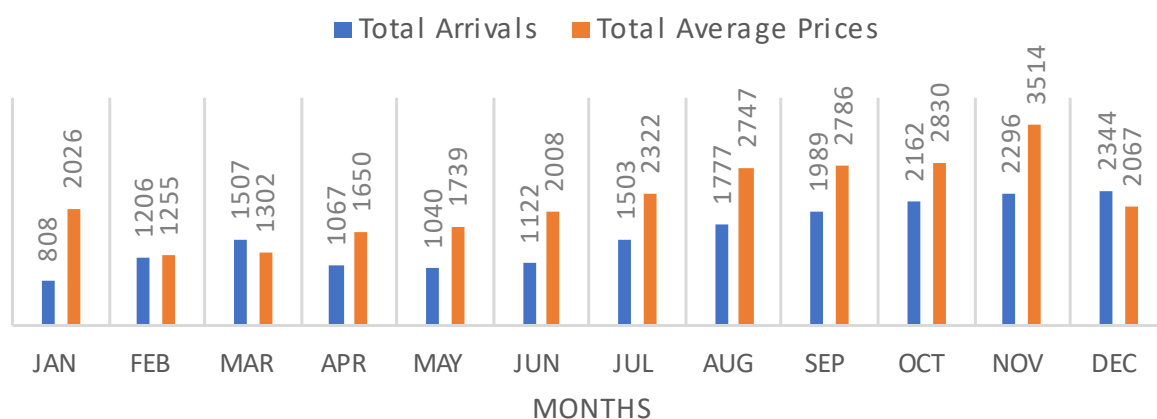


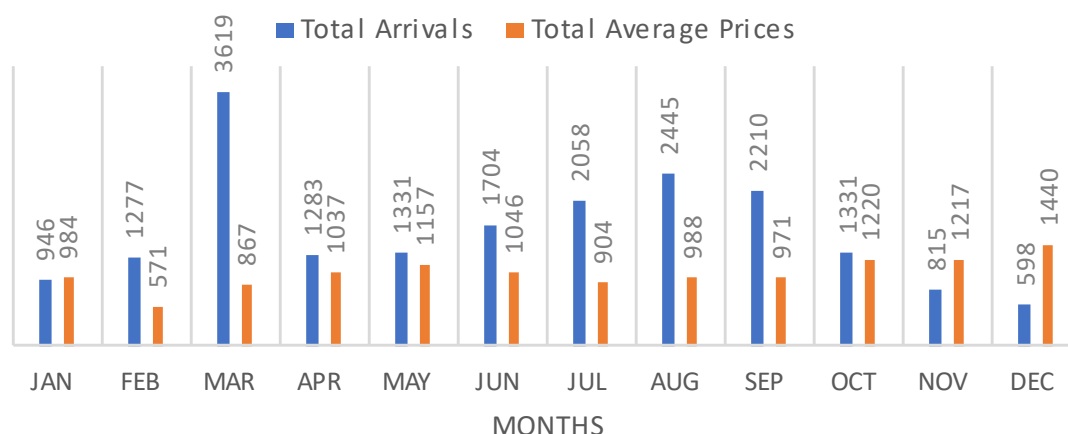
Table -2

From January 2021 to December 2021

Source- Mou and sheetal(2022)

Months	Total Arrivals	Total Average Prices
Jan	946	984
Feb	1277	571
March	3619	867
April	1283	1037
May	1331	1157
June	1704	1046
July	2058	904
Aug	2445	988
Sep	2210	971
Oct	1331	1220
Nov	815	1217
Dec	598	1440

