

## Scanning report (EIP format for practice abstracts)

**\*Project title (native language):** EUFRUT: Fruit Network europeo

**\*Project title (English):** EUFRUIT: European Fruit Network

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### Section A. Summary for EIP dissemination

**\*Keywords:** Variety testing, soft fruit, strawberry

**\*Main geographical location:** ITH51-59 Emilia Romagna region

**Other geographical locations:** ITH10 Bolzano-Bozen

**\*Summary (native language):**

Negli ultimi anni sono state brevettate nuove varietà di fragole tra cui Flavia \* e Flaminia \* suscitando vivo interesse tra i maggiori gruppi di agricoltori in Marocco, Tunisia, Spagna e Sud Italia dove sono già stati messi a dimora i primi impianti pilota che confermano le buone prestazioni di queste varietà, sia in termini agronomici che commerciali. Le due cultivar sono caratterizzate da una precoce maturazione, vigoria media e frutti esterni alla chioma facili da raccogliere, elevata resistenza ad oidio e alle malattie fogliari e radicali in genere. Adatte anche a terreni stanchi, hanno dimostrato buona adattabilità alla pratica del ristoppio ed alla coltivazione biologica o con basso impatto ambientale.

Altre ricerche su nuove varietà di fragole sono offerte dalla ricerca di CREA (Crea, Olivicoltura, frutticoltura, agrumicoltura a Forlì). Gli esempi sono una ricerca rivolta verso un frutto che abbia il profumo particolarmente invitante di fragoline di bosco o una fragola bianca che può essere apprezzato da coloro che vorrebbero godersi il loro frutto preferito ma sono allergici ai pigmenti rossi. Questi sono gli obiettivi principali per i prossimi anni del centro di ricerca CREA. L'obiettivo è quindi quello di restituire le proprietà sensoriali che sono state sottratte da una selezione mirata a una maggiore resa e una conservazione più lunga rispetto alla qualità intrinseca del frutto. L'unità di ricerca CREA è partita da otto diversi programmi che hanno interessato l'Italia, dalla Sicilia al Trentino, per trovare nuove varietà per migliorare la qualità, in particolare l'aroma e la fragranza, attraverso incroci naturali e quindi non in laboratorio.

**Summary (english):**

In recent years, new varieties of strawberries have been patented. Flavia\* and Flaminia\* are two of them and they arouse keen interest among the major Farmers Group in Morocco, Tunisia, Spain and Southern Italy where the first pilot-plants have been already planted confirming the good performances of this varieties, both in agronomic and commercial terms. The two cultivars are characterized by early maturity, medium vigor and fruit outside the foliage easy to collect, highly resistant to powdery mildew and leaf and root diseases in general. Also suitable for tired soils, showed good adaptability to the cropping practice and to the organic cultivations or with low environmental impact.

Other research programs on new strawberries varieties are undertaken by the research center of CREA (Crea, Olivicoltura, fruit-growing, citrus farming in Forlì). Examples are strawberry that has the particularly inviting scent of wild strawberries and a white strawberry that can meet those who would like to enjoy their favorite fruit but are allergic to red pigments. These are the main objectives for the next years of CREA. The aim is to give back those sensory properties that have been subtracted from a selection aimed at greater yield and a longer conservation than the intrinsic quality of the fruit. The research unit started from eight different programs that have interested Italy, from Sicily to Trentino, to find new varieties to improve the quality, in particular aroma and fragrance, through natural crossings, and therefore not in the laboratory.

## 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 (Wareme-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. Stabilire una rete europea focalizzata nel settore frutticolo.
2. Sviluppare e implementare un approccio sistematico per la ricerca e la sintesi delle conoscenze scientifiche e pratiche esistenti.
3. Stabilire un dialogo continuo con i componenti della politica europea, nazionale e regionale.
4. Identificare e supportare nuove aree di ricerca monitorando e analizzando continuamente le attività di ricerca e di innovazione tecnologia esistenti e all'avanguardia.

