

Activities of Plum and Prune WG in 2015

E. Kaufmane, Dr.biol.

Latvia State Institute of Fruit Growing

Graudu Str.1, Dobele, LV 3701, LATVIA, www.lvai.lv



***III EUFRIN Plum and Prune
Working Group Meeting "Present
Constraints of Plum Growing in
Europe"
SKOPELOS, GREECE
20-21 August, 2015***



Convener - Assoc. Prof. dr. Alexandros Papachatzis

Participants – scientists and plum growers from Greece, Germany, Romania, Bosnia and Herzegovina, USA, Latvia, Norway.

17 oral presentations, **12** posters

Main topics

- Marketing and economics
- Genetic Resources and Plant Breeding
- Pests and Diseases - Sharka Management
- Crop Management
- Post-Harvest Management, Fruit Quality and Processing



Why the meeting was on Scopelos island?

- The largest plum producer in Greece - mostly prunes for drying.
- **Has its own cultivars suitable for drying – very sweet, firm, yield 25-30 t/ha.**
- Sun drying on wooden palettes (racks), then rolling with hands and cooling, then drying in stoves at changing temperatures (75-90C) for 6-9 hours. Very work consuming, but excellent quality - price on the island 15 EUR/kg, in Athens up to 30 EUR/kg.
- Dried prunes are among the most economically important crops in Greece, income 50-100 th. EUR/ha.
- Plans to increase production, to sell in Mediterranean countries.



Marketing and economics



Recently the demand for local products increases in Greece, because :

- Fruits grown in local climate are believed to be **more healthy**;
- The consumer knows the product, as it is **traditional and original (unique)**, so reliable – Greece is a country with old traditions, small farms, especially in mountain regions;
- **Consumers support their own producers**, understanding that this means support the the regional economics;
- Producers are seeking new possibilities – **new products typical to the region, with high added value.**



Genetic Resources and Plant Breeding



«PRUNDOC – a project to define accessions for the European collection» – S.H. Hjeltnes

Project financed from ECPGR – 15 000 EUR. 9 partners from Norway, Serbia, Latvia, Italy, Germany. France, Belgium, Austria, Greece.

Prundoc documents

The partners agreed about the **first and second priority descriptors**, which are based on:

- Obst –Descriptoren NAP (David Szalatnay)
http://www.fructus.ch/assets/plugindata/poola/deskriptoren-handbuch_nap.pdf
- UPOV
- IPGRI
- Specific descriptors from Gembloux (Marc Lateur)
- SSR genotyping – SLU Balsgård/ (Sweden)

Genetic Resources and Plant Breeding

Outputs of Prundoc:

- Passport and descriptor data from >100 unique genotypes uploaded in European Prunus Data Base
- National coordinators informed with request to consider these accessions to be flagged in EURISCO as European Collection accessions
- Awareness of instute's quality management systems in order to be able to act as a holding institute of accessions belonging to the European collection



Genetic Resources and Plant Breeding

«Challenges to Prune production in increasingly variable Californian weather conditions» - DeJong T.M.

Traditionally the climate of California is very good for plum growing, but -

Changes are observed in recent years, with **negative influence on productivity and fruit quality**:

- 1) extremely high temperatures during plum flowering – short flowering period, **poor pollination**;
- 2) Total sum of hot days (hours) in the first 30 days after flowering – less time between flowering and harvest - **small fruits!**

A similar situation observed in many European countries.

Aim of breeding – to obtain cultivars more resistant to high spring temperatures, and to increase fruit quality.

Pests and Diseases - Sharka Management



«**Sharka resistant plum cultivars by using the hypersensitive response**» – W. Hartmann

Plum pox virus is the most dangerous virus in fruit growing.

