

**Advancement of non-technological
innovation performance and
innovation capacity in fruit growing
and processing sector in selected
Baltic Sea Region countries**

Activities and accomplishments of LatHort (PP1)



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Institute of Horticulture (LatHort)

Jaunmoku palace, Latvia
February 18 – 19, 2019

Activity 3.1: Development of demonstration objects in orchards

Purchased:

plant protection, fertilising items and small tools for management of demo objects.



Activity 3.1: Development of demonstration objects in orchards

Shears and saws powered by engine and with high capacity of working hours, equipped with an extended handle to allow for managing, pruning high trees, their canopy.



Activity 3.1: Development of demonstration objects in orchards



Part of tree support system to demonstrate innovative forms of canopy and orchard systems



Activity 3.1: Development of demonstration objects in orchards



Demo object with apple cultivars 'Gita' and 'Antonovka' on dwarf rootstock in the sustainable orchard management system.

Activity 3.1: Development of demonstration objects in orchards

Demonstration of new type of orchard management and canopy performance



Activity 3.1: Development of demonstration objects in orchards

‘Adele’



‘Laine’



Heka espalier



‘Jubiläum’

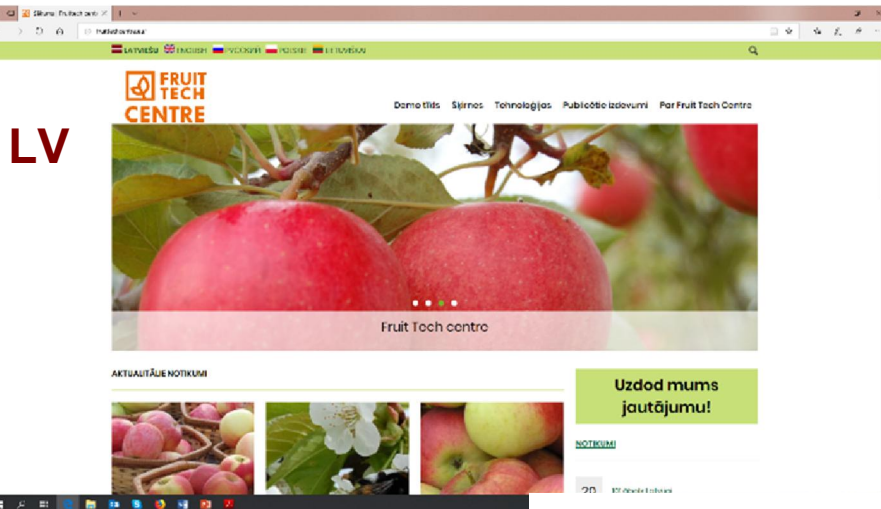


‘Ance’

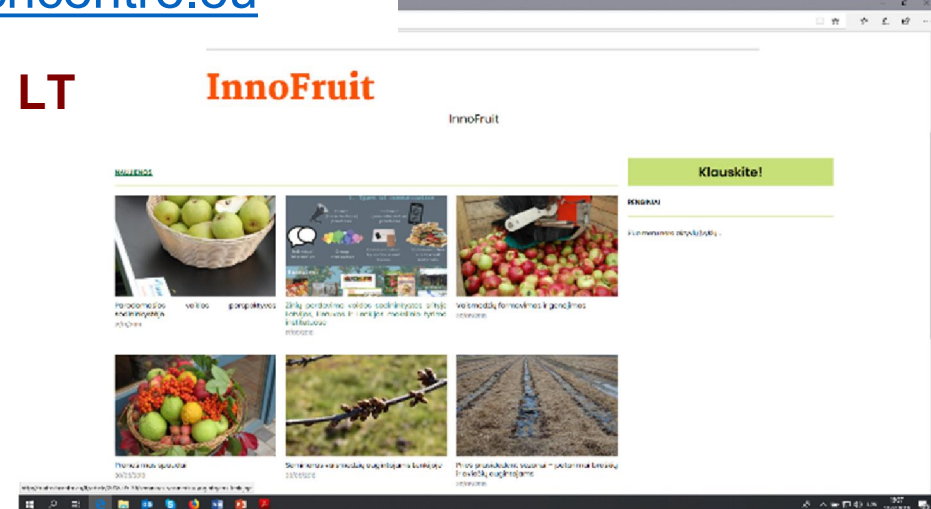
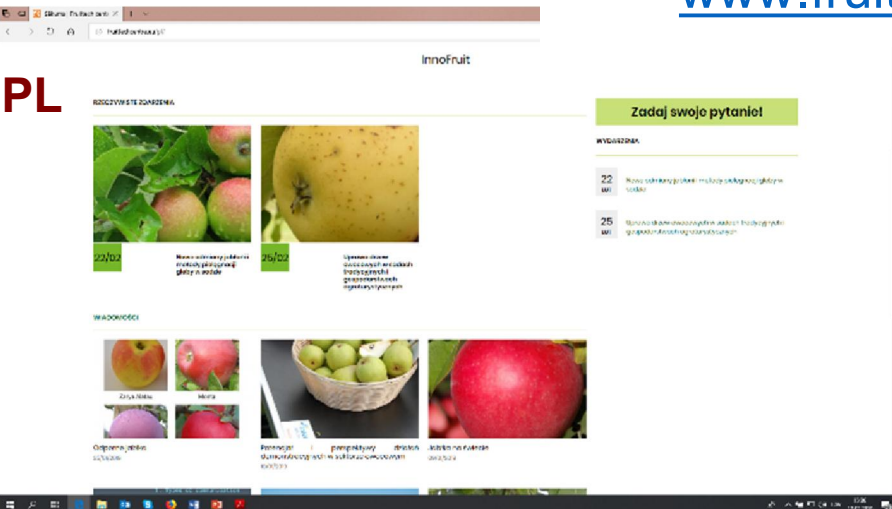


