Factsheet

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Colorado potato beetle *Leptinotarsa decemlineata*

Exotic threat to Western Australia

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Background

Both the larvae and adults of the Colorado potato beetle, *Leptinotarsa decemlineata*, feed on the leaves of the potato. Adult beetles are easily confused with the beneficial aphid-eating ladybird because they too are brightly coloured and similar in size and shape.

PHOTO: C. TROUVÉ/SRPV

ADULT COLORADO POTATO BEETLE

Distribution

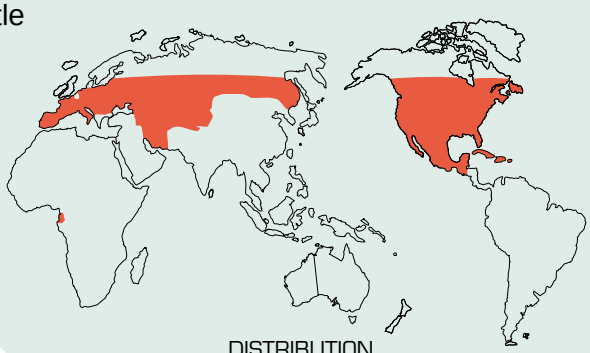
Before commercial potato growing, Colorado potato beetle occurred on wild plants of the Solanaceae (nightshade) family in North America (USA down to Costa Rica). It was brought into France from America. From there it spread through parts of Europe and Asia. It has also been reported from Africa (Gabon*), but does not occur in Australia.

*doubtful record

Potential impact

The Colorado potato beetle is one of the most widespread and destructive pests of cultivated potato. The adults and larvae feed on the leaves and stems of the potato plant and if not controlled they strip and kill the plants. Tubers do not develop and overall yield can be reduced by up to 50%. Populations of the beetle are liable to expand considerably under favourable weather conditions, and this pest is also suspected of transmitting several potato pathogens including spindle tuber, bacterial wilt and ring rot.

Climate matching with other parts of the world, indicates that in WA the areas from



DISTRIBUTION

PHOTO: BRITISH CROWN ©

SIDE VIEW OF LARVA, SHOWING ROWS OF BLACK SPOTS

PHOTO: UNIVERSITY OF KENTUCKY

FEMALE WITH NEWLY LAID EGG BATCH

Jurien southwards, including Perth, Bunbury, Augusta, Manjimup, Frankland, Narrogin, Albany and Esperance would provide a suitable habitat for this pest.

For further information on WA quarantine regulations for this pest please refer to the Potato Industry Protection Plan and Reference Manual, or contact Agriculture Western Australia's Quarantine Entomologist, Mike Grimm, phone 93683752.

Plants affected

Colorado potato beetle attacks mainly Solanaceae such as *Solanum tuberosum* (potato), and other cultivated crops such as *Lycopersicon esculentum* (tomato) and *S. melongena* (eggplant), as well as wild hosts including *S. elaeagnifolium* (silverleaf nightshade) and *S. rostratum* (buffalo burr) which occur in Western Australia respectively as declared and pest plants (DP &PP), and can act as a reservoir for infestation. *Nicotiana tabacum* (tobacco) and *Hyoscyamus niger* (black henbane) are also hosts.

Season of occurrence

The overwintering beetles emerge from the ground in spring or early summer, depending on the climate and their physiological state. There is usually a mass emergence over 1 or 2 days. Flight muscles are often weakly developed and only a small proportion of beetles will fly from the field of origin. Under optimal conditions the cycle from egg to adult can take as little as three weeks, and the beetle can go through three complete generations per year.

Symptoms

Adults and larvae feed on the edges of leaves and may quickly strip the foliage of young plants. They eventually strip all leaves from the haulm. In rare instances the tubers are also eaten. Characteristic black and sticky excrement is left on the stem and leaves by the larvae and adults.