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European Vegetable Research Institutes Network

What is EUVRIN

European **V**egetable **I**nstitutes **N**etwork

- an informal, voluntary network
- research institutes (including universities) or departments of research institutes, that specialize in research, development, and extension on vegetable production
- countries of the European Union, + those than can participate in COST
- Currently, 50 member institutes, 302 individual members
- **Not funded**
- Currently, some administrative support from FRESHFEL, AREFLH, AGROLINK-FLANDERS (these explained later)

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Objectives of EUVRIN

- To establish and improve **cooperation between vegetable R&D institutes and teams** within Europe.
- To promote the exchange of information on vegetable R&D through:
- To **enhance and facilitate coordinated research**, development and technology transfer
- To **facilitate joint bids** for funding of R&D in International, European programs
- **Establish and update a research agenda and communicate it to national and international, European Authorities**

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Who got EUVRIN started

FRESHFEL

- European Fresh Produce Association
- forum for fresh fruit and vegetable supply chain in Europe and beyond
- members are associations, companies with interest in European fresh fruit and vegetable sector,

ARELF

- Assembly of European Regions of Fruit and Vegetable production
- Represent, defend and promote the common interests of horticultural regions

Agrolink Flanders:

- Collaboration Platform
- Various applied research stations: ILVO, Inagro, PSKW, PCG, PCA, PCS, PCFruit, others
- Certain faculties of U. Ghent, KU Leuven
- The Flemish agricultural industry wanted access to bundled services

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History of EUVRIN

- In 2014, **FRESHFEL** and **AREFLH** created a **European taskforce** for research and innovation on fruit and vegetable research.
- In 2015, this group of experts presented a **strategic agenda** to the **European Commission** that focused on **the priorities of research for the fruit and vegetable sector** in the framework of Horizon 2020.
  - Strategic Research and Innovation Agenda (SIRA) for the Fruit and Vegetable sector v2015
- This task force recommended the creation of a European network of vegetable research and transfer centres
- This network would be similar to **EUFRIN** (**E**uropean **F**ruit **I**nstitutes **N**etwork)
- **EUFRIN:** established network of >40 fruit research centres

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Organisation of EUVRIN

7 Working groups

- Fertilisation and irrigation (105 members)
- IPM for vegetable production (77 members)
- Genetic resources and breeding (57 members)
- Greenhouse crops (99 members)
- Quality (40 members)
- Systems approach in vegetable chain (26 members)
- Post harvest physiology and technology (NEW as of October 2016) (17 members)

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Working Group, Fertilisation and Irrigation

CORE MANAGEMENT COMMITTEE

- Rodney Thompson (SP) co-ordinator - Retiring
- Janjo De Haan (NL)
- Antje Fiebig (GE)
- Angelo Signore (IT/BE)

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Working Group, Fertilisation and Irrigation

ACTIVITIES REALISED

- Data base of members and their interests (later explained by Angelo Signore)
- Preparation of SIRA document v2016 (Strategic Innovation and Research Agenda for the Fruit and Vegetable Sector)
- SIRA v2016 included detailed descrptions/justification for research on:
  - Optimising nitrogen management in vegetable production
  - Irrigation management for vegetable production
  - Fertigation management
  - Precision horticulture: integration of proximal sensing techniques and GPS
- MeWe social network
- Members encouraged to lobby on specific issues
- Meeting held in Brussels in October 2016, part of full EUVRIN meeting

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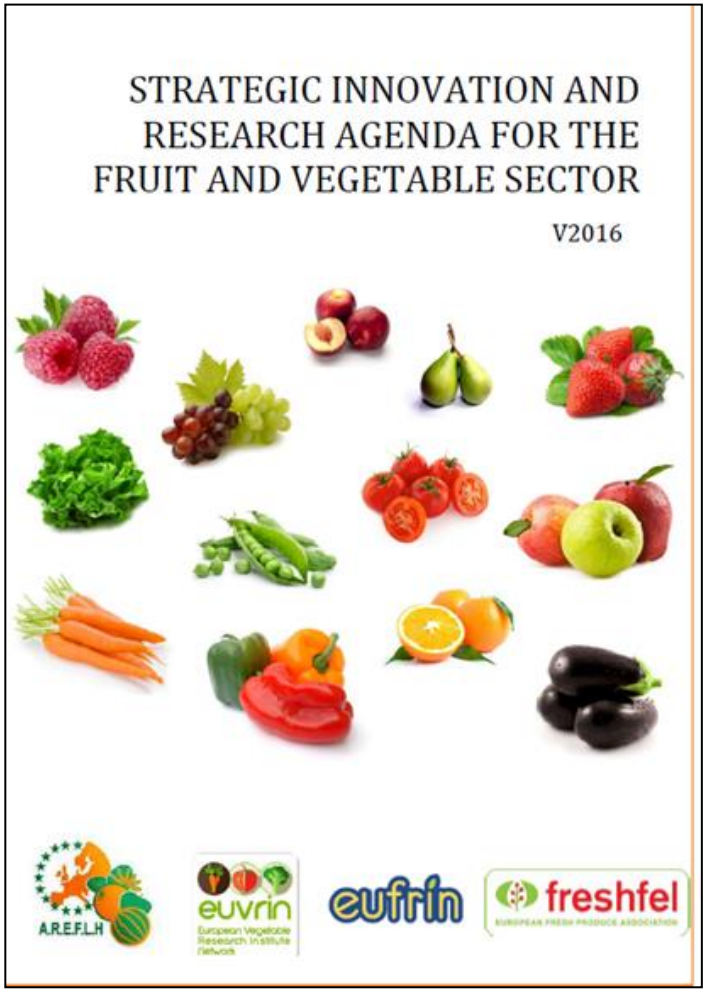
Strategic Innovation and Research Agenda for the Fruit and Vegetable Sector, V2016