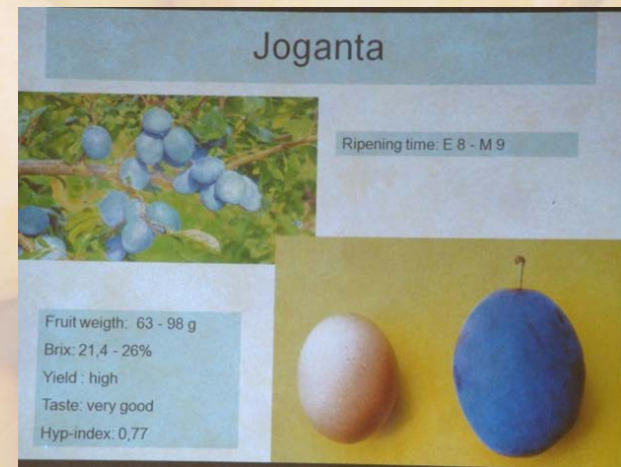
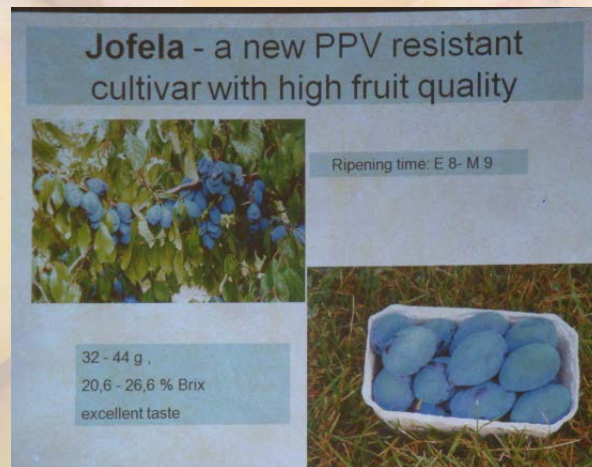
Czech Republic: Number of trees has decreased from 18 mill. to 4 mill.

- **Bulgaria:** Decrease of the plum production from 1970 to 1981 for nearly 50 %
- **Serbia-Montenegro:** 56 % of plum trees were PPV infected some 10 years ago , in the meantime much more
- **Germany:** In some orchards there is a loss of fruits of nearly 90 %.
- **Worldwide:** **In the last 3 decades the economical loss was summarized to nearly 10,000 mill. €**



Pest and Diseases - Sharka Management

- A successful breeding programme was performed for many years at University of Hohenheim (Germany)- in 1990 the **first resistant cultivar 'Jojo' was introduced**. 'Jojo' is cultivated in many European countries, but its fruit quality is not very good.
- After many crossings, testings, etc. **three new sharka resistant cultivars were selected: 'Jofela', 'Joganta', 'Jolina'**.



This line of breeding is and will be actual worldwide and especially in Europe

Crop Management

- **Mechanical thinning of plums -**
M.Blanke
- **Leader management techniques to induce vegetative bud development in plum –** M.Cvetkovič
- **Several presentations about the new cultivars, different rootstocks, growing systems from Romania –** F.Stanica, M.Botu, etc.



Post-Harvest Management, Fruit Quality and Processing



- **Non-Destructive Detection of Glauousness on Plum** – M.Blanke
- **Comparative study on polyphenols content and antioxidant effect of plum varieties from the island of Skopelos in Greece** – A.Papachatzis.
- **Qualitative traits and antioxidant contents in skin and flesh tissue of 43 plum and prune cultivars maintained in the Greek GeneBank collection** –P.Drogoudi



Some conclusions and challenges in the future...

The meetings of Plum and Prune WG reserchers **each 4 years** (between the ISHS Symposiums) are valuable, but some colleagues suggested these meetings preferably could have at least **one session as workshop where project ideas are discussed**. May be in groups followed by plenum presentations. The meetings might discuss topics concerning Horizon 2020, EEA, INTERREG grants or other financial instruments that are possible for the partners to apply for money. A good example is PRUNDOC – although with small funding, it helps real cooperation between countries and development of a database .





Xth International Symposium
Plum & Prune Genetics, Breeding & Pomology



UNIVERSITY OF CALIFORNIA, DAVIS

MAY 20 - 25, 2012

The next Symposium will be in
Germany, Munich in July, 2016.



The next EUFRIN Plum and Prunus WG meeting will be **in Latvia in 2018**



I hope we have power enough to organize this meeting very well!



*Thank for your
attention!*

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