

LIVESEED Apple task Workshop- BIOFACH 2019

Organic apple breeding in Europe- Common strategy and networking to face organic sector challenges and market opportunities

Organic apple in Greece

Sevi Liouza

Environmentalist - Organic apple farmer BioFru
AEGILOPS heritage variety nursery



15th of February 2019, 9.00 to 13.00
Nuremberg Convention Center, NCC Mite, room Lisabon



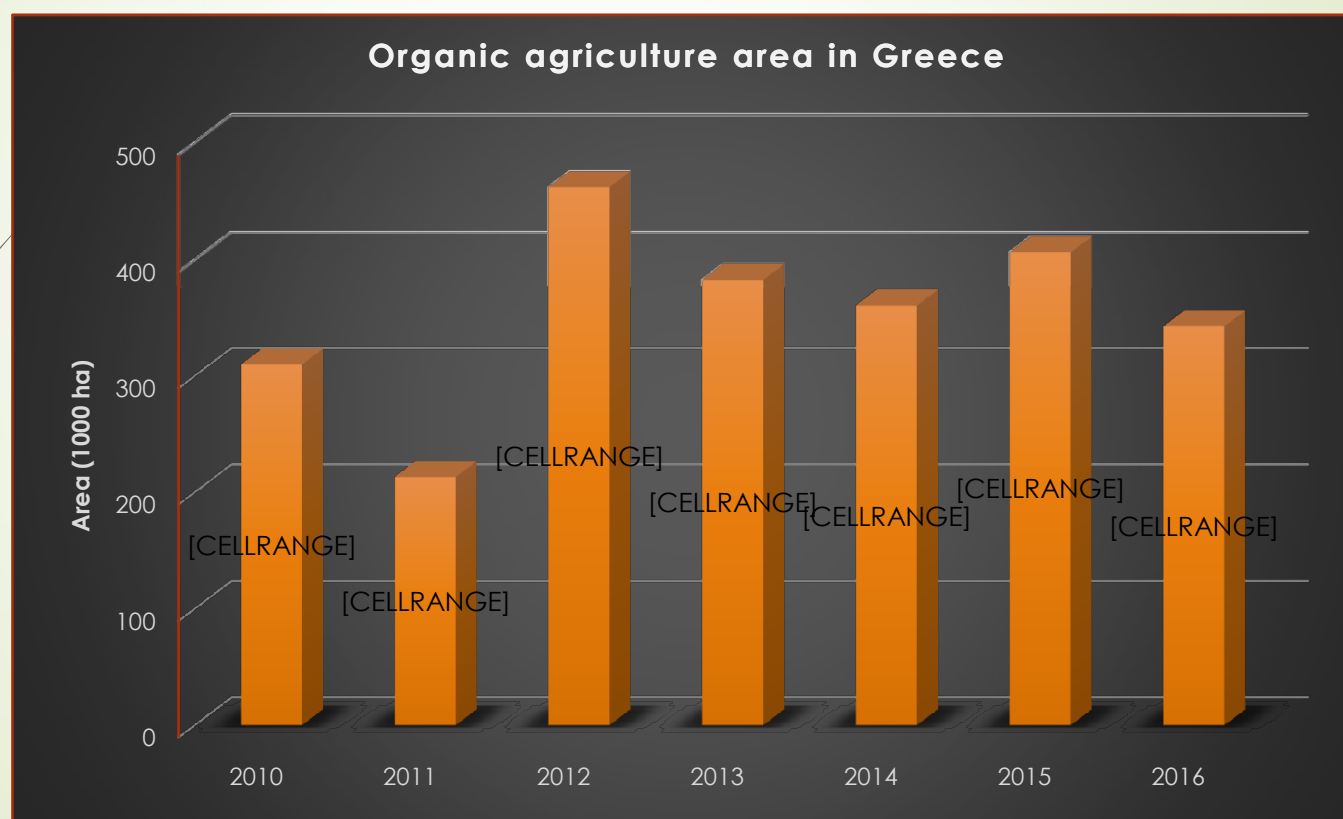
Organic agriculture in Greece

- ▶ Directorate of Organic Agriculture of MRDF
- ▶ AGROCERT (certification and labeling body)
- ▶ 11 eligible certification bodies





