



Indo-German Cooperation on Agricultural Market Development

Building sustainable partnerships

Garlic (*Allium sativum*)



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Global Trade – India’s Role

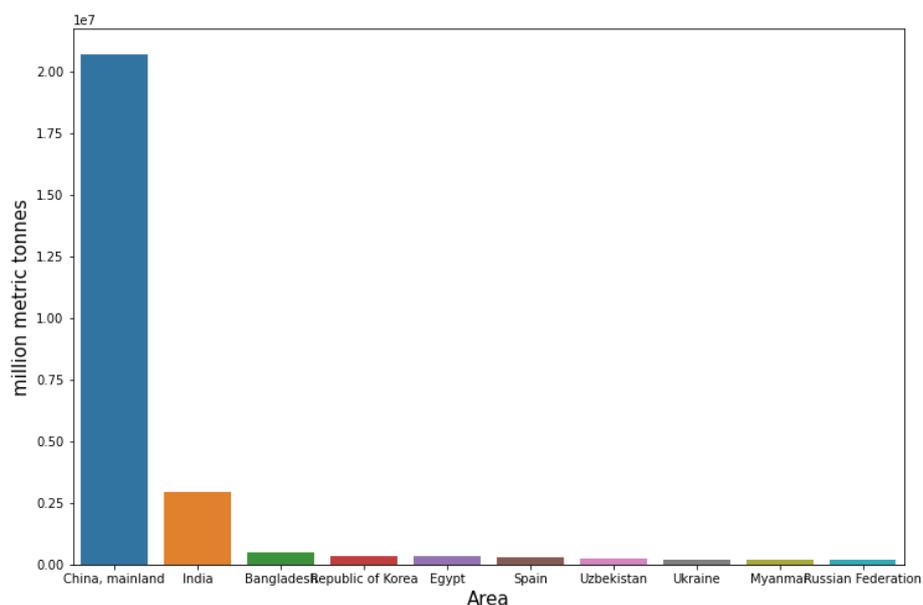


Figure 1. Major garlic producing countries in 2019 (FAOSTAT 2021¹)

- In 2020, China was the world’s largest garlic producing country, contributing more than 75% of total world production with 20.7 million metric tonnes (FAOSTAT 2021).
- China was the world’s largest garlic exporter with a global share of 65.5% (US\$ 2 billion), Indonesia was the largest garlic importer with a share of 19.5% (US\$ 586 million) in 2020.

Table 1. Top five global garlic exporters in 2020 (Tridge 2021ⁱⁱ)

Country	Export Share 2020 (%)	Export Value in 2020 (US\$ million)	Export Growth Value from 2017-20 (%)
China	65.58	2.07 billion	-5.79
Spain	15.17	479.62	+34.91
Argentina	5.63	178.11	-3.85
Netherlands	3.10	97.91	+3.5
Egypt	1.36	43.78	+56.71

Table 2. Top five global garlic importers in 2020 (Tridge 2021)

Country	Import Share in 2020 (%)	Import Value In 2020 (US\$ million)	Export Growth value 2019-20 (%)
Indonesia	19.51	586.23	0.31
Brazil	9.81	294.70	-2.44
USA	7.83	235.11	+5.50
Malaysia	3.88	116.51	-37.96
Germany	3.5	105.09	+26.22

- In 2020, India’s garlic global production share was 9.48%, while the export share accounted for a value of US\$ 5.5 million. From 2017 to 2020, growth in export value declined to -77.23%.
- In 2020, India imported garlic with a value of US\$ 5.1 million. From 2015 to 2020, garlic growth in import value increased more than 300%. Primary supplies come from Afghanistan with 37,81% shares of the total value of garlic imports to India, followed by UAE 28%, Myanmar 16% and others.

