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**Is the pollen beetle *Brassicogethes viridescens*
(Coleoptera: Nitidulidae) a pest of concern for
canola growers?**

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Pollen beetle (*Brassicogethes viridescens*)



Pollen beetle (*Brassicogethes viridescens*)

Adults emerge in the spring.
Lay eggs on newly forming buds
Larvae bore into and feed on the developing bud.
Adults feed on pollen from flowers.



Pollen beetle (*Brassicoglyphus viridescens*) larvae



Pollen beetle (*Brassicogethes viridescens*) adults



Damage by the pollen beetle (*Brassicogethes viridescens*)





What do we know about pollen beetles

- First reported in Maine (1993), Nova Scotia, Prince Edward Island (1994), and Quebec (date?).
- Adults emerge from overwintering in the spring.
- They are polyphagous feeding on pollen from many different plant families before moving to cruciferous plants.
- Chew holes in the base of green buds and lay eggs inside. 200-250 eggs, generally 2-3 eggs /bud.
- Larvae feed on pollen inside the buds.
- Two instars, 1st feeds for 5-10 days on the pollen inside the bud, 2nd feeds on pollen from open flowers.
- Drop off the plant to pupate in the soil.

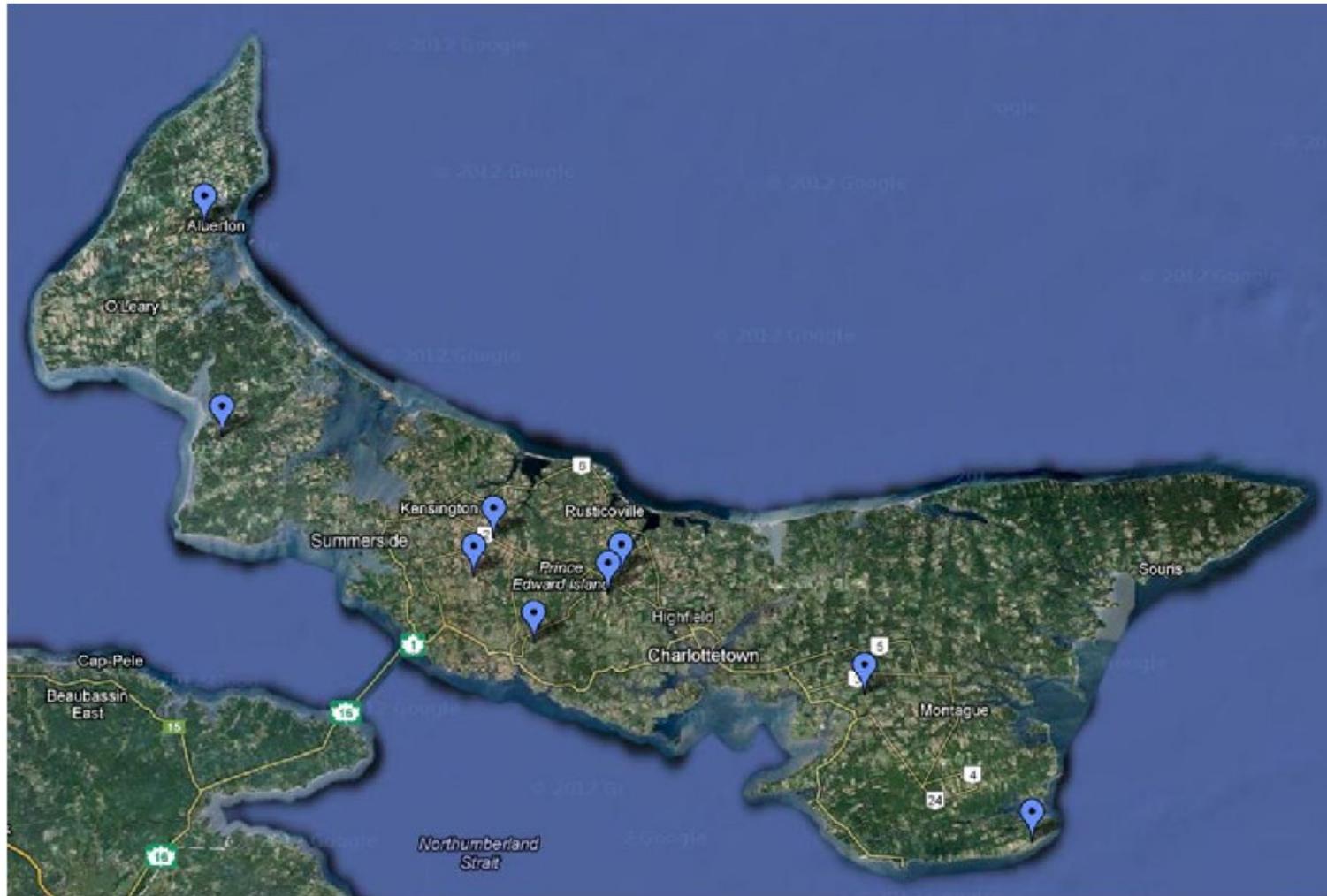


What do we know about pollen beetles

- Adults emerge and feed on pollen from other flowers over the rest of the summer before seeking overwintering sites.
- Especially damaging to spring crop.
- Threshold in Europe for spring crop is 0.5 - 5 per plant.
- Threshold is lower, 1 per 5 plants, for composite hybrids.
- Plant may compensate, but pods smaller and with reduced oil content.
- Plants may overcompensate with more pods but they mature later and may not give an even harvestable crop.