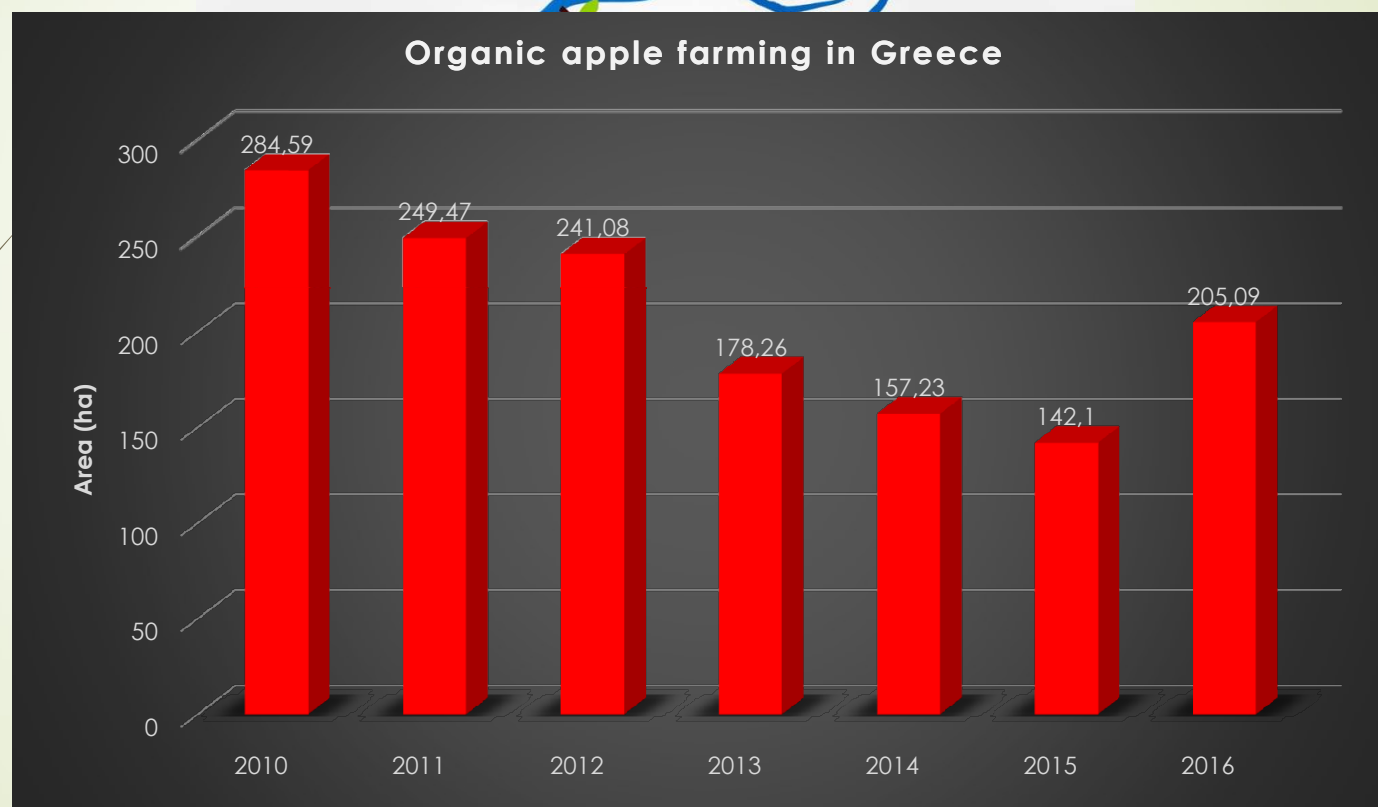
Organic agriculture in figures



Source: Ministry of Agricultural Development and Food (2016)



