

Distribution and Detection of Rusty Tussock

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Background and Questions

- Rusty tussock (*Orgyia antiqua*) is an occasional pest of cranberries across Canada
- Historically this pest has been limited to a few fields in Richmond and Delta; monitoring for the caterpillar stage is done via sweep net during the daytime and only in fields with a previous history
- However in the 2012 field season rusty tussock larvae were found in several new locations as part of regular monitoring for other pests – fireworm or black vine weevil
- These new locations were in Pitt Meadows, south Richmond, and Langley
- Based on 2012 observations we had two questions for the 2013 field season

QUESTION 1: WHAT IS THE CURRENT DISTRIBUTION OF RUSTY TUSSOCK?

QUESTION 2: SHOULD DAYTIME SWEEP SAMPLING FOR RUSTY TUSSOCK BECOME PART OF THE REGULAR PEST MONITORING PROGRAM, REGARDLESS OF FIELD HISTORY?

Rusty Tussock Biology

- Native to Europe but now distributed across Canada
- Feeds on a wide range of plants including conifers, deciduous trees and shrubs
- Feeds on needles, leaves and flower buds
- New infestations could start via larvae “blowing in” from surrounding vegetation
- Once established in a field, flightless females could “call” males in from surrounding vegetation



Rusty tussock caterpillar (left) and adult male (right)
 (USDA Forest Service Archives, USDA Forest Service, www.forestryimages.org)

Distribution of Rusty Tussock: 2013 Client Fields

| Location (# of fields) | Previous Rusty Tussock Detections? | Surrounding Vegetation |
|------------------------|--|--|
| Richmond 1 (1 field) | 4+ years with sprays in previous years | Commercial cranberries + annual weeds and grasses |
| Richmond 2 (1 field) | 4+ years with sprays in previous years | Commercial cranberries + annual weeds and grasses |
| Langley 1 (3 fields) | First detection in 2012 | Mixture of trees and shrubs adjacent |
| Langley 2 (1 field) | No previous history | Commercial cranberries + annual weeds and grasses |
| Delta 1 (1 field) | No previous history | Commercial cranberries + forest patch (trees and shrubs) |

- For the second year in a row rusty tussock larvae have been found in Langley
- We did not find any larvae in 2013 in Pitt Meadows
- Only 1 of the 3 new detections in 2012 had rusty tussock larvae in 2013
- In one of our Richmond fields with a three year history (2010, 2011, 2012) we found no larvae in 2013

Sweep Sampling vs. Visual Sampling

In 2013 new detections were only found via visual sampling. Growers and scouts should be aware of rusty tussock caterpillar appearance in case it is encountered. Follow up with sweep samples (right) throughout field. Sweep during the day, striking the top of the canopy with the bottom edge of the net. Some flowers will be dislodged during sweeps for rusty tussock.



- We did four sets of sweep samples in 12 client fields (Delta to Chilliwack) from mid-June to mid-July
- Fields had no previous history of rusty tussock
- No larvae were detected from these sweeps
- There were two new detections in 2013 and both occurred during visual sampling for fireworm in early July
- Sweep sampling is only necessary if rusty tussock is detected during visual sampling