### **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

### Luigi Manfrini - Dipartimento di Scienze e Tecnologie Agro-Alimentari

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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:** [02/05/2018]

#### Source materials and methodology

The CONSORZIO ITALIANO VIVAISTI (CIV) is one of the world's most specialized private entities in strawberry plants, apple and pear tree and rootstock research and development. CIV aims to reach a high level of variety innovation and production of certified propagation material.

CIV have patented the new strawberry varieties Flavia\* and Flaminia\* arouse keen interest among the major Farmers Group in Morocco, Tunisia, Spain and Southern Italy where the first pilot-plants have been already planted confirming the good performances of this varieties, both in agronomic and commercial terms. The two cultivars are characterized by early maturity, medium vigor and fruit outside the foliage easy to collect, highly resistant to powdery mildew and leaf and root diseases in general. Also suitable for tired soils, showed good adaptability to the cropping practice and to the organic cultivations or with low environmental impact.

With the variety Flavia\* and Flaminia\* CIV is proving to be able particularly careful to the low environmental impact productions (e.g. contained CFP's level thanks to fewer treatments in the field) suitable for an integrated production cultivation, organic and of course conventional one," emphasizes CIV General Director, Marica Soattin. In this way CIV seeks to satisfy the growing demand from the consumers for quality products not only from organoleptic point of view but also in terms of environmental, social and economic performance for the whole production-chain.

Features:

Flavia\* – Very good fruit flavor, very sweet, with low acidity. Perception of prolonged and intense sweetness. High percentage of extra quality fruits. Harvesting time: Very early BRIX 8.8 -11.5. Excellent consistency and shelf life.

Flaminia\* – Fruit of the excellent flavor, very sweet, with a good balance between sweetness and acidity. Harvesting time: Early BRIX 8.7 -10.6. High tolerance to the plant ripening. Excellent consistency and shelf life.

Other research on new varieties of strawberries are offered by the research of CREA (Crea, Olivicoltura, fruit-growing, citrus farming in Forlì). Examples are strawberry that has the particularly inviting scent of wild strawberries and a white strawberry that can meet those who would like to enjoy their favorite fruit but are allergic to red pigments. These are the main objectives for the next years of CREA. The aim is to give back those sensory properties that have been subtracted from a selection aimed at greater yield and a longer conservation than the intrinsic quality of the fruit. The research unit started from eight different programs that have interested Italy, from Sicily to Trentino, to find new varieties to improve the quality, in particular aroma and fragrance, through natural crossings, and therefore not in the laboratory. Gianluca Baruzzi - researcher from CREA - says "Flavor is always the driving element and, in a few years, we will be able to put on the market a very sweet, fragrant and long-lasting strawberry".

<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

The source materials for this scanning report are amongst others:

- [agronotizie.imagelinenetwork.com/vivaismo-e-sementi/2018/04/26/la-fragola-nel-2018-pensando-al-2020/58483](http://agronotizie.imagelinenetwork.com/vivaismo-e-sementi/2018/04/26/la-fragola-nel-2018-pensando-al-2020/58483)
- <https://rivistafrutticoltura.edagricole.it/frutta/fragola-e-piccoli-frutti-unaltra-annata-difficile-a-causa-del-clima/>
- [http://www.crea.gov.it/wp-content/uploads/2018/03/Fragola-bianca\\_interv-Baruzzi\\_riv-Cia.pdf?x99213](http://www.crea.gov.it/wp-content/uploads/2018/03/Fragola-bianca_interv-Baruzzi_riv-Cia.pdf?x99213)
- <http://www.agrimpresaonline.it/fragola-bianca-allergico-ai-pigmenti/>

### Best practice findings

In order to reach its goals, CIV and CREA work in partnership with the best international hybridation programs and commercial companies to test varieties throughout the world, to guarantee commercial success to marketing businesses, and provide healthy fruits to consumers.

CIV is a founder member of INN, International New-varieties Network, an association that promotes the exchange, evaluation and marketing of new varieties in the major fruit production areas in the world.

#### OBJECTIVES:

- To develop new breeds and varieties
- To develop new horticultural regions
- To develop a worldwide technical and commercial structure for the promotion of new varieties
- To develop a standard, coordinated evaluation process