

Voluntary Report – Voluntary - Public Distribution

Date: June 13, 2025

Report Number: TU2025-0035

Report Name: Unexpected Frost Leads to Crop Damage Concerns

Country: Turkiye

Post: Ankara

Report Category: Agricultural Situation, Agriculture in the News, Citrus, Fresh Deciduous Fruit, Tree Nuts

Prepared By: FAS Turkiye Staff

Approved By: Rishan Chaudhry

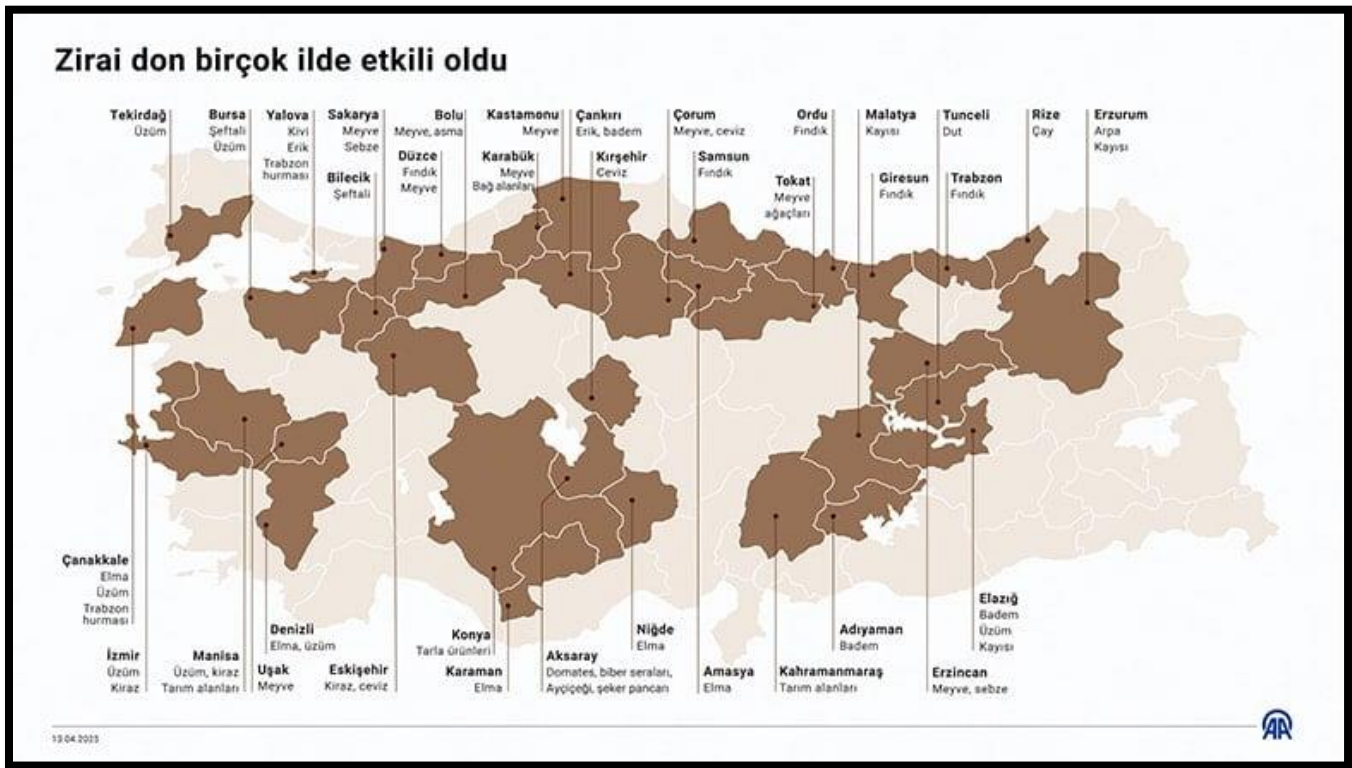
Report Highlights:

Unexpected spring frost led to crop damage in citrus, fruit, and tree nut orchards throughout Turkiye. The Turkish government responded by providing financial compensation to farmers, hoping to stem their losses. Post will continue to monitor the effects of these weather events in the coming harvest season.

