



Foreign fruit cultivars suitable for Finnish climate —preliminary experiences and recommendations

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Background of the research

- There is no organisation that does active horticultural plant breeding in Finland nowadays -> we are dependent on foreign cultivars
- A lot of cultivars from Russia and other neighbouring countries were imported to Finland by garden enthusiasts in the 1990's -> nobody was collecting data of those cultivars for common use -> collection of data was financed by ENPI CBC 2007-2013 program



SPECICROP project was co-funded by the European Union, the Russian Federation and the Republic of Finland.

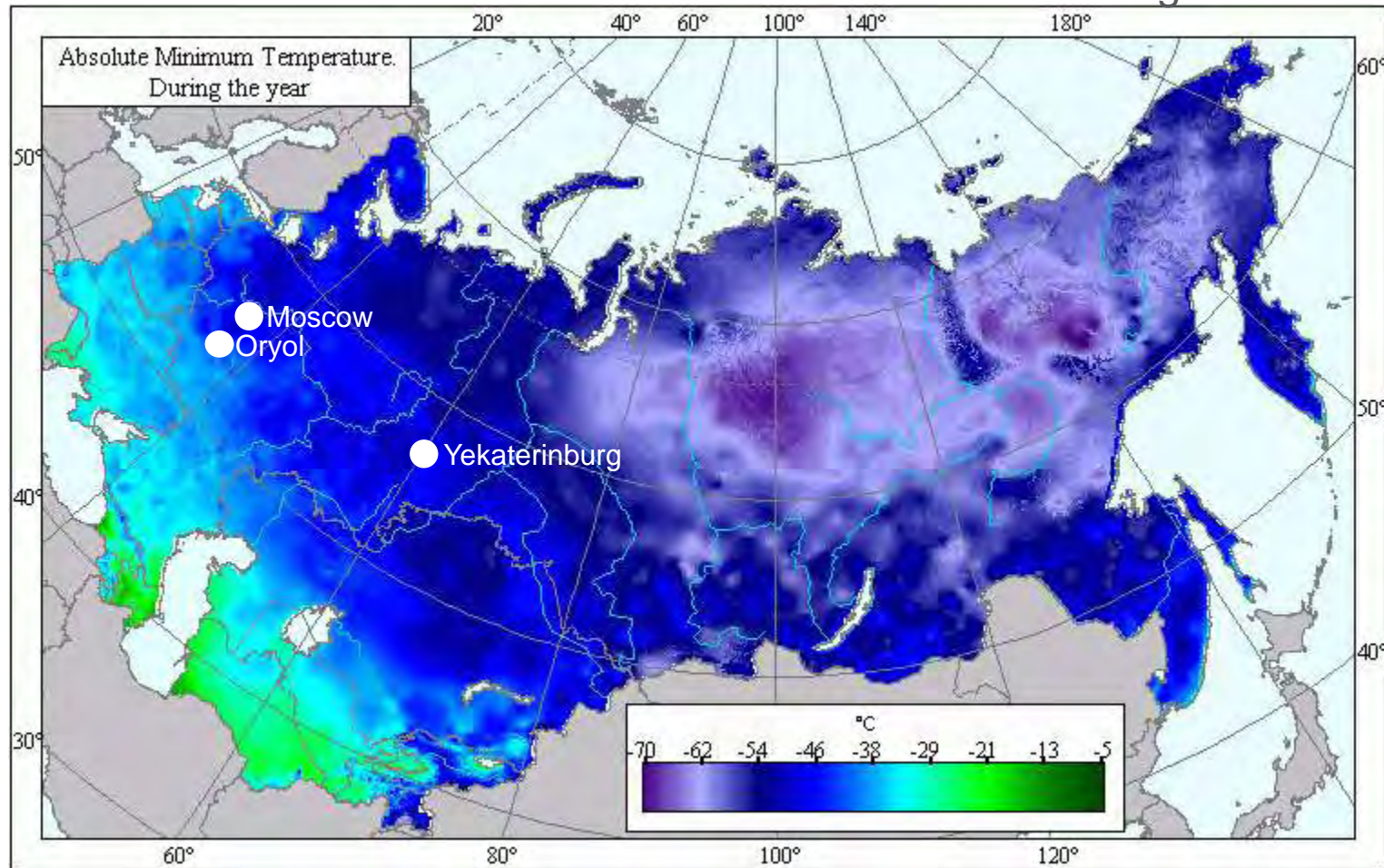
- Plants are/were growing in commercial plantations and in one of the research sites of Luke -> systematic evaluation was not possible