Table 3. India’s Garlic import trend in 2020

Partner	Import Share in 2020 (%)	Import Value In 2020 (US\$ million)	Import Growth value 2019-20 (%)
Afghanistan	37.81	1.95	-
UAE	28.29	1.46	-
Myanmar	16.46	0.84	-59.95
China	8.2	0.422	+222.18
Iran	5.2	0.26	-30.20

- In 2020, the USA was the major importer of Indian garlic, with a share value of 27%, (US\$ 1.5 million), followed by UAE with 16.6% and Nepal with 15.8%. India’s major garlic export trade with the USA has declined to -12.4% in 2020.

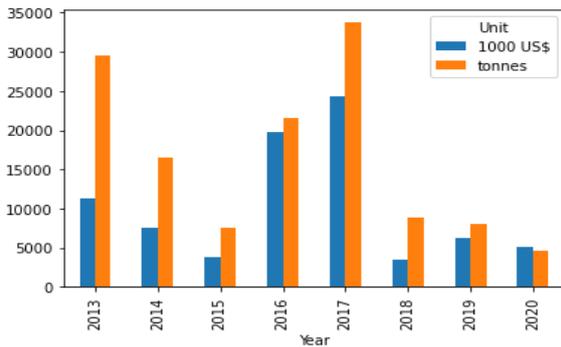


Figure 2. Indian Garlic export trends from 2013 to 2020 (Tridge 2021)

Table 4. Indian garlic importing countries (Tridge 2021)

Partner	Export Share in 2020 (%)	Export Value In 2020 (US\$ million)	Export Growth value 2019-20 (%)
India to USA	27.04	1.50	-11.71
India to UAE	16.88	0.93	+382.4
India to Nepal	15.85	0.87	-
India to Thailand	9.32	0.51	-69.12
India to South Africa	7.99	0.44	-

Garlic Market Trends in European Union

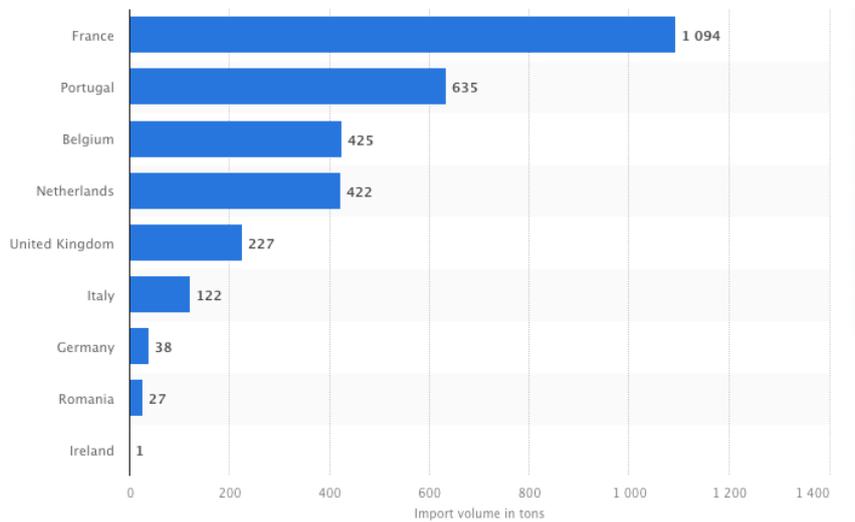


Figure 3. EU garlic import in 2019ⁱⁱⁱ

- EU countries produce around 0.4 million tons of garlic per year. Spain is the EU’s biggest producer, with a production of 273,000 tons (in 2018), followed by Italy (29,980 tons in 2017) and Romania (28,770 tons in 2018).
- The top 5 garlic exporters to the European Union are Spain, China, Netherlands, Germany and Italy. All those, and also Egypt and France, experienced an increase in garlic exports to the EU in 2020.

