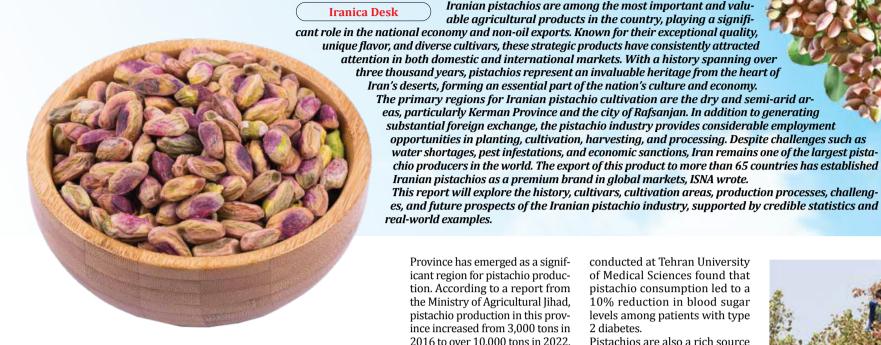
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**Pistachio is Iran's rich heritage,** global commodity



## **Historical context**

Iranian pistachios are among the oldest agricultural products in the country, dating back over 3,000 years. During the Achaemenid era, they were highly valued as a trade commodity along the Silk Road. The primary origins of pistachios are the dry and desert regions of Iran, particularly Kerman Province and Rafsanjan, which accounts for over 30% of the country's pistachio production, according to official statistics

Semnan. For instance, Khorasan Razavi produced 30,000 tons in 2022-2023, contributing significantly to national production. This trend highlights the country's potential for expanding pistachio cultivation.

Iranian pistachios hold a special place in global markets due to their diverse varieties and excellent quality. The cultivation of pistachios has expanded in many desert and semi-desert regions of Iran, thanks to the tree's high resistance to arid conditions.



The history of pistachios underscores their significant role in Iran's economy and culture. During the Safavid era, Iranian pistachios gained immense popularity in Europe. Today, thanks to its favorable climate and fertile soil in central regions, Iran is recognized as one of the largest pistachio producers worldwide.

Kerman Province, especially Rafsanjan, is considered the hub of pistachio production in the country. In 2021, Rafsanjan alone produced over 70,000 tons of pistachios, representing a significant share of national production. In addition to Kerman, the Khorasan Razavi Province, Semnan, Yazd, and Sistan and Baluchestan are also important for pistachio production. For example, in 2022, Khorasan Razavi Province accounted for 25% of the country's pistachio production, with Fayzabad and Bardaskan counties being key production centers. Recently, Sistan and Baluchestan

Province has emerged as a significant region for pistachio production. According to a report from the Ministry of Agricultural Jihad, pistachio production in this province increased from 3,000 tons in 2016 to over 10,000 tons in 2022. This growth indicates the high potential for expanding pistachio cultivation in water-scarce areas.

## Planting, cultivating and harvesting process

Pistachio trees are typically planted in sandy-loamy soils in dry regions. These trees require minimal water and thrive in hot, arid climates. The planting process begins in the first year, with pistachio trees usually reaching economic productivity between the seventh and tenth years.

During the cultivation stage, care for pistachio trees includes regular irrigation, appropriate fertilization, and pest and disease management. One significant challenge at this stage is managing water consumption. For instance, drip irrigation methods can reduce water usage in pistachio orchards by up to 40%.

Pistachio harvesting occurs in late summer and is generally performed using both manual and mechanized methods. According to statistics from the Ministry of Jihad Agriculture, most pistachio orchards in Iran are harvested traditionally. However, the use of mechanized equipment can lower harvesting costs and enhance production efficiency.

Pistachios are rich in nutrients, including protein, fiber, vitamins, and essential minerals such as iron, potassium, and phosphorus. Regular consumption of pistachios can help lower bad cholesterol (LDL) levels and improve heart health. Research has shown that consuming 40 grams of pistachios daily can reduce the risk of heart disease by up to 20%. Thanks to their high fiber content, pistachios positively impact digestive health and help regulate blood sugar levels. Studies conducted at Tehran University of Medical Sciences found that pistachio consumption led to a 10% reduction in blood sugar levels among patients with type 2 diabetes.

Iranian pistachios are among the most important and valu-

able agricultural products in the country, playing a signifi-

Pistachios are also a rich source of antioxidants, which help prevent cellular aging and combat cancer. The vitamin E found in pistachios plays a crucial role in boosting the immune system and improving skin health. For these reasons, pistachios are recognized globally as a healthy and nutritious snack.

Iran has long been one of the largest producers and exporters of pistachios in the world. According to statistics from the Food and Agriculture Organization (FAO), Iran produced over 430,000 tons of pistachios from March 21, 2023, to March 20, 2024, making it the third-largest pistachio producer globally and accounting for about 20% of market demand.

Iran's primary competitors in this market include the United States and Turkey. The US, particularly California, has increased its share in the global pistachio market in recent years through advancements in agricultural technology. However, the quality and flavor of Iranian pistachios remain unmatched. Reports from the Islamic Republic of Iran Customs Administration indicate that Iranian pistachios are exported to over 65 countries, including China, India, Germany, and Russia.

Asian markets, especially China and India, are among the most important destinations for Iranian pistachio exports. In 2021, over 80,000 tons were exported to these two countries, demonstrating Iran's capacity to supply global markets. Despite sanctions, Iranian pistachio exports continue to play a significant role in the agricultural economy. Pistachio production in Iran faces multiple challenges, including water scarcity. Most pistachio orchards are located in dry and desert areas, necessitating opti-



mal water management. Statistics reveal that over 70% of pistachio orchards in Iran rely on traditional irrigation methods, leading to significant water waste.

Another challenge is the prevalence of pests and diseases in pistachio orchards. The pistachio psylla, for example, is one of the most destructive pests, causing substantial damage to producers each year. In 2022, over 20% of pistachio orchards in Kerman experienced reduced yields due to infestations.

Sanction-related issues have also significantly impacted Iranian pistachio exports. High transportation costs and banking restrictions make it difficult for producers to access international markets. Nevertheless, the government seeks to alleviate production and export barriers through supportive policies.

Despite these challenges, the Iranian pistachio industry has substantial potential for growth and development. Advancements in modern irrigation systems and the use of high-vield cultivars can notably enhance the country's pistachio production. For example, implementing pressure irrigation projects in Kerman orchards has successfully reduced water consumption. Marketing and developing export markets are other forward-looking strategies to bolster Iran's

position in the global pistachio market. Markets such as China, India, and Russia continue to be important destinations for Iranian pistachio exports. In 2023, exports to China increased by 25%, reflecting a strong demand for Iranian pistachios.

Given the climatic changes and increasing drought conditions, the future of the pistachio industry hinges on investment in modern technologies and scientific research. Collaborative efforts between the government and the private sector can implement strategic programs to maintain and enhance Iran's share in the global pistachio market. These actions will contribute to sustainable agricultural development and the country's economic prosperity.

In summary, Iranian pistachios, as one of the most valuable agricultural products, have historically played a vital role in Iran's economy. Their high quality, diverse cultivars, and unique flavor secure a special place for Iranian pistachios in global markets. Despite challenges such as water scarcity, climate change, and economic sanctions, Iran has maintained a significant share of the global market. The export of pistachios to over 65 countries underscores the high potential of this product for generating revenue and developing non-oil trade in the country.

## **Recent developments and** expansion

Recent advancements in agricultural technology have facilitated the expansion of pistachio cultivation into other provinces, such as Khorasan Razavi, Yazd, and