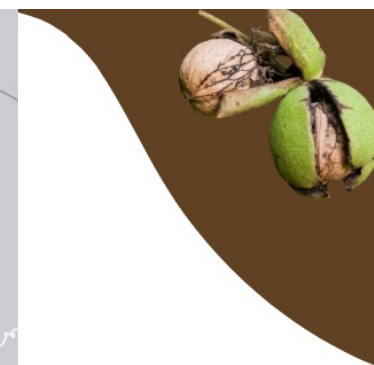
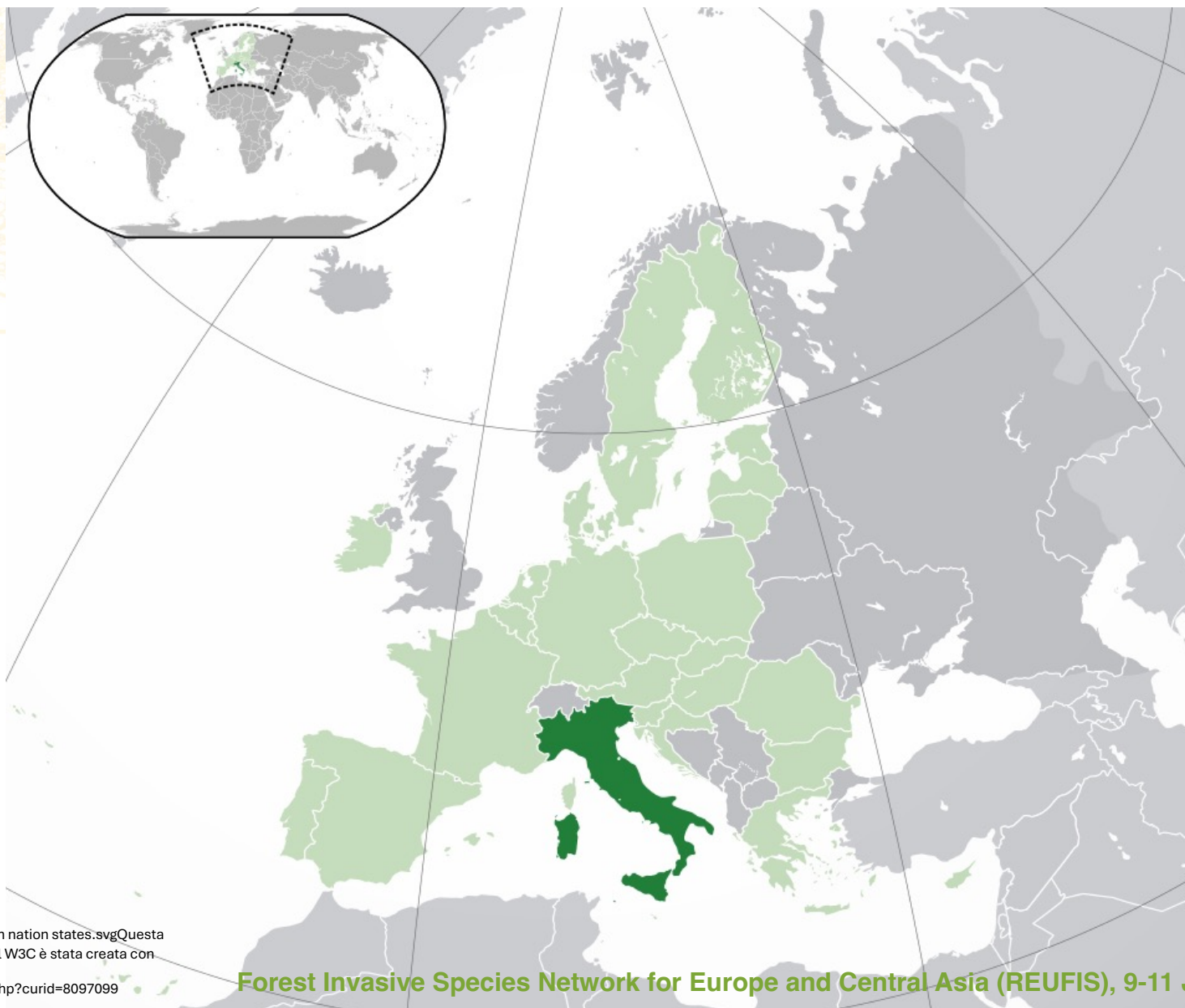




Country status of nut tree resources and health

ITALY

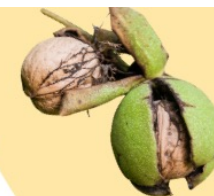
Forest Invasive Species Network for Europe and Central Asia (REUFIS), 9-11 June 2026, Kyrgyzstan