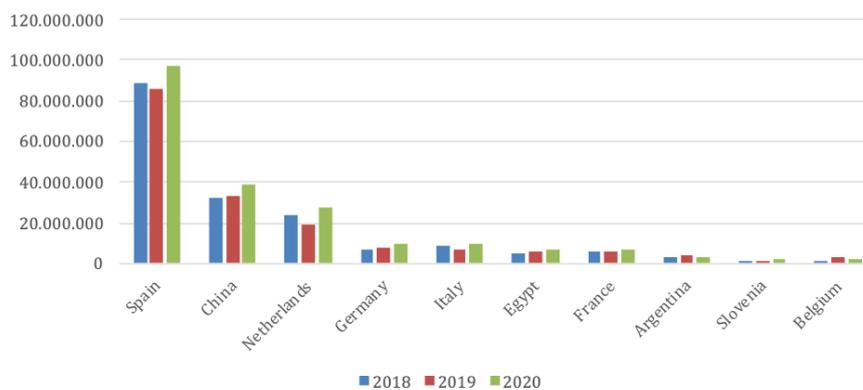


Figure 4. Top 10 suppliers of garlic to the EU from 2018 to 2020^{iv}

Garlic Import Trend in Germany

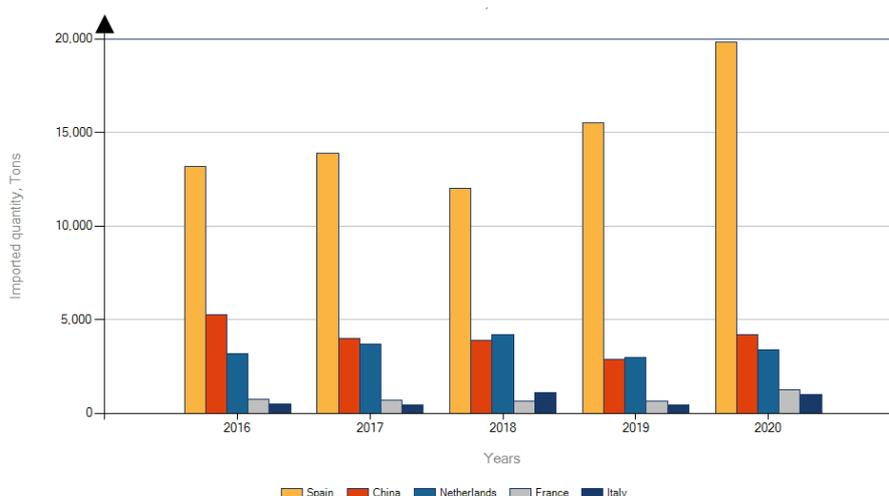


Figure 5. Garlic import trend in Germany (ITC, 2021*)

- German garlic imports reached US\$ 4.5 million in 2020.
- Germany is the largest importer of fresh garlic from Spain, and the imports from Spain in December 2020 peaked, reaching US\$ 6.62 million for a single month which records a growth of 57% compared to the same period in 2019.

Prices of garlic

- Garlic offered in German stores are available either as fresh, unbranded and unpacked garlic. There is also an offering of garlic in other forms, such as pickled and preserved garlic, or as garlic paste in oil, or in the form of dried, granulated or powdered spice.
- In general, the prices for fresh garlic in Germany are similar to those elsewhere in the EU, which average around €0.5 – €1.5 per 100 g in end-market prices for consumers but are much lower for bulk importers and wholesalers.
- The price for processed garlic varies according to the product type, processing level, volume and brand. Other important factors impacting price of garlic include quality, packaging type, retailer, as well as if the product is certified as organic and/or fair trade. On average, prices for pickled and preserved garlic are from €0.8 to €2 and more per 100 g, for garlic paste in oil – from €6 to €10 per 100g, and for dried, granulated or powdered garlic – from €1 to €8 and more per 100g (EU 2018^{vi}).

