

Leptinotarsa decemlineata



Taxon	Family / Order / Class / Phylum
<i>Leptinotarsa decemlineata</i> Say 1824	Chrysomelidae / Coleoptera / Insecta / Arthropoda

COMMON NAMES (English only)

Colorado beetle
Ten-striped spearman,
Ten-lined potato beetle

SYNONYMS

Chrysomela decemlineata Say
Doryphora decemlineata Rogers
Polygramma decemlineata (Chev.) Mels.

SHORT DESCRIPTION

Adult beetles up to 11 mm long. The elytra are yellow with 10 characteristic black longitudinal bands.

BIOLOGY/ECOLOGY

Dispersal mechanisms

Main natural spread of beetle over large areas is by wind-borne migration.

Reproduction

Females usually deposit eggs on the underside surface of the host plant leaves. An egg mass may contain from 10 to 40 eggs. Most adult females deposit over 300 eggs during a period of four to five weeks, but they can lay as many as 800 eggs. Potatoes are the preferred host, but it may feed and survive on a number of other Solanaceae: eggplant, tomato, pepper, tobacco, ground cherry, horse-nettle, common nightshade, belladonna, thorn apple, henbane, and its first recorded host plant: buffalo-bur (*Solanum rostratum*).

Known predators

Birds eat both larvae and adults.

Resistant stages (seeds, spores etc.)

Larvae are hardy and resistant to unfavorable weather.

HABITAT

Native (EUNIS code)

G1: Broadleaved deciduous woodland

Habitat occupied in invaded range (EUNIS code)

I1: Arable land and market gardens, I2: Cultivated areas of gardens and parks

Habitat requirements

Beetles are sensitive to cold temperatures. They need at least 60 days of temperature over 15°C in summer and winter temperatures not falling below 8°C.

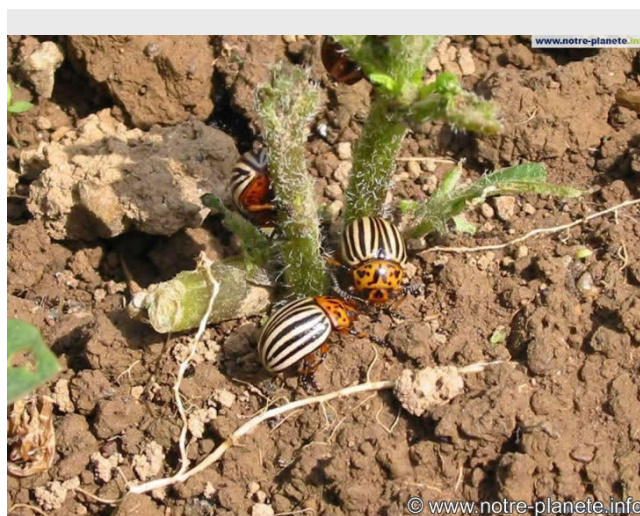
DISTRIBUTION

Native Range

Mexico, where beetles are still present and feed on wild relatives of potato such is *Solanum rostratum*.

Known Introduced Range

Beetles were accidentally introduced into USA. In 1922 it was introduced to Bordeaux in France from where it expanded almost throughout the European continent and parts of Asia in about 30 years.



Adults of Colorado potato beetle, *Leptinotarsa decemlineata*

Photo: www.notre-planete.info

Trend

Capable of adapting to different climatic conditions and different host plants this beetle is constantly moving to new areas. Its distribution is limited by temperature and therefore climate warming could expand its distribution range.

MAP (European distribution)



Legend

	Known in country		Known in CGRS square		Known in sea
	Eradicated		Eradicated		Extinct

INTRODUCTION PATHWAY

International trade appears to be the most likely pathway for introduction on imported commodities such as fresh vegetables from infested areas. Beetles can also be spread through wind and attachment to all forms of packaging and transport.

IMPACT

Ecosystem Impact

Unknown.

Health and Social Impact

None.

Economic Impact

It is a serious pest of potatoes. Both adults and larvae feed on potato leaves and the damage can greatly reduce potato yields. Beetles can also be a pest of other solanaceous plants such as tomato, aubergine, tobacco and peppers.

MANAGEMENT

Prevention

This beetle may be managed culturally by crop rotation.

Mechanical

Destruction of crop debris is very effective at reducing population levels.

Chemical

Insecticides are commonly used to control populations of Colorado potato beetle, but resistance to insecticides develops rapidly.

Biological control

There is a long list of natural enemies. *Bacillus thuringiensis* and some species of nematodes have been used as control agents.

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Date Last Modified: November 6th, 2006