Activity 3.2: Improvement and expansion of the Technology Transfer Centre webpage

Improved and expanded webpage of the Technology Transfer Centre for an enhanced use by SMEs in the BSR countries; the mobile version of the website;



www.fruittechcentre.eu

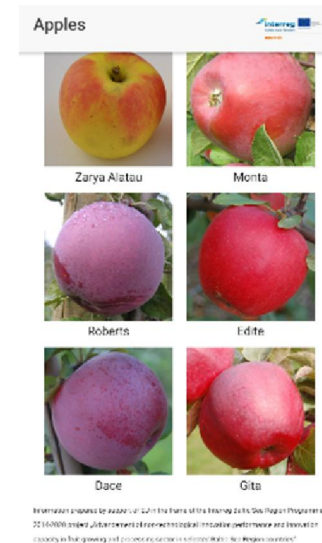


Activity 3.4: Development of tools for innovation transfer

App. for smart phones and devices - contains the cultivar-specific information.

<https://play.google.com/store/apps/details?id=eu.fruittechcentre.mobile>

«Resistant apples»



Healthy products for kids with reduced sugar content



Projekts "Ieteikumi un tehnoloģiskā inovāciju kapacitātes attīstība augu audzēšanā un pārstrādē Baltijas jūras reģiona valstīs" (InnoFruit)

Online booklets and leaflets about the production of healthy niche products.



Sugar

Kids eat more sugar than they need!



A lot of sugar kids take with:



Sweetened, fizzy drinks and juice drinks



Buns, cakes, pastries and biscuits



Can a large amount of sugar affect our kids?

Too much sugar consumption often means we eat too many calories. If we don't use them, our body will

Activity 3.5: Development of demonstration and pilot objects for processing

Established demonstration objects - premises for the processing of fruit and berries in order to demonstrate innovative technologies for efficient utilisation of by-products.



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Freezer



Dried fruit product grinder



Steam Jacketed kettle

Activity 3.5: Development of demonstration and pilot objects for processing

Established demonstration objects - premises for the processing of fruit and berries in order to demonstrate innovative technologies for efficient utilisation of by-products.



The ball mill - an innovative equipment for graining product very fine

Activity 3.5: Development of demonstration and pilot objects for processing

Established demonstration objects - premises for the processing of fruit and berries in order to demonstrate innovative technologies for efficient utilisation of by-products

Electrical lifting equipment



Equipment for drying of fruits, berries, vegetables and their processed products (incl. puree, pomace on silicone try).



Activity 3.3: Products development and demonstration

LatHort and «Berry plus» **developed juice-based products**, product prototypes: **clear juices** and **juices with pulp** (incl. smoothies), using local raw material, such as American cranberry, sea buckthorn, and other raw material of other fruit and berries with high nutritional value.



Activity 3.3: Products development and demonstration



Projekts „Netehnoloģisko un tehnoloģisko inovāciju kapacitātes attīstība augļu audzēšanā un pārstrādē Baltijas jūras reģiona valstīs”
(InnoFruit), #R004

LatHort **developed product prototypes** on the basis of **juice press cake** with a high amount of dietary fibre also.

DI: Pārstrādes un bioķīmijas nodaļa	PĪLĀDŽU SUKĀŽU PAGATAVOŠANAS TEHNOLOĢIJA	<i>Izstrādāja:</i> <u>A.Oļšteine, I.Krasnova, K.Juhnēviča</u> – <u>Radenkova, K.Dukurs</u> <i>Apstiprinu:</i> <u>D.Seglina</u> 09.03.2018
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Sastāvdaļas

Izejvielu nosaukums	Svars, g
Pīlādžu augļi	1000
Sīrups pārļiešanai	1000

Pagatavošana

- Sukāžu pagatavošanai izmanto pīlādžu šķirņu ogas, kurām salīdzinājumā ar savvaļas pīlādžiem ir mazāk rūgtvielu.
- Ogas attīra no ķekariem (kātiem, lapām, netīrumiem) un sasaldē -18 °C.
- Lai ogas neizžūst uzolabā saldētavā oāsa un mitruma neaurlaidīdā iepakojumā. Ieteicamais

