

Agribusiness opportunities of potatoes in Gujarat

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Potato is a favourite vegetable and glory like gold that impacts different stakeholders throughout India and more specifically in Gujarat as this state contribute on the highest rung of the ladder in productivity. Banaskantha district holds the number one position in potato production in India. Holistic Policy environment, entrepreneurial culture, established infrastructure and business acumen of the producers' communities transform potato as a crop into an agribusiness based commodity in Gujarat. Gujarat is a hub of many processing industries. This state is recognised for its processed varieties of potatoes that mean for French fries production. Amicable climatic condition at the time of harvest of potatoes helps in bumper production in this state. In a nutshell, Gujarat is a state that provides a sound business ecosystem for potato production in the era of agribusiness.

Keywords: Contract Farming, Cold Storages, Gujarat, Processing Industries, Traders

POTATO is a crop that epitomises as gold by many producers in Gujarat but the journey of it was not simple but rather a stubborn one, which was honed by best business acumen and management practices. Surat, where potato first put its foot in seventeen centuries, is now a place of diamond polishing and cotton industries. The advent of climatic change and changing business environment transform potato production scenario throughout the state. A major chunk of potato production is under the helm of few districts particularly Banaskantha, Sabarkantha, Aravalli, Mahesana and Gandhinagar in Gujarat (Fig. 1). Banaskantha is the number one district in potato production in India. Both table varieties (Pokhraj, Baadsaha) and processing varieties (Lady Rosetta, Santana) are cultivated and harvested by the potato producers and channelized to ultimate consumers. Gujarat ranks 4th in the potato production in India and when productivity is considered, it is at the top for several years. Stability

in production and productivity attracts many processing organisations like McCain, PepsiCo, Balaji, Hyfun etc. to this state. Amul which is a dairy brand now extends its arms in the potato processing and marketing segment through buyback arrangement among Banas Diary, Hyfun processing organisations and Dairy cum Potato Producers. All this environment makes present day potato production and marketing more thrilled and challenging. Sometimes it is a crop of “Problems of Plenty” and sometimes it is applauded as “Food for Future”. Sound infrastructure in Gujarat reshape the business style of this crop and ultimately drives attention of the policy makers not only in this state but also globally that makes to decide *Global Potato Conclave-2020* (a conference that is held every ten years) in Gandhinagar, Gujarat.

New in Gujarat Potatoes

Potato production in Gujarat is linked with two major festivals; Diwali (For sowing) and Holi (For

Harvesting). Sometimes, the pattern of production is also marked according to demand disruptiveness and climate crunch. Potato is a 110 days' crop here but pre harvesting of potatoes are also observed to rationalise the demand and to get a better price. So at the time of end December and early January, potatoes are sold at two different prices; around ₹ 6/kg for cold storage potatoes that are evacuated and ₹ 8/kg for early harvested potatoes. Potatoes are cultivated in loose loamy soil but producers in Gujarat used to add black soil in it for controlling sunshine that improves tuber growth. The favourable temperature at Deesa of Banaskantha district in Gujarat improves harvesting of potatoes and controlled reduced sugar formation that impacts better on French fries (Table 2) production by processing industries. Keeping potato in earthen pot, producing potato both at river basin and upland river basin, storage under haulm with potato leaves, and use of labour very meticulously for potato blanching and peeling make



Fig. 1. Process of Potatoes from Production to Marketing in Gujarat

potato production at a higher level. Government policy like backend subsidy in Micro Irrigation System (MIS), transport subsidy in the interstate movement of commodity, subsidy in cold storages, and central government Tomato, Onion and Potato (TOP) policy make this crop lucrative and alluring in Gujarat.

Potatoes in Cold Storages

Potato is a semi perishable commodity that needs immediate storing in cold storages. Even cold storage helps in price discovery and create another options for channelization of the commodities. Around 168 cold storages are in Gujarat that keeps potato as commodity safe and suitable for further processing at different

stakeholders. Banaskantha and Kheda districts are two major districts where we found cold storages for potato storage. Cold storage keeps table potatoes, seed potatoes and processed varieties at a different amicable temperature in Gujarat. Potatoes are shifted in cold storages after April month onwards and about 65 % evacuated before September. The seed potatoes that are to use next year are kept up to the end of October. December is the month when all stored potatoes are evacuated from the cold storages for maintenance purpose. Potato producers are charged ₹ 1.70 to 1.75 per kg for the first three months of harvesting and ₹ 2.00 to 2.25 per kg for subsequent storage of potatoes in cold storage. Gujarat producers

depend on the Jalandhar market for potato seeds but other options like cold storages, own store produce for seed, seed sold by private players like Mahindra Agro, ITC cannot be overlooked. In a nutshell, cold storage in Gujarat do exclusively grading and sorting of potatoes on behalf of producers, transport their products if the need arises, and in some cases help in labour supply to the producers by the cold storage manager make its distinct presence and support in this trade scenario.