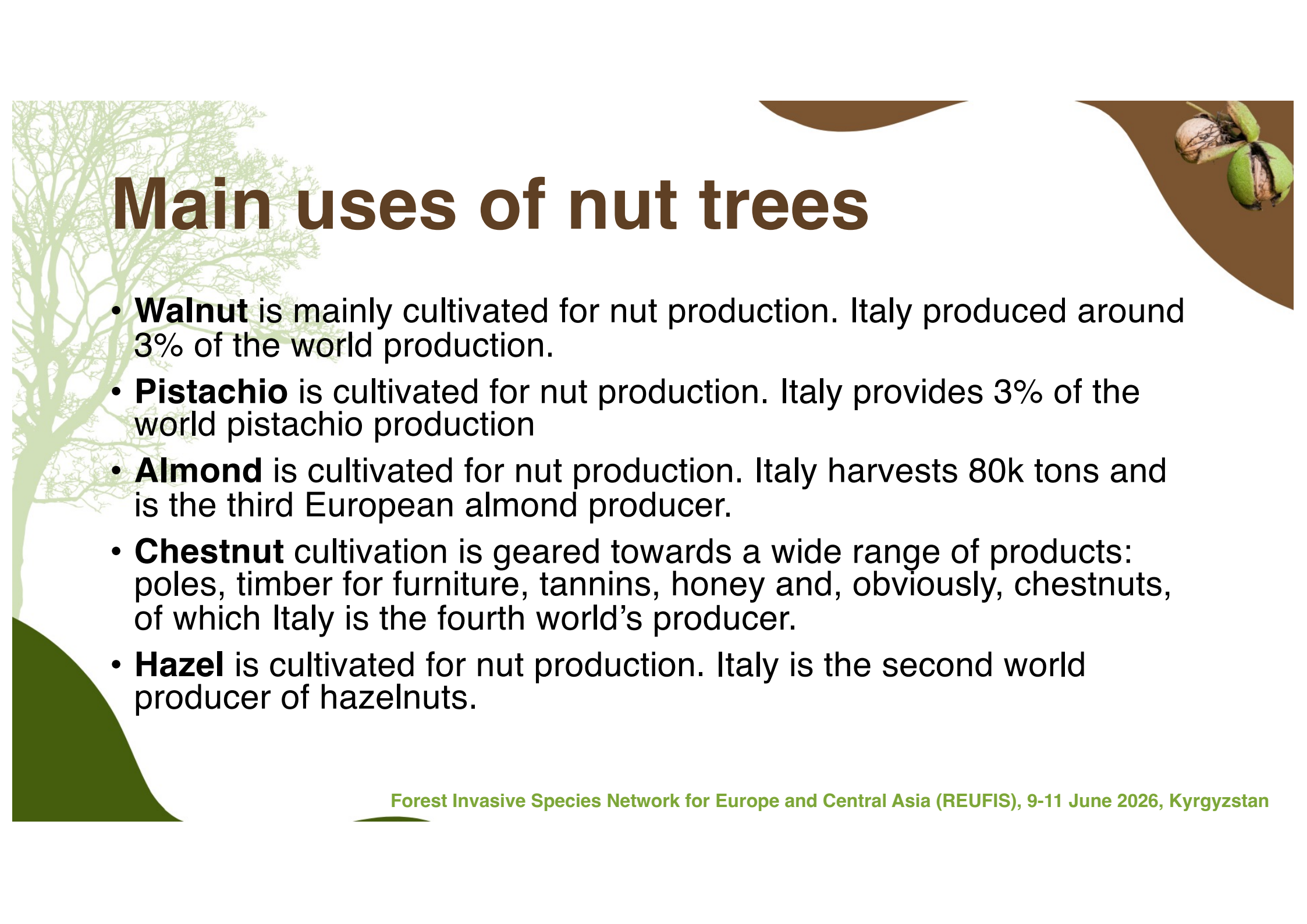
Di NuclearVacuum - File:Location European nation states.svg Questa grafica vettoriale non specificata secondo il W3C è stata creata con Inkscape ., CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=8097099>

Forest Invasive Species Network for Europe and Central Asia (REUFIS), 9-11 June 2026, Kyrgyzstan

Main nut tree species and distribution



- **Walnut** was introduced probably during Roman Empire times; it is now cultivated all over the country, particularly in the center-south of the peninsula (Campania).
- **Pistachio**, known and cultivated since Roman Empire times; it is cultivated in the southern part of Italy, including Sicily. Some locally selected varieties are known.
- **Almond**, introduced in Sicily by Phoenicians (3000 BP), it is still widely cultivated in Sicily and in Apulia.
- **Chestnut**, introduced in Italy by Romans it is now cultivated all along the hills and the mountains of the country. Widely cultivated until the 1930s it went abandoned because of *a*) the introduction of some lethal diseases and *b*) urbanization of the local population
- **Hazel**, naturally present in Italy at altitudes ranging from hills to mid-mountain levels. Its cultivation is on the rise to meet the growing market demand for hazelnut-based spreads and patisserie.



