



2nd DIGITAL NEWSLETTER



BRESOV in full swing

The **BRESOV** project, started in May 2018, is now about to reach its mid-point. Its vision of shaping the future of organic breeding and farming couldn't be more relevant with the current changing climatic conditions and a rapidly growing world population estimated to reach 9 billion by 2050.

With a budget of around 6 Mio EUR and 22 partners from the EU and beyond, **BRESOV** aims to improve the competitiveness of three of the economically most significant vegetable crops (broccoli, snap bean and tomato) when grown in an organic production system.

Report from 1st Review Meeting

The Project underwent its **first Review Meeting in Brussels** on 23-24 January 2020. Project Officer from the European Commission and two external experts (the reviewers) were present during the meeting, together with the Project Coordinator and his management team from Eurice, as well as six work package leaders and three crop group leaders.

This 1st Review Meeting followed the submission of the project's 1st Periodic Report to the Commission in December 2019. The objective was to present and answer questions on the project's progress so far, including scientific results, potential impacts, use of resources, management procedures, and beneficiaries' contributions and integration within the project. Each work package and crop group had a 30-minute presentation and Q&A with the reviewers.

The reviewers focused in particular on the issues encountered with international seed exchange and with the project's progress in creating impact through dissemination and the involvement of the stakeholders in decision making processes.

The meeting was very successful - the Project Officer thanked the Coordinator for a very well managed project and the report, the **BRESOV** team came away smiling.

We're looking forward to receiving the reviewers' full feedback report any day now!



Joint Science-Policy session of LIVESEED, ECOBREED & BRESOV

On 23 January 2020 **BRESOV** representatives participated in the **Joint Policy Session of Horizon 2020 projects LIVESEED, ECOBREED, BRESOV** organized by the European Commission.

The Commission was represented by DG AGRI, DG ENV, as well as the Directorate-General for Health and Food Safety (DG SANTE).

Objective of the meeting was to discuss with the Commission the policy recommendations in light of planning for **Horizon Europe** and the **Green Deal**. These included:

- Recommendations for improving production and use of Organic Seed
- Recommendations for describing Organic Heterogeneous Material and Organic Varieties
- Ideas for the temporary experiment on Organic Bred Varieties; material in pipeline of the three EU projects
- Challenges encountered when exchanging Plant Genetic Resources with Third countries
- Research needs for Horizon Europe (2021-2027), also in view of Green Deal (Farm to Fork strategy), new Organic Regulation

Why BRESOV is important



Dr Peter Glen Walley
University of Liverpool

"The **BRESOV** project will provide a firm base for the organic breeding sector. The use of state-of-the-art high throughput genotyping methodologies to genetically characterise diverse germplasm will greatly enhance the capture of beneficial genetic variation for organic crop improvement. By using a multi-actor approach, with the inclusion of public and private researchers, farmer associations and seed companies, new innovative approaches can be translated directly to the organic sector. This work will interlink and join up other EU projects such as LIVESEED and ECOBREED; together we hope to build a stronger, more competitive, sustainable future for all organic growers."

Meet the BRESOV team

Spotlight on Broccoli and Cauliflower

Broccoli and Cauliflower

Green beans

Tomatoes

BRESOV aims to tackle the nutritional challenges of a growing world population and changing climatic conditions by enhancing productivity of different vegetable crops in an organic and sustainable farming infrastructure.

BRESOV works on broccoli, snap bean and tomato as those staple vegetable crops have significant roles in meeting our global food and nutritional security goal, and under organic conditions can contribute to storing carbon and introducing nitrogen improving organic soil quality.

Broccoli and Cauliflower

Green beans

Tomatoes

Let's talk about broccoli and cauliflower

Broccoli and cauliflower are the vegetables that you either love or hate. Due to its high nutritional value, broccoli is cultivated and consumed in many countries around the world from Italy and the Netherlands to Japan and the United States. It is a rich source of fibres, proteins, lipids, minerals and vitamins. It is a cold temperature crop that is harvested year-round, being sowed both in spring and in autumn.

Classification and taxonomy

Broccoli and cauliflower (*Brassica oleracea* L. var *itallica* and *botrytis* respectively) are members of the Brassicaceae or Cruciferae family, also known as the mustard family, that includes other well-known members such as Savoy cabbage, Brussels sprouts, Chinese cabbage, Rutabaga, Collard greens, Kohlrabi and, of course, Mustard.

