

ON-DEMAND HARVEST IS THE FUTURE

Despite being the world's largest and the oldest agrarian country, Indian agricultural landscape is dreary with multiple problems plaguing the farmers invariably.

THE PROBLEM

1) UNAWARE FARMER

Farmers know how to grow the crop. However, they do not know the demand trends, the rates in the supply market and the needs of the consumer. Thus, they produce the crop uncertain of the vital information of **what to produce** and **how much to produce**.

2) UNPREDICTABLE TREND OF DEMAND AND SUPPLY

When the demand is low, farmers have an excess of supply of the produce. As demand comes in - the prices rise and the farmer goes in the market to sell his produce. Sometimes, when the demand rises exceedingly at a particular time, the farmer would consider increasing the yield. This often leads to over-supply of one crop at a particular time, thus affecting the prices.

The demand, supply, and prices, therefore, keep fluctuating. This fluctuation of the supply-demand market is faced by the farmer cultivating the crop due to uncertainty and unpredictability. Retailers face the grunge at their end with excess supply (or less supply), inconsistent prices, increased transportation/storage costs, etc.

3) NO TRACEABILITY

Those who have been part of the supply chain network have been managing the post-harvest processes - production, distribution, and marketing. However, the current system does not offer any traceability - i.e. one cannot work backward to find the source of the problem - hence, no reliability.

4) WASTAGE

According to reports, about 7-10% of the total harvest is lost during these processes from farm to market and then a further 4-5% loss is incurred at the distribution stage. It also impacts the economy of the country at both micro and macro levels significantly.

THE SOLUTION: 'ON-DEMAND HARVEST' VIA BLOCKCHAIN

The supply chain needs to be coordinated with the producer (i.e. the farmer) and the demands and supply risk must be shared among the supply chain members. Now, this can happen when the farmer knows the market and produces accordingly.

The Blockchain technology keeps a digital ledger of all the activities involved in the agricultural process including the complete supply chain. Introduction of Blockchain based SCM would make all the processes and information readily available - making the complete system direct, traceable and reliable.

The farmer would know the current demand and produce according to the ongoing market trend. The retailer would also know how much is being produced and can better regulate the prices. The supply would be based on the current demand and the farmer would be harvesting accordingly.

This is precisely called **On-Demand Harvest**. It analyzes the market and knows the demand for the commodity. This saves the market from an oversupply or under-supply of the goods.

HOW IT WORKS?

For instance, a farmer was producing 1000 quintals of wheat on his farm. The previous year, only 30% of the produce was sold and the rest perished due to no demand and oversupply of the product. The farmer and the retailer incurred huge losses.

This year, through Blockchain-enabled SCM system, the farmer has got the information that only 500 quintals of wheat is required. He, therefore, prepares his land for 700 quintals of wheat (keeping in mind the post-harvest losses). He decides to cultivate oats on the rest of the land - a product whose demand is rising in the market. As the demand is already there in the market, the farmer does not have any problem in selling away his entire production.

At the same time, he also profited by cultivating oats and selling it, as the demand was already there.

The retailer did not have to spend on storing the excess produce. The prices and the quality of the commodity were maintained as the demand matched the supply trend.

BENEFITS

- 1) Enhanced transparency
- 2) Better communication
- 3) Counter unpredictability
- 4) Regulated prices
- 5) Consistent quality
- 6) Improved performance of the supply chain
- 7) Maximum reliability
- 8) Reduced risks
- 9) Increased profitability

SMARTFARMS STEPS IN AND STEPS UP!

SmartFarms keeps track of the supply chain and makes it more responsive. The required data about demand and supply is easily traceable. With the use of the app, the entire marketing process becomes integrated - which leads to an ease of communication between the producer (i.e. the farmer) and the consumer (i.e. the retailer). It bridges the gap between the farmer and the retailer by supplying required information about the market trend - the demand and the consequent supply needed.

Cultivation is done according to the demand with minimum wastage and maximum utility. As the supply and demand ratio is steady, fluctuations in prices are lesser. Illegal hoarding can be controlled too and the prices stay regulated without inflation. The farmer directly profits from the sale. The retailer pays a reasonable amount with controlled logistics. Post-harvest costs and losses are cut down too due to the farmer's direct contact with the buyer.

On-Demand Harvest provides much-needed control over the market - to both the farmer and the retailer. Adding predictability and reliability to the system, Blockchain managed SCM is paving the way forward. Amidst the

dreary agricultural landscape, this is the future - secure, systematic,
SmartFarmed!

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