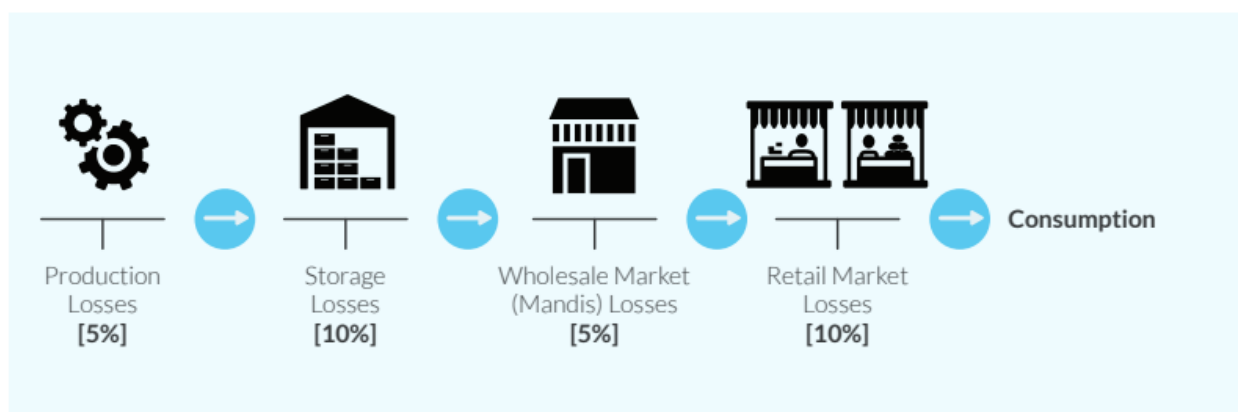
## FROM JANUARY 2021 TO DECEMBER 2021



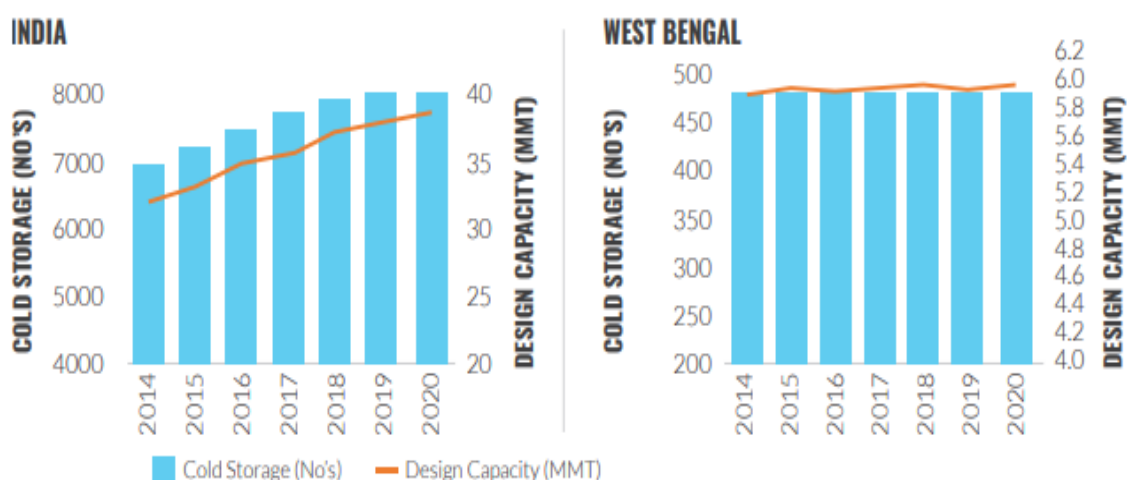
### Factors Influencing Price Fluctuation

- 1) **Supply and demand**- It plays a pivotal role for price fluctuation. A surplus crop often leads to lower prices, while shortages can cause increase in prices.

- 2) **Climatic factor**- unpredictable weather patterns, particularly heavy rains and drought, have sustainable impacts on production. Research by Dey et al. (2019) highlighted the role of monsoon patterns in affecting production yields.
- 3) **Lack of storage facilities**- Poor market infrastructure and insufficient supply chains contribute to price volatility. Small and Marginal farmers need to sell at lower prices to the middle man immediately after harvest due to lack of proper supply chain and storage facilities.
- 4) **Government policies**- Minimum Support Price (MSP) schemes and market intervention policies affect pricing. The effectiveness of these interventions varies based on implementation and awareness among farmers.
- 5) **Seasonal Variation**- Potato prices exhibit strong seasonal patterns, peaking during the months of high demand, such as festivals and weddings. The harvesting season (January to March) typically sees lower prices due to increased supply.



(Source- Analysis of potato value chain (2021))