Origin, history and uses

Originally from what is now Italy, broccoli has been cultivated around the whole Mediterranean region since Ancient Roman times. The origins of cauliflower are believed to be the Northeastern Mediterranean region (Cyprus).

The word broccoli comes from the Italian word brocco derived from the Latin broccus (meaning 'projecting', a reference to the broccoli head). In Italian, broccoli is a plural word referring to the numerous sprouts in the inflorescence shape of the plant. The word cauliflower derives from the Latin words caulis (cabbage) and flōs (flower), reflecting its membership of the cabbage family.

In the 18th century, both broccoli and cauliflower were introduced to Northern Europe, particularly England and France. Towards the beginning of the 20th century, due to the large European (and especially Italian) migration, they became more and more popular in the United States. Nowadays, the US is the third largest producer of broccoli and cauliflower in the world. California is the 'broccoli state' producing more than 90% of the American broccoli.[1]

[1] More about the history of broccoli in Juurlink, B.H.J., *Broccoli. Cultivation, Nutritional Properties and Effects on Health*, Nova Publishers, New-Yorker, 2016.

Broccoli and cauliflower can be eaten fresh or preserved frozen; they can also be consumed in processed forms such as powders which can be used for soups and even coffee!

More information on key facts about broccoli and cauliflower can be found [here](#)

Latest News

Where has the BRESOV team been?

Workshop on potentialities and challenges of breeding for the vegetable organic systems



BRESOV at the University of Almería, Spain

On 28 November 2019 the **BRESOV** partners University of Almería, University of Catania, Euroseeds, CREA and University of Valencia organised a workshop on Potentialities and Challenges of Breeding for the Vegetable Organic Systems at the University of Almería, Spain. The aim was to clarify the actual EU landscape for the organic sector and understand how breeding can help bridge the perspectives of the seed industry, the organic farmers, the consumers and other stakeholders.

Find more information about this workshop [here](#)

BRESOV at BICNAPIA meeting in Fargo, North Dakota



BRESOV presenting at BICNAPIA, US

On 5 November 2019 Università Politecnica delle Marche presented some preliminary results of **BRESOV** as well as common bean diversity at the BICNAPIA meetings (2019 Bean Improvement Cooperative (BIC) & NAPIA Biennial Meetings) in Fargo, North Dakota, US.

Further information about the meetings is available [here](#)

BRESOV presented at Euroseeds congress, Stockholm

On 15 October 2019 the latest results of the **BRESOV** project were presented at the Euroseeds annual congress, which in 2019 took place in Stockholm, Sweden. The project was presented during the Vegetable section meeting at the congress that this year gathered more than 1100 seed professionals from Europe and beyond.



BRESOV at the Euroseeds congress

BRESOV at 2019 Jubilee of Agricultural and Forestry Academy, Romania



On 3-4 October 2019 **BRESOV** partner Vegetable Research and Development Station Bacau (VRDS) presented **BRESOV** at the 2019 Jubilee of the Academy of Agricultural and Forestry Sciences and 92 years of institutionalized agricultural research in Romania, addressing national authorities.

BRESOV at PhD seminar, Tunisia



On 17 September 2019 **BRESOV** activities were presented during a PhD seminar at the University Tunis el Manar, in Tunisia, partner of the project as well.

BRESOV at Solanaceae Conference, Jerusalem



On 15-19 September 2019 **BRESOV** was presented with a poster at the XVI Solanaceae Conference (SOL 2019) in Jerusalem, Israel, by the **BRESOV** partner Universitat Politècnica de Valencia.

BRESOV and other projects’ workshop, Italy

On 4 July 2019 **BRESOV** partner CREA organised a workshop on “Lo sviluppo dell’orticoltura biologica: la ricerca incontra il mondo operativo/The development of organic agriculture: research meets the operators” in Monsampolo del Tronto, Italy. The meeting addressed organic farmers and hosted presentation of **BRESOV**, DIVERIMPACTS, SUREVEG, LIVESEED, INNOVABIO projects.



BRESOV in Monsampolo del Tronto, Italy

News from the fields – and the tables!

Broccoli growers in Yuyao, China

On 3 December 2019 the University of Catania and the Zhejiang Academy of Agricultural Sciences, both **BRESOV** project partners, visited broccoli growers in Yuyao, China.