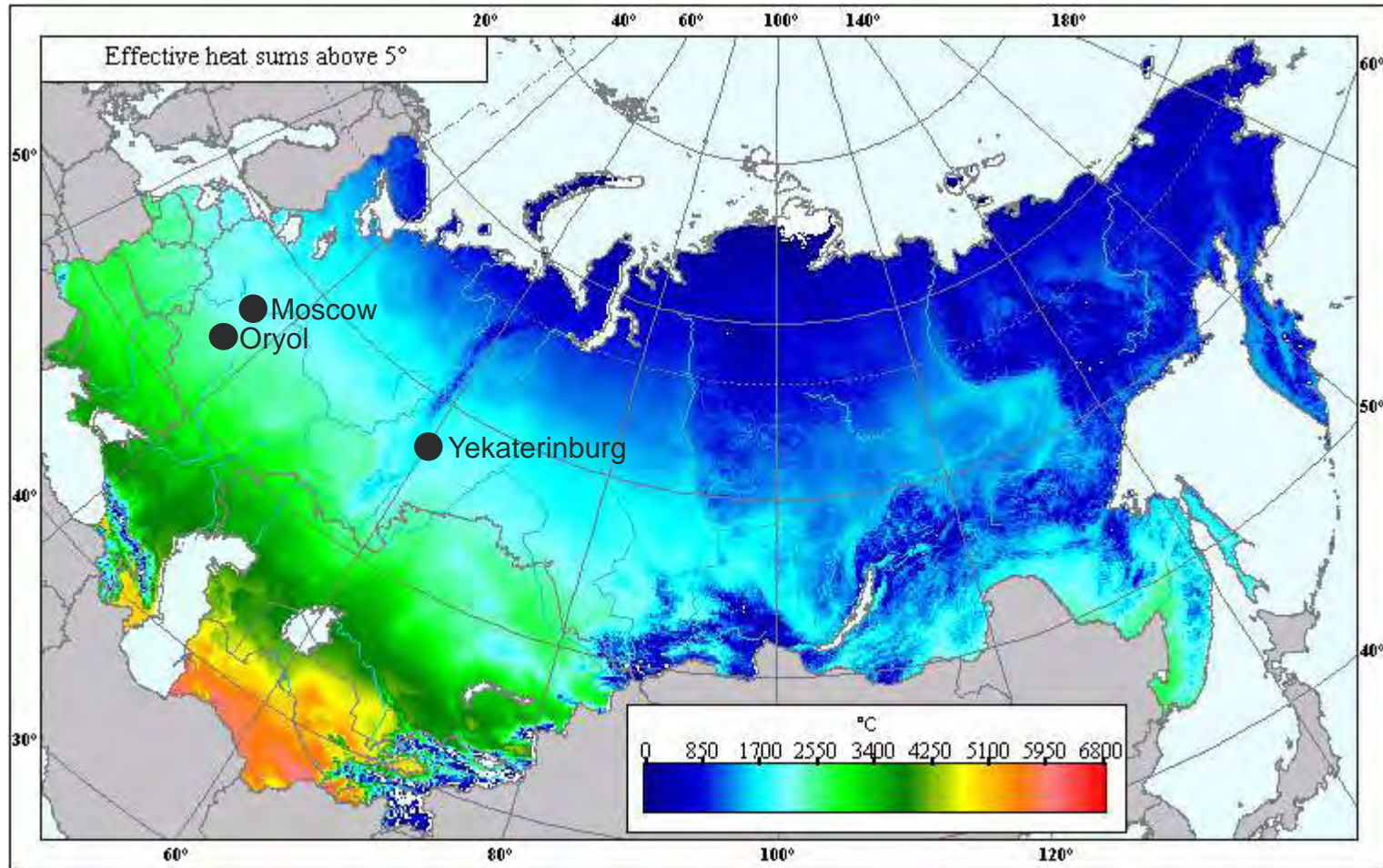
Aim of the research

- To find new fruit cultivars for Finnish growers and home gardeners
- To find cultivars for more north than just to most southern part of Finland where the main fruit cultivation area is situated
- To find cultivars that are more resistant to diseases, mainly to apple scab (*Venturia inaequalis*)
- To find cultivars that has storability
- And of course the taste and phenotype and ...

