ISA NEWSLETTER N°12, March 2022

International Sunflower Association

Contents

Editorial

The vegetable oil sector was already in a very tense situation due to climatic (rapeseed) and socio-economic (palm) events. The war in Ukraine is directly affecting the world's leading sunflower producer, which accounts for 33% of oil production and almost 50% of world exports, and causes an explosion in energy prices, resulting in historically high prices for the vegetable oils complex on very short term, causing heavy difficulties for importing countries.

Beyond these figures and the massive effects on the markets, there are people, agronomists, or researchers, whom we sometimes have the opportunity to meet at conferences and events organized by ISA, or in the framework of scientific collaborations.

Some research institutions are setting up emergency reception systems for researchers who have been willing and able to leave their country. This dramatic moment is certainly the right one for solidarity in the sunflower world.

With the help off its members, ISA will continue to do its best to contribute to peace, through scientific exchange and the development of relationships between researchers and agronomists around the world.

May the coming sunflower conference be the place and symbol of the strength and solidarity of the sunflower community.

Etienne Pilorgé, ISA Secretary

Activity and News of the association

War in Ukraine and sunflower community: help to Ukrainian researchers

The war in Ukraine, the world leader in sunflower production, is of direct concern to the whole sunflower research and innovation community. We regularly meet with colleagues from Ukraine, scientists, and agronomists, at events organised by ISA or in the framework of collaborative projects.
Faced with the situation, some national institutions and ISA members are mobilising to offer assistance to Ukrainian researchers and possibly their families by hosting them at least temporarily.
In Spain the Spanish National Research Council or CSIC has launched an initiative to host researchers holding a PhD degree in the different research centres located in Spain. Among these centres, the Institute for Sustainable Agriculture is focused on agricultural research and can host researchers with expertise in this research area. It can offer between 3 months and 2 years duration contracts to women of any age and men older than 60, since they are allowed to leave Ukraine. This offer is open not only to the sunflower community but also to researchers working on other crops. Interested researchers can send a brief (1 page) CV resume to Dr Leire Molinero

(leire.molinero(at)csic.es). Researchers that, holding a PhD degree, have expertise in research areas different of agriculture can also send CVs and the CSIC will try that they join any other of its research centres.
In France, INRAE welcomes Ukrainian scientists who wish to come to its laboratories with the help of the PAUSE programme. An emergency fund will help the researcher and its family for 3 months before applying to the PAUSE program. Hosting will be possible notably at INRAE Toulouse (contact: Stéphane Muños - stephane.munos(at)inrae.fr and Nicolas Langlade - nicolas.langlade(at)inrae.fr) and at AgroParisTech (Paris-Versailles). Terres Inovia can also provide additional support to visiting Ukrainian scholars in these institutions. (Contact: contact(at)isasunflower.org or e.pilorge(at)terresinovia.fr)
Some ISA members in Ukraine's neighbouring countries are already active in hosting their Ukrainian colleagues and their families who have communicated their need.
ISA will help in receiving assistance needs, organizing contacts with assistance and diffusing offers from institutions as well as private members on its website, and adapt its support to situations. Do not hesitate to send us assistance offers or needs.
Contact: contact(at)isasunflower.org or e.pilorge(at)terresinovia.fr

Victor Burlov Vasilievich

Dr Victor Burlov Vasilievich passed away on 17th February 2022. He was indeed an extremely well-known breeder on a world scale and is credited with many achievements, especially in creating hybrids resistant to new races of broomrape. He also won the 2008 Pustovoït Award and was an honorary member of ISA.

Dr Viktor Burlov (1938-2022)

Dr Viktor Burlov was born in 1938 in Odessa, Ukraine. He graduated from the Faculty of Agriculture in Odessa in 1960 and worked for several agricultural enterprises as an agronomist between 1961 and 1966. During the 1967-1970 period, he worked on his master's thesis at the Plant Breeding and Genetics Institute in Odessa. Upon receiving his master's degree, he began working at the said institute and has been at the helm of its sunflower breeding program since 1971 until the present day. In 1988, he received his PhD degree with a thesis on the study of heterosis and resistance to diseases and broomrape.

