



New Pest Response Guidelines

Pissodes castaneus

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New Pest Response Guidelines (NPRG)

- ▶ Pest Information
- ▶ Identification
- ▶ Survey Procedures
- ▶ Regulatory Procedures
- ▶ Control Procedures
- ▶ Environmental Compliance
- ▶ Pathways
- ▶ References
- ▶ Other



Pissodes castaneus – Pest Information: Historical Information and Classification

Major cause of pine dieback

Secondary pest responsible for death of pines

High plasticity and adaptive ability

Table 2-1 Classification of *Pissodes castaneus* (DeGeer)

| | |
|-----------------------|-------------------------------------|
| Phylum | Arthropoda |
| Class | Insecta |
| Order | Coleoptera |
| Family | Curculionidae |
| Genus | <i>Pissodes</i> |
| Full Name | <i>Pissodes castaneus</i> (De Geer) |
| Preferred Common Name | Small Banded Pine Weevil |



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Pissodes castaneus – Pest Information

▶ Distribution

- ▶ Europe - throughout
- ▶ Asia – Turkey and Siberia
- ▶ Africa – Algeria, Morocco, Madeira Islands, Canary Islands

- ▶ South America – Uruguay and Argentina



Pissodes castaneus – Pest Information:

Hosts

Hosts

▶ Pinaceae

- ▶ *Abies* spp. – fir
- ▶ *Larix decidua* – common larch
- ▶ *Pinus* spp. – pines (ex. *P. pinaster*)

▶ Taxaceae

- ▶ *Taxus baccata* – English yew (CABI, 2011)

- ▶ stressed or young trees preferentially
-



Pissodes castaneus – Pest Information Life Cycle (and Identification)



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High Phenological Variability

- One generation/two years to three generations per year
- Two types of development: 11-12 months and 2-3 months
- Adults and mature larvae overwinter

Oviposition
April-May
July-Sept
(France)



Gomez and Hartel, 2010

Pissodes castaneus – Pest Information

Symptoms



Gomez and Hartel, 2010

Prefer 5-7cm



Gomez and Hartel, 2010



Gomez and Hartel, 2010



Pissodes castaneus – Pest Information

Symptoms



Gomez and Hartel, 2010



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Pissodes castaneus – Symptoms



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Pissodes castaneus – Survey

- ▶ Trap logs
- ▶ Pheromone Lures



Zaleski, 2009



Zaleski, 2009



Pissodes castaneus – Control

- ▶ Keep trees unstressed
- ▶ Natural enemies
 - ▶ High levels of parasitism
 - ▶ Parasitoids
 - ▶ Entomopathic Fungi



Zaleski, 2009



Pissodes castaneus - Pathways

- ▶ Current location and possibility for natural movement.
- ▶ Wood shipments



Gomez and Hartel, 2010



Pissodes castaneus – Association with Pathogens

- ▶ Which comes first – pathogen or weevil?
 - ▶ *Cronartium flaccidum* – prefers to lay on edge of rust but avoids actual rust
 - ▶ Aleppo Pine Knot Disease – In presence of *P. castaneus*, knots form. Without *P. castaneus*, no knots form.
 - ▶ Blue-stain fungus *Leptographium serpens* – in presence of fungus, *P. castaneus* adults emerge earlier and in greater numbers. Prefer trees with the fungus. Not a vector for the fungus.





THANKS



PestLens