BRESOV partners visiting broccoli growers in China

Vegetable brassica breeding programme in Liverpool





During November 2019 the vegetable Brassica breeding programme has been well proceeding at the University of Liverpool, Institute of Integrative Biology (even on a cold early morning – when the picture was taken!).

Tomato project meeting and visit in Almería



On 27 November 2019 The **BRESOV** partners working on tomatoes met at the University of Almería, Spain, to discuss results and new experiments to be planned related to tomatoes. In the afternoon the whole team visited a production site of organic tomatoes, including a vegetable processing plant.



BRESOV partners involved in tomato research visit Almería, Spain.

Tomato field experiments in Catania

November was a busy month for **BRESOV** partners: University of Catania carried out tomato field experiments. Although it was winter time the nutritional tomato trial showed the effect of BCAs and aminoacids on the growth of the plants and of their roots.



Tomato field experiments at the University of Catania, Italy

Last organoleptic evaluation of the season at FiBL

On 12 September 2019, **BRESOV** partner FiBL had their last organoleptic evaluation of the season. Participants from FiBL and ProSpecieRara (PSR) tasted a variety of products to remember the sensory attributes that can be used to describe beans and then evaluated bean varieties from their variety trial.



BRESOV partners tasting a variety of crops

Bresov team and experimental field for Brassica



In October 2019 University of Catania in Sicily kicked off the 2nd year experimental field for Brassica oleracea water stress phenotyping.

Conclusion of FiBL bean variety trial, Switzerland



On 17 September 2019 **BRESOV** partner FiBL ended their bean variety trial in Switzerland. The last bean harvest of the season was done on the plants after pulling them out and evaluating them for diseases.

Tomato tasting in Paimpol, Brittany

On 2 August 2019 **BRESOV** partner Vegenov organised a tomato tasting. The event took place in Paimpol, France, during the **Chant de Marin festival**. Eight greenhouse tomato varieties were proposed to consumers for taste evaluation during this event. Consumers were asked to score the varieties by tasting at least three varieties, more if they wanted. Overall, 356 consumers participated, and each variety was evaluated at least 204 times. Additionally, the **BRESOV** poster and postcards were presented to the audience.



Tomato tasting in Paimpol, France

Summer school at University of Valencia attracts Elementary School Children

110 elementary school children of grade four (9-10 years old) attended the Summer School at **BRESOV** partner University of Valencia, Spain, in August 2019 (Escola d'Estiu 2019). They took part in the activity so called "Pomopoulus", in which the diversity of tomato was explained and used as an example of how diversity is important in agriculture and human nutrition. The children saw diversity of fruits, graded and tasted them, and transplanted one seedling each which they brought home. They also visited the germplasm bank where seeds are stored.

More information about the event is available [here](#)





[Read more News](#)

What's next?

- 12-13 February 2020: BRESOV at Workshop: **Brassica vegetable genetic resources and resistance breeding**, Skalský Dvůr, Czech Republic, by VURV
- 20-26 March 2020: BRESOV at **14th European Farming Systems Conference** (IFSA – European Group), Evora, Portugal, by UTAD
- 7-9 May 2020: BRESOV at **AHC 2020 3rd Asian Horticultural Congress 2020**, Bitec, Bangkok, by VRDS
- 2-6 June 2020: BRESOV at **4th International Symposium on Horticulture in Europe Advancing together: Enhancing quality of life through HortScience**, Stuttgart, Germany, by VRDS
- 22-25 June 2020: BRESOV at **XIII giornate scientifiche SOI (Italian Horticulture Society Scientific Days)**, Catania, Sicily, by UNICT
- 23-28 August 2020: BRESOV at **XXIst EUCARPIA General Congress**, Rotterdam, the Netherlands, by SERIDA
- 5-6 September 2020: BRESOV at **Exhibition 1001 Gemüse**, Rheinau, Switzerland, by FiBL
- 21-27 September 2020: BRESOV at **Organic World Congress**, Rennes, France, by UNICT, Vegenov
- October 2020: BRESOV at **Agralim Fair 2020** (agricultural and food fair in North East Romania), Lasi, Romania, by VRDS
- 5-8 October 2020: BRESOV at **ISHS III International Organic Fruit Symposium and I International Organic Vegetable Symposium**, Catania, Italy, by UNICT, UPV, VRDS

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Heinrich-Hertz-Allee 1
66386 St. Ingbert
Germany
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