

## Scanning report (EIP format for practice abstracts)

- \*Project title (native language):** [EUFRUIT: Network Europeo sui Fruttiferi]  
**\*Project title (English):** EUFRUIT: European Fruit Network  
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### Section A. Summary for EIP dissemination

- \*Keywords:** [Variety testing, pome fruit]  
**\*Main geographical location:** [ITH51-59 Emilia Romagna region]  
**Other geographical locations:** [copy other NUTS 3 region from section C, below, 'NUTS 3 region(s)']  
**\*Summary (native language):**

UNIBO è coinvolta sin dalla fondazione della rete nazionale "Liste varietali" (come coordinatore del progetto). Le informazioni raccolte durante i test varietali sono stati analizzati ed i risultati sono stati diffusi in riviste tecniche con il fine di divulgare ed informare i frutticoltori sulle prestazioni di queste nuove accessioni. UNIBO partecipa anche alla rete europea EUFRIN dall'inizio della sua attività.

Attualmente sono stati testati nei frutteti UNIBO circa 46 ibridi non resistenti, 63 mutanti di Gala / Fuji / Red Delicious / Braeburn / Golden Delicious / Pinova / Cripps Pink di diversi proprietari e circa 150 ibridi del programma interno di breeding di melo. La collezione UNIBO include anche 43 ibridi monogenici resistenti alla ticchiolatura (20 in fase di test al momento). La maggior parte di loro porta la resistenza alla Vf (gene Rvi6). Per le valutazioni delle varietà, viene utilizzato l'elenco dei descrittori EUFRIN e i dati sono registrati in un database interno. Le cinque migliori selezioni del programma di breeding di UNIBO sono attualmente al livello 2 di test.

### Section B. Project information

- \*Project coordinator:** Michelle H. Williams; Aarhus University, Department of Food, Kirstinebjergvej 10, 5792 Aarslev, Denmark; mw@food.au.dk; +45 25170049  
**\*Project period:** 2016 - 2019  
**\*Project status:** Ongoing  
**\*Funded by:** Horizon 2020  
**\*Total budget:** €1.8m  
**\*Geographical regions:** DK011 Copenhagen, DK012 Copenhagen and its environs, DK013 North Zealand, DK014 Bornholm, DK021 East Zealand, DK022 West- and South Zealand, DK031 Funen, DK032 South Jutland, DK041 West Jutland, DK042 East Jutland, DK050 North Jutland, BE211 (Arrondissement. Antwerpen), BE212 (Mechelen), BE213 (Turnhout), BE221 (Hasselt), BE222 (Arr. Maaseik), BE223 (Tongeren), BE231 (Aalst), BE232 (Dendermonde), BE233 (Eeklo), BE234 (Gent), BE235 (Oudenaarde), BE236 (Sint-Niklaas), BE241 (Halle-Vilvoorde), BE242 (Leuven), BE251 (Brugge), BE253 (Ieper), BE254 (Kortrijk), BE255 (Arr. Oostende), BE256 (Arr. Roeselare), BE257 (Tielt), BE258 (Veurne), BE310 (Nivelles-Nijvel), BE331 (Huy-Hoei), BE332 (Liège- Luik), BE334 (Waremmе-Borgworm), BE335 (Verviers), FR8 Méditerranée; FR81 Languedoc-Roussillon, FR6 SUD-OUEST, FR512 Maine et Loire, FR611 Dordogne, FR812 Gard, DE6 (Hamburg), DE8 (Mecklenburg-Vorpommern), DE9 (Niedersachsen), DEF0 (Schleswig-Holstein), DEE0 (Sachsen-Anhalt), DEA (Nordrhein-Westfalen), DE111, DE112, DE113, DE114, DE115, DE116, DE117, DE118, DE119, E11A, DE11B, DE11C, DE11D, DE121, DE122, DE123, DE124, DE125, DE126, DE127, DE 128, DE129, DE12A, DE12B, DE12C, DE131, DE132, DE133, DE134, DE135, DE136, DE137, DE138, DE139,

