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

Sanna Kauppinen, Natural Resources Institute Finland (Luke)
sanna.kauppinen@luke.fi

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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
- 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
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)
Summer cultivars 21

Agra
Arkad letnij zholtij
Avgusta
Ijulskoje Tshernenko
Jablotshnyj 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**
**Druzhba 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)
In red – to Central Finland (III-IV)
In blue – to more north (V-VI)
Uslada
Winter cultivars 39

Aape
Alesja
Antej
Auksis
Babushkino
Beforest
Bolotovskoje
Cortland
Dace
Iedzenu
Imant
Imrus
Ivanovskoje
Jubilej Moskvy
Kandil Orlovskij
Koritshnoje novoje
Krista
Kulikovskoje
Kurnakovskoje
Martovskoje

Orlik
Orlovskaja zarja
Orlovskoje polesje
Podarok Grafskomu
Renet Karpova
Rozhdestvenskoje
Samorodok
Sinap orlovskij
Spartan
Start
Strojevskoje
Studentsheskoje
Svezhest
Sweet sixteen
Teremok
Tshistotel
Venjaminovskoje
Zarja Alatau
Zvezdotshka

In black – to Southern Finland (I-II)
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In blue – to more north (V-VI)
Rozhdestvenskoje
Strojevskoje
Venjaminovskoje
Pears 15
Belorusskaja pozdnaja
Djuimovotshka
Fevralskij suvenir
Jeseninskaja
Kadi
Kafedralnaja
Karamelnaja
Lada
Lukna
Muratovskaja
Rumjanaja letnaja
Skorospelka iz Mitshurinska
Tjutshevskaja
Tshizhovskaja
Vidnaja

In black – to Southern Finland (I-II)
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Plums (examples, not in the book yet)

Diploid plums
Kubanskaja kometa
Skoroplodnaja
Podarok Sankt-Peterburgu

Hexaploid plums
Evraziia21
Garmonija
Renklod mitshurinskij

In black – to Southern Finland (I-II)
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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
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