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Natural disasters have a significant effect on agricultural markets.

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Abstract

Many people throughout the globe rely on agriculture and the goods it produces to make a living. In addition to water distribution through irrigation systems, the amount and timing of rainfall during the monsoon seasons is crucial to agricultural cultivation. However, in the extreme, agricultural activities are impacted by super-natural phenomena or natural catastrophes like flood and drought. Droughts and floods, especially if they become more frequent and severe, might pose problems for farmers and endanger the food supply for millions of people throughout the globe. This article explores how natural disasters like floods and unusually strong downpours affect the sale and distribution of crops. Crops are destroyed and the yield is drastically reduced when there is a flood. Monsoon floods, on the other hand, are seen as an easily accessible resource for agricultural irrigation.

Key Words: Agriculture marketing, extreme natural conditions impact .

Introduction:

Extreme weather events are a common occurrence all around the globe. Every year, many natural catastrophes strike various parts of the globe. The frequency of flood disasters is far higher. Natural disasters have a negative impact on agricultural productivity and the overall economy when they occur often. The size, frequency, and intensity of these effects are all variables. The fall in agricultural output and agricultural earnings is only one way in which it impacts the well-being of rural families. Because they lack the necessary resources, infrastructure, and catastrophe risk reduction measures, many developing nations are severely impacted. Many

people throughout the globe rely on agriculture and the goods it produces to make a living. In addition to water distribution through irrigation systems, the amount and timing of rainfall during the monsoon seasons is crucial to agricultural cultivation. However, in the extreme, agricultural activities are impacted by super-natural phenomena or natural catastrophes like flood and drought. Droughts and floods, especially if they become more frequent and severe, might pose problems for farmers and endanger the food supply for millions of people throughout the globe.

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This article devolves into the impact of super natural events such as floods and unprecedented heavy rain shower which causes adverse impact on agricultural produce and marketing. Severe inundation destroys crops and severely affects its yield. However, monsoon floods are considered as the open-access resource in providing irrigational input to agriculture. But when the level of disaster is extreme, it will affect the production, distribution and marketing of the crops. Marketing functions such as assembling, transporting, grading, processing and consumption of agricultural products gets affected due to natural disasters such as floods and heavy rain. Floods and droughts can cause loss of harvest or loss of livestock due to the prevalence of extreme natural conditions and thus affecting the marketing process. FAO (Food and Agriculture Organization) study explains that 22% of all damages caused by natural extremities such as flood, drought, storms occurs in agricultural sector. These impacts can create long lasting effects on agriculture marketing. This article also describes the various types of natural calamities such as floods, droughts, biological and geophysical disaster and their impacts over agricultural products and their marketing.

Natural Extremities

Every year natural disasters like flood, drought, earthquake, landslides, hurricanes, tornadoes becomes a challenge for agricultural production and marketing. This is because agriculture depends on climatic conditions, weather, and availability of water through irrigation dams, rivers and channels. So any extremities in these aspects will easily impact the process of agriculture production and marketing.

Climatic conditions vary from one place to another and thus creating different types of natural extremities according to the prevalence of climate at that particular place. For example in a country like United States floods, hurricanes and tornadoes are found often rather than other natural calamities. Wild fires occurs more in forest areas than plains and plateaus. Common types of disasters and its impacts on agriculture marketing are discussed below.

Drought :

Drought is the most serious natural

extremity to agriculture in almost all parts of the world. It occurs when there is insufficiency of rain for an extended period. This causes imbalance in water resource, shortage of water, damages to the crop, groundwater depletion and loss of moisture and fertility of soil.