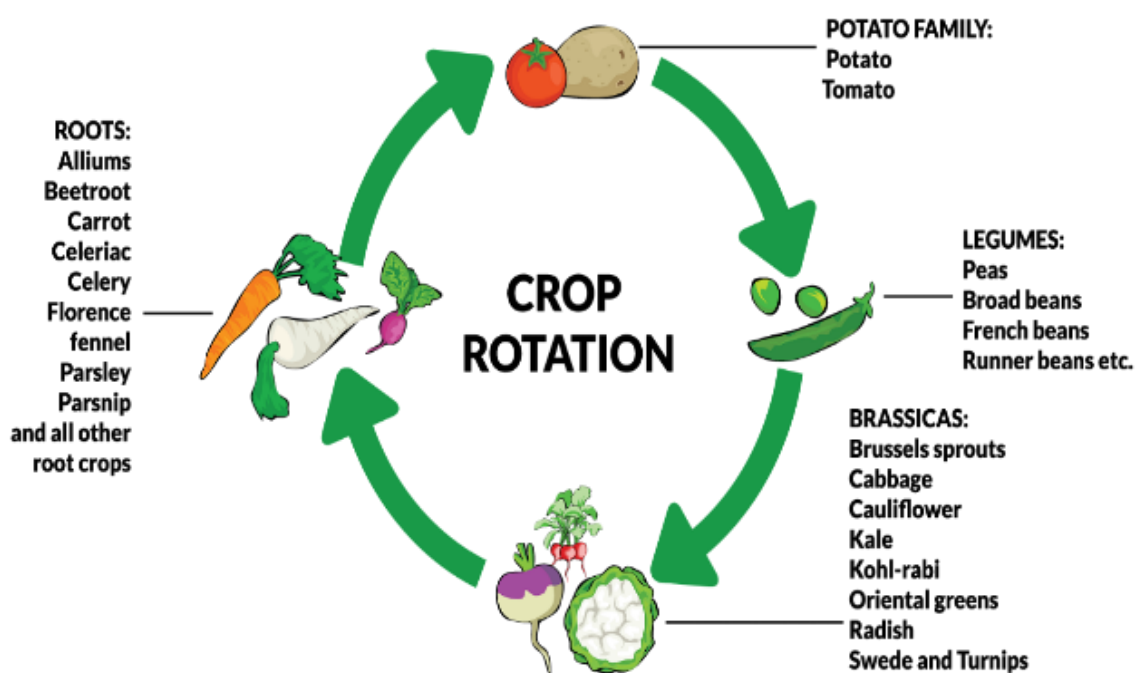
(Source - Analysis of potato value chain (2021))

## Discussion

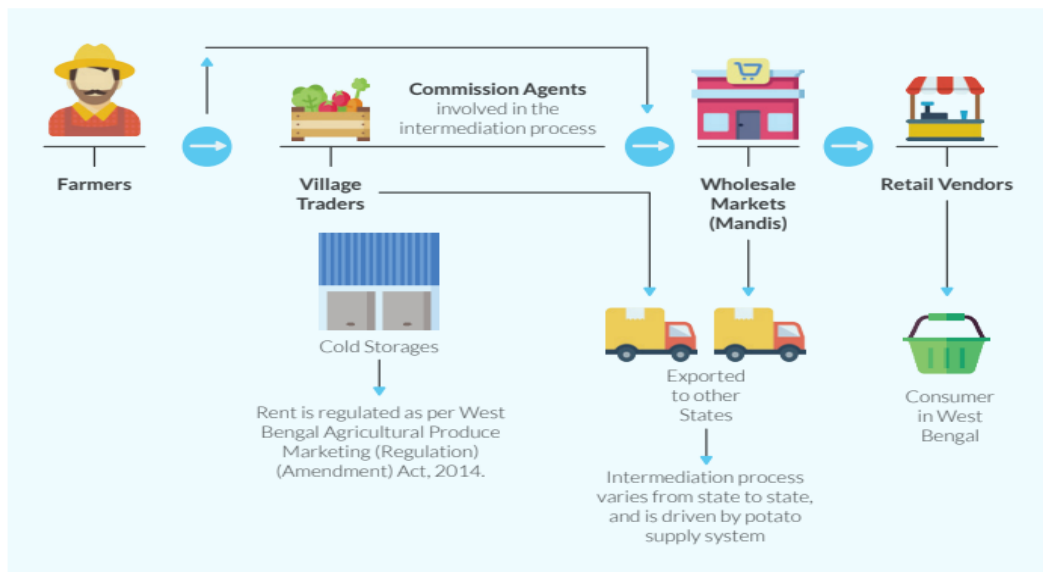
The interplay of production practices, climatic conditions, and market dynamics creates a complex pricing environment for potatoes in West Bengal. While government policies aim to stabilize prices, their effectiveness is often hindered by infrastructural challenges and lack of timely information.

### Recommendation for stabilization

1. **Improved the supply chain management:** -. Utilize e-commerce platforms so that the farmers can connect with buyers, ensuring transparency and efficiency in the supply chain.
2. **Storage facilities should be improved:** -  
Desired storage temperature for seed potatoes after initial curing is 3.3 to 4.4°C. Potato respiration is minimized at 2.8 °C. it should be maintained.
3. **Government intervention:** -MSP and establish a price established fund to purchase the crop from the farmers at correct market price to prevent the farmers against distress sale.
4. **Crop rotation:** - Farmers should adopt the crop rotation practices to reduce the crop failure and price fluctuation.



(Source- Dhamecha(2021))



(Source- Analysis of potato value chain (2021))

## Conclusion

Potato is primarily a cash crop, and any disasters of the monsoon can cause distress sales of otherwise high-value crops. Consumption of potato is more price elastic than that of any other food grain in West Bengal because of the use of potato as an alternative to rice. So, this article shows how and why the price of potatoes will fluctuate and also provides ways to control.

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