Drayed rown berries



Jam with low amount of calories

Activity 3.3: Products development and demonstration



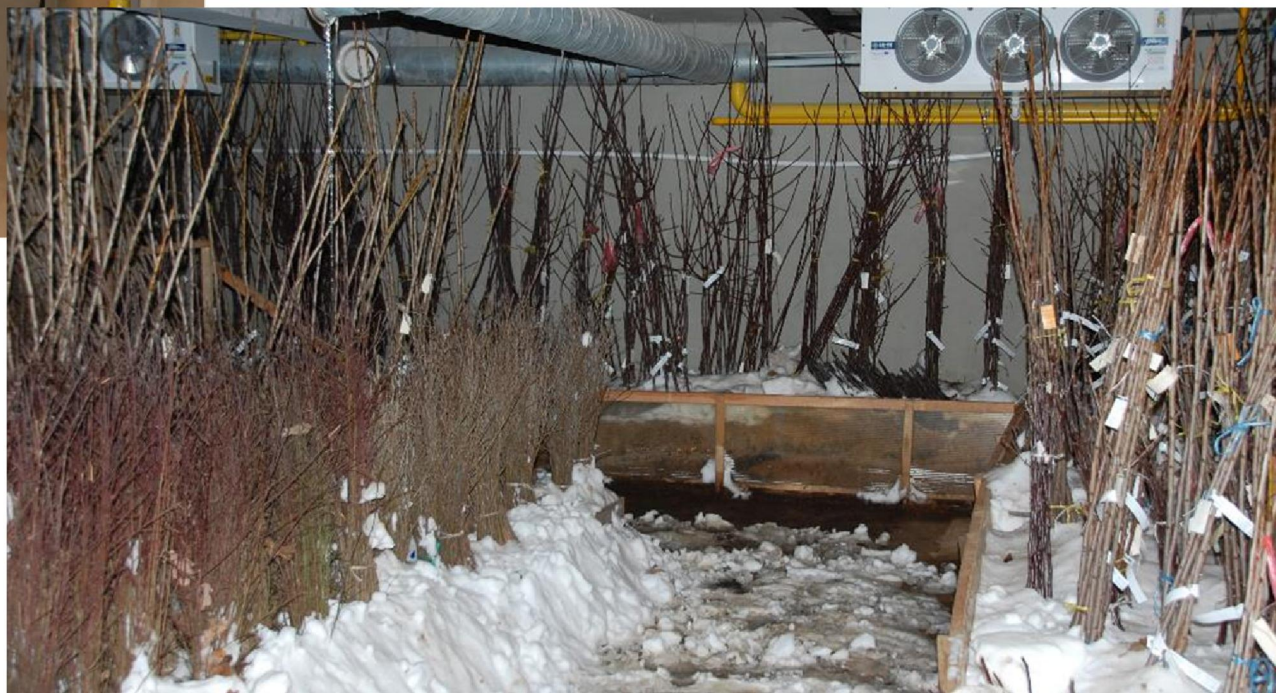
**Marmalades - samples of
sea buckthorns**

**New products based
on fruit and berry
press cake - sweets**



Activity 3.6: Development of pilot and demonstration objects to enhance research capacity in horticulture

Plant storage complex to demonstrate possibilities for obtaining good quality planting material (an adjustable regime of temperature etc., ensuring prolonged storage time of the planting material and its constant quality during the storage period).



Activity 3.6: Development of pilot and demonstration objects to enhance research capacity in horticulture

Thermo chamber with equipment allowing to introduce fruit-growing farms with a new assortment of varieties suitable for the BSR climate.



**Conduktometer
for relative
elektrolyte
leakage
detecting**



**Climate and plant growing cameras for
temperature stress examination**



High accuracy scale

Activity 3.6: Development of pilot and demonstration objects to enhance research capacity in horticulture

Thermo chamber with equipment allowing to introduce fruit-growing farms with a new assortment of varieties suitable for the BSR climate.



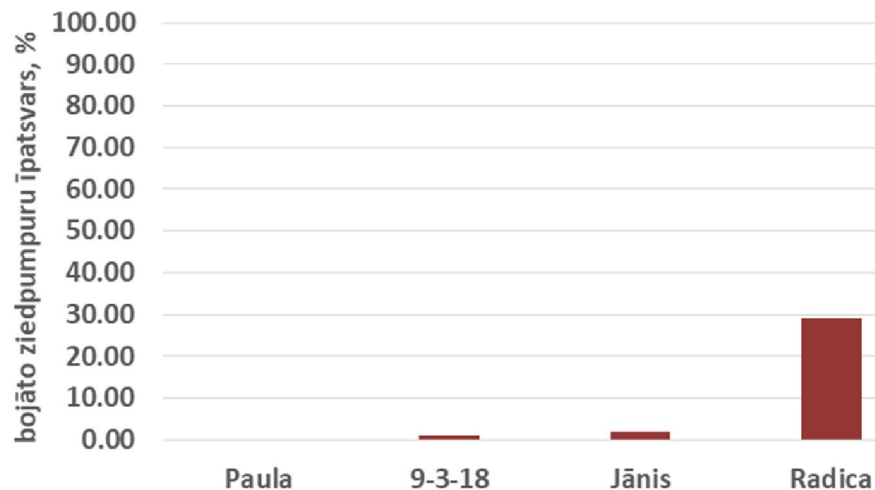
Stereo microscope for plant part examination



