Rusty Tussock Distribution in Fraser Valley Cranberry Fields

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Outline

- Biology and current monitoring protocol
- 2012 field season finding
- 2013 Objectives
- Methods
- Results
- Recommendations

Rusty tussock – Biology

- An occasional pest of cranberries
- Larvae feed on leaves and flowers
- Can have an economic impact if not controlled
- New infestations start as larvae blow in from surrounding vegetation
- Have a very wide host range

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Rusty tussock - Biology

- Females are flightless produce pheromone
- Males can fly
- So once established in a cranberry field female can call in males
- In cranberry fields rusty tussock damage is patchy
- Usually see in same patches from year to year
- Best seen during bloom – areas with very few flowers

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Monitoring Program

- IPM for Cranberries in Western Canada
- Initial detection during monitoring for FW
- Follow up with sweep sampling
- Targeted sweep sampling in fields with a history
- Our modification is to sweep during the day – go to known patches + timing to target young larvae before they do the most damage

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- In 2012, we started season with 3 positive fields, all with a history of rusty tussock and all in the same area in Richmond
- We ended the season with 6 positive fields
- The 3 new observations were in areas where we had no record of Rusty tussock previously: Pitt Meadows, Langley and a new area in Richmond

2013 Questions

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

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

Methods

- Picked 12 client fields with NO previous history of Rusty tussock
- Surrounding vegetation included forest, trees, shrubs (potential hosts)
- Surrounding farms with Rusty tussock
- Sweep sampling 1X week
- 4 sets of sweeps in total
- During bloom

Sweep sampling general protocol

- Net needs to hit the foliage
- There should be a few flowers and leaves
- 180^{o} arc
- Sweep continuously from sprinkler to sprinkler
- In areas of suspect damage + edge and an interior pass
- We sweep during the day – recommendation for older larvae is to sweep at night

2013 Findings

- No larvae detected during sweep sampling in the survey fields

2013 Findings

- No larvae detected during sweep sampling in the survey fields
- 2 new rusty tussock detections in 2013
  - In both cases larvae found via regular visual monitoring
- Positive fields for 2013 located in Richmond, Langley, Langley/Abby border, Delta

2013 Summary

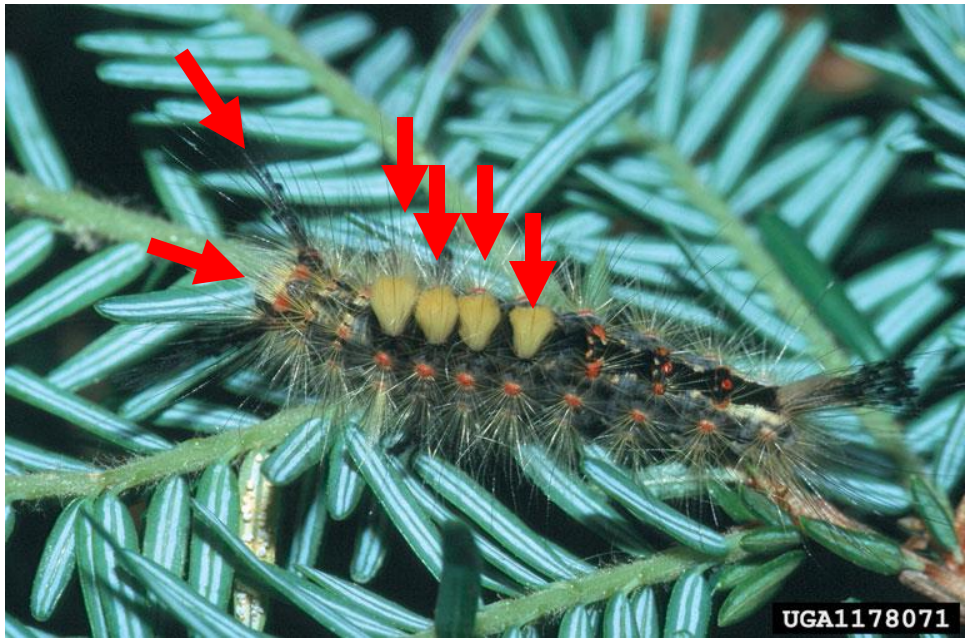
- Status of Rusty tussock is unchanged – remains an occasional pest
- Based on 2 consecutive years of monitoring data Rusty tussock no longer limited to Richmond/Delta

Recommendations

- If you don't have a history of Rusty tussock then it does not seem to be necessary to sweep
- Be aware of larva appearance and collect anything suspect to confirm
- Larvae found as part of regular monitoring for fireworm (2nd Generation)
- Because distribution is patchy – mark sprinklers where larvae found and follow up with sweep sampling

Recommendations

- If you don't have a history of Rusty tussock then it does not seem to be necessary to do anything special
- Be aware of larva appearance and collect anything suspect to confirm
- Larvae found as part of regular monitoring for fireworm or weevil
- Because distribution is patchy – mark sprinklers where larvae found and follow up with sweep sampling



Rusty tussock versus Blackheaded FW

http://farm3.staticflickr.com/2585/3707285306_d6470798f6_z.jpg

http://pnwhandbooks.org/insect/sites/default/files/relatedimages/g37-7_0.jpg

Acknowledgments

- Cooperating growers
- ES scouts and cranberry crew
- Funding from BC Cranberry Marketing Commission

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Funding provided by:

Investment Agriculture Foundation of British Columbia

Agriculture and Agri-Food Canada

Agriculture et Agroalimentaire Canada