Main uses of nut trees

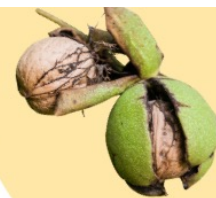
- **Walnut** is mainly cultivated for nut production. Italy produced around 3% of the world production.
- **Pistachio** is cultivated for nut production. Italy provides 3% of the world pistachio production
- **Almond** is cultivated for nut production. Italy harvests 80k tons and is the third European almond producer.
- **Chestnut** cultivation is geared towards a wide range of products: poles, timber for furniture, tannins, honey and, obviously, chestnuts, of which Italy is the fourth world's producer.
- **Hazel** is cultivated for nut production. Italy is the second world producer of hazelnuts.

Trade (import/export) of nut products and germplasm

Nut production represents 0.6% of Italian fruit and vegetables production, 4% of the fruit and vegetables export with an increase of 36.5% in 2025 respect to 2024

- **Walnut** exports is mainly towards EU countries. Cultivars mainly used are: Sorrento (most cultivated variety in Italy); Franquette, Mayette, Lara (France); Serr, Hartley, Payne (California).
- **Pistachio**, the internal production covers up to 15% of the internal demand, the rest is imported from Turkey and USA. Mainly cultivated cultivars are 'Pistacchio verde di Bronte', 'Pistacchio di Raffadali', 'Bianca', 'Cerasola', 'Insolia', 'Silvana'.
- **Almond** Italy is a net importer of almonds, with 137,000 tons of imports – mainly from the USA. Nevertheless, the superior quality of Italian almonds is increasingly being recognized on international markets, where exports reached €24 million in 2024. Mainly used cultivars are 'Cristomorto', 'Supernova', and 'Tuono',
- **Chestnut**, Italy is the world's leading exporter and importer of chestnuts, with figures of EU€ 78.7 million and EU€ 74.6 million respectively. Since the cultivation is widespread since long, many local varieties are cultivated.
- **Hazelnut**, Italy produces 55% of the internal demand and mainly imports from Turkey the remaining 45%. Main cultivars are 'Tonda Gentile delle Langhe', 'Tonda di Giffoni', 'Tonda Gentile Romana', 'Mortarella', 'S. Giovanni', 'Camponica', 'Siciliana'.

Main insect pests and diseases of nut trees in the country



- **Walnut:** thousand canker disease, Alternaria leaf spot, anthracnose, Cylindrocarpon dieback, Melanconium dieback, Phytophthora sp., shallow bark canker, walnut blight, blackline. Walnut husk fly, Codling moth, sap beetle, Asian walnut moth, walnut aphid
- **Pistachio:** Alternaria late blight, gum canker, panicle and shoot blight, rust, Septoria leaf spot. Pistachio seed wasp, stink bugs, pistachio psylla, Mediterranean root borer
- **Almond:** anthracnose, brown rot, leaf curl, Phomopsis canker, red leaf blotch and fruit rot, Phytophthora sp., scab, bacterial canker, almond mosaic. Almond lace bug, almond wasp,
- **Chestnut:** ink disease, chestnut blight, orange leaf spot, black rot. Early chestnut moth, Asian chestnut gall wasp.
- **Hazelnut,** leaf spots and bud diseases, bacterial canker, hazelnut yellows, hazelnut mosaic. Stink bugs, hazelnut weevil, hazelnut big bud mite, hazelnut longhorn beetle.

Current pest and disease control methods used in the country

- Managing pests and diseases in European nut orchards (primarily walnuts, hazelnuts, almonds, and chestnuts) is facing a massive shift. Traditional, low-input management styles are no longer viable due to climate change, international trade bringing in invasive species, and tight regulatory frameworks.
- Depending on the region and the specific crop, estimated annual yield losses from these biotic pressures range between **20% and 50%**.
- Depending on the type of cultivation, disease control is now operated generally by IPM tactics including biocontrol, the latter especially in the case of chestnut against chestnut blight.

Needs/challenges in management of pest and diseases

The European Union's strict regulatory stance on chemical plant protection products forces growers to pivot away from broad-spectrum synthetic pesticides.

- **Resistance:** Decades of relying solely on heavy chemical spraying have caused many native pests and fungi to develop resistance.
- **Lack of alternatives:** Chemical bans are outpacing the commercial availability of viable, fast-acting biological alternatives.

Warmer European winters and prolonged summer droughts are severely stressing nut trees, compromising their immune systems. Warmer temperatures also mean longer breeding seasons, allowing insect populations (like mites and aphids) to multi-replicate and build up much faster than in the past.

Critical Management Needs

- To stay profitable and sustainable, European nut production is transitioning heavily into advanced Integrated Pest Management (IPM).
- **Advanced Surveillance and Diagnostics → Early Detection and Rapid Response**
- Detecting a pathogen during its latent (hidden) phase before symptoms visually manifest is vital (**molecular and biochemical tools**). The industry is currently pushing for:
- **Digital monitoring:** Deploying drones to scan for early canopy defoliation and water stress.
- **Smart trapping:** Utilizing broad-spectrum, pheromone-based traps at trade ports and orchard borders to catch non-native insect vectors before they establish.



Thank you for your attention!