# ISA NEWSLETTER N°9, November 2020

## International Sunflower Association

## Contents

# Editorial

*We hope that this ISA newsletter N°9 will find all its readers and their families in good health.*

*The pandemic affects the whole planet in a second wave, and most governments try to find a way to manage both health and economic consequences, which are already considerable. Although disrupted in its functioning, the agricultural sector is relatively spared and globally maintained its activity, crops are still sown, grown, and harvested. The agricultural production sector is confirmed as a permanent basis of the economy for the very basic reason that it meets a fundamental need: food.*

*For agronomists and more generally people working with life sciences, adversities linked to biology or climate are something « normal »; only the intensity of the phenomena may not be normal. And from this point of view, the COVID-19 pandemic, with 1,4 million deaths until now, is still far below the wastes of the 1918-19 influenza, which caused probably more than 50 million deaths in the world, but overpassed the 1968 influenza. We may think that scientific progress will permit to control it with vaccination, which gives at least the hope to « erase » this disease and forget this bad period.*

*The events of abnormal intensity linked to the climate change, seem to be more frequent in recent years, and also concern vital aspects for humanity. We know that erasing the problem is already not possible and that it will not be possible to forget it in the coming centuries. Science and technical development will certainly play their role for both adaptation and mitigation of climate change, but this issue certainly deserves more intensive financial efforts than done until now…*

*An association like ISA often works on medium and long-term issues and encourage us in thinking beyond short term. But as for anybody, our normal functioning is disrupted: our events, our General Assembly and board meetings, and more generally our interactions. We are obliged to play with the virus and will do our best to adapt ourselves on the short term and take the best decisions especially for our next ISA Conference. We are carefully monitoring the situation and based on new information, we will make a timely decision on holding the conference and other activities of our association.*

*We want all of us to overcome this situation as soon as possible and as easily as possible, and for all of us to return fully to our efforts to improve scientific activities and all aspects of sunflower production.*

*Dr Vladimir Miklič,*
*ISA President*

*Etienne Pilorgé,*
*ISA Secretary*

# Activity and News of the association

## Turkey: Trakya University Wild Sunflower Garden inauguration, August 2020

Nice initiative for the preservation and maintenance of wild sunflower genetic resources progresses and development of international collaboration: our former ISA President Yalcin Kaya shared this message:

"I am proudly informing you that we opened Wild Sunflower Garden in Trakya University with higher participation, with my rector and other guests as well as with higher interest of Turkish National Media. We set up our garden via a bilateral scientific project between Bulgaria and Turkey. Our garden covers almost all *Helianthus* species except some endangered species in the US with over 200 accessions. We are grateful to Dr Laura Marek supplying seeds from USDA Genebank and Sofia Genetics Institute director and our project partner leader Assoc.Prof. Dr. Roumiana Vassilevska-Ivanova and Dr Daniela Valkova from Dobroudja Institute.

We set up a web page to share all information via our web page as English and Turkish as well as QR codes on the plates of all accessions in the garden so all visitors could reach all necessary information by cell phones during their visits as Turkish and English. https://sunflower.trakya.edu.tr/

We will conduct in our project: All *Helianthus* species and subspecies; the classical characterization based UPOV criteria molecular characterization, set up DNA contents-based flow cytometry, etc. We will conduct scientific research in our wild garden as well as M Sc and Ph D student thesis and we are ready to collaborate on any kind of project with all institutions and seed companies from all parts of the world. All information, pictures will be shared as free on our web page. "


## Orobanche Atlas

**In the ISA newsletter N6 of last January, we mentioned and presented the book "Orobanche Cumana Atlas**" By Maria Duca, Steliana Clapco, Rodica Martea, Olesea Tabara. In Romanian, with many illustrations and references, it provides an overview of the main results obtained by the Moldavian research on all key aspects of O. cumana and a description of the parasite structure, distribution, race evolution, control measures etc. The electronic version of this book of common interest for the sunflower community is now available on the ISA website. See:

https://www.isasunflower.org/publications/reports-and-students-thesis/Display/Atlas%20Sunflower%20broomrape%20%28Orobance%20cumana%20Wallr.%29#

Contact: Maria Duca (ISA member)

## 20th International Sunflower Conference, Novi Sad, Serbia.

https://isc2020.com/program/program-overview/

Dear colleagues,

Currently, it is not possible for us to prognose the situation in June next year and how the Conference will be held.

The intention is to proceed as planned with a regular Conference organization. We will inform all potential participants about the form of the conference at least three months before the beginning. Thank you for your understanding.

At this moment, the Conference program and speakers remain the same, with only minor changes. Already received abstracts and papers are valid. We invite everyone interested to continue submitting abstracts and papers.

