

Preparedness in biological control of priority biosecurity threats

Siberian moth, *Dendrolimus sibiricus* (Tschetverikov)

Introduction

Dendrolimus sibiricus Tschetverikov (Lepidoptera: Lasiocampidae), the Siberian moth, is a serious pest for coniferous trees, mainly larch (*Larix* spp.), fir (*Abies* spp.), spruce (*Picea* spp.), pines (*Pinus* spp.). It is native to Asian Russia, and areas of Northern Kazakhstan, Northern Mongolia, Northern China and North Korea. Specific environmental conditions can lead to pest outbreaks (insufficient moisture in spring, increased average monthly temperature and severe droughts in summer). Outbreaks take place every almost 10 years and can last 2 to 3 years.

The damage is caused by the larval feeding and the main symptom is the defoliation of trees and eventually the killing of the host plant. The female can lay from 200 to 800 eggs in chains or clusters on branches or needles. The larvae start feeding on needles immediately after hatching. The pest has a 2-3 year life cycle

Following infestation forests become susceptible to fire because of the fallen branches and needles and the vulnerability of dead trees. Additionally, there is a threat to human and animal health when an outbreak occurs because the pest can cause allergies. The pest is a serious threat for European forests

History of classical biological control against pest

No classical biological control programmes reported.

Most promising natural enemies

From the literature, there are several native natural enemies that parasitize the Siberian moth. However, some of them are more important because they are being constantly reported to be present in the native regions of Siberian moth.

Yurchenko and Turova, (2002) and other studies, report that the parasitism of the Siberian moth by the egg parasitoid *Telenomus* sp. is constant and the range is between 50% and even 90% (at the beginning of the outbreak and at the end of it respectively). *Telenomus* species have been also successfully reared in the laboratory and furthermore, they have been used in augmentative biological control programs. The species *T. dendrolimi* is native in East Asia. It has been used in releases in China to control *Ostrinia furnacalis* (Güenée) (Lepidoptera:Crambidae) which is a pest of corn.

Other natural enemies

No other natural enemies suitable for classical biological control reported.

References

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