Eastern direction quite unknown to Finland in fruit cultivars -> a lot of new potential

www.agroatlas.ru





Result of the research

- 84 apple cultivars and 15 pear cultivars were chosen to give preliminary recommendation, others were not potential to Finland or there is not yet enough experience of their growth in Finland (plums and cherries)
- Descriptions are based mainly on breeder's description but complemented by the observations made in Finland
- Cultivars are mainly from Russia (63 apples and 12 pears), but also cultivars from
 - Belarus (6/1)
 - Latvia (4/0)
 - Lithuania (1/1)
 - Canada (3/0)
 - USA (2/0)
 - Estonia (2/1)
 - Ukraina (2/0)
 - Kazakhstan (1/0) are included

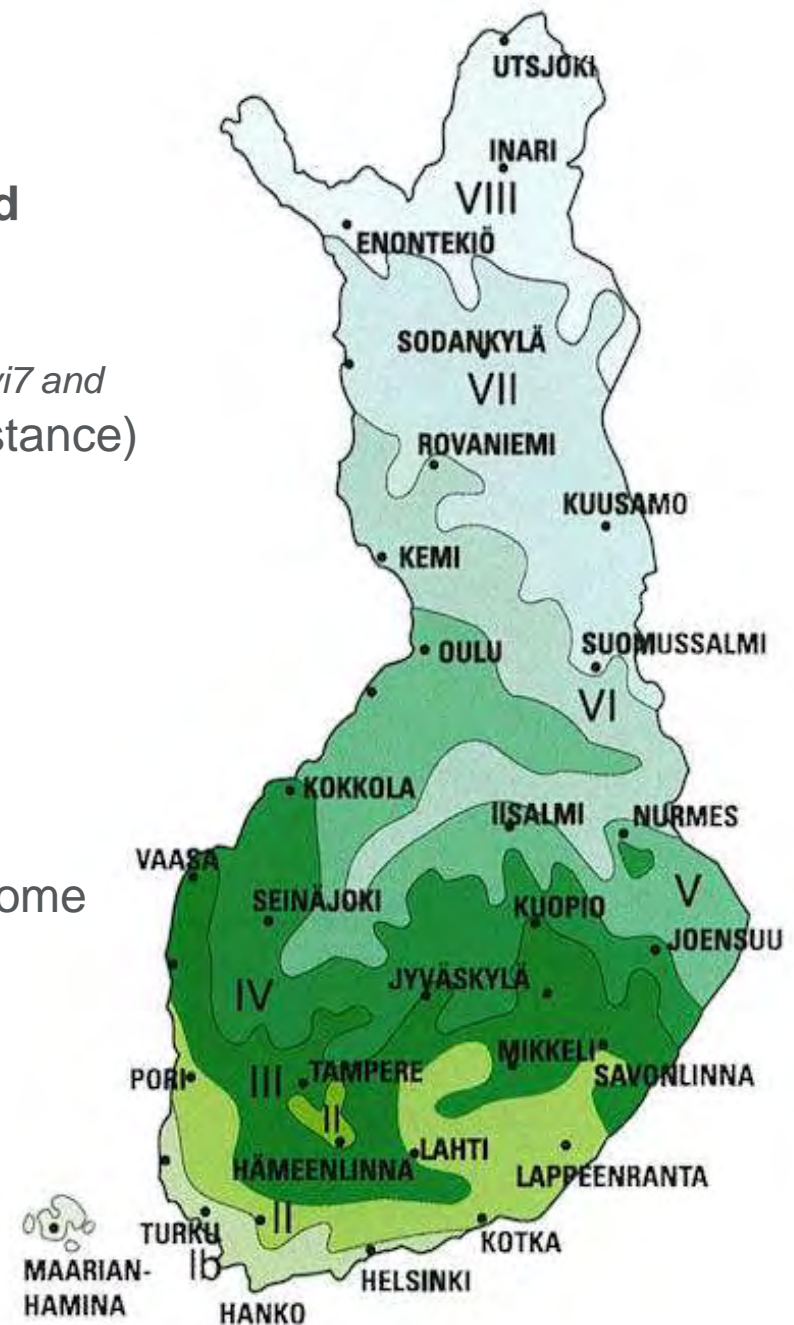
Descriptions include:

- Winter hardiness and **recommended hardiness zones according to knowledge this far**
- Apple scab hardiness (*Vf/Vm* (*Rvi6/Rvi7* and *Rvi5 nowadays*) resistance, overall resistance)
- Other diseases (mainly *Monilia* brown rot)
- Yearly production
- Taste, texture
- Colour
- Storability
- Growth habit
- Suitable root stock
- Suitability for commercial growing/ home gardens