Floods: Flood is a natural hazard that brings more physical loss to the society almost in many countries around the world. Flood is considered as a situation where the water covers the living and moving surrounding land. The water may be from sea, rivers, ponds, dams, lakes and even rainwater due to heavy rainfall. Floods can be grouped into several types as follows:

Flash flood: The areas covering steep slopes, slashing rain can be a reason that riverbed that filled with very little or no water at first, suddenly filled with fast flowing water. The rain water is at first stagnated on the slopes, then flows towards downhill and gathering momentum and at last all the water get together and fill in the river bed. Hence, the water level rises steadily but heavily. Then the water flows over the river banks and floods the near by areas. Thus, a flash flood is considered to have a very direct response to rainfall with high intensity or sudden massive melting of snow around the mountains.

Coastal flood :Coastal flood is that, the coastal area is flooded by the sudden rise of sea water. It happens because of flood of severe storm. When the storm wind pushes the water up that creates high waves. The very characteristic of a coastal flood is that, the sea water enters fast, and spreads over a larger area.

Urban floods: Normally, main causes of flooding in urban areas are flash rain, or due to river floods. However, there is also a specific flood type that is called urban flooding. Urban flooding is due to lack of drainage system in urban areas. A very little space as open soil is normally used for flood water storage. High intensity of rainfall is the cause of flooding, when the sewage system and as well the draining canals do not have its full capacity to drain away the full amounts of rain that are showering. Urban flooding happens fairly frequently. Urban floods causes heavy disturbance of daily walks of life in the city.



River floods: Rainfall over an extended period and an extended area can cause major rivers to overflow their banks. The water can cover enormous areas. Downstream areas is also affected, even after they didn't receive much rain themselves. When there is a great deal of rain over an extended period, the river water level rise bit by bit because it is filled with water from smaller rivers. The water extends out as much as possible flowing to the lower lying areas before slowly rising. A breach is incredibly dangerous for the people living close to it.

Ponding flood: Ponding is a type of flooding that can happen in relatively flat areas. Rain water falling in a region is generally stored within the ground, in canals or lakes, or is drained away, or pumped-up out. When more rainwater enters a water system than can be stored, or can leave the system, flooding occurs. During this case, rain is the main source of the flood: not water returning from a river, but water on its way to the river.

Mudflows and Landslides: There are some geophysical disasters that do not require seismic or tectonic activity for instances to occur. Landslides and mudflows result when large quantities of debris travels down a slope or incline. A landslide specifically includes material like rocks, earth, or random debris (e.g. vegetation or trees), while a mudflow adds water or some other liquid that turns it into a literal river of mud and or debris. These can be caused by the breakdown of soil and rocks along the sides of hills, cliffs, or other slopes of land. Destabilization of the land by other geophysical disasters-like volcanoes and earthquakes-or human actions like deforestation, excavation, and mining can also cause a landslide or mudflow to happen.

Agricultural Products / Marketing vis-a-vis Natural Disasters:

Agricultural marketing consists of different features such as perishability, irregular demand, price fluctuations, inelastic demand, presence of middlemen. These features are discussed with specific reference to natural disasters.

Perishable Products

Agricultural products are perishable in nature. Vegetables, fruits, meat, milk, egg and other products have shorter time and will perish

soon. But products like grains oil seeds etc., stay fresh for a little longer. So, proper management should be done for storing and distribution with respect to the nature of the agrarian product. But, during

bad weather, continuous rain fall, floods etc., perishable products get rotten very easily and become a rare commodity to buy in the market.

Disruption of Demand:

Agricultural products are cultivated in certain seasons according to the nature of the product. Even though they are produced seasonally, they are necessary for consumption throughout the year. So, in order to supply the product regularly, storage of the produce need to be properly managed. During drought and excess rain the agricultural products fall down and will raise demand in market because of shortage of the produce.

Variations in Price:

Price of agricultural products varies in agricultural markets. According to the availability and demand, the price of the product varies. During harvest period, the supply will be high so the price will be low and vise-versa during non harvest period. The price is the key factor that decide the seller and buyer relation. If the agricultural products are get spoiled considerably during bad monsoon, drought or flood, the price of product will considerably increase and the impact will discernible in the market.