Field sites in PEI



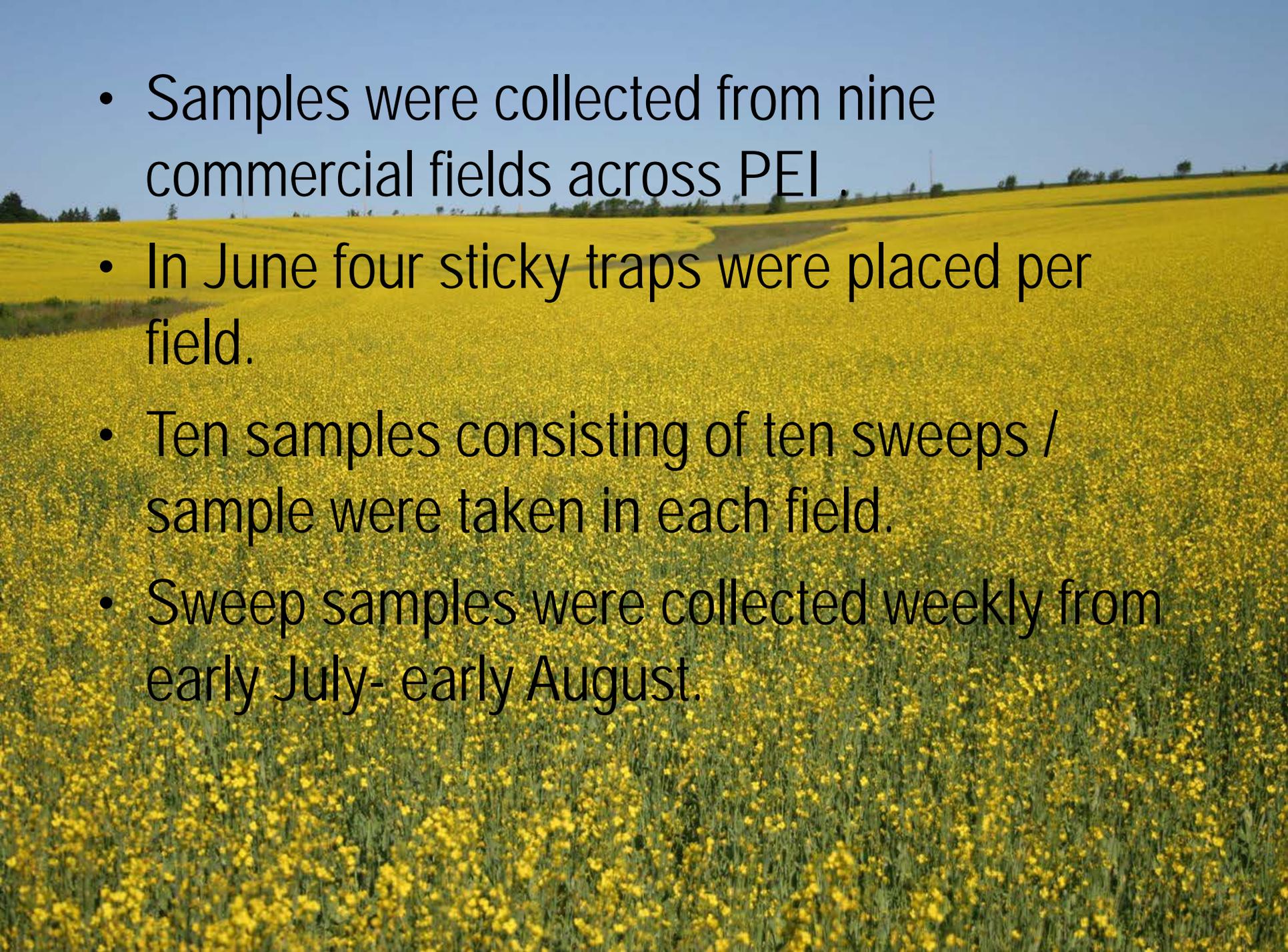
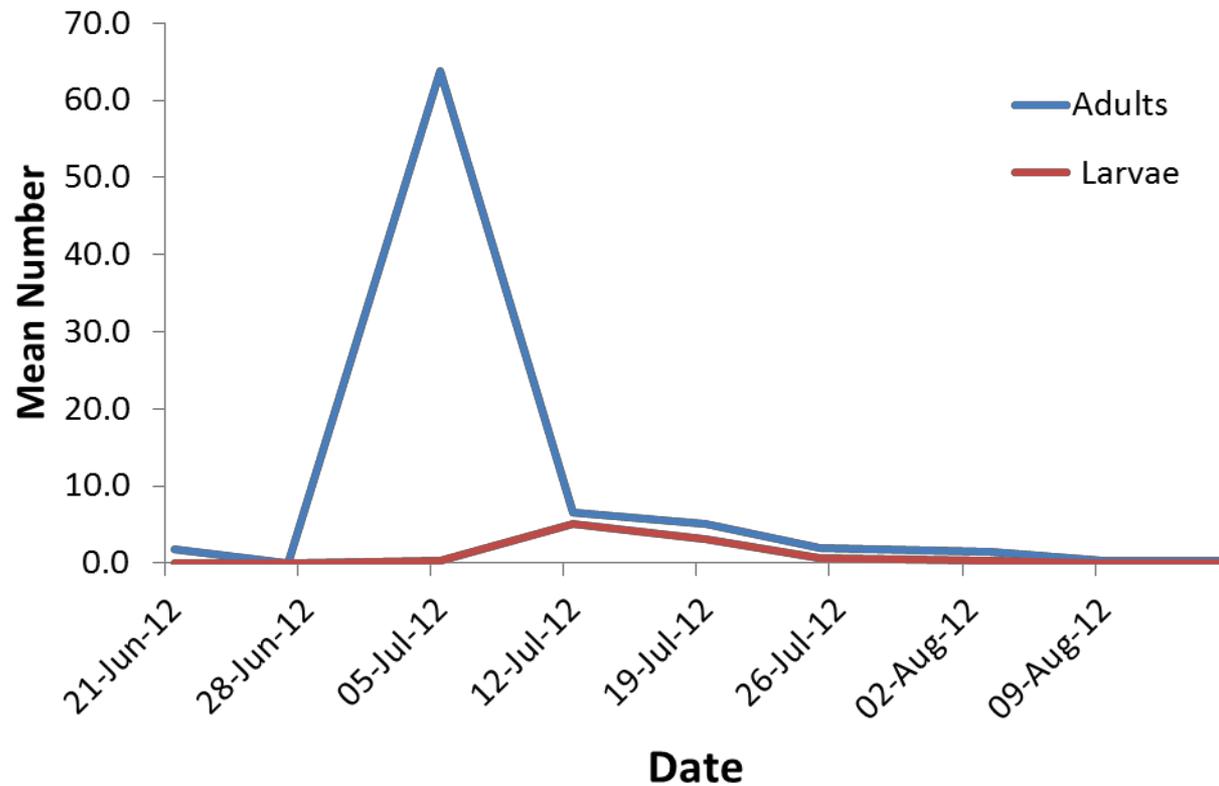
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- A wide-angle photograph of a vast field of yellow rapeseed flowers in full bloom. The field stretches to the horizon under a clear, bright blue sky. The flowers are densely packed, creating a sea of yellow. In the distance, a few trees and a utility pole are visible on the horizon line.
- Samples were collected from nine commercial fields across PEI .
 - In June four sticky traps were placed per field.
 - Ten samples consisting of ten sweeps / sample were taken in each field.
 - Sweep samples were collected weekly from early July- early August.

