PLUM CULTIVARS FROM FRUIT RESEARCH INSTITUTE, ČAČAK INTENDED FOR DRYING

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Fruit production in Serbia (2010 – 2014) [Faostat, 2016]:

1. Plum (507.987 t)
2. Apple (252.185 t)
3. Sour Cherry (85.120 t)
4. ..... 

- More than 80% of plums are processed into brandy;
- 15-17% of plums are used for fresh consumption;
- 2-4% of plums are processed into other products;
- About 1% of plums are used for drying.
• During the end of 19\textsuperscript{th} and the first half of 20\textsuperscript{th} century, prunes were one of the most important export articles of Serbia.

• Production of prunes was based in the largest percentage on well-known old cultivar ‘Požegača’ (‘Common Prune’) which accounted more than 90\% of total production.

• Due to very high susceptibility of cultivar ‘Požegača’ to Sharka virus, after spreading of this virus across whole territory of Serbia during the second half of 20\textsuperscript{th} century, prunes production was devastated.
Figure 1. Chronology of prunes production in Serbia

- **XIX century**: max. 41296 t
- **XX century**: max. 66390 t
- **XXI century**: max. 5340 t
• In last two decades, ‘Stanley’ became the most important plum cultivar for drying in Serbia.

• Today, this cultivar accounted more than 80% of prunes production, although it has a lot of deficiencies.
Since 1979, fifteen plum cultivars are named and released:

The most important plum breeding objectives:

- fruit quality,
- high and regular bearing,
- early and late ripening time,
- tolerance or resistance to Sharka virus,
- adaptability to different climate conditions, and
- suitability for processing.
Cultivars suitable for drying
‘Čačanska Rodna’ (‘Stanley’ x ‘Požegača’) 

Ripening time: end of August,

Tree: vigorous, strong pruning requested;

Fruit: medium (30-40g), oval in shape,

  intense blue skin colour with bloom,

Excellent flavour and quality,

Soluble solids content higher than 20° Brix,

Prunes of excellent quality,

Susceptible to Sharka virus.
‘Čačanski Šećer’ (‘Agen 707’ x ‘Pacific’)

Rippening time: end of August;

Tree: medium large, suitable for HDP system,

Unstable bearing,

Fruit: medium (30-40g), oval in shape,

violet blue skin colour with bloom,

Very good flavour and quality,

Soluble solids content is about 20° Brix,

Prunes of very good quality,

Tolerant to Sharka virus.
‘Valjevka’ (‘Agen 707’ x ‘Stanley’)

- Rippening time: beginning of September;
- Tree: large,
- Unstable bearing,
- Fruit: medium (30 – 35g), ovate in shape, dark blue skin colour with heavy bloom,
- Excellent flavour and quality,
- Soluble solids content is about 23° Brix,
- Prunes of excellent quality,
- Tolerant to Sharka virus.
‘Mildora’ (‘Large Sugar Prune’ x ‘Čačanska Lepotica’)

Rippening time: mid-August;

Tree: medium large,

Very good cropper,

Fruit: small (25 – 30g), roundish in shape, reddish to violet skin colour with bloom,

Very good flavour and quality,

Soluble solids content is more than 25° Brix,

Prunes of excellent quality, amber colour,

Tolerant to Sharka virus.
‘Krina’ (‘Wangenheims’ x ‘Italian Prune’)  

Ripening time: end of August;  
Tree: vigorous,  
Very good cropper,  
Fruit: small to medium (25 – 35g), oval in shape, violet blue skin colour with bloom,  
Very good flavour and quality,  
Soluble solids content is 20 – 25° Brix,  
Prunes of good quality,  
Tolerant to Sharka virus.
‘Pozna Plava’ (‘Čačanska Najbolja’ x ‘Čačanska Najbolja’)  

Rippening time: beginning of September;  
Tree: vigorous,  
Unstable bearing, humid areas requested,  
Fruit: medium (30 – 40g), oval in shape,  
dark blue skin colour with heavy bloom,  
Excellent flavour and quality,  
Soluble solids content is about 20° Brix,  
Prunes of good quality,  
Tolerant to Sharka virus.
‘Nada’ (‘Stanley’ x ‘Scoldus’) 

Rippening time: mid-August;

Tree: medium vigorous, suitable for HDP system,

Good cropper,

Fruit: medium to large (35 – 45g), oval in shape,

dark blue skin colour with heavy bloom,

Very good flavour and quality,

Soluble solids content is 18 – 22° Brix,

Prunes of very good quality,

Tolerant to Sharka virus.
Table 1. Average values of the most important traits for drying of seven plum cultivars created at Fruit Research Institute, Čačak in period 2013-2015.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Fruit weight (g)</th>
<th>Soluble solids (%)</th>
<th>Percentage of dried plums (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Čačanska Rodna’</td>
<td>34.30</td>
<td>21.42</td>
<td>2.95</td>
</tr>
<tr>
<td>‘Čačanski Šećer’</td>
<td>35.20</td>
<td>22.36</td>
<td>3.25</td>
</tr>
<tr>
<td>‘Valjevka’</td>
<td>30.45</td>
<td>22.50</td>
<td>3.45</td>
</tr>
<tr>
<td>‘Mildora’</td>
<td>26.53</td>
<td>25.50</td>
<td>2.60</td>
</tr>
<tr>
<td>‘Krina’</td>
<td>27.47</td>
<td>22.10</td>
<td>3.40</td>
</tr>
<tr>
<td>‘Pozna Plava’</td>
<td>33.20</td>
<td>19.10</td>
<td>3.45</td>
</tr>
<tr>
<td>‘Nada’</td>
<td>37.91</td>
<td>18.58</td>
<td>3.60</td>
</tr>
</tbody>
</table>
Welcome to Fruit Research Institute, Čačak, Serbia...