

## Scanning report (EIP format for practice abstracts)

**\*Project title (native language):** EUFRUIT: Europäisches Obstnetzwerk

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

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### Section A. Summary for EIP dissemination

**\*Keywords:** ]

**\*Main geographical location:** DE6 (Hamburg); DE9 (Niedersachsen)]

**Other geographical locations:** DE8 (Mecklenburg-Vorpommern), DEF0 (Schleswig-Holstein), DEE0 (Sachsen-Anhalt), DEA (Nordrhein-Westfalen)

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

Der Schwerpunkt der Sortenprüfung aller Beerenobstarten ist es, eine Empfehlung anbauwürdiger Sorten für den Norddeutschen Raum, unter Berücksichtigung von Anbausystem, Düngung und Wassermanagement, Standort (Boden) und der Rentabilität für den Anbau, bei Direktvermarktung und Vermarktung über den LEH, zu geben. Die in der Sortenprüfung erarbeiteten Ergebnisse sind von entscheidender Bedeutung über Erfolg oder Misserfolg in der Praxis und haben daher eine Schlüsselrolle in der Strategieplanung der Anbaubetriebe und Sortenzüchtung.

Unsere Forschungsarbeit stützt sich auf drei Säulen: Sortenprüfung, Versuche zu aktuellen Pflanzenschutzproblemen, und Versuche zu Anbau und Kulturverfahren.

Die Versuchsarbeit umfasst Anbauversuche, Sortenprüfung und die gesamte Kulturtechnik sowie den Pflanzenschutz bei allen Beerenobst-Arten. Das sind Erdbeeren, Heidelbeeren, Himbeeren, Brombeeren, Rote und Schwarze Johannisbeeren, Stachelbeeren und Minikiwis („Kiwibeeren“). Die Versuche werden im Versuchsbetrieb sowie in Praxisbetrieben durchgeführt.

Der Bereich Anbauversuche umfasst jährlich 10 bis 20 Versuche. Für den Pflanzenschutz 20 bis 40 Versuche, hier auch in Außenversuchen und im Ökologischen Anbau. Im Bereich Pflanzenschutz werden amtliche Mittelprüfungen für die Zulassung neuer Produkte durchgeführt, außerdem wird intensiv mit dem Arbeitskreis Lückenindikation zusammengearbeitet, um durch biologische Wirkungsprüfungen sowie Rückstandsversuche neue Produkte zum Schließen von Indikationslücken dem Anbau und der Beratung zur Verfügung zu stellen.

Ziel unserer Arbeit ist es die Wettbewerbsfähigkeit des norddeutschen Beerenobstanbaus zu fördern und auszubauen. Neue und alte Sorten werden kontinuierlich getestet und auf ihre Wettbewerbsfähigkeit geprüft.

Unsere Ergebnisse sind Grundlage für Entscheidungen und Beratung der Beratungsringe, Vermarktungsorganisationen, Handel, Anbauern, Forschungsinstitutionen, Behörden und Ministerien und Berufsständischen Gremien.

#### **Summary (english):**

The focus of the variety testing of all soft fruit varieties is to give a recommendation of cultivable varieties for the North German area, taking into account cultivation system, fertilization and water management, location (soil) and profitability for cultivation, for direct marketing and marketing through the food retail. The results of the variety examination are of crucial importance for success or failure in practice and therefore have a key role in the strategic planning of the growers and variety breeding.

Our research is based on three pillars: Variety testing, trials on current pest management issues, and cultivation and cultural practices.

The experimental work includes cultivation trials, variety testing and the entire cultural technique as well as plant protection for all berry fruit species. They are strawberries, blueberries, raspberries, blackberries, red and black currants, gooseberries and minikiwis ("kiwi berries"). The tests are carried out in experimental operation as well as in practical operations.

The field of cultivation tests comprises 10 to 20 experiments per year. For plant protection 20 to 40 experiments, also as outdoor experiments and in organic cultivation. In the field of crop protection, official mid-level tests are carried out for the approval of new products. In addition, intensive work is being done with the workgroup gap indication in order to provide new products for closing indication gaps for cultivation and consultation through biological impact tests and residue trials.

The aim of our work is to promote and expand the competitiveness of North German berry fruit cultivation. New and old varieties are continuously tested and tested for their competitiveness.

Our results are the basis for the decisions and advice of advisory councils, marketing organizations, trade, growers, research institutions, authorities and ministries and professional bodies.

## 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. Etablierung eines europäischen Netzwerks, das sich auf den Obstsektor konzentriert.
2. Entwicklung und Umsetzung eines systemischen Ansatzes zur Sichtung und Zusammenstellung bestehenden wissenschaftlichen und praxisnahen Wissens.
3. Etablierung eines laufenden Dialogs mit relevanten politische Gremien auf regionaler, nationaler und EU Ebene.
4. Ermittlung und Unterstützung neuer Forschungsschwerpunkte durch kontinuierliches Monitoring und Auswertung bestehender und neu bestehender Forschungs- und Innovationsaktivitäten.

**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 Felix Koschnick, OVA Jork – Standort Langförden

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**Country:** Germany

**NUTS 3 region(s)<sup>2</sup>:** DE6 (Hamburg); DE9 (Niedersachsen) DE8 (Mecklenburg-Vorpommern), DEF0 (Schleswig-Holstein), DEE0 (Sachsen-Anhalt), DEA (Nordrhein-Westfalen)

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

**Date:** 30.04.2018

### Source materials and methodology

The berry fruit section of the ESTEBURG - Fruit Research, Extension and Education Center is a branch office in Langförden, Germany's largest contiguous strawberry growing area.