Submission is open: https://isc2020.com/call-for-papers/

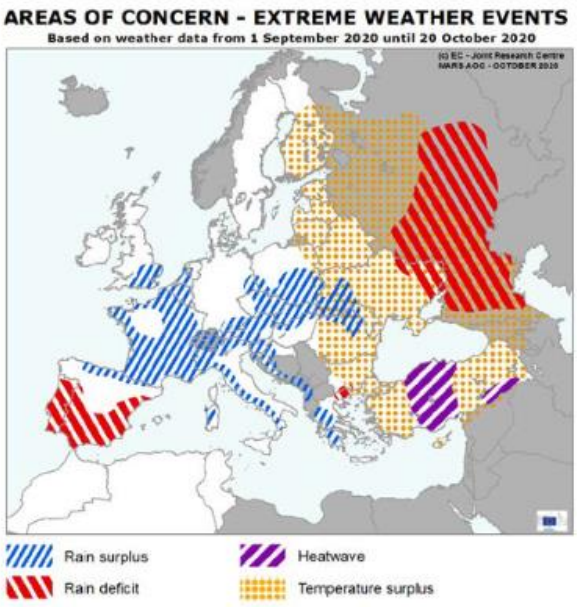
Abstract Submission Deadline: 10 December 2020
Paper Submission Deadline: 20 March 2021
Registration is open: https://isc2020.com/participation-fees/
Regular fee deadline 20 May 2021
On site fee from 21 May 2021
The conference website remains active and all conference information will continue to be published there.

See you next year in Novi Sad!
20th ISC Organizing Committee

# Value chains and regional news

## Europe

The European Commission – JRC MARS Bulletin published last October 26th, its crops forecasts, revised downwards since September. The end of sunflower season in Europe may have been affected by rainfall in Western Europe for the latest crops. "Warm and dry summer weather continued throughout the first three weeks of September in most of Europe" but "abundant rainfall and a clear rain surplus were recorded in the second half of the analysis-period in most parts of central and western Europe and the central and eastern Mediterranean region. These wet conditions at the end of September and October caused delays to the harvesting of summer crops. "




| Crop | Yield (t/ha) | | | | |
|---|---|---|---|---|---|
| | Avg 5yrs | September Bulletin | MARS 2020 forecasts | % Diff 20/5yrs | % Diff September |
| Grain maize | 7.58 | 7.83 | **7.42** | – 2.1 | – 5.2 |
| Potato | 32.4 | 32.8 | **32.6** | + 0.4 | – 0.8 |
| Sugar beet | 74.6 | 73.0 | **72.5** | – 2.8 | – 0.7 |
| Sunflower | 2.25 | 2.21 | **2.15** | – 4.2 | – 2.7 |
| Soybean | 2.94 | 3.05 | **3.01** | + 2.5 | – 1.3 |
| Green maize | 40.1 | 40.0 | **40.0** | – 0.2 | + 0.1 |

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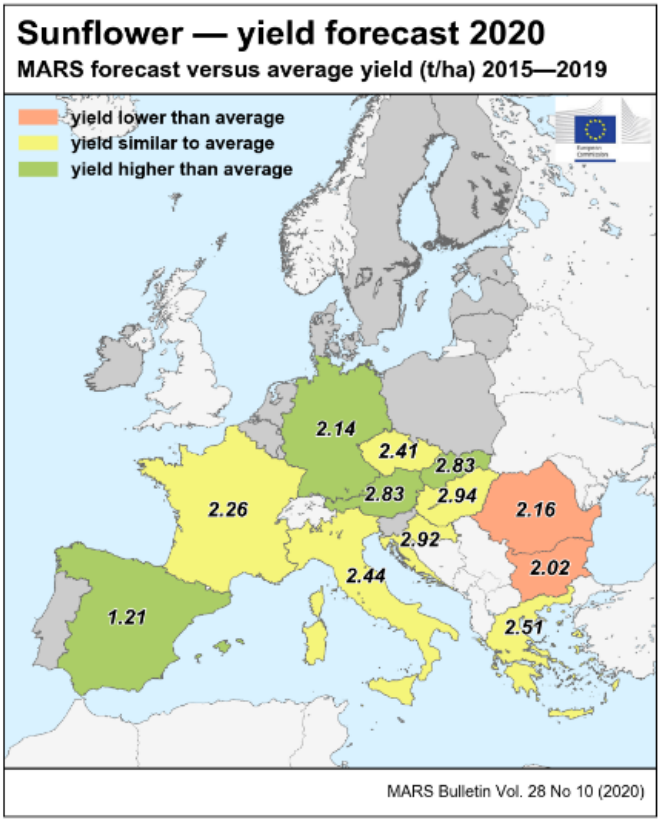
Globally, yield results are relatively good in the western part of Europe, similar or higher than 5 years average, but heavily affected by the lasting warm and dry conditions in Romania and Bulgaria (see newsletter N°8).