DE13A, DE141, DE142, DE143, DE144, DE145, DE146, DE147, DE148, DE149, DE600 Hamburg, DE932 Cuxhaven, DE933 Harburg, DE939 Stade, DEF09 Pinneberg, NL1-NL4 + NLZ Holland; NL 224 zuidwest Gelderland, NL 226 Arnhem/Nijmegen, NL230 Flevoland, NL310 Utrecht, NL321 Kop van Noord-Holland, NI322 Alkmaar en omgeving, NL338 oost Zuid-Holland, NL33A zuidoost Zuid-Holland, NL341 Zeeuws-Vlaanderen, NL342 overig Zeeland, NI411 west Noord-Brabant, NL413 noordoost Noord-Brabant, NL414 zuidoost Noord-Brabant, NL421 noord Limburg, NL422 Midden-Limburg, NL423 zuid Limburg, ES620 Murcia, UKG11 Herefordshire, UKG12, Worcestershire, UKH12 Cambridgeshire, UKH16 North and West Norfolk, UKH17 Breckland and South Norfolk, UKJ22 East Sussex, UKJ35 South Hampshire, UKJ36 Central Hampshire, UKJ37 North Hampshire, UKJ41 Medway, UKJ42 Kent, UKJ43 Kent Thames Gateway, UKJ44 East Kent, UKJ45 Mid Kent, UKJ46 West Kent, ES618 Sevilla, ES511 Barcelona, ES512 Gerona, ES513 Lérida, ES514 Tarragona, CH0 Schweiz/Suisse/Svizzera, ITH51-59 Emilia Romagna region, ITH10 Bolzano-Bozen, HU101 Budapest, HU102 Pest, RO111, RO112, RO113, RO114, RO115, RO121, RO122, RO123, RO124, RO125, RO126, RO211, RO212, RO213, RO214, RO215, RO216, RO221, RO222, RO223, RO224, RO225, RO226, RO311, RO312, RO313, RO314, RO315, RO316, RO317, RO321, RO322 RO411, RO412, RO413, RO414, RO415, RO421, RO422, RO423, RO424. HU101, HU102, LT001 Alytaus apskritis, LT002 Kauno apskritis, LT003 Klaipėdos apskritis, LT004 Marijampolės apskritis, LT005 Panevėžio apskritis, LT006 Šiaulių apskritis, LT007 Tauragės apskritis, LT008 Telšių apskritis, LT009 Utenos apskritis, LT00A Vilniaus apskritis.

**Project web page:** <http://www.eufrin.org/index.php?id=55>

**\*Project Objectives (native language):**

1. Costituire un Network Europeo incentrato sul settore frutticolo.
2. Sviluppare e mettere a punto un sistema che consenta di analizzare e sintetizzare le conoscenze scientifiche e pratiche acquisite.
3. Stabilire un dialogo costante con le principali Istituzioni politiche a livello europeo, nazionale e regionale.
4. Identificare e supportare le aree di ricerca di nuova priorità attraverso il monitoraggio continuo e l'analisi delle attività di ricerca ed innovazione già esistenti o di imminente realizzazione.

**Project Objectives (English):**

1. Establish a European network focused on the fruit sector.
2. Develop and implement a systematic approach for scanning and synthesizing existing scientific and practical knowledge.
3. Establish an ongoing dialogue with relevant EU, national and regional policy bodies.
4. Identify and support new priority areas of research by continually monitoring and analysing existing and upcoming research and innovation activities.

**\*Project partners:**

1. Aarhus University, Department of Food Science (Denmark) • AU
2. Research Station for Fruit npo (Belgium) • Pcfuit
3. Centre Technique Interprofessionnel des Fruits et Légumes (France) • CTIFL
4. Obstbauversuchsanstalt Jork (Germany) • OVA
5. Stichting Wageningen Research (Netherlands) • WR
6. ~~East Malling Research (United Kingdom) • EMR (terminated 08-02-2016)~~
7. Institut de Recerca i Tecnologia Agroalimentàries (Spain) • IRTA
8. Federal Department of Economic Affairs, Education and Research (EAER), acting through Agroscope Institute of Plant Sciences (Switzerland) • Agroscope
9. Laimburg Research Centre for Agriculture and Forestry (Italy) • Laimburg
10. University of Agronomic Sciences and Veterinary Medicine of Bucharest (Romania) • USAMV
11. National Agricultural Research and Innovation Centre Fruitculture Research Institute (Hungary) • NARIC
12. Lithuanian Research Centre for Agriculture and Forestry (Lithuania) • LRCAF
13. Assemblée des Régions Européennes Fruitières, Légumières et Horticoles (France) • AREFHL
14. Variety Innovation Consortium South Tyrol (Italy) • SKST
15. Freshfel Europe (Belgium) • FRESHFEL
16. Elbe-Obst Erzeugerorganisation r.V. (Germany) • EO
17. Fruitconsult BV (Netherlands) • FC

18. University of Greenwich (United Kingdom) • UoG
19. University of Hohenheim (Germany) • UHOH
20. Università di Bologna (Italy) • UNIBO
21. Institut National de la Recherche Agronomique (France) • INRA
22. NIAB EMR (new 09-02-2016)