Turkiye experienced three major frost incidents in spring 2025, which local contacts and media have reported will result in TARSIM, the state-owned agricultural insurance company, paying out 21 billion Turkish lira (\$536 million as of June 3, 2025) to insured farmers. The frost damage is also expected to increase inflation and will lead to significant increases in retail prices for fruits and vegetables in the coming summer. The first two frost events affected relatively small areas, but the third had a larger effect.

- **February 23 – 24, 2025:** Adana, Mersin, Hatay provinces were impacted. These provinces are known for their warm, stable climate in the southernmost coast of Türkiye along the Mediterranean Sea, close to Syrian border. Frost is very rare in this region.
- **March 21 – 22, 2025:** Izmir province and vicinity was impacted. Being on the Aegean coast in western Türkiye, Izmir is known for its mild climate, and frost is rare.
- **April 09 – 14, 2025:** 65 provinces out of 81 provinces were impacted. Of these 65 provinces, 36 provinces were affected more intensely.

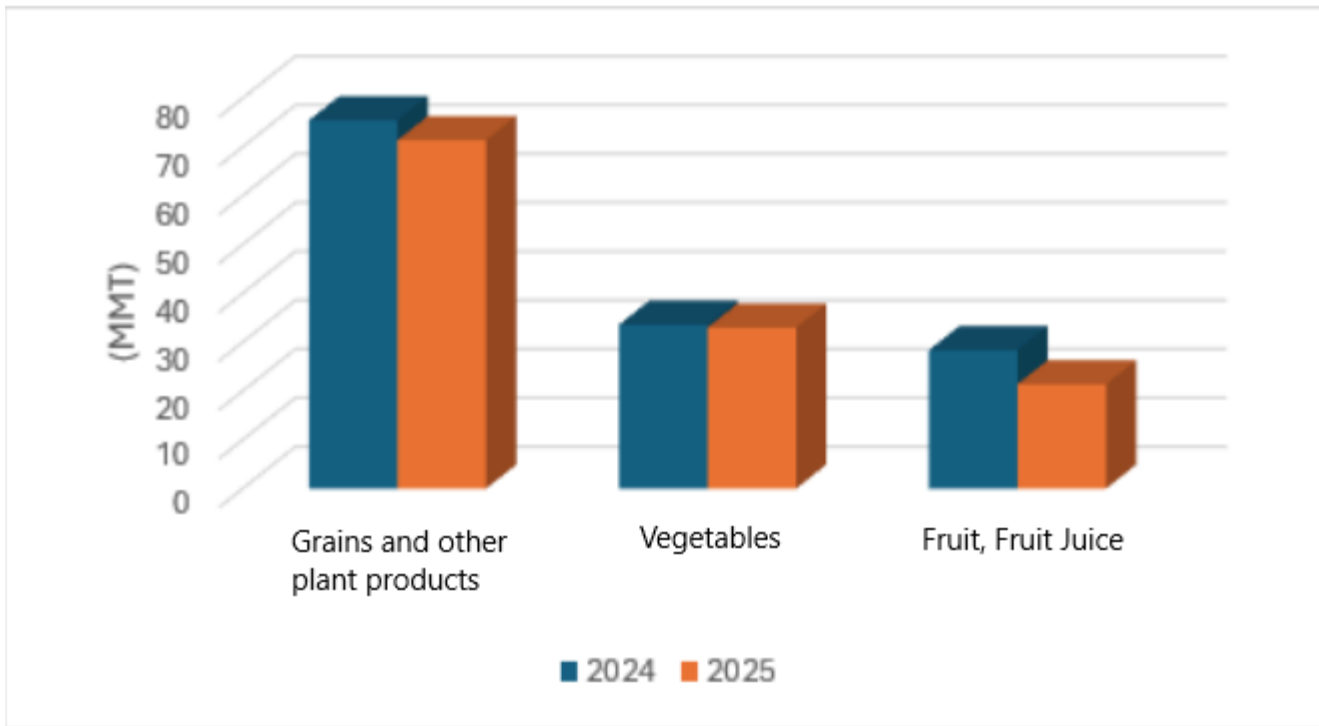
Figure 1. Provinces that were more intensely affected by frost damage.