Figure 1. Mean number of adults and larvae found over the season

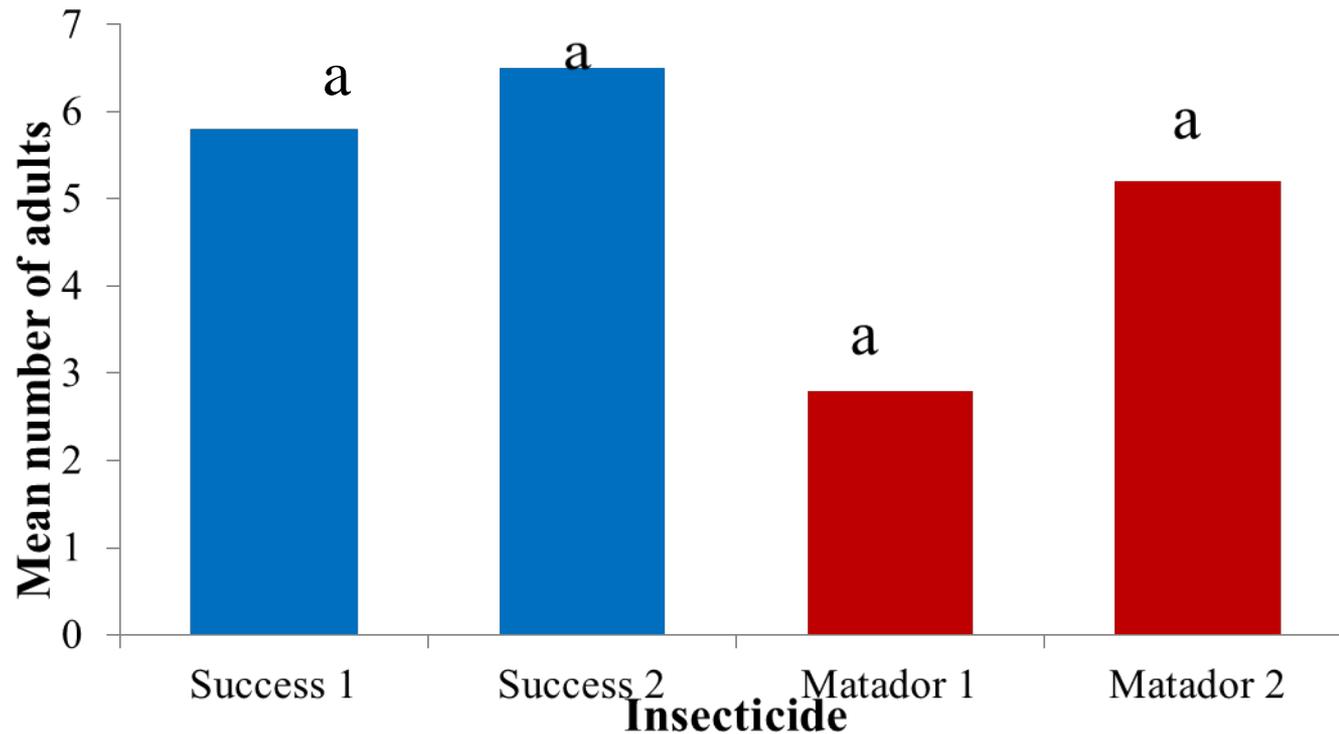


Insecticide trial

- Plots 4X6m were established at Harrington research farms (PEI)
- Four replicates per treatment in a randomized complete block design
- Treatments were
- Pre bloom
 - Success 480SC (spinosad @ 182ml/ha)
 - Matador 120EC (Lambda-cyhalothrin) @ 83ml/ha)
- 10% bloom
 - Success 480SC(Spinosad @ 182ml/ha)
 - Matador 120EC (Lambda-cyhalothrin @ 83ml/ha)
 - Malathion 500EC (Diethyl dimethoxythiophosphorylthio) succinate @ 1.12l/ha)