In the variety trials were different berry fruits tested. Because of the fast rotating variety carousel, the changing requirements of the trade and the customers, the search for suitable varieties for the respective segment. LEH and direct marketing is an essential factor for the sustainability and economic success of the growers and variety breeders, as well as plant propagators, Through the continuous variety testing on our test site and also with growers, we are able to provide the current requirements appropriate advice promptly. The variety testing executed in different steps. New varieties are usually grown in the tunnel for assessment and screening. The actual variety testing then takes place in the field as frigo- or appointment culture (60 days) and in a one-year field trial. Subsequently, the varieties that have proven themselves are followed up and assessed in the recommended cultivation system for them. This is also happening on a larger scale in cooperation with growers in the region.

Through the different cultivation systems and the right choice of variety higher area performance, - yield, quality and cultivation and harvesting period can be advanced.

Our continuous intensive work allows us to draw conclusions about the suitability of a variety for our climate, our soils, our growers and our markets. Ultimately, our statements are continued verified by the trade, the growers and the end users, because only if they accept a new variety recommendation, the variety established in the area. [

Strawberry:

The variety testing is carried out in different steps. New varieties are usually grown in the tunnel for assessment and screening.

The actual variety testing then takes place in the field as frigo- or appointment culture (60 days) and in a one-year inventory.

Subsequently, the varieties that have proven themselves are then followed up and assessed in the recommended cultivation system for them. • Variety sighting Strawberry in the protected cultivation, there were 10 single-bearing and 12 remounting varieties in the test. • Variety classification strawberry in the classical outdoor cultivation, there were 28 single-bearing and 14 remounting varieties in the test. Cultivation technique, the experimental station berry fruit Langförden busy in the strawberry with the protected cultivation in substrate cultivation, outdoor cultivation with and without dam.

Blueberry:

• The variety classification of 12 new varieties was continued and recorded at several sites, as well as plant Raspberry: • Field sighting Freiland, much this year Due to frost, for 2018, the plot is dissolved and a new crop of summer-berries raspberries planned. The varieties from 2015 as well as the 7 further varieties from 2016 will be continued in the substrate under protected conditions. aterial and origin comparisons.

Blackberry:

<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

•Variety survey, the same varieties were further observed and assessed. Loch Ness, Chester Thornl, Loch Tay, Black Diamond, Nightfall, SB 105, Black Pearl, Metolius, Loch Maree, Dirksen Thornless, Natchez, Quachita, Reuben, Primarc, 641 - M2, Asterina, Loch Maree, Newberry

Currant:

•Variety protection for the existing red and blackcurrants with a focus on the fresh market. More varieties were added, these young plants will move in 2018 in the new currant quarters.

Gooseberry:

•Variety survey continued. As well as two new Bekay selections added to the exam.

Kiwi berry (Minikiwi):

• Participation in the national variety trial Kiwi berries with 6 ♀ varieties and 2 ♂ fertilizer varieties.

Maibeere / honey berry, (*Lonicera kamchatatica*):

• Will be included in variety testing with some 2018 varieties.

### Best practice findings

The variety testing is carried out in different steps. New varieties are usually grown in the tunnel for assessment and screening.

The actual variety testing then takes place in the field as frigo- or appointment culture and in a one-year inventory. Subsequently, the varieties that have proven themselves are then followed up and assessed in the recommended cultivation system for them.

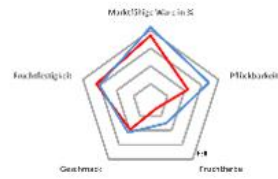
Examples from the variety test strawberry:

The image shows three example forms for strawberry variety testing. Each form is a grid of evaluation criteria with a 1-9 scale and a small illustration of a strawberry. The forms are:

- Form 1 (Left):** Evaluates fruit firmness (Fruchtfestigkeit), color of the fruit flesh (Farbe des Fruchtfleisches), juiciness (Säftigkeit), appearance (Aussehen), sugar-acid ratio (Zucker-Säure-Verhältnis), acidity (Acidität), taste (Geschmack), ripeness for marketing (Reifezustand zur Vermarktung), and further remarks (Weitere Anmerkungen/Auffälligkeiten).
- Form 2 (Middle):** Evaluates growth habit (Wuchsform), plant density (Dichte der Pflanzen), growth strength (Wuchsstärke), plant loss/number (Pflanzenausfall, Anzahl), frost tolerance (Frostanfälligkeit), and uniformity of the crop (Einhelligkeit des Bestandes).
- Form 3 (Right):** Evaluates the number of flowers (Anzahl Ausblüher), leaf condition (Blattzustand, z.Z. des vollen Wachstums), leaf color (Farbe der Blattoberseite), plant health (Pflanzengesundheit), flowering time (Zeitpunkt der Blüte), flowering location (Ort der Blüte), BBCH stage (BBCH- Stadium), and other remarks (Weitere Anmerkungen/Auffälligkeiten).

Comparison Sonata vs. Sonsation

	Ertrag (g/Pflanze)			Anteil marktfähige Ware in %	Fruchtgröße, g
	marktfähig	Nicht marktfähig	Gesamtertrag		
<b>Sonata</b>	699,6	239,3	939,0	74,3	17,6
<b>Sonsation</b>	752,3	141,9	894,2	83,7	18,8



Pflanzdatum: 20. April 2016

Datum	02.06.	06.06.	09.06.	13.06.	15.06.	16.06.	20.06.	23.06.	27.06.	30.06.	04.07.
<b>Sonata</b>											
<b>Sonsation</b>											



Sonata



Sonsation



In variety testing, plant, status, growth, susceptibility yield, marketability, crippled, lazy / ill and fruit characteristics, as well as overall performance compared to our reference varieties are assessed (score sheets, see above).