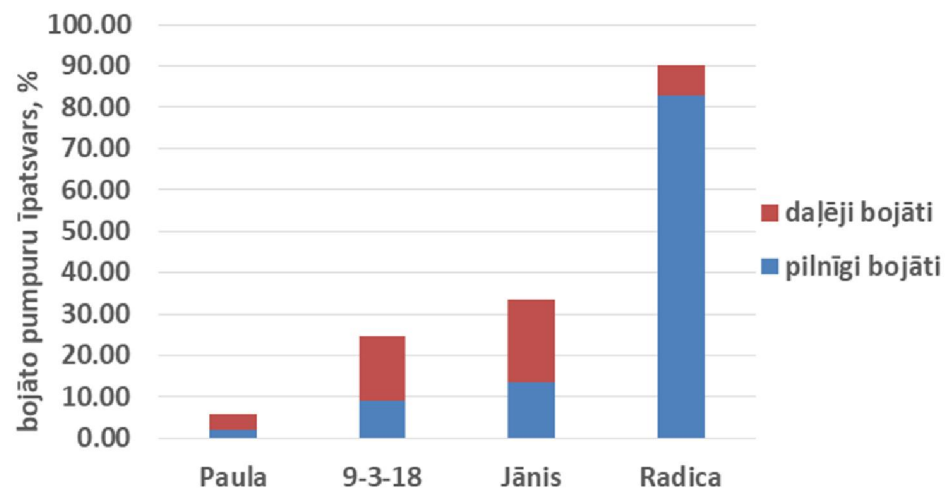
Shoots examination after freezing

Winterhardiness of sweet cherry cultivars flowerbuds

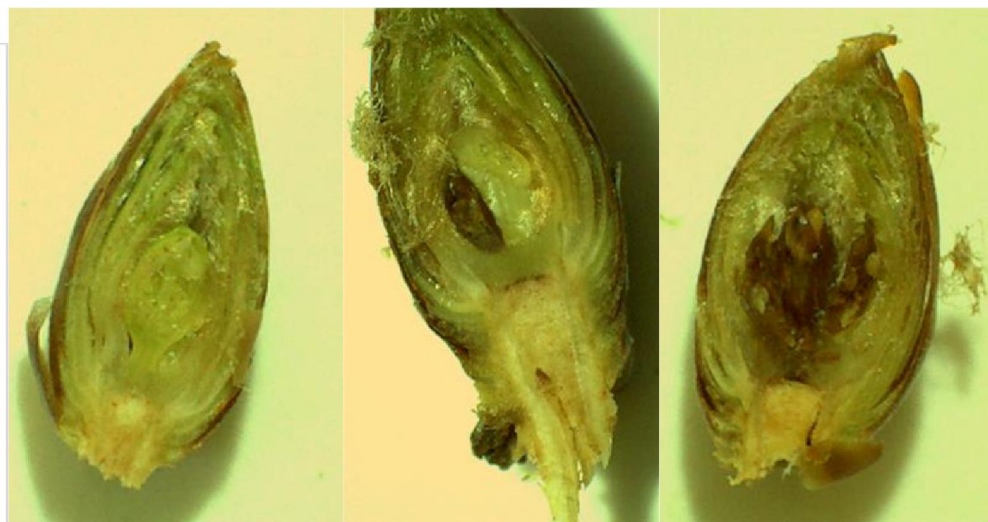
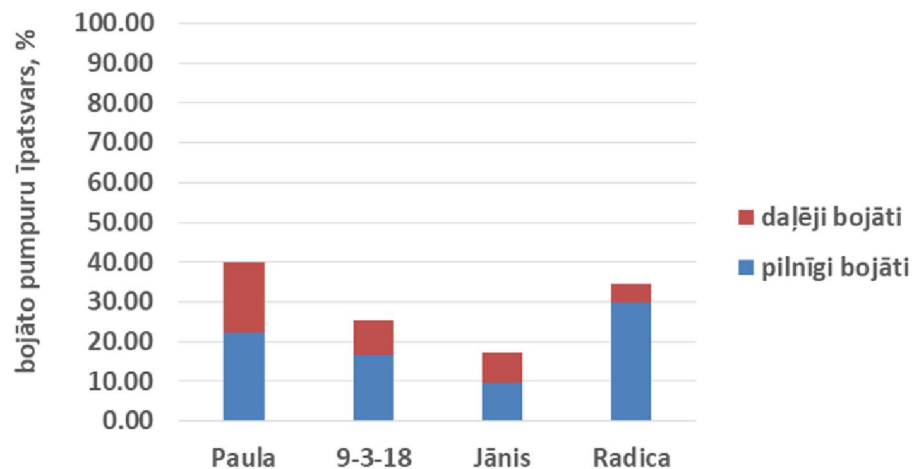
-20 °C, 26. februāris



