



Country status of nut tree resources and health- Serbia

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Main nut tree species and distribution in Serbia

In Agriculture

- *Juglans regia* (plantations)
- *Corylus avellana* (plantations)

In Forestry

- *Juglans nigra*
- *Corylus colurna*

In Urban areas

- *Juglans nigra* (different cultivars)
- *Juglans regia* (different cultivars)
- *Castanea sativa* (different cultivars)
- *Corylus avellana* (different cultivars)

Main uses of nut trees in Serbia



- ***Corylus avelana*** (fruit/nut)
- *Hazel* in Serbia is widespread across hilly and mountainous regions, especially in western and eastern Serbia, with scattered populations in Vojvodina (Fruška Gora). Naturally occurring in forest edges. Cultivated in orchards for commercial production all over country (various cultivars). Common species in nurseries and as an ornamental species
- ***Corylus colurna*** (high quality wood)
- In Serbia, forests of Turkish hazel (*Corylus colurna*) are most characteristic in the Đerdap Gorge, where this species forms communities with beech, oak, and other tree species.
- while in urban areas it is often planted in parks as an ornamental species.
- *In Serbia, Turkish hazel* (*Corylus colurna*) is often cultivated in nurseries and as ornamental species
- ***Castanea sativa*** (fruit/nut, wood, for honey production)
- ***Juglans regia*** (walnuts, high quality wood)
- ***Juglans nigra*** (high quality wood)

Main uses of nut trees



Species	Main Regions in Serbia	Annual Production	Key problems
Walnut (<i>Juglans regia</i>)	Central & Southern Serbia	~24,000 tons	Old orchards, pests
Hazelnut (<i>Corylus avellana</i>)	Western & Eastern Serbia	Expanding orchards	Market demand rising
Chestnut (<i>Castanea sativa</i>)	Western Serbia	~1,500–2,000 tons	Blight, climate stress

Trade (import/export) of nut products and germplasm



HAZELNUT

- Serbia has experienced a significant increase in hazelnut exports over recent years – with exports reaching around USD 5.9 million in 2023.
- Italy remains the leading destination market.
- Ferrero has been investing in hazelnut plantations in Serbia
- country's position as an important emerging center of hazelnut production in Europe.

WALNUT

- No significant walnut exports, yet
- Serbia is still an importer.
- Strong potential exists, 2 million walnut trees, Serbia 5th in Europe

Main insect pests and diseases of nut trees in the country



- **Hazelnut Area (Western & Eastern Serbia):**
 - *Ecology:* Hilly terrain, forest edges, mixed deciduous stands.
 - *Phytopathological challenges:* Hazelnut weevil (*Curculio nucum*), big bud mite (*Phytoptus avellanae*), powdery mildew (*Phyllactinia guttata*).
- **Chestnut Area (Western Serbia):**
 - *Ecology:* Acidic mountain soils, mixed oak-beech forests.
 - *Phytopathological challenges:* Chestnut gall wasp (*Dryocosmus kuriphilus*), chestnut blight (*Cryphonectria parasitica*), ink disease (*Phytophthora cambivora*).

Main insect pests and diseases of nut trees in the country



CORYLUS	
Diseases	Insects
<i>Phyllactinia guttata</i> – hazel powdery mildew	<i>Myzocalis coryli</i> – small hazel aphid <i>Corylobium avellanae</i> - large Hazel Aphid <i>Pterocallis alni</i> - common Alder Aphid <i>Myzocallis carpini</i> - hornbeam aphid
<i>Xanthomonas arboricola pv.corylina</i> – bacterial blight of hazelnut	<i>Halyomorpha halys</i> - brown marmorated stink bug
<i>Monilinia spp.</i> – Blossom blight and fruit rot of hazelnut	<i>Phytoptus avellanae</i> – eriophyid mite
<i>Pseudomonas avellanae</i> – Bacterial canker of hazelnut	<i>Curculio nucum</i> – hazelnut weevil
<i>Cytospora corylicola</i> – Hazelnut canker	<i>Oberea linearis</i> – hazelnut longhorned beetle
<i>Piggotia coryli</i> – Anthracnose of hazelnut	<i>Eulecanium coryli</i> – nut scale

Main insect pests and diseases of nut trees in the Serbia



WALNUT	
DISEASES	INSECTS AND ACARI
<i>Gnomonia leptostyla</i> Walnut anthracnose	<i>Eriophyes erineus</i> - walnut erineum mite <i>Eriophyes tristatus</i> – walnut blister mite
<i>Xanthomonas campestris pv. juglandis</i> Bacterial blight of walnut	<i>Chromaphis juglandicola</i> - European walnut aphid <i>Panaphis juglandis</i> -dusky-veined walnut aphid <i>Stomaphis juglandis</i> - Serbian walnut aphid
	<i>Cydia pomonella</i> – codling moth
CHESNUT	
<i>Phytophthora sp.</i> - ink disease of chestnut	<i>Dryocosmus kuriphilus</i> - Asian Chestnut Gall Wasp (not present)
<i>Cryphonectria parasitica</i> - chestnut blight	

Current pest and disease control methods used in the Serbia



In intensive plantations of Hazelnut and Walnut we are using

- chemical control (curative and prevention)
- pheromone traps
- mechanical
- On State level we have organized IPM Service for Hazelnut and Walnut and Sweet chestnut (forestry)
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Needs/challenges in management of pest and diseases

- Strict quarantine and monitoring of imported plant materials
- Development of resistant cultivars and improved grafting practices.
- Targeted biological control and
- Introduction of IPM



Thank you for your attention!