Source: Anatolian Agency (Turkish state-owned news agency)

The agricultural production estimate for 2025 as published by the Turkish Statistical Institute (TurkSTAT) highlights a sharp decline in agricultural production due to drought, agricultural frost, excessive rainfall, and hail in late 2024 and 2025. The expectation is that there will be up to a 60 percent loss in 2025, especially in the fruit sector.

Chart 1. 2025 Production Forecast



Source: TurkSTAT, 2025

Stone and Deciduous Fruit Sector Impacts

The April 2025 frost impacted 36 provinces and led to significant losses in products such as apricots, grapes, figs, apples, plums, cherries, sour cherries, peaches, and persimmons. Apricot trees in Malatya were severely damaged, while vineyards in Manisa and apple orchards in Niğde were affected; damage assessment efforts continue to be carried out by teams from the Ministry of Agriculture and Forestry (MinAF).

Cherry production in Türkiye is primarily concentrated in the west. The coastal province of Izmir and the inland province of Afyonkarahisar are the leading producers of sweet and sour cherries, respectively. Izmir and Manisa together account for 20 percent of the country's total cherry production. However, according to the regional Chamber of Agriculture, frost damage could result in up to a 70 percent reduction in this year's cherry yield.

Peaches and nectarines are predominantly cultivated in the coastal regions of western and southern Türkiye. The leading producing provinces include Mersin, Çanakkale, Bursa, and Izmir, located along the Aegean and Mediterranean seas. Bursa, which typically produces around 100 metric tons (MT) of peaches annually, is expected to see a 50 percent decrease in production this year. In Mersin, one of Türkiye's most important agricultural centers, the April frost event caused significant damage to crops.

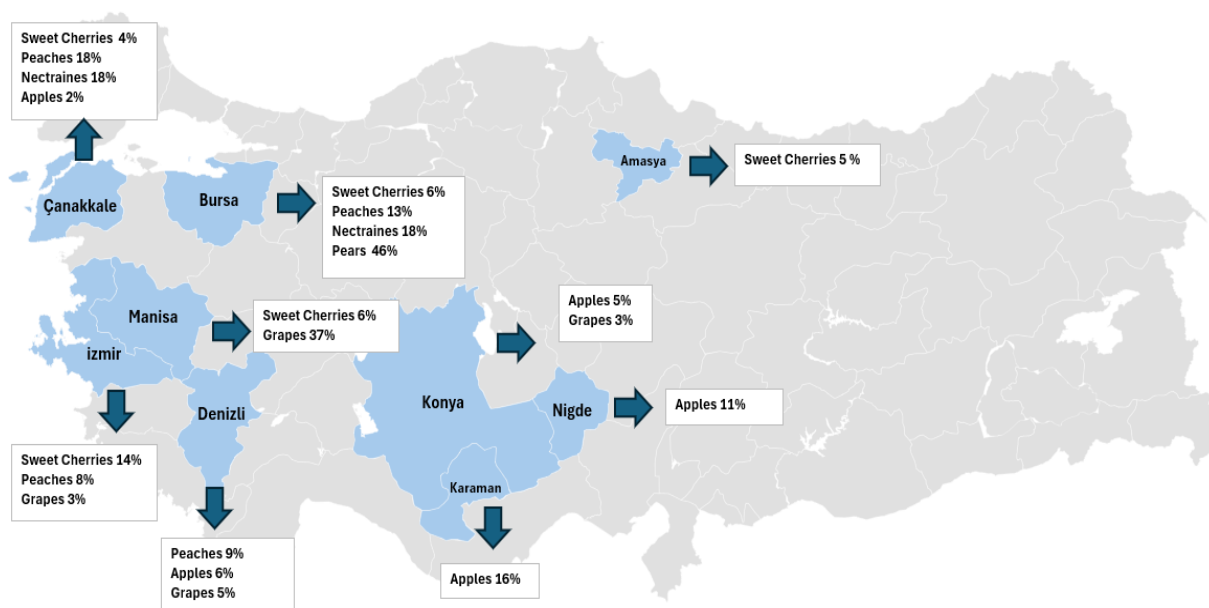
Following the frost, the district experienced a hailstorm which negatively affected peach, kiwi, walnut, and plum trees.