It is important to note that from his very first day on the job at the Odessa institute, Dr Burlov resolutely insisted on conducting research on inbreeding, heterosis and development of hybrids in sunflower even though there was a lot of opposition to this type of research in the USSR of the time. Dr Burlov has developed and studied the combining abilities of a large number of inbred lines. As early as 1974, he developed the first sunflower hybrid based on genetic male sterility containing the marker gener Rassvet. This achievement was soon followed by the development of a whole series of hybrids based on cytoplasmic male sterility, including Od-122, Od-123, Od-504, Zgoda and others (Official Catalogue, Ukraine, 1979-1990). These were the first Ukrainian hybrids used on a large scale in commercial sunflower production. Most of them are grown even today. Later, Dr Viktor Burlov has

developed a batch of breeding materials that was the basis for the development of several new sunflower hybrids, the most important of which are Zliva, Zachist, Znachidka, and some others (Official Catalogue, Ukraine, 1999- 2006). These hybrids are genetically resistant to broomrape races E and F and have resistance to races 710 and 730 of downy mildew as well as tolerance of Phomopsis, Sclerotinia and Rhizopus. The breeding material developed by Dr. Burlov is of great international importance as well, as it has been used in several programs on joint hybrid development run in partnership with various international organizations working on sunflower breeding. The first among these organizations were the Institute of Field and Vegetable Crops in Novi Sad, Rustica, and the GKI from Hungary. The joint program with Rustica has produced the joint hybrids Medalion and Ursus, which are resistant to race E of broomrape and are successfully grown in Turkey, Romania, Italy, and some other European countries. After that, Dr Burlov has also established joint hybrid programs with a number of other companies, including Soltis (Limagrain), Advanta, Danisco, and others. Joint hybrids developed by Dr Burlov and various partner companies played an important role in European sunflower production. In total, Dr Burlov has developed more than 30 Ukrainian and over 10 joint sunflower hybrids. Dr. Burlov developed set of inbred lines with special emphasis on productivity and resistance to broomrape, downy mildew, drought, Rhizopus, Sclerotinia, and Phomopsis.

Besides developing sunflower hybrids, Dr Burlov has authored or co-authored more than 100 scientific papers and has participated in a large number of domestic and international conferences. He has also mentored nine MSc theses and has in the course of his career proven himself to be an outstanding educator, earning him the title of university professor. Overall, Dr. Burlov was a figure of great authority among sunflower breeders and growers, especially in Ukraine and other former Soviet republics.

Dr. Burlov was an honorary member of ISA. For his contribution to the development of sunflower hybrids, he won the 2008 Pustovoit Award.

In addition to great merits for the improvement of sunflower cultivation in the world, all who knew him will remember him as a noble and selfless friend of a cheerful spirit, always ready to help everyone.

May he have eternal glory.

20th International Sunflower Conference, Novi Sad, Serbia

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

Dear colleagues,

The 20th International Sunflower Conference, hosted by the Institute of Field and Vegetable Crops (IFVCNS) will be held in Novi Sad on 20-23 June, 2022. Since our last newsletter, travelling and event organization have both become more feasible as the situation with Covid19 is getting under control. We will provide appropriate information and services both online and onsite to safeguard the health, safety, and security of all conference participants.

There is still time to submit papers!
Paper Submission Deadline: 20 March 2022
Submission Guidelines are available at **https://isc2020.com/call-for-papers/**.

The special issue of Agronomy-Basel journal (ISSN 2073-4395; SCIE, 2020 IF 3.417) is also open for submission.
Deadline for submissions: 20 September 2022
https://www.mdpi.com/journal/agronomy/special_issues/sunflower