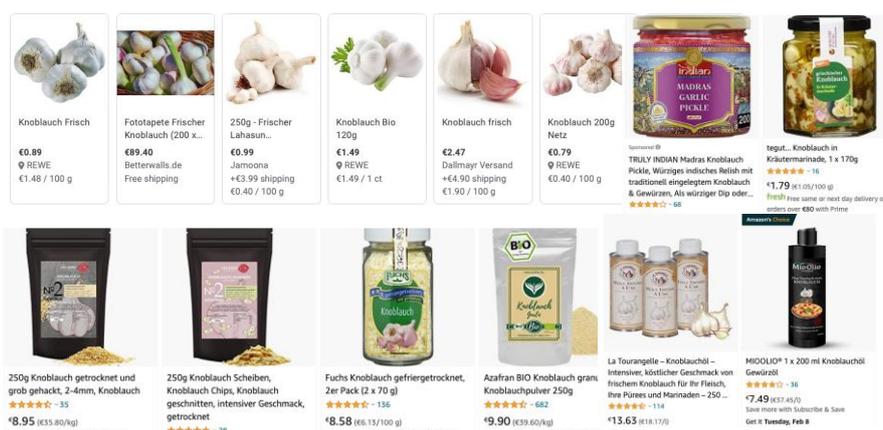
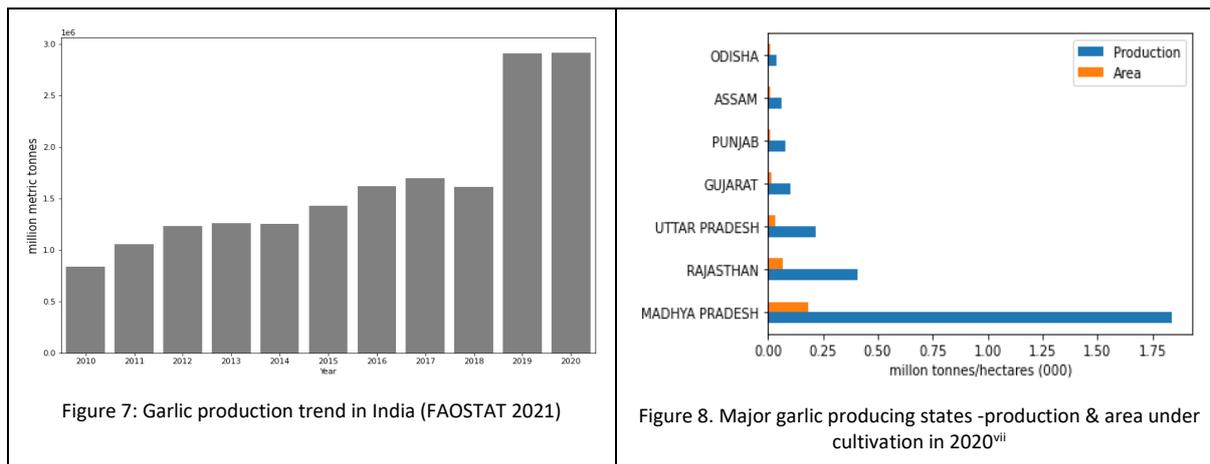


Figure 6. Garlic and garlic centric products with retail prices in Germany

Garlic Production in India



- Garlic is an essential ingredient of Indian cuisine as well as an important ingredient for medicinal and antimicrobial purposes
- In terms of production, Madhya Pradesh was the largest garlic producing state in India with a share of 63.4%, followed by Rajasthan (14.2%), Uttar Pradesh (7.7%), and Gujarat (3.6%) in 2019-20^{viii}.
- Together, these top four garlic-producing states contributed more than 90% of total production in 2019-20.
- Garlic varieties, *Agrifound White*, *Yamuna Safed*, *Yamuna Safed 2* and *Yamuna Safed 3* have been notified by the Government of India^{ix}.
- The area under garlic has increased from 0.12 million ha to 0.36 million ha during 2000-2020. The production also increased during the same period from 0.5 million tonnes to 2.9 million tonnes.
- The average productivity of garlic is 8.03 tonnes per ha, which is less than in China (23 tonnes per ha).
- Punjab has the highest productivity yield of garlic with 12 tonnes per ha, followed by Madhya Pradesh with 10 tonnes per ha.
- Rabi* is the primary season for garlic cultivation in India. The crop can be planted from August to November in Madhya Pradesh and Rajasthan.