Presented various suggestions for research topics to the European Commission to include in next H2020 program



SIRA document available on EUVRIN web page

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Strategic Innovation and Research Agenda for the Fruit and Vegetable Sector, V2016

Presented various suggestions for research topics to the European Commission to include in next H2020 program

7 Identification of Innovation and Research needs to address the global challenges 28

7.1 Particularities of the chain 28

7.2 Research needs for Input Suppliers and Production 28

7.2.1 Genetic Resources and their Utilization 30

7.2.2 Sustainable Plant Protection 33

7.2.3 Efficient Use of Primary Resources 36

7.2.4 Enabling Technologies: robotization and precision horticulture 39

7.2.5 Greenhouse production 41

STRATEGIC INNOVATION AND RESEARCH AGENDA · AREFLH · EUVRIN - EUFRIN · FRESHFEL [4]

- European Commission people were interested in input
- SIRA document enables active participation in the process
- Provides opportunity for feedback

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Example of input from our WG into SIRA document

Optimizing nitrogen use efficiency and securing yields in vegetable production

Specific challenge:

Modern vegetable production requires high inputs of nitrogen; most is applied as mineral fertiliser. Because of the lack of adequate tools and management procedures, excessive nitrogen application is common which in turn often results in nitrogen contamination of water bodies. This jeopardizes meeting the requirements of the EU Water Framework Directive. Simply imposing ad-hoc restrictions on nitrogen use will reduce yields and growers incomes by creating nitrogen limitations. There is a requirement for the development of management tools and approaches that enable optimal nitrogen management for the diverse vegetable crops and cropping environments of the EU.

Scope:

Proposals should provide growers, throughout the EU, with (i) tools and approaches to precisely assess the amount and timing of fertilization, and (ii) management strategies to increase nitrogen use efficiency and recycling of nitrogen at field and farm level. The overall aim is to reduce nitrogen losses to water bodies, appreciably reduce the amounts of N fertiliser applied, ensure high yields, and optimise product quality in line with EU consumers' expectations. Solutions can be high technology (e.g. optical sensors, decision support systems) or agronomic approaches, or judicious combinations of both. Solutions should be practical, user-friendly, and both labour and cost efficient. Proposals should fall under the concept of "multi-actor approach", from the producer to the researcher, thus allowing for the adequate involvement of all stakeholders in the proposed activities. This will facilitate the rapid uptake of the cross-knowledge generated within the project.

Expected impact:

1) Ensure that EU society has a plentiful supply of high quality vegetable products grown with appreciably reduced nitrogen losses to the environment, thereby meeting consumers' expectations of sustainable production of vegetables.

2) Provide EU vegetable growers with practical, easy-to-use management tools and management strategies that will enable commercially viable and environmental-friendly vegetable production

3) Ensure that the EU vegetable production is associated with sustainable land use by meeting environmental demands of the Water Framework Directive

Working Group, Fertilisation and Irrigation

FUTURE ACTIVITIES

- New coordinator
- Will be annual meeting of EUVRIN management committee in October 2017 in Brussels, WG coordinator to attend
- Revise core management committee?
- Revision of SIRA document for 2017
  - What do we include?
  - Who does the work?
- More effective lobbying?
  - Which activities?
  - Coordination within WG?
- Possible COST action
  - Topic?
  - Leader?

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EUVRIN WG Fertilisation and Irrigation workshop, Almeria, 9-11 May 2017

Nature of workshop

- Informal, with focus on discussion
- Opportunities to network, establish collaborations and consortia

Rules for workshop

- Sessions will start on time
- Please stick to time limits

Workshop Logistics

- Meeting rooms, UAL workshop bus stop, WiFi etc.

Buses from hotels in Retamar

- From Hotel Barceló Cabo de Gata

Presentations

- Make available during break prior to session of presentation

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EUVRIN WG Fertilisation and Irrigation workshop, Almeria, 9-11 May 2017

Trip to “Las Palmerillas” Research Station of Foundation Cajamar

- Bus will leave UAL at 8:15
- Bus will collect people at Hotel Barceló at 8:30
- Tour starts at 9:15 in Las Palmerillas
- Will begin with some presentations, and then visit to research facilities

Wednesday lunch

- In UAL student dining room (“Comedor”) at 13:30
- We will restart here at 15:00

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