-30 °C, 26. februāris

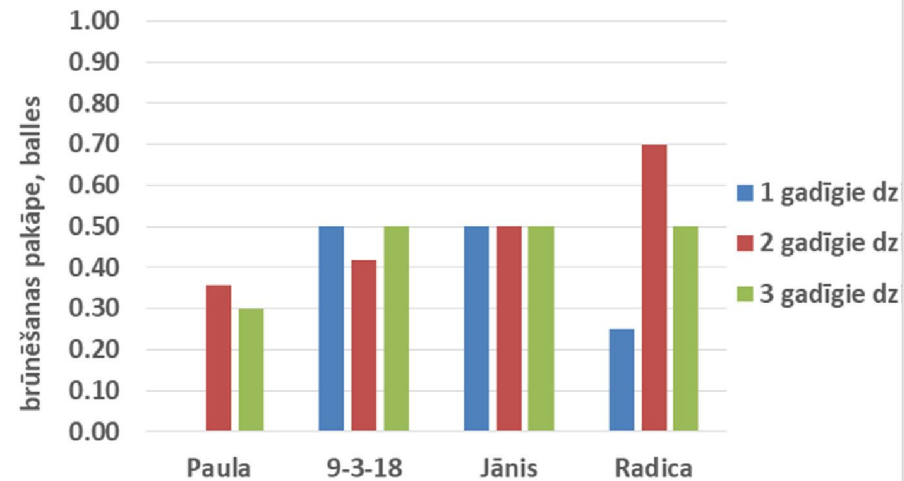


-10 °C, 9. aprīlis

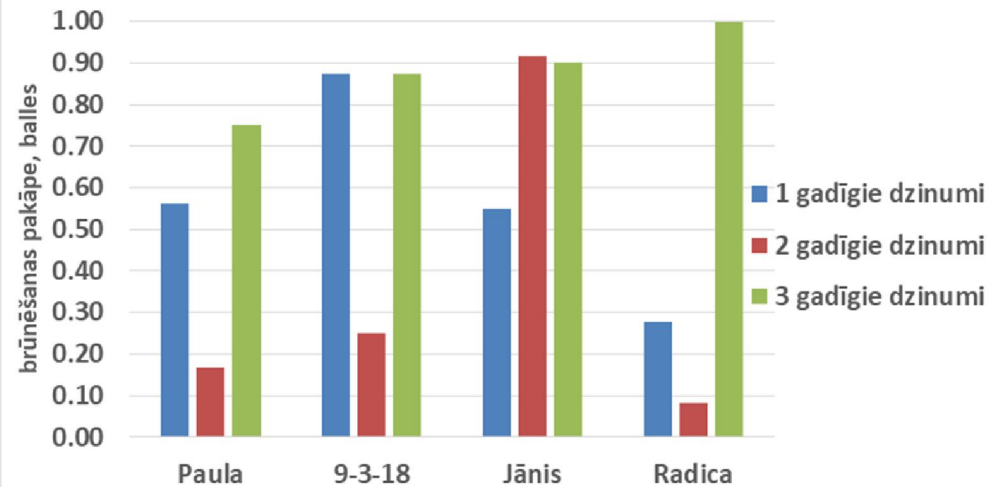


Winterhardiness of sweet cherries shoots

