

### 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



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



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

From 2 to 15 flies/trap

Molasses – 300 flies/trap

June 20th to July 31st







## 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

#### Latviawe 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





# HIPPOVITA

#### PRODUCT WITH SPECIFIC ACTION Inoculum of mycorrhizal fungi

**COMPOSITION:** 

Organic matter Mycorrhizae content 2 % (Glomus spp.) Rhizosphere bacteria content 1×10<sup>9</sup> UFC/g Bacillus psychrodurans Bacillus licheniformis Bacillus spp.

MIPAAF Fertilizers Producers Register N°01293/12

FORMULATION: Liquid

Content: 5 Litre Trial peformed 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 <u>in the already</u> <u>contaminated soil</u>.

This does not exclude the possibility of successful use of this preparation prophylactically <u>in uninfected soils</u>.

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