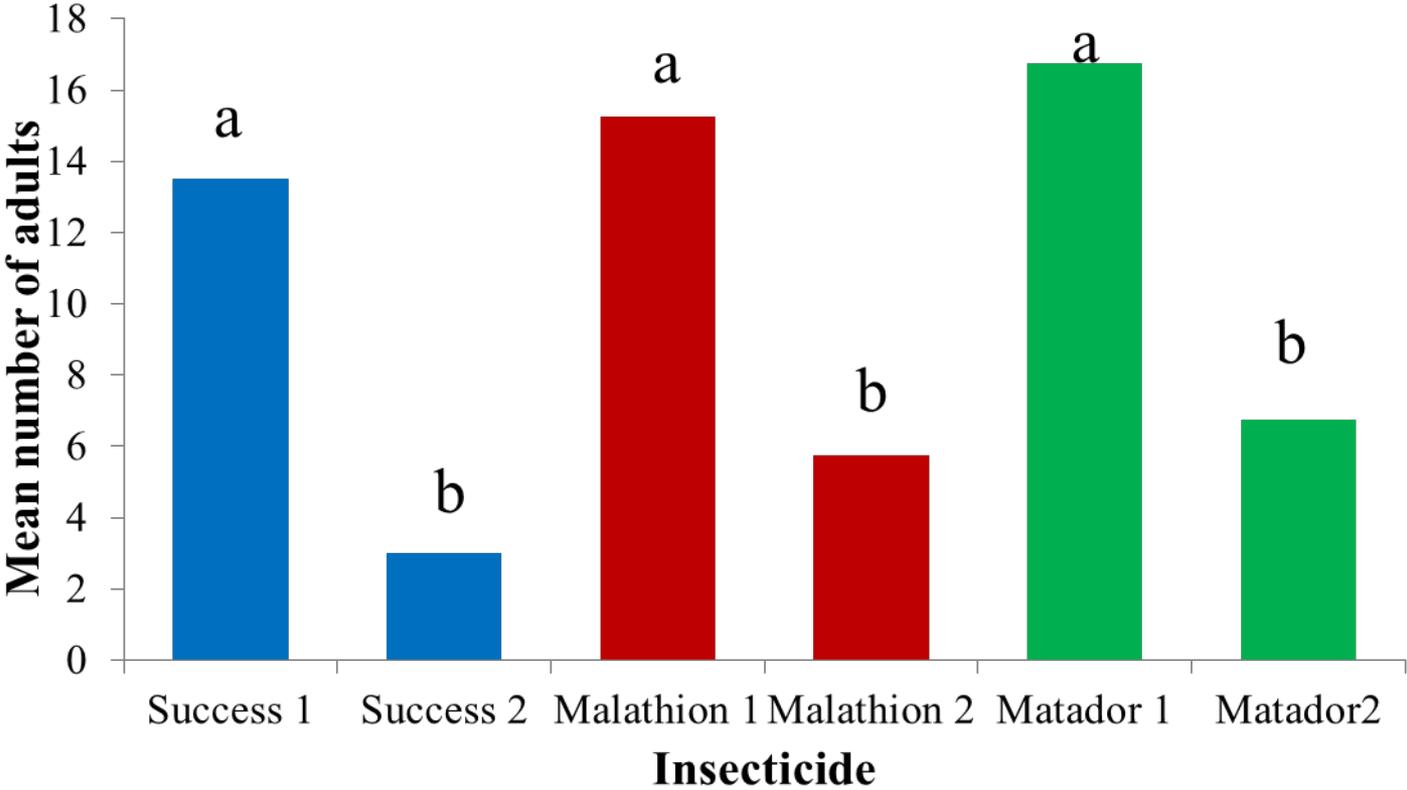
Figure 2. Mean number of adult *B. viridescens* present in the crop before and after an insecticide application at pre-bloom.



(1= Number before application; 2= Number four days post application)



Figure 2. Mean number of adult *B. viridescens* present in the crop before and after an insecticide application at 10% bloom



(1= Number before application; 2 = Number four days after application)



Conclusion

- *B. viridescens* peak in mid- June in the field under maritime conditions
- Adults can be controlled by insecticides at 10% bloom

Next steps

- Develop life tables for this insect in the Maritimes.
- Establish early season detection techniques.
- Assess the impact of natural





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