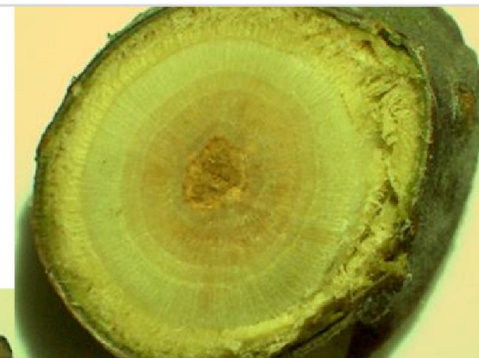
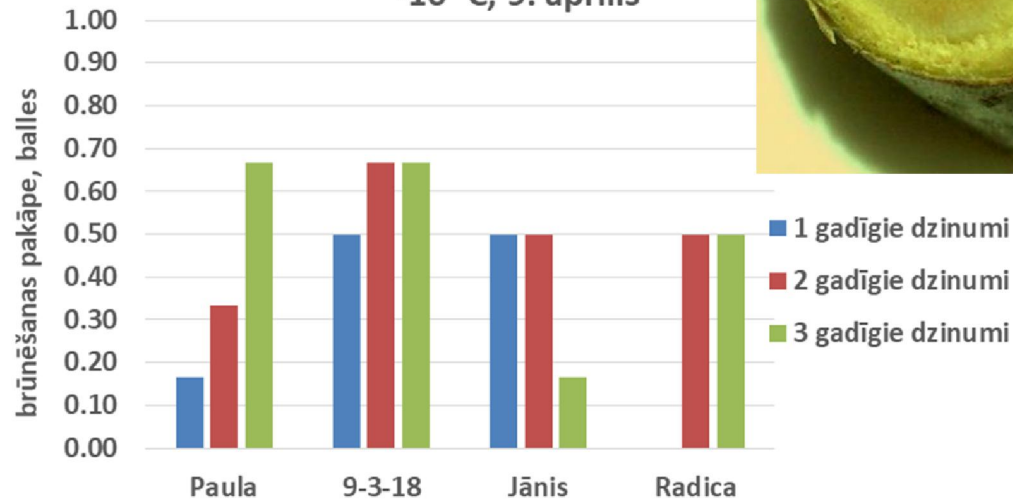
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