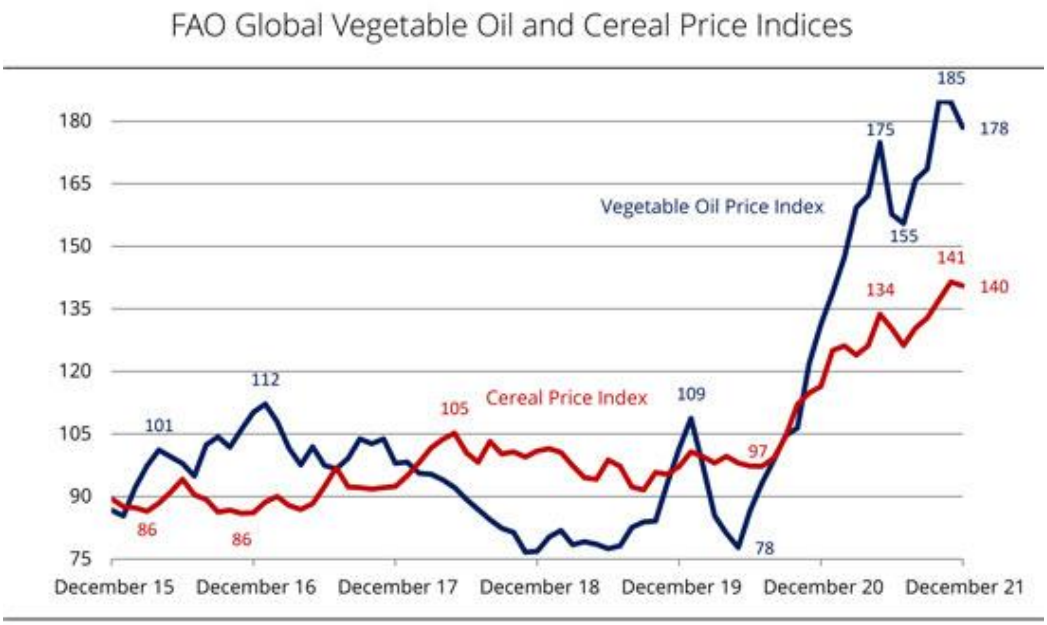
Registration is still open: **https://isc2020.com/participation-fees/**
Additional information can be found with the supporting agency Panacomp.
Regular fee deadline: 20 May 2022
On site fee: from 21 May 2022

The conference website remains active, and all conference information will continue to be published there. https://isc2020.com/

See you soon in Novi Sad!
20th ISC Organizing Committee

Value chains and regional news

FAO vegetable oil price index 2021 hit historical annual highs in January, before the war in Ukraine



Source: FAO Price Index, AMI

The FAO price indices of vegetable oil and cereals in November 2021 reached an all-time high at 185 and 141 points, respectively. In December, the indices declined slightly.

Looking at the entire year 2021, the FAO vegetable oil price index was at on average 164.8 points, which was up 65.4 points from the previous year's level. This translates to a 65.8 per cent rise to a new annual high.

The FAO Vegetable Oil Price Index averaged 185.9 points in January, up 7.4 points (4.2 percent) month-on-month, marking an all-time high. The rise reflected higher quotations for palm, soy, rapeseed and sunflowerseed oil. After a short-lived drop, international palm oil prices rebounded in January, largely underpinned by concerns over a possible reduction in export availabilities from

Indonesia, the world's top palm oil exporter, as well as subdued output in key producing countries. World soyoil prices also recovered, supported by robust import purchases, particularly from India. In the meantime, rapeseed and sunflowerseed oil prices were buoyed by, respectively, lingering supply tightness and surging global import demand. Rising crude oil prices also lent support to international vegetable oil values.

Sources Ufop https://www.ufop.de/english/news/chart-week/#kw02_2022 and FAO release 3rd Feb 2022 https://www.fao.org/worldfoodsituation/foodpricesindex/en/?_=1332420646600

Sunflower markets and war in Ukraine

The war in Ukraine which started on 24th February affects the main sunflower producing and exporting region in the world. Ukraine alone represents 30% of the world sunflower seeds production and 33% of the sunflower oil production, and the major part of this production being processed in the country, Ukraine is the first sunflower oil exporter in the world with almost half of the sunflower oil exports. Ukraine has a strategic position in the sunflower market as the world's largest seed producer and the world's largest crusher and exporter of oil. Ukraine also produces other oilseeds: around 4500kT of soybeans and 1250-2000 kT of rapeseed.

