



LABĀKAIS-NO-LABĀKĀ



# **Diploid plum genetic resources and variety testing in Latvia**

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# Japanese plums

- Of diploid plum ( $2n=16$ ) species, **JAPANESE PLUM** *Prunus salicina* is commercially important in warmer regions, but **lacks winter-hardiness in Latvia**.
- Its subspecies **USSURIAN PLUM** *P.salicina ssp. ussuriensis* is cold-hardy, but sensitive to temperature fluctuations in late winter and often susceptible to diseases like *Monilinia sp.*
- Of this group **only one** cultivar - '**Skoroplodnaya**' is commercially successful in Latvia, and **only in continental regions**.
- Other diploid species are used in crosses with Japanese plum – **myrobalan** *P.cerasifera* (high disease tolerance), *P.americana*, *P.nigra* (winterhardy), *P.simonii*, etc.



# Inter-species hybrids

- The best results of inter-species hybridization were achieved IN RUSSIA, where the complex of winter-hardy diploid hybrid plums was named *Prunus rossica* Erem., and BELARUS.
- The inter-species hybrids are better adapted in Latvia, but still may suffer from flower bud damages.
- The most stable production has 'KOMETА' ('Kometa Kubanskaya'), which is widely grown commercially.
- Only cvs. ripening before domestic plums are commercially important.
- Many inter-species hybrids have poor pollen quality in Latvian climate - suitable pollinators are essential.



# Cultivars problematic in Latvia

- Lack regularity of production because of flower bud winter damages + tree injury in critical winters.
- Very large fruits (to 60g) - '**Kolonnovidnaya**' (later flowering, red flesh).
- Early ripening, good quality - '**Ijunsksaya Roza**' ('Kometa Rannaya'), '**Naidyona**'.
- Pollinators – '**MaraPuteshestvennitsa**' ('**Rubinovaya**')': medium hardy
- **Historical cultivars** (*P.salicina* x *P.cerasifera*!) - '**Early Golden**', '**First**'- very low winter hardiness.



**'Kolonnovidnaya'**  
**'Naidyona'**  
**'Ijunsksaya Roza'**



# Variety trials

- The newest Russian and Belarussian cultivars included **in variety trials since 2015** are:
  - ‘Carskaya’, ‘Nesmeyana’, ‘Sigma’, ‘Zlato Skifov’ - Russia;
  - ‘Lodva’, ‘Soneika’ - Belarus.
- **‘Zlato Skifov’** seems promising as both hardy and **extremely early ripening**. Yet the fruits in Latvia are **only 20 g**.
- ‘Carskaya’ – hardy, productive, but very small fruits.
- ‘Sigma’ – productive, not large fruits, flavour lacking some years.
- Other cvs. - low productivity.



# Latvian genetic resources (1)

- Our genetic resources collection of diploid plums holds **22 cultivars and hybrids of Latvian origin.**

THE MOST INTERESTING ARE:

- **'Alvis'** (*P.salicina* ssp.*ussuriensis* x *P.cerasifera*) - very hardy pollinator, small fruits in medium season; ornamental value in flower time
- **Rootstock PU-20651** (*P.salicina* ssp.*ussuriensis* x *P.cerasifera*) - slightly reducing tree vigour, can be propagated by seed and cuttings



**'Alvis'** – fruits,  
flowers



# Latvian genetic resources (2)

## Redleaf plums:

- '**Spīdola**' - medium hardy, good pollinator, fruits for processing
- '**Liesma**' - very hardy, pollinator, fruits for processing
- '**Gunta**' - very hardy, complex hybrid : poor pollen

Hybrid of black apricot (*P. x dasycarpa*) **Ma-1** : hardy, productive, but small fruits



**'Spīdola'** - flowers



**'Gunta'**- trees in spring and autumn



**MA-1** fruits



A photograph of a blossoming orchard. The trees are heavily laden with white flowers, and the ground is covered with small yellow dandelions. The sky is a clear, vibrant blue.

**Thank you!**