Organic apple farming - area

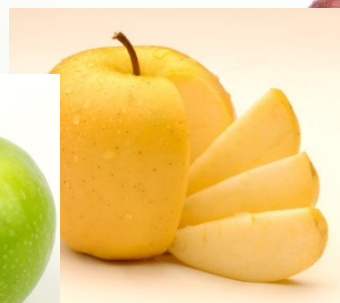
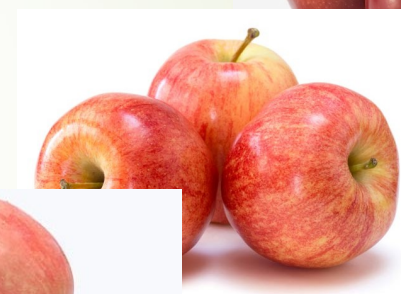


Source: Ministry of Agricultural Development and Food (2016)



Organic apple farming - varieties

- Red delicious (Starking)
- Gala
- Fuji
- Golden delicious
- Granny Smith





Organic apple market

- Fresh fruit 90%
- Exports: <10% mainly to Italy, England
- Imports: mainly from Latin America



- S/m
- Retailers – Organic stores
- Folk market



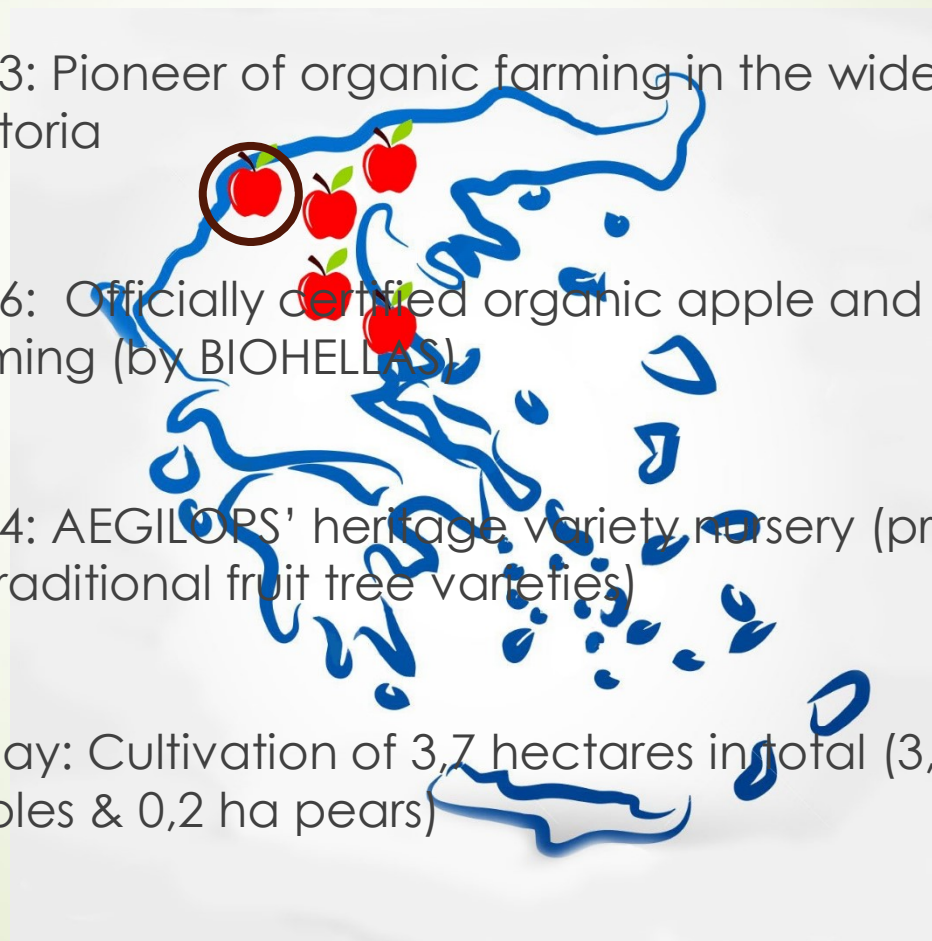
Restraints

- Decreasing trends in organic apple production
- Fruit trees are not subsidized by EU agro environmental funds
- Institutional and scientific gap on organic (fruit) production support
- Difficulties in production (primarily insects' attacks & secondly fungal diseases and viruses)
- Absence of organic nurseries or varieties



