



Andrejs Brūvelis

*Feasibility study for  
trapping of the sea  
buckthorn flies and  
biological control of  
wilt.*



**A small piece of research done before the main investigation**

**Can *Rhagoletis batava* be caught by organic low cost feeding attractants?**

**Does the biological preparation HIPPOVITA reduce the infection of sea buckthorn with vascular mycosis in the already infected soil?**

**Should we proceed with them?**

**If so, how?**

Invasion of the Siberian race of  
the sea buckthorn fly  
*Rhagoletis batava obscuriosa*  
Kolomic, 1970

Less aggressive local races of  
*R. batava* are not indicated



## **Requirements for traps**

1. Atractants are easy acessible and effective enough to significantly reduce the number of flies.
2. They can be used in organic farming.
3. They are not harmful for wildlife.
4. Their cost does not make sea buckthorn cultivation unprofitable.



**DO NOT USE OPEN LONG EXPOSED GLUE TRAPS FOR MASS CAPTURE OF INSECTS**

**USE THEM ONLY FOR SHORT TIME MONITORING PURPOSE**



**1000 ml box  
150 ml molasses  
40 days  
300 *R.batava* caught**

**Honey, malt extract, beer,  
apple cider vinegar,  
methyl eugenol**

**From 2 to 15 flies/trap**

**Molasses – 300 flies/trap**

**June 20th to July 31st**

Sugar beet molasses





*Syrphus ribesii*,  
the only attracted fly



1. Molasses
2. Molasses + sea buckthorn juice
3. Combi-Protec





**In the summer of 2020, the *R.batava* feeding attractant made by CSALOMON was tested in Latvia**

**Performed under the supervision of the Latvian Institute of Horticulture**

**Efficacy of traps was 31%, which is not enough to make it useful in the mass capture of flies**

**Conclusion:**

**Experiments should be continued by different trap designs with an emphasis on entry openings**

**Molasses should be included in the list of potential feeding attractants for the *Rhagoletis batava***

**Soilborn fungi**, mostly *Verticillium* & *Fusarium*

**Russia**                    **20% of plants die within first 7 years**

**China, Gansu**            **70% of Russian cultivars die within 5 years**

**Romania, Timis**        **94% of variety 'Clara' infected**

**Latvia**                    **we lose 10% of plants within 10 years**

- Selection of the most resistant varieties
- Avoidance of potentially hazardous soils
  - > Proper crop rotation
  - > Avoiding soils with high pH





**Trial performed in infected plot**

**250 (125 + 125) five year old 'Tarmo' shrubs**

**Each treated by 3 x 5 ml , solution 0,15%**

**21% of both treated and untreated shrubs died**

***Conclusion:***

**HIPPOVITA does not reduce the dying of sea buckthorn plants from soilborn fungi diseases in the already contaminated soil.**

**This does not exclude the possibility of successful use of this preparation prophylactically in uninfected soils.**



**THANK YOU FOR YOUR ATTENTION**

**PLEASE CLAP AND DON'T ASK TOUGH QUESTIONS**