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Apricot farming and processing in Central Asia: Challenges and perspectives

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Abstract

Apricot (*Prunus armeniaca* L.) remains one of the key fruits of temperate zones, with Central Asia serving as a major centre of its origin and genetic diversity. The study aimed to evaluate the economic potential of fresh and dried apricot production and trade worldwide, with a special focus on Central Asian countries, and to assess the efficiency of various drying technologies. Data from FAOSTAT, WITS, Tridge and WTO for 2020–2025, along with a systematic review of scientific literature on drying technologies (Scopus, Web of Science, etc.), were used; return on investment (ROI) and gross profit were calculated for traditional sun drying, convective, infrared and freeze-drying methods assuming an annual output of 50 tonnes of dried apricots. It was established that global apricot production reached approximately 4.5 million tonnes in 2024; Turkey, Uzbekistan and Iran remain the leading producers, but in 2025, catastrophic spring frosts in Turkey (particularly in Malatya province) reduced output, causing a sharp rise in global prices for fresh and dried apricots. In Central Asia, Uzbekistan (~526–540 thousand tonnes in 2024), Tajikistan (~313–348 thousand tonnes in 2024–2025), and Kyrgyzstan (~57 thousand tonnes in 2023–2024) demonstrate substantial export potential; Turkey exported dried apricots worth USD 404.5 million in 2024, yet regional suppliers (especially Uzbekistan and Tajikistan) gain competitive advantages in 2025. ROI calculations showed: sun drying – 7.3 %, convective – 23.4 %, infrared – 28.5 %, freeze-drying – 33.9%; infrared and freeze-drying provide the highest product quality. The findings can be applied by farmers, processors and investors in Central Asia (primarily Kyrgyzstan) to select appropriate drying technologies, reduce post-harvest losses and access premium export markets (EU, USA, Russia).

Keywords: Drying technology, equipment, harvested area, operating costs, return on investment, yield

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