Garlic Market

- In the recent past, garlic has been one of the agricultural commodities subject to high price fluctuations in major markets in India.
- In general, garlic prices follow a typical seasonal pattern in price movement. The market arrivals of garlic start from the month of February during which the price for garlic is low.
- Data compiled by Nashik-based National Horticultural Research & Development Foundation (NHRDF) shows that garlic prices have more than doubled in the last one month to trade at INR 152.50 per kilogram in Kolkata wholesale mandi in 2019. At the same time in Bengaluru and Chennai, garlic prices have jumped by 43 per cent and 54 per cent to trade at INR 92.50 per kilogram and INR 170 per kilogram respectively (Jha 2019^x).

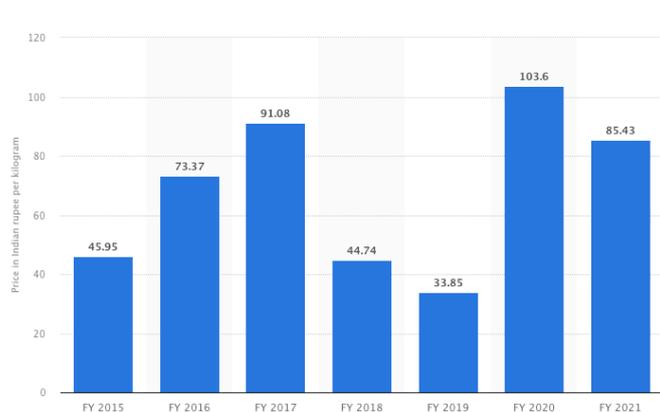


Figure 9. Average garlic price trend in India (Statista 2022^{xi})

- In 2020 October 9th, wholesale market garlic was quoted at INR 80 per kg to INR100 per kg compared to one month ago at INR 40 per kg to INR 50 per kg. In the retail market, garlic was available at INR 140 per kg to INR 160 per kg at Vidarbha, Maharashtra (Hitvada 2020^{xii}).
- Figure 10 summarizes the monthly-wise average wholesale and retail garlic price in Bangalore, Karnataka.

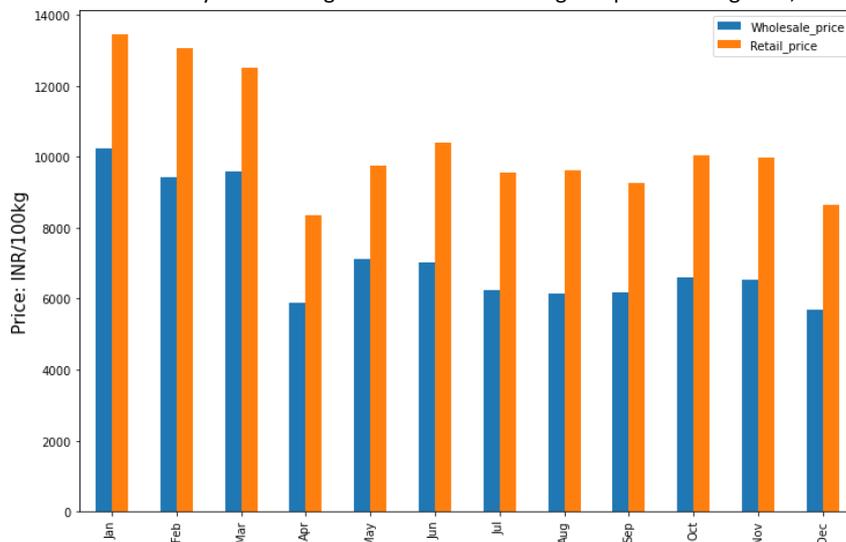


Figure 10. Average wholesale and retail garlic price in Bangalore market in 2021 (NHB 2022^{xiii})