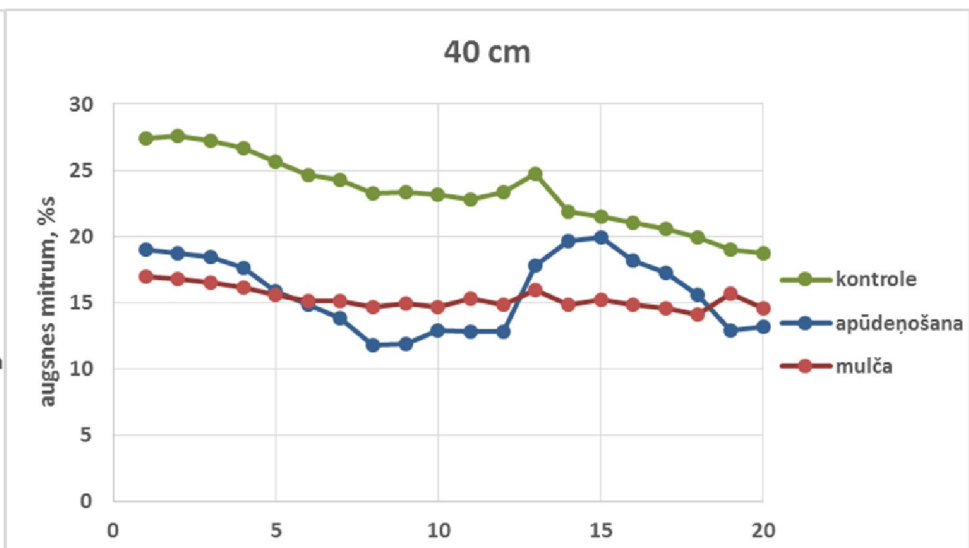
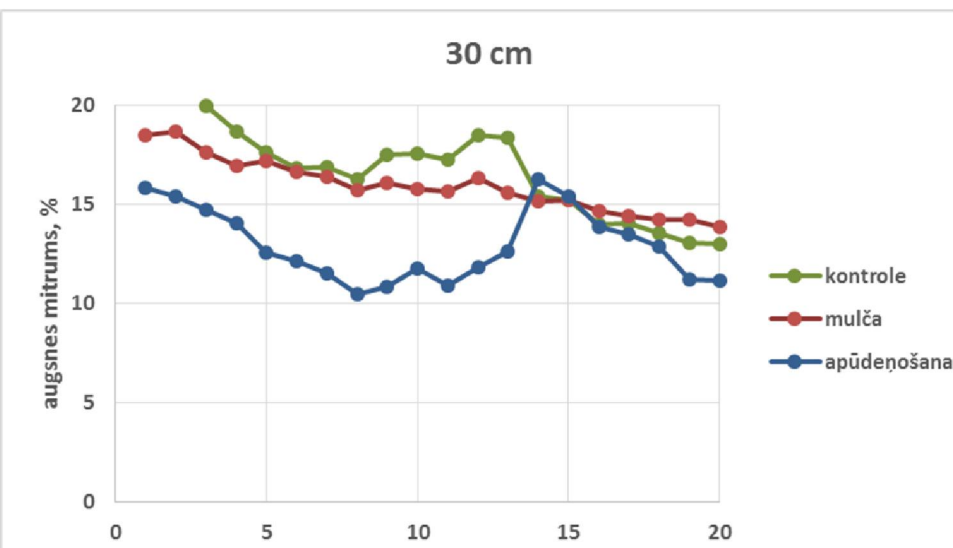
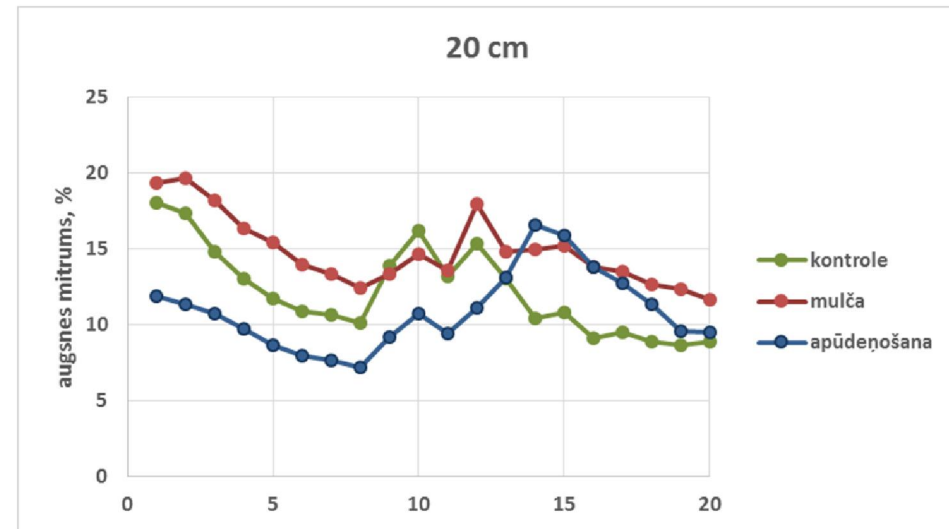
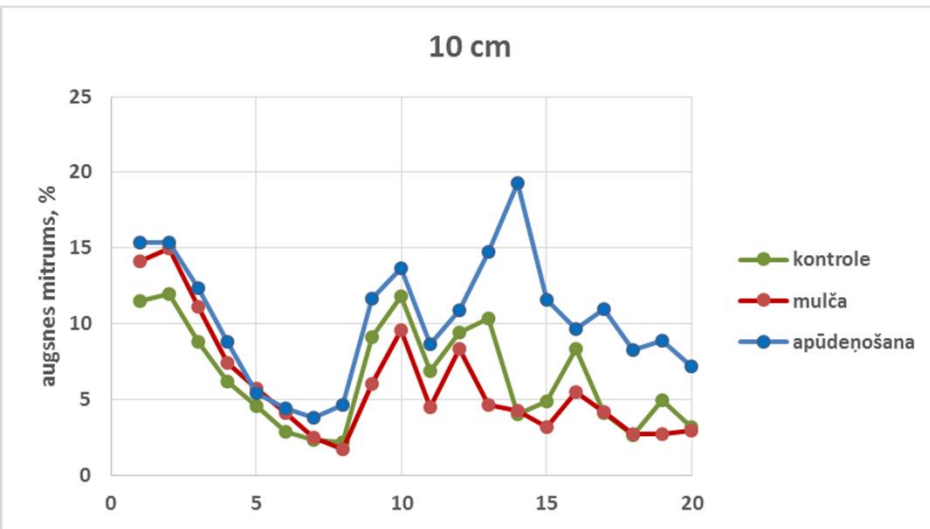