In Niğde and Karaman, two of Türkiye's major apple production centers, cold weather and the frost damaged apple orchards. Last year, heat stress caused production to drop to 350,000 tons, and this year it looks like it will fall even lower due to the late cold snap.

Bursa province is responsible for nearly half of Türkiye's pear production. While some areas in Bursa were severely affected by frost damage, other parts remained unaffected. Typically, Bursa produces around 250,000 MT of Santa Maria and Deveci pears. However, this year's production is expected to decrease to approximately 170,000-180,000 MT due to frost damage.

Forty percent of Türkiye's raisin production comes from the Manisa and Izmir regions, where some areas have experienced frost damage. As it is still very early in the grape production season, it is too soon to estimate this year's yield. Farmers will need to invest in their vineyards to ensure production for the coming years.

Figure 2. Top fruit producing provinces and percent production affected by frost damage



Source: FAS/Türkiye

Citrus Sector Impacts

Prior to first frost event it was a very mild January but following the cold snap citrus producers were forced to cut frozen citrus trees, impacting yield for several years. *Enterdonat* and *Kutdiken* lemon varieties were the most affected, which will negatively impact Turkish exports this season. While frost breakers and other heating machines were utilized to try and combat the weather, their use led to significant financial strains for farmers already under intense pressure from rising input and labor costs.

Since the most sensitive citrus fruit is lemons, the government took emergency action and temporarily banned lemon exports on April 8, 2025, due to a predicted supply shortage following cold weather and frost damage in the southeast where 80 percent of the total citrus production is done. However, the Ministry of Trade lifted the export ban days later following intense negative reactions from lemon producers and exporters. For more details, please click [here](#).

It is expected that orange production will fall from 1.6 to 1.4 million metric tons (MMT) and lemon production will fall from 1.7 to 1.3 MMT as a direct result of frost damage. According to industry expert assessments, crop loss in some trees and young orchards could extend through the next 3 years.

Tree Nut Sector Impacts

Commercial pistachio orchards in Gaziantep reported frost damage, and there are market sources indicating that there could be pistachio production losses of up to 50 percent. If true, Türkiye's overall pistachio production will fall about 25 percent in MY 2025/26.

According to market sources, there are estimates of 20 to 35 percent loss of hazelnuts in some hazelnut producing provinces like Samsun, Giresun, and Ordu. The elevation of the orchard determined the frost's effects; lower altitudes were not affected, but elevations higher than 2,300 feet were damaged.

Market sources are also indicating that there might be up to 70 percent losses of walnuts, but this number seems a bit exaggerated; a loss of 30 to 45 percent seems more reasonable since walnut production is spread all over Türkiye.

Major almond producing province Adiyaman was affected, and market sources expect about a 30 percent loss there. The tree damage will probably lead to lower yields in pistachios, hazelnuts, almonds and walnuts also next season.

Negligibly Impacted Sectors

Cotton

Since cotton is not planted until the end of April or beginning of May, cotton production was not affected by these weather events.

Grains

Strategic products such as wheat and barley were not significantly affected by the frost but continued to experience production losses due to drought conditions.

Sugar Beets & Corn

Sugar beet and corn planting takes place in March and April. In the Central Anatolia region, minor damage was reported in some sugar beet fields where planting had already taken place, however it is not expected to impact overall yields.

Attachments:

No Attachments.