Organic farm "BIOFru" – Vasileiada Kastoria, Greece

- 1993: Pioneer of organic farming in the wider region of Kastoria
- 1996: Officially certified organic apple and pear farming (by BIOHELLAS)
- 2014: AEGILORS' heritage variety nursery (preservation of traditional fruit tree varieties)
- Today: Cultivation of 3,7 hectares in total (3,5 ha apples & 0,2 ha pears)





Organic farm “BIOFru”

- Cultivated varieties:

Red delicious (Red chief, Super chief, Scarlet, Jeromine), Gala, Fuji, Jonagored, Granny Smith, Golden delicious

- Parallel activities in the farm

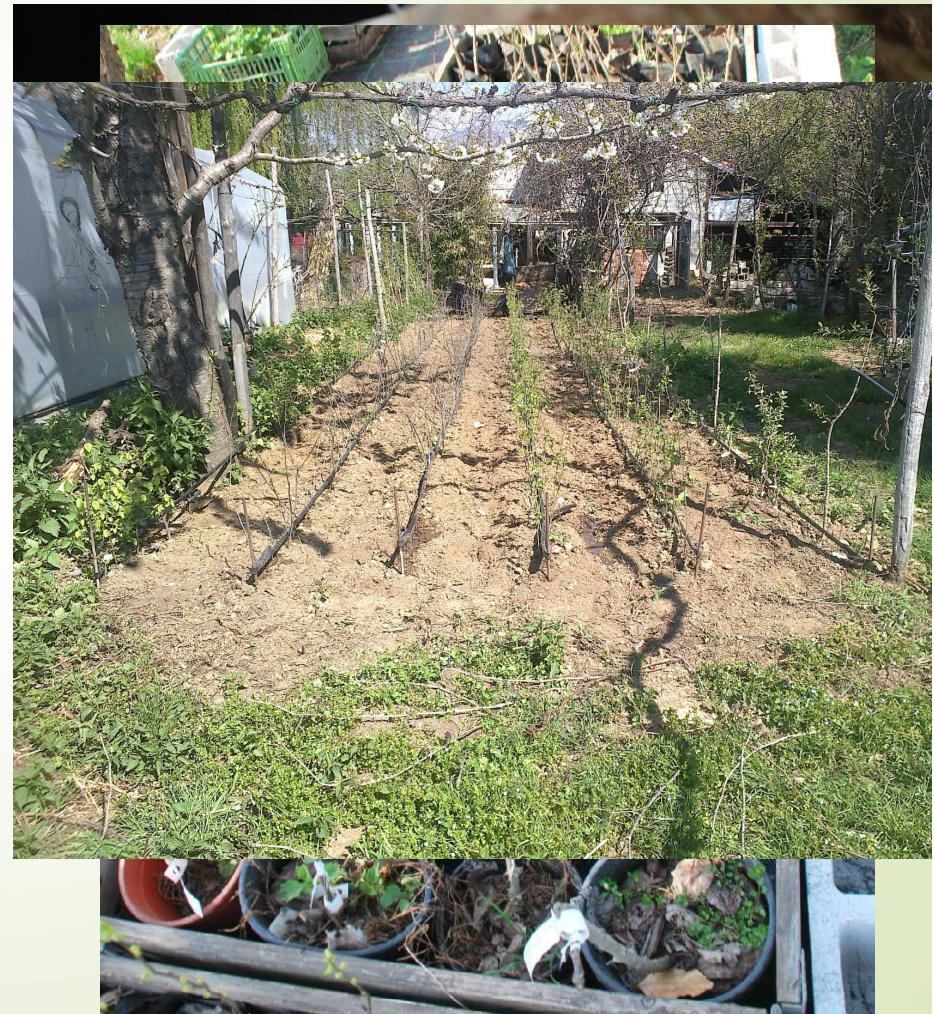
- Preservation of old varieties (fruit, vegetables, vines)
- Involvement in the Greek organic farming movement
- Demonstration and training
- Member in producers' – customers' cooperatives