Impact of middlemen :

Agricultural Products have high interference of middlemen when compared to industrial products. Intermediaries or the middlemen buy agrarian products from the farmers directly at a very low price during harvest. They store those products in storehouse and sell them at higher price. Thus they take accountability of market management and perform all the functions of marketing from collection till selling of the product. Because of middlemen farmers fails to get fair and reasonable price for their produce. That too, the middle man will purchase at very low price from the producer, and hoard the food grains during normal season in bulk quantity, and sell the produce during rainy season and at time of natural calamities at higher price.



Inelastic Demand:

Agricultural products are essential for day to day life. Any variation in their price does not influence much. During flood or drought, rise in prices does not change demand for essential agrarian products. Thus, demand for the agrarian products remains inelastic in agrarian market.

Elastic Supply:

Supply of agrarian products remains elastic, even if demand remains inelastic. Supply is affected by the change of price of agrarian products. If price increases, then supply also rises. If price decreases, supply also decreases. It has more relation to existing climatic condition either at drought or at flood.

Agriculture marketing and natural extremities.

Consumers purchase a product, as a result of some personal, social and economical factors, on the basis of building a desire or need for the products. A producer is considered to be successful in selling his products only when he identifies the needs and requirements of the consumers.

Personal Preferences

Consumer behaviour is influenced by various personal factors such as likes, dislikes, priorities, morals and values. Opinion of consumer will be dominantly related to their personal needs, desire, family habits etc. For instance, people who are vegetarian prefer vegetables and does not prefer egg and meat. So personal preference plays an important role in purchasing agrarian products. But, during the flood and heavy rain fall the consumer has to cut short his choice and live only with the availability in markets.

Economic Conditions

Purchasing power of a consumer is the key factor towards buying pattern of a product. The economic conditions of a buyer is the determining point in the market. Thus a positive economic environment will boost consumers confidence towards the purchase of a product. During the period of heavy rain fall and fall in agricultural product, the economic conditions of the buyer as well the seller will fall heavily and

its result reflects in market value.

Influence on Group behaviour:

The primary influential group consisting of family members, immediate relatives, friends, and the secondary influential group, consisting of neighbours and acquaintances have a dominant influence on the purchasing behaviour of a consumer. People always prefer to buy products only after consulting with other people who have already purchased and acquaintance with that product. At times of natural extremity, assembling of people together and deciding the choice of buying pattern affects very much and causes monopoly market towards a particular available product.

Effects on purchasing Power:

During the natural disasters, the very basis of living is at question. Heavy rain and flood not only washes away the bushes and other objects, but also the very economic condition of buyers. Thus it will have a greater disaster in agricultural market economy.

Drastic change in Consumption pattern of buyers:

Agrarian products varies according to seasonal changes. Production of food grain in India is on seasonal basis. i.e., Kharif season, Rabi season. Consumers decision thus depends upon the availability of food grains according to the season. When the monsoon is failure, and when expected rain fall is not happened, production of food grains gets affected seriously. This will in turn change the consumption pattern of buyers in the market.

Deterioration in quality :

The consumer while buying agricultural products always consider the quality aspects like colour, smell, size and taste. The rational consumers always prefer best quality, for the least price, they pay. The natural extremities, i.e., flood and heavy rain fall again become the determining factor towards quality of agricultural product. The quality of the agricultural product such as paddy, oil seeds and other food grains gets affected by heavy rain.



Conclusion:

Against this back drop, the agricultural marketing is facing lots of problems especially during natural extremities as discussed. The study shows that the drought and flood are the key factors that affects not only the livelihood of common man but also the marketing of agricultural products and inputs.

In a nut shell, personal preferences of buyers, economic conditions, purchasing power, consumption pattern, and influence on group behaviour on the one hand and perishability of agricultural products, variations in price of products, impact of middlemen, inelastic demand, elastic supply, and deterioration in quality on the other hand, are the areas of the concern in terms of natural extremities. All these maladies, if over come, in a letter and spirit, it is no doubt the farmer producers will reap the fruit from agricultural operations.

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