

## AN OVERVIEW OF TOMATO PRODUCTION AND PROCESSING IN INDIA

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### Introduction

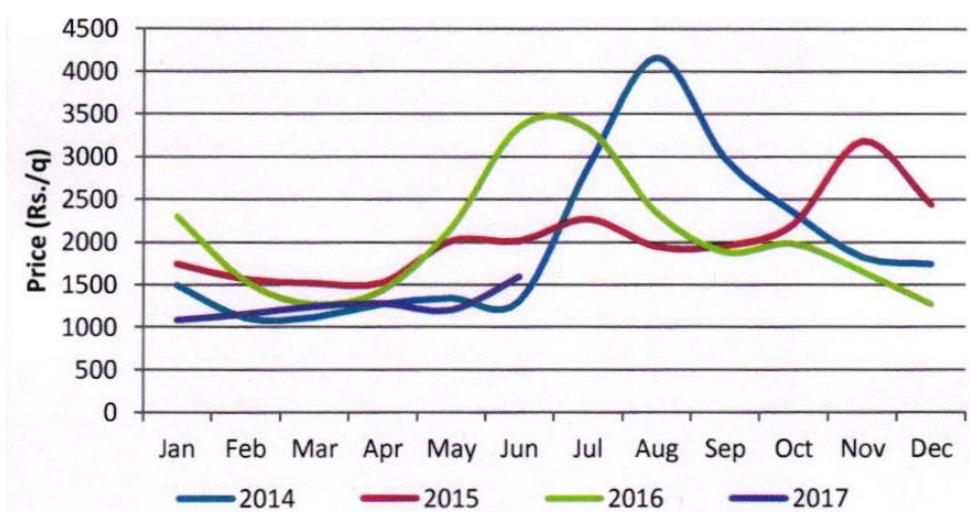
India is the second largest producer of tomatoes in the World. According to National Horticultural Board, the provisional all India production of tomatoes is estimated as 20,573,000 MT with a productivity value of 25.3 MT/Ha for the year 2019-20. The major Tomato producing states in the country are Madhya Pradesh, Andhra Pradesh, Karnataka, Gujarat and Odisha. Indian farmers face the challenge of low productivity of tomatoes and huge losses (amounting to 20-30 %) during storage and transportation. In India, there lies a huge opportunity in tomato processing as the demand for processed tomato products has been growing at an annual rate of about 30%.

**Losses in Tomato Value Chain: A Big Concern:** In a case study conducted in Karnal (Haryana), it was reported that there were about 13.34% losses in tomato at the farmers' level. During transportation, losses were about 2.33%. At trader's level, the average loss reported was 3.4% which was attributed to handling, weighing, loading and delay in marketing. At the wholesaler's and retailer's level, average losses were about 6.89 and 8.53% respectively. Similarly, in another case study, it was revealed that on an average post-harvest losses in tomato handling at farmer's level in Jharkhand was 9.86% while at agent/local trader's level, average losses were 2% and at the wholesaler and retailer's level, the average losses were 9.38 and 11.25%, respectively. It was reported that there was wastage of huge quantity of tomato during glut situation due to lack of availability of processing unit and their marketing (<https://financejharkhand>). Therefore, preservation of tomato through processing at processing units close to production like in nearest Food Mega Parks can help overcome some of these major losses.

In its recent Annual report (2020), the World Vegetable Center advocates farmers to adopt new climate-resilient technologies like tomato production under minimum tillage or open-pollinated tomato lines for better yields. The Public-Private Partnership (PPP) can also help farmers to overcome losses to a large extent. In 2012, PPP between HUL and Maharashtra Government for sustainable sourcing of 100% of tomatoes, has become self-sustaining as the company continues to provide these farmers a buy-back guarantee for their produce and also

supports farmers with knowledge about the latest agricultural techniques and expert advice in adopting sustainable agricultural practices into irrigation and selecting right type of seeds etc. (<https://thecsrjournal.in/csr-report-hul-spent-116-crore-rupees-on-corporate-social-responsibility/>).

**Value-added Tomato Products: Production and Challenges:** Tomato can be processed into tomato pulp/juice, tomato paste, tomato ketchup, culinary sauces/chutneys, soups, dehydrated curries and powders with extended shelf-life. Amongst different tomato products, ketchup has wide acceptance. India's ketchup market is of around ₹ 1.8 billion. Nestle's Maggi leads the ketchup market (37% market share) followed by Unilever's Kissan (29%) and Heinz (10%). Fresh tomato still enjoys a big demand. However, there is high volatility in wholesale price of fresh tomato during different seasons (Fig. 1). The surge in fresh tomato prices over seasons has created an increased acceptance for easier-to-cook meals by consumers. Assocham (the Associated Chambers of Commerce of India) has reported a 40% increase in the demand for tomato puree and ketchup during the late off-season (May to July 2016) when due to drought in southern states the retail price of tomato was ₹ 80-100/kg in Indian metros. Processed tomato products are gaining wide acceptance not only in food processing industry/snacks foods



**Fig. 1:** Tomato Wholesale Price Seasonality

Government of Consumer Affair, GOI (Price Monitoring Cell), 2017-2018

industry/hotels/restaurants/cafes but also in the homes as a key ingredient or side accomplishment. Recently, one could see the packet of tomato soup powder being served in the premium trains like Vande Bharat which could be prepared into instant soup with the addition of hot water.

Due to an increase in demand of processed tomato products, new entrepreneurs are also venturing into tomato processing units. Presuming raw material availability for 4 months only and with a projection of about 42% Internal Rate of Return, a typical financial model for establishing and running a 4,500 tonnes per annum paste unit generally involves an investment

of around ₹ 50 - 60 Lakh. The desirable qualities for a processing tomato cultivar include spotless, red colour, firm, fruit weight be at least 50 g, disease-free tomatoes with high total soluble solids (5-6° Brix), acidity more than 0.4% and pH less than 4.5. However, it is difficult to procure the requisite volumes of paste concentrate and pulp from local suppliers or to procure fresh tomatoes from farmers meeting the quality standards and in quantities that enable optimum plant utilization. Strategies should be adopted to develop backward linkages with farmers to produce the right type of variety so as to reduce the cost of processing, maximize the use of processing capacity. One can also focus on developing more farmer clusters on-site processing units to perform the primary processing which will primarily reduce the cost of storage and transportation of tomato along with post-harvest losses.

## Conclusion

Tomato production is growing year-on-year and to reduce the post-harvest losses backward and forward linkages between the producer and the processor needs to be strengthened by focusing on improved cultivars suitable for processing into different value-added tomato products.

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