Garlic Promotional Schemes in India

National Research Centre (NRC) on Onion and Garlic of the Indian Council of Agricultural Research (ICAR)

The NRC on Onion & Garlic, located in Pune Maharashtra, has a mission to promote the overall growth of garlic terms of enhancement of quality production, export and processing. Its major mandates are basic, strategic and applied research on genetic resource management, crop improvement and production technologies for enhancing and sustaining production of onion and garlic, transfer of technology and capacity building of stakeholders for enhancing the productivity of onion and garlic.

What are significant challenges in the garlic supply chain?

Production constraints:

- Low productivity and low seed replacement ratio.
- Post-harvest losses are an average of 20-25%, during curing, drying and grading. Storage of garlic at 30 to 35 °C temperatures at 65 to 75 % humidity is the major constraint. There is a lack of infrastructure facilities at the farmer's level for stacking and storage of garlic.
- Inadequate storage facilities in rural areas: Storage facilities in villages are found to be inadequate, which contributes leads to distress sales. Due to lack of storage facilities, a substantial quantity of the commodity is also lost. Distress sale is obligatory on some farmers as they have to repay the loan availed from traders during the time of sowing for seed, fertilisers etc.

Processing and market infrastructure-related constraints:

- The traditional system of marketing: In the clusters, there is an absence of alternate channels of marketing. So, farmers typically sell only through APMCs or village level traders.
- Lack of market intelligence services: Farmers do not receive information on market prices. Some farmers sell crops through village-level traders, because due to which they are not realising fair price.
- Lack of primary processing infrastructure:
 - There is a non-availability of facilities for primary processing: cleaning, grading & sorting at the farm level.
 - There is no practice and provision of producer level storage.
 - There is an acute lack of awareness among farmers regarding FAQ (Fair Average Quality) standards.
 - Farmers do not practice the usage of basic equipment like moisture meter and weighing machine.
 - Fluctuations in prices: Generally, the price of commodities goes down in the post-harvest period due to heavy arrivals in the market and later shoots up. Farmers in the catchment area do not have storage facility to store and they also don't use a warehouse receipt system.
 - Lack of marketing information: Due to a lack of market information regarding prevailing prices, arrivals etc., most of the producer's market garlic in the Mandi without studying the price trends.

- ⁱ https://www.fao.org/faostat/en/#rankings/countries_by_commodity
- ⁱⁱ <https://www.tridge.com/intelligences/onion>
- ⁱⁱⁱ <https://www.statista.com/statistics/771998/imports-from-garlic-since-europe-to-spain-by-country-from-origin/>
- ^{iv} https://www.importpromotiondesk.com/fileadmin/user_upload/Publikationen/factsheet/obst_gemuese/Fresh_Onion_and_Garlic.pdf
- ^v <https://www.trademap.org/Index.aspx>
- ^{vi} <https://gfa.org.ge/wp-content/uploads/2019/05/Garlic-market-research.pdf>
- ^{vii} <https://numerical.co.in/numerons/collection/5fb9455e1f1c599016b93c22>
- ^{viii} https://agricoop.nic.in/sites/default/files/Monthly%20Report%20on%20Onion%20for%20April%2C%202020_0.pdf
- ^{ix} <http://eagri.org/eagri50/HORT281/pdf/lec16.pdf>
- ^x https://www.business-standard.com/article/markets/garlic-prices-surge-sharply-as-rain-hits-supply-onion-bounces-back-119102301342_1.html
- ^{xi} <https://www.statista.com/statistics/1069811/average-price-of-garlic-india/>
- ^{xii} <https://www.thehitavada.com/Encyc/2020/10/9/Garlic-prices-climb-up-as-supply-trims.html>
- ^{xiii} <http://nhb.gov.in/statistics/price-arrival-statistics.html>