## Section C. Annex: Scanning report<sup>1</sup>

# Scanning report [Stefano Tartarini, Luigi Manfrini, CREA-FRF]

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**Country:** [Italy]

**NUTS 3 region(s)<sup>2</sup>:** [ITH51-59 Emilia Romagna region]

**WP no. and title:** WP2 - Performance of new fruit varieties

**Date:** [14-6-2016]

## Source materials and methodology

The Department of Agricultural Sciences of the Bologna University is holding one of the larger apple germplasm collection in Italy and, in the last forty years, the collection has been enriched through the addition of the most advanced selections and mutant clones from the main breeding programs around the world. This activity was mainly conducted thanks to the availability of some public funds. All the new introductions (new cultivars or mutant clones of known varieties) have been tested to investigate their adaptation to our environmental conditions. Unfortunately, due to the lack of public funds, this activity was strongly reduced in the last years. Nevertheless, all the collected accessions are still maintained in our fields.

UniBO is involved since its beginning of the national network of “Liste varietali” (as project coordinator). The data collected during the variety testing trials were analyzed and the results were disseminated in technical journals in order to inform growers about the performances of these new accessions.

UniBO is also participating to the European EUFRIN network since the beginning of its activity (Prof. S. Sansavini). In particular, EUFRIN meetings were very useful to tune the recording of the data with common descriptors, to exchange the information among variety testers and to enlarge the knowledge around new varieties.

- R. Gregori, L. Folini, L. Berra, W. Guerra, S. Sansavini. Lista del melo 2015, le varietà per i nuovi impianti. *L'Informatore Agrario*, 2015, 46:46-50

- R. Gregori, L. Berra, D. Nari, S. Sansavini. Tutte le varietà in Lista 2014 per gli impianti di melo. *L'informatore Agrario*, 2014, 46:40-43

- S. Sansavini, R. Gregori, W. Guerra. Un'ondata di nuove varietà. *Terra e Vita*, 2014, 48:34-36

- W. Guerra, R. Gregori, W. Faedi, S. Sansavini. Lista varietale del melo 2013: sono 3 le nuove entrate. *L'informatore Agrario*, 2013, 46:42-46

- R. Gregori, W. Guerra, L. Berra, G. Bassi, S. Sansavini. Panel test sensoriale e comparazione di varietà in diversi contesti ambientali. *Frutticoltura*, 2013, 11:44-52

- R. Gregori, M. Bergamaschi, W. Guerra, S. Sansavini. Melo. Come orientarsi per i nuovi impianti di melo: pregi e difetti delle “nuove” e “vecchie” cultivar. *Terra e Vita, Supplemento*, 2013, 38:28-34

## Best practice findings

### Variety testing of peaches and nectarines

All the cultivars are maintained at the experimental farm of the Bologna University in Cadriano (Coordinates: 44°33'N 11°27'E; elevation: 28 m above sea level) under a minimum level of sprayings against the main pathogen and pests, independently from their level of resistance. To date, a total of more than 300 apple accessions have been tested since the beginning of the variety testing trials (Level 1). For each variety, 3-4 trees on M9 are planted. The environmental conditions of the site are not fully

<sup>1</sup> Equivalent to 'final report' in EIP-AGRI format.

<sup>2</sup> Please see [ec.europa.eu/eurostat/ramon/nomenclatures/](http://ec.europa.eu/eurostat/ramon/nomenclatures/) for details on NUTS regions, level 3

favourable to apple cultivation i.e. the fruit colour is not favoured by the limited day/night temperature excursion during the last phases of fruit development or fruit russetting is enhanced by the high humidity levels during fruit development.

At present about 46 not-resistant hybrids, 63 mutants of Gala/Fuji/Red Delicious/Braeburn/Golden Delicious/Pinova/Cripps Pink from different owners and about 150 hybrids from the own apple breeding program are being tested in those trial orchards. The Unibo collection include also 43 monogenic scab resistant hybrids (20 in testing at the moment). Most of them are carrying the *Vf*-resistance (*Rvi6* gene). The five best selections from the UniBO breeding program are currently tested (level 2).

For the variety evaluations, the EUFRIN descriptor list is used and the data are stored in an own database.

The data collected since the start of the “variety testing project” are available for this project.

Based on the gained experience, some general considerations in our level 1 testing could be identified:

- the increasing costs to maintain these fields require an urgent financial support
- the demand for testing is increasing due to the large number of public and private breeding programs that release new varieties every year
- the full-confidentiality request made by some variety owners limit the diffusion of the testing results