

Chapter 9

Overcoming Supply Chain Barriers in Onion Through Technology

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ABSTRACT

The onion economy is characterized by major price volatility due to seasonal production, while there is daily consumption by almost every Indian household. The crop is highly perishable and depends upon stored produce for about 6-7 months as there is no harvest between May to November. The crop besides suffering from considerable storage losses, is also susceptible to unfavorable monsoons which can lead to huge crop loss and high prices. Price rise is addressed through government agencies releasing buffer stocks, fixation of Minimum Export Price and even regressive measures such as export ban. This paper, examines the price fluctuations and the status of demand, supply and exports of onion crop. The paper highlights that the supply shocks must be addressed through technology, which can increase yields and also be leveraged for creating advanced storage structures in place of traditional ones, often used by farmers. This serves as the real solution rather than export bans, considering that India has export potential and several countries are dependent upon India for supplies.

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1. STATUS OF ONION: GLOBAL PERSPECTIVE

Onion is one of the most consumed vegetables and a staple ingredient in the cuisine of many cultures worldwide. The world demand for fresh onions has shown a rising trend driven by increase in population, rising per capita income, urbanization, *etc.* especially in several developing countries. The large majority of world consumption takes place in Asia, notably China and India due to demographic factors and hence these two countries dominate the world consumption as well as production of onion. The importance of onions in the cuisines of Asian countries across all levels of income groups is likely to perpetuate and strengthen the demand for this vegetable crop.

Onions are a versatile crop and differ in color and taste with some varieties more pungent than others. Yellow onions make up 75% of all cultivated onions in the world, while other colors are red and white. India is the top producer in the world known for pungency in the varieties cultivated. The country also has the advantage of cultivating the crop throughout the year in three seasons. In Bangla Desh onion is considered as a major spice crop while in Indonesia onions are also used for medicinal purposes. The country wise share of onions in world area and production is indicated in Table 1.

Table 1. Major Onion Producing Countries in the World (2020)

Country	Area	% share to Total Area	Production	% share in Production	Productivity (Tonnes / ha)
	(Million Ha)		(Million Tonnes)		
India	1.43	26.09	26.74	25.58	18.7
China	1.08	19.71	23.66	22.63	21.91
USA	0.05	0.91	3.82	3.65	65.6
Egypt	0.09	1.64	3.16	3.02	35.11
Türkey	0.07	1.28	2.28	2.18	32.57
Pakistan	0.15	2.74	2.12	2.03	14.13
Iran	0.05	0.91	2.06	1.97	41.2
Bangladesh	0.19	3.47	1.95	1.87	10.26
Sudan	0.11	2.01	1.95	1.87	17.73
Indonesia	0.19	3.47	1.82	1.74	9.58
Others	2.07	37.8	34.99	33.47	16.90
World	5.48	100	104.55	100	19.08

Source: ICAR-National Institute of Agricultural Economics and Policy Research, New Delhi (2020)

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