AEGILOPS heritage variety nursery

- Seedlings
- Rootstocks: M9, M111, firiki and grafting
- Transplantation and evaluation of the young trees
- Search for old varieties in the wider region
- Conservation of 20 apple & 20 pear varieties and wild apple rootstocks





Traditional varieties

- Firiki
- Krasomilo
- Kidonomilo
- Skioupia
- Pilafa

Rootstocs

- Firiki
- Wild apple
(red, yellow)



AEGILOPS - Network for Biodiversity and Ecology in Agriculture



- Founded in 2004 - Network of ecofarmers in Greece
- Mission: the preservation - recultivation of local varieties / heritage crops and the development of varieties and seeds adapted to local conditions and organic farming





Pomology Institute - Directorate General of Agricultural Research Hellenic Agricultural Organization DEMETER

Current project: *Fruit Trees 2
Safeguard*

Promoting fruit tree cultivation
through maintaining and
organizing the field gene bank
collection, creating parent plants
for the production of certified
propagating material and
evaluating, exploiting and
improving autochthonous cultivars



The Department of Deciduous Fruit Trees (DDFT) is a non-profit research organization with the scope to develop applied research in all deciduous fruit tree cultivars.

It belongs to the Institute of Fruit Breeding and Genetic Resources (IFBRGR) having its headquarters in Thessaloniki and the Hellenic Agricultural Organization - "DEMETER" (now DEMETER) with headquarters in Athens. DDFT commenced its activities in 1961.

In October 2016, with "Seedling material" and was integrated with 2017, into the National Agricultural Research Foundation (NARS).

Principal aims of research in the conservation, evaluation and utilization of local genetic resources and the development of new cultivars with improved yield, fruit quality and adaptation characteristics. The DDFT contains in premises a large collection of local and foreign cultivars. Moreover research is directed to modern cultivation systems with the aim of integrating production systems in a sustainable manner.

The areas of principle research interest today are:

- Development and valorisation of improved deciduous fruit tree cultivars and rootstocks
- Improvement of cultivation systems
- Breeding for new cultivars with improved characteristics
- Conservation of fruit tree genetic resources
- Other activities

Information about DDFT: The Department of Deciduous Fruit Trees (DDFT) (formerly Institute of Fruit Breeding and Genetic Resources) is the Institute of Fruit Breeding and Genetic Resources, GR-57001 Thessaloniki. It develops applied research in order to produce cultivars, practices, controlling diseases and pests and professional management in deciduous fruit trees with an apple, pear, peach, nectarine, apricot, cherry etc. Moreover it conserves local genetic resources and develops breeding programs.

Central offices: Directorate of General Research Hellenic Agricultural Organization (DGAR) Hellenic, Athens 115 26 Tel: +30 21083 3034

Επισκευή: 28 05 Θεσσαλονίκη, Τηλ: +30 20320 41348 Email: info@demeter.gr

The Institute of Fruit Breeding and Genetic Resources Thessaloniki 570 01, Θεσσαλονίκη 57048 Τηλ: +30 2031 47013

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What varieties we need in Greece?

- ▶ Organically bred fruit tree varieties
- ▶ Suitable for organic farming (e.g. resistance to fungal diseases/ insect attacks)
- ▶ Yield stability
- ▶ Long shelf life



Suggestions

- Find solutions and share experiences on important organic crop production issues
- Scan and valorize domestic apple biodiversity
- Bring adapted organic varieties to the market
- Meet consumers needs



Organic farm "BIOFru"





An (organic) apple a day
keeps the doctor away!!!

Thank you! - Danke!