| Country | Sunflower (t/ha) | | | | |
|---|---|---|---|---|---|
| | Avg 5yrs | 2019 | MARS 2020 forecasts | %20/5yrs | %20/19 |
| **EU** | 2.25 | 2.32 | **2.15** | – 4.2 | – 7.1 |
| AT | 2.68 | 3.00 | **2.83** | + 5.7 | – 5.8 |
| BE | — | — | — | — | — |
| BG | 2.28 | 2.35 | **2.02** | – 11 | – 14 |
| CY | — | — | — | — | — |
| CZ | 2.43 | 2.44 | **2.41** | – 0.9 | – 1.2 |
| DE | 2.02 | 2.04 | **2.14** | + 6.1 | + 4.7 |
| DK | — | — | — | — | — |
| EE | — | — | — | — | — |
| EL | 2.59 | 2.80 | **2.51** | – 3.0 | – 10 |
| ES | 1.15 | 1.12 | **1.21** | + 5.2 | + 7.9 |
| FI | — | — | — | — | — |
| FR | 2.27 | 2.15 | **2.26** | – 0.6 | + 4.9 |
| HR | 2.90 | 3.02 | **2.92** | + 0.7 | – 3.2 |
| HU | 2.88 | 3.00 | **2.94** | + 2.1 | – 2.0 |
| IE | — | — | — | — | — |
| IT | 2.37 | 2.47 | **2.44** | + 2.8 | – 1.2 |
| LT | — | — | — | — | — |
| LU | — | — | — | — | — |
| LV | — | — | — | — | — |
| MT | — | — | — | — | — |
| NL | — | — | — | — | — |
| PL | — | — | — | — | — |
| PT | — | — | — | — | — |
| RO | 2.47 | 2.64 | **2.16** | – 13 | – 18 |
| SE | — | — | — | — | — |
| SI | — | — | — | — | — |
| SK | 2.66 | 2.64 | **2.83** | + 6.2 | + 7.2 |




For more details, including comments per country, see: https://ec.europa.eu/jrc/sites/jrcsh/files/jrc-mars-bulletin-vol28-no10.pdf

In Ukraine, trend similar to Bulgaria and Romania is mentioned: the JRC confirms its forecasts of the specific Ukraine Bulletin of September (https://ec.europa.eu/jrc/sites/jrcsh/files/jrc-mars-bulletin_ukraine-september_2020.pdf ), yields lower than in 2019 (-4,8%), but still better than 5 years average. The USDA World production report published on October 9 gives more details and seems to be even less optimistic: "Ukraine sunflower seed production for 2020/21 is estimated at 15.0 million metric tons (mmt), down 12 percent from last month and down 9 percent from last year. Yield is estimated at 2.21 tons per hectare (t/ha), down 12 percent from last month and down 14 percent from last year. Harvested area is estimated at 6.8 million hectares, unchanged from last month and up 6 percent from last year." (more details at https://apps.fas.usda.gov/psdonline/circulars/production.pdf ).

## Sunflower in North America

Sunflower progresses in septentrional regions. As reported by the US National Sunflower Association (see https://www.sunflowernsa.com/magazine/articles/default.aspx?ArticleID=3909), the Canadian sunflower acreage progressed from 55900 acres ( 22600 ha) in 2019 to 100000 acres (40470 ha) in 2020, principally in Manitoba, which means a 79% increase.

This trend is common with the traditional production areas in USA, since the 2020 US acreage rises by 26% compared to 2019, reaching 1,7 million acres (688 000 ha) for a total production estimated at 1,27 Million tons, up 44% compared to 2019.

### Argentina

The USDA World production report published on October 9th mentioned a decrease in 2020/21, sunflower acreage by 9% compared to last year, at 1,4 million ha. “Soil moisture is favorable in the province of Buenos Aires; however, increased precipitation is needed in northern and central Argentina. The combination of reduced rainfall and warmer-than-average temperatures has resulted in soil moisture deficits.” (https://apps.fas.usda.gov/psdonline/circulars/production.pdf )

### Industrial design modelling

Sharing results may be a smart way to advertise about services: We found on Research Gate, this presentation of an application of a software designed by INTELLIGEN INC, SuperPro Designer®, to the case of a Sunflower seed crush plant, as example.
Stavropoulos, Y., & Petrides, D. Sunflower Seed Crush Plant Process Modeling and Evaluation using SuperPro Designer®.
https://www.researchgate.net/profile/Demetri_Petrides/publication/342505501_Sunflower_Seed_Crush_Plant_-_Process_Modeling_and_Optimization_using_SuperPro_Designer/links/5ef7f291458515505078afbb/Sunflower-Seed-Crush-Plant-Process-Modeling-and-Optimization-using-SuperPro-Designer.pdf

# Scientific news

## Publications

#### GENETICS AND BREEDING

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# Coming international and national events

**13-14 January, 2021 : Sunflower Research Forum, USA**
*Call for Papers:* The National Sunflower Association is inviting research papers for presentation at the 2021 Sunflower Research Forum, which will be held virtually via Zoom, due to the ongoing Covid-19 situation, on January 13th and 14th, 2021.
https://www.sunflowernsa.com/Research/call-for-papers/

~~22-25 June 2020~~, **Postponed: 21-24 June 2021 : 20th International Sunflower Conference, Novi Sad, Serbia.**
https://isc2020.com/


~~6-10 September 2020,~~ **Postponed: June 20-24, 2021**: **32nd Annual Meeting AAIC Association for the Advancement of Industrial Crops. Bologna, Italy.**
www.aaic.org

***We invite all the persons who read this newsletter to share information with the Sunflower community: let us know the scientific projects, events organized in your country, crops performances or any information of interest for sunflower R&D.***

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