In black – to Southern Finland (I-II)

In red – to Central Finland (III-IV)

In blue – to more north (V-VI)



Hardiness zones I-VIII for perennial horticultural plants

Summer cultivars 21

Agra

Arkad letnij zholtyj

Avgusta

Ijulskoje Tshernenko

Jablotschnyj spas

Jelena

Jubiljar

Junost

Kalvil belyj letnij

Konfetnoje

Krasnoje ranneje

Mantet

Medunitsa

Metshta

Narodnoje

Orlinka

Roberts

Serebrjanoje kopytse

Solntsedar

Zhelannoje

Zhemtshuzhnoje



In black – to Southern Finland (I-II)

In red – to Central Finland (III-IV)

In blue – to more north (V-VI)

Autumn cultivars 24

Aelita

Afrodita

Antonovka zolotaja

Druzhiba narodov

Gita

Izbrannitsa

Kovalenkovskoje

Kymppitonni

Marat Busurin

Orlovim

Orlovskij pioner

Orlovskoje polosatoje

Osennaja radost

Pamjat Isajeva

Podsnezhnik

Pärnu tuvioun

Sergiana

Severnaja zarja

Slava pobediteljam

Slavjanin

Solnyshko

Tambovskoje

Uslada

Zhanna




In black – to Southern Finland (I-II)

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Kovalenkovskoje



ORLOVIM



Uslada



Winter cultivars 39

Aape	Orlik
Alesja	Orlovskaja zarja
Antej	Orlovskoje polesje
Auksis	Podarok Grafskomu
Babushkino	Renet Karpova
Beforest	Rozhdestvenskoje
Bolotovskoje	Samorodok
Cortland	Sinap orlovskij
Dace	Spartan
Iedzenu	Start
Imant	Strojevskoje
Imrus	Studentsheskoje
Ivanovskoje	Svezhest
Jubilej Moskvj	Sweet sixteen
Kandil Orlovskij	Teremok
Koritshnoje novoje	Tshistotel
Krista	Venjaminovskoje
Kulikovskoje	Zarja Alatau
Kurnakovskoje	Zvezdotshka
Martovskoje	

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Martovskoje



Rozhdestvenskoje



Strojevskoje

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Venjaminovskoje

Pears 15

Belorusskaja pozdnaja

Djuimovotshka

Fevralskij suvenir

Jeseninskaja

Kadi

Kafedralnaja

Karamelnaja

Lada

Lukna

Muratovskaja

Rumjanaja letnaja

Skorospelka iz Mitshurinska

Tjutshevskaja

Tshizhovskaja

Vidnaja



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Plums (examples, not in the book yet)

Diploid plums

Kubanskaja kometa

Skoroplodnaja

Podarok Sankt-Peterburgu

Hexaploid plums

Evrazia21

Garmonija

Renklod mitshurinskij

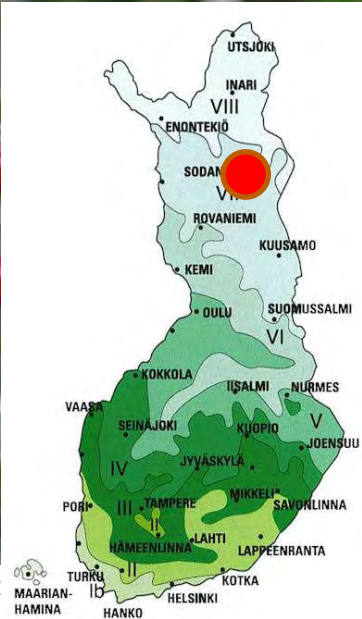


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Sour cherry Schedraja is producing crop in Salla, Lapland, zone VII!



Conclusion

- There is a possibility to find new cultivars also to Finnish harsh climate by screening foreign cultivars, but the testing is very challenging with the diminishing resources of research institutes
- This research was a good start, but much more information and experience is needed to decide what cultivars are good for commercial production
- Cooperation with growers is more and more important in order to get long-term field experience about new cultivars

Publication:

Nissinen, M., Kauppinen S. ja Kinnanen, H. 2016.

**Ulkomaisia hedelmälajeja Suomeen oloihin –
alustavia viljelykokemuksia ja suosituksia.**

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