Processing of Potatoes

Processing of potatoes is both at the organised and unorganised sector in Gujarat. Total 1 lakh bag of LR varieties are processed through organised sector and other processing

Table 1. Potato Supply Chain in Gujarat

Potato	Potato Producer	Trader	Cold Storage Manager	Exporter	Processor		Trader	Wholesaler	Retailor	Consumer	
					Organized	Unorganized				National	International
								Mandi	Mandi		
Table Varieties											
Process Varieties											

Source: Primary Survey Work

is done through the unorganised sector. Though, maximum potatoes are produced in northern Gujarat yet unorganised processing is done majorly in Bhavnagar districts. Organised processing is channelized through contract farming; mainly seed and consultancy are provided through the processors and producers sold around ₹9/kg to the processor (Table 1). Here in Gujarat, potato producers prefer to do business away from contract farming models and around 18 % of potatoes are produced through contract farming. Around 20 different processing organisations are present in Gujarat and significant contributors are: McCaine (French Fries), Balaji

(Wafers), Pepsi (Wafers), ITC (Wafers), Himalaya (French Fires) and Hyfun (French Fries). The study says, no industries in this state procure the processed varieties of potato from Farmer Producing Organisation (FPO), Cooperatives and Cold storage.

Traders in Potatoes

The role of traders in form of wholesalers and retailers are much significant in the potato market in Gujarat. Potato market is quite heterogeneous and ungraded when we move from urban to rural. Wholesalers behave as trader that procures potatoes directly from producers. Retailors sell the product

to the consumer. It has been observed that there is a price difference of ₹4-5 per kg and it is maximum around February and March and minimum around December and January. Traders take this advantage and sell the products accordingly. Potatoes are priced through an open auction in the mandies and retailers sell relatively ungraded lots to consumer at a price of ₹20/kg throughout the year.

Labour Issues and Other Aspects in Potatoes

In the end, potatoes production to marketing in Gujarat is flux and challenging. In this scenario, labour unavailability makes the game riskier. Still, potato producers handle labour crunch through effective management like skilled one for assembling line operation and unskilled one for seed plantation and harvesting. Both cash and kind management make the system under control; ₹200 and 5 kg potatoes (small size less than 14 mm). Gujarat farmers bifurcated potato sizes in 0-14, 14-32, 32-45 mm, and greater than 45 mm. Accordingly they decide the market for each commodity like small-size for Dum aloo production and larger-size for processing purpose. Around 5% post-harvest losses are marked in potatoes in Gujarat. Climate, input cost particularly seed, and unavailability of labour make potato producers worry and cautious in this business.

Table 2. Cost and Benefit of the Processing Industries

Processing Cost and Margin – Potato to Chips		
Particulars	Amount (₹)	%
Cost of potato including transport and handling (45 kg @ ₹20/kg)	900	30.00
Labour Cost for washing, peeling and cutting in to slices	80	2.67
Chips Preparation		
i. Oil 7kg @ ₹55/kg	385	12.83
ii. Fuel Cost	300	10.00
iii. Labour Cost for frying and packing	150	5.00
iv. Packing material	30	1.00
Total Cost	1845	61.50
Profit	405	13.50
Value of Chips sold to wholesaler (15kg @ ₹150/kg)	2250	75.00
Retailors Purchase Price @ ₹180/kg	2700	90.00
Packing Cost	150	5.00
Retailors Profit	150	5.00
Retailors Price to Consumers @ ₹200/kg	3000	100.00

Source: Department of Agricultural and Rural Management, Tamil Nadu Agricultural University, Coimbatore, 2015

Agriculture to Agripreneurship: Journey of an Agribusiness Student

Mukesh Chaudhury, a student of International Agribusiness Management Institute of Anand Agricultural University, Anand accepts the challenges in potato entrepreneurship rather than accepting a lucrative placement package in a multinational company. Shri Mukesh who is a graduate in agriculture and master in agribusiness management is a native to Banaskantha district, Gujarat. Banaskantha district is a potato podium where about ₹ 15,000 cr of potato business is being carried out through many stakeholders. Mukesh's father who was APMC Chairman at Deesa, APMC and his uncle, Shri Govind Chaudhury motivated him to

try his endeavour in journey of potato and he accepted the proposal with full of energy and eagerness. In an initial attempt in the year 2019, he tied with Hyfun processing organisations through contract farming and goes for Santana varieties which are best for French fries for ultimate consumers. Sleepless night and endless enthusiasm put his step in the era of agribusiness. He got a good amount of profit this year in spite of some percentage loss through nematode infestation. Now he is worthy and happy as well and he has no repentance for his decisions which was full of risk and repercussion.

Conclusion

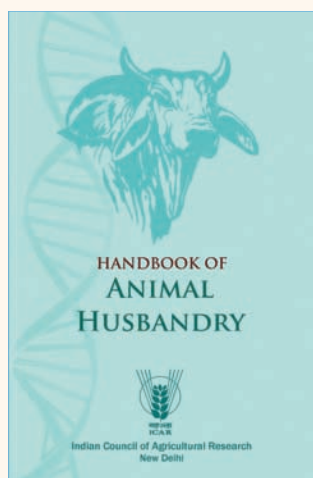
Potato means a happy man in a humorous way. Potato producers in

Gujarat symbolises happy (*Majama*) when profit increases. Potato produces a symbol of glory for this state through different ways from production to marketing. The benefit over cost is just double here in Gujarat for potato production. Market agonies nullified here in Gujarat through infrastructure and policy framework. Production, Productivity and Profitability are 3Ps suit here to potatoes in Gujarat; no doubt about it.

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Livestock sector has created a significant impact on equity in terms of employment and poverty alleviation. After staple crops, livestock sector is the second most important contributor to the agricultural economy. The



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TECHNICAL SPECIFICATIONS

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