2019/20 Oil World statistics July 2021 ed	**PRODUCTION**			**EXPORTS**		
1000 T	**seeds**	**oil**	**meal**	**seeds**	**oil**	**meal**
Ukraine	16500	7168	6440	76	6763	5164
Russia	15379	5978	5577	1278	3706	1998
Romania	2900	554	634	115	87	160
Bulgaria	1914	600	618	313	271	206
Moldova	840	171	156	379	143	112
Turquie	1470	1170	1349	48	629	5
Georgie	3	3,9	4,3	0,1	0,4	1,1
Black Sea Region (main sunf producers)	39006	15645	14778	2209	11599	7646
World	55632	21534	21978	3616	13698	8996
% from Black Sea main producers	*70%*	*73%*	*67%*	*61%*	*85%*	*85%*
% from Ukraine	*30%*	*33%*	*29%*	*2%*	*49%*	*57%*
% from Russia	*28%*	*28%*	*25%*	*35%*	*27%*	*22%*

The Russian Army's attack on Ukraine has surprised the world by its intensity and scale. The war is generalised to the whole of Ukraine, unlike in 2014. This tragic episode had a considerable impact on the Ukrainian market, which saw all its commercial activity come to a halt. There has been no trade since Thursday 24 February. The loading ports are closed and will only reopen at the end of the conflict. Shipowners are no longer chartering ships for the Black Sea in general for fear that one of their vessels will be damaged by the fighting. Ukrainian sunflower crushing plants and ports have ceased all activity. It will be difficult to find an effective alternative in the current context of tight supplies of other vegetable oils. In addition to this, the continuation of the conflict could eventually hamper the next harvest in Ukraine, in terms of supplies of seeds, plant protection products, etc.

This situation may have destabilizing direct effects on edible oil procurements of the traditional customers of Ukraine, like India, China, Egypt, Iraq, and many others, which will have to look for alternatives in context of growing prices of the oil complex. Imports of sunflower oil from Ukraine represented in 2020 14% of the total oil and fats imports of India for example, and 9% for China, 7% for Egypt and 57% for Iraq. Ukraine is also a major cereals exporter.

Among the reactions in Europe, the French Company Saipol (Avril Group), which transforms "more than half" of French oilseed crops, announced on 7th March that it redirects sunflower destined for biofuels towards food. Saipol, which has a reserve of oilseeds intended for energy use, has already taken the decision to direct all its sunflower oil production towards the food market in order to ensure

the continuity of supply to industrialists. (Read more on https://presse.groupeavril.com/press-info-situation-update-conflict-in-ukraine/?lang=en)

USDA: 2021 Production Down 36% from 2020

The NSA Sunflower Magazine in its February issue reports that U.S. sunflower production dropped by 36% in 2021 compared to 2020 according to the USDA January annual crop summary. The 2021 drought-hit crop year's output totalled 861kT, as contrasted to 2020's total of 1352kT. At 789kT, oil-type production declined by 34% compared to the previous year; nonoil sunflower production was 75,8kT in 2021, a drop of 54% from 2020's level of 169 kT.

Harvested oil-type area totalled 461000 ha for the eight surveyed states in 2021; that compared to 587000 the prior year. Average oil-type yield was 1,71T/ha last season, as compared to 2 T/ha in 2020. Nonoil harvested area was 42200 ha in 2021, down 51% from 2020's 86400 acres. The average nonoil yield came in at 1,8 T/ha, according to USDA. That was down from 2020's average of 1,9T/ha."

Read more in NSA Sunflower Magazine Feb 2022,
https://www.sunflowernsa.com/magazine/articlesdefault.aspx?ArticleID=3990

Scientific news

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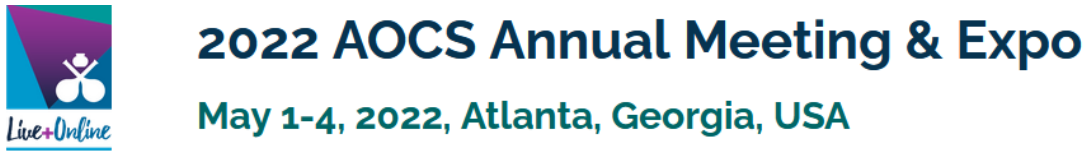
Coming international and national events

AOCS Annual Meeting, May 1-4, 2022, Atlanta, USA / live and online
https://annualmeeting.aocs.org/



20th International Sunflower Conference, 20-23 June 2022, Novi Sad, Serbia.
https://isc2020.com/

15th International conference on precision agriculture, 26-29 June 2022, Minneapolis, USA https://www.ispag.org/icpa

European Society o Agronomy Congress, August 29th to September 2nd, 2022 Potsdam, Germany,
https://esa-congress-potsdam2022.de/frontend/index.php?folder_id=4191&page_id=

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