Activity 3.6: Development of pilot and demonstration objects to enhance research capacity in horticulture

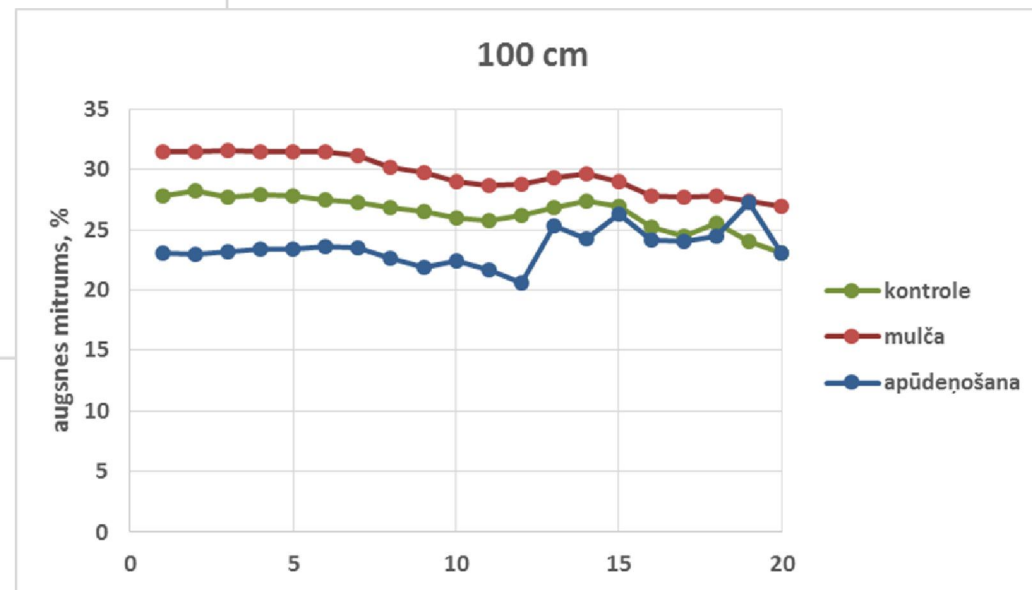
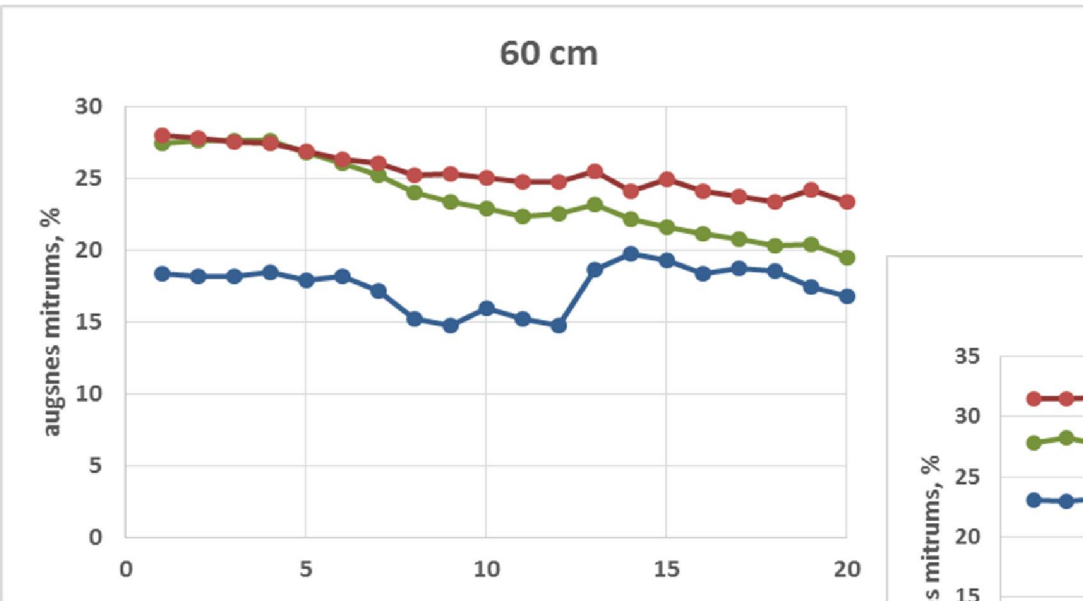
Demo object with a soil moisture measuring tool for simultaneously measuring soil moisture at different soil layers in one object.



Soil moisture observation in trial with cherries including mulched and irrigated plots in dry season of 2018 (May – September)



Soil moisture observation in trial with cherries including mulched and irrigated plots in dry season of 2018 (May – September)



Activity 4.1: Organisation of study visits and communicative events by LatHort (PP1)

Activities and events	Periods of Project						Total
	1.	2.	3.	4.	5.	6.	
Number of consultatins to increase unique farm and enterprise capacity	18	8	13	5	13	?	57
Number unique farms and enterprise participated at the «Field Day»*	39	27	27		(2 events)	0	93
Conferences organised with demonstration activities related to InnoFruit*	1					1	1
Conferences participated					2	?	2
Exhibitions*		3		4	1	4?	8
Seminars, lectures for farmers and entrepreneurs		5	1	4	1	?	11
Number of experts of experience exchange visits		8	44		4 (SE) + 41	0	97
Visits organised for foreign experts					1	0	1

* events provided with exhibitions of fruits

Activity 4.1: Organisation of study visits and communicative events by LatHort (PP1)

**Project meeting in
2017, La Sad**



**Seminar in
Durbe**



Conference in Riga, Latvia, 2016



**Field day in
Dobele**



Activity 4.1: Organisation of study visits and communicative events by LatHort (PP1)



Lithuania

Study visit of experts in 2017

Poland



Activity 4.1: Organisation of study visits and communicative events by LatHort (PP1)



Consultation on processing



Exhibition

During project meeting in demo farm «Very Berry»



«Apple Day» in Dobeles, 2017

Activity 4.1: Organisation of study visits and communicative events by LatHort (PP1)



Sweden

May, 2018



Activity 4.1: Organisation of study visits and communicative events by LatHort (PP1)



Lithuania

Study visits of experts in 2018

Poland



Activity 4.1: Organisation of study visits and communicative events by LatHort (PP1)



Study visit of experts from Lithuania and Poland to Latvia in 2018



Activity 4.2: Creation of the open demo-farm network model

LatHort signed at the moment **15** of CO-OPERATION AGREEMENTs about participation in demo-farm network according the project InnoFruit:

Līveni Ltd.;
Krogzeme Ltd.;
Poceri Ltd.,
Very Berry Ltd.;
farm «Vīksnas 1»;
farm «Ezermala»;
farm «Kurpnieki»;
farm «Mucenieki»;
farm «Eglāji»;
farm «Gaidas»;
farm «Ievulejas»;
farm «Jaunbrēmeles»;
farm «Ķenteni»;
farm «Lejasdārzi»;
farm «Migldārzi»



Eglāji



Gaidas



Kurpnieki



Ķenteni



EUROPEAN
REGIONAL
DEVELOPMENT
FUND

EUROPEAN UNION

InnoFruit