RESEARCH INSTITUTE FOR FRUIT GROWING
PITEȘTI, ROMANIA

office@icdp-pitesti.ro
http://www.icdp.ro
Fruit Growing in Romania

Romanian orchard surfaces in present (2011 year, ha)

- Apple: 58,506 ha
- Pear: 60,455 ha
- Plum: 7,032 ha
- Sweet and sour cherry: 3,008 ha
- Apricot: 2,538 ha
- Peach: 1,237 ha
- Walnut: 112 ha
- Small berries: 1,759 ha
- Other species: 3,442 ha
Romanian orchard surfaces present (2011 year) and perspective (2014-2020 period, ha)
Research Institute for Fruit Growing (RIFG) Pitesti was founded in 1967.

It is located in the heart of the Getic Plateau, Maracineni village, 5 km far from Pitesti town, Arges district, Romania.

RIFG is the leading fruit growing research and development center in Romania.

The scientific results on fruit growing lead to a practical development that can be performed by individual farmers.
Geographical co-ordinates: 44°53’56” Northern latitude, and 24°51’35” Eastern longitude.

The experimental fields stretch around the Institute headquarter and nearby, in a various relief represented by a flat river plain and terraces as well as hills of about 240-310 m above sea level.

Soil types prevailing in the field are medium-textured and heavy-clay soils: clayey-illuvial luvisols, colluvial or alluvial and brown soils on flat areas and eroded, medium-textured brown soils on hillside areas, all showing a medium and low humus content.
The climate neighbouring **RIFG Pitesti** is favorable for growing deciduous fruit species and small fruits. The average multi-annual temperature is **9.8°C**, the maximum temperature is **38.8°C**, whereas the minimum temperature is **–24.4°C**; total annual rainfalls recorded is **668 mm**. The early autumn frosts usually occur at the end of **October** and the latest about mid **April**.
Scientific activity:

The scientific research staff includes 21 researchers.

The research division of the Institute carries on scientific investigations in 7 departments:

- **Department** of Breeding of varieties for apple, pear, plum, sweet and sour cherry; genetic diversity in pomology and germplasm conservation,

- **Department** of Breeding of strawberry, blackcurrants, raspberries, blueberries, seabuckthorn and other minor bush fruits; germplasm conservation; propagation and technologies in cane and bush fruits,

- **Department** of Breeding, Germplasm conservation of rootstocks and nursery; Propagation technologies

- **Department** of Plant protection,

- **Department** of Virology *in vitro* - propagation techniques,

- **Department** of Orchard technologies, soil-plant-atmosphere relationships, groundcover management systems, erosion control, orchard irrigation and fertilizer application.

- **Department** of Agro-ecology, Physiology and Biochemistry
Fruit Growing Research Network in Romania

The Institute co-ordinates scientifically the fruit research and development activity of 5 experimental R&D stations located in the most important fruit-growing areas in Romania. These research stations are located in the following regions:

- **South**: RSFG Baneasa;
- **South-East**: RSFG Constanta;
- **North-East**: RSFG Iasi and RSFG Falticeni;
- **North**: RSFG Bistrita.
Fruit growing research topics for the 2007 – 2013 period

- Studies of genetic variability and inheritance of major characteristics in fruit trees and berries
- Preservation and evaluation of the fruit germplasm ex situ and possibly in situ; over 5,000 accessions
- Breeding of new cvs. with best fruit quality and genetic resistance to biotic and abiotic factors
- Zoning of the fruit species and varieties
- Sustainable fruit technologies and environment protection
- Germplasm maintainance and breeding of fruit tree rootstocks
- Nursery techniques – macro and micro propagation, virology
GENETIC RESOURCES, BREEDING AND ZONING OF FRUIT VARIETIES AND ROOSTOCKS
Apple, pear and quince
Plum, sweet cherry and sour cherry
Apricot, peach, nectarine and almond
Strawberry, raspberry, goosberry, blueberry, blackberry, currants, hipberry, lonicera, seabuckthorn, elderberry
Rootstocks breeding
Some results obtained in fruit breeding

ROMUS 5
summer, scab tolerant
apple cultivar
Columnar, scab tolerant apple cultivars
Winter, scab tolerant apple cultivar
Rebra

Autumn, scab tolerant apple cultivar
5 pear cvs. – Ervina (2003), Paramis (2008), Paradox (2010), Paradise (2010), Isadora (2012);

Agent

PPV tolerant plum cv. (for drying)
Roman

PPV tolerant plum cv.
(for fresh market)
Romanța

PPV tolerant plum cv.
(for fresh market)
Spectral

Sweet cherry cv.
3 sour cherry cvs. – Rival (2004), Amanda (2005), Stelar (2008);

20 peach and nectarines cvs. – Cecilia, Puiu, Liviu (N), Melania (N) (2000), Catherine, Raluca (2001), Costin (N), Florin, Filip, Alexia, Amalia, Antonia (2002), Tina (N), Mihaela (N), Eugen, Dida, Năică (N), Valerica (2003), Alex, Herăstrău (2006);

6 walnut cvs. – Anica (1999), Ovidiu (2001), Claudia, Sibișel 252, Geoagiu 86, Ciprian (2003);
7 black currant cvs.
Abanos (1999),
Ronix (2000),
Deea (2000),
Record 35 (2001),
Padina (2003),
Geo (2004),
Poli 51 (2012).
3 strawberry cvs. – Magic, Real (1998), Floral (2004);
3 gooseberry cvs. – Virens (2007), Verda (2007), Vely (2009);
2 blackberry cvs. – Dar 8, Dar 24 (2006);
2 seabuckthorn cvs. – Pitești 1, Pitești 2 (2006);
Some results obtained in roostock breeding

4 generative rootstocks
- Secular R-M, Mirobolan C5, Mirobolan dwarf (1999) – for plum
- Semavium (2000) – for sweet cherry

8 vegetative rootstocks
- IP-C2 (1999) - for sweet cherry
- IP-C3 (2000) - for sour cherry
- Adaptabil, Miroper (2000) – for peach
- Apricor (2006) – for apricot
IPC-6
vegetative cherry rootstock

Adaptable
vegetative peach rootstock
SUSTAINABLE FRUIT TECHNOLOGIES AND ENVIRONMENT PROTECTION
Sustainable Fruit Technologies and Environment Protection

- Soil-plant-atmosphere relationships;
- Zoning of the fruit species and varieties
- Groundcover management systems;
- Orchard irrigation and fertilizer application;
- Pruning and training management systems;
- Bioregulators and foliar fertilizer application;
- Pest and disease management systems, virology;
- Shelf life.
The present spatial distribution of the high risk to late frost areas for the ‘Tuleu gras’ plum cultivar in Romania, when the mean air temperature increases by 2°C.
High density – 25 years age
High density – 3 years age
New cherry training system
NURSERY TECHNIQUES

Macro and micro propagation

Candidate nuclear stock (glasshouse)

Nuclear stock (prebasic) (insect proof tunnels)

Propagation stock (basic) (field)
Virology – fruit species

- study, identification and control of virus like diseases in fruit species, strawberry and small fruits;
- production and preservation of the certified planting material stock;
- virus free plants;
“in vitro” propagation
Aclimatization
PITESTI
Attested by a document going back to 1388.
• It was a market town which developed as a commercial, handicraft and agricultural center.
• Presently, it is an industrial (Renault factory and OMV Petrochemicals), universitary city, having over 200,000 inhabitants.
• It is 120 km N-W far from Bucharest, capital of Romania.
• There is a chain of high-quality hotels down town.
• RIFG is located 5 km far from the town center.

Looking forward to seeing you in Pitesti AGAIN!