



Juiceletter

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DECEMBER 2020

The
HiStab Juice
Project

Associations
reports

IFU's
Juicypedia

**The IFU Crop and
Processing Reports**

AN OPPORTUNITY FOR CHANGE

2020 is coming to an end and will leave us with an unprecedented experience, that none of us saw coming but became a reality.

If there is one learning from this, it is that IFU as a highly globally networked organization has been able to gather diverse information and insight quickly all the time during the year, to help making the necessary decisions on program and activities adjustments. The intense participation of all of IFU's stakeholders have assisted us to make the best out of the year and our gratitude goes out to all that supported.

Despite all, 2020 was not a year during which the IFU stood still. We meanwhile have over 200 members with over 1200 individuals from those members actively registered and using the membership benefits. Virtual webinars throughout the year, replaced the cancelled workshop in Vienna and most of the usual IFU commission and executive committee meetings were successfully held, using the same platforms. Working remotely, has enabled significant engagement with members and participation in our commissions and this will for sure be a feature of the IFU going forward.

In our strive to further internationalize and professionalize we have made great steps, such as enhancing our cooperation with the Chinese Beverage Industry Association CBIA and also working hand in hand with the FAO on their initiative to reduce food loss and waste. This initiative will continue into 2021 which also is the International Year of Fruits & Vegetables, highlighting health and nutritional benefits through sustainable production and consumption. On sustainability we have worked hard with the outcome of our membership survey in hand and have discussed with the Juice CSR Platform to become their global partner while working closely with the AIJN on the European sustainability agenda.

Through an improved segmentation of the regional IFU structure, which was approved during our first ever virtual Assembly of Delegates, we not only have more access to our existing

membership world-wide but also have more nearby regional representation which will help to bring added value to a large number of potential new members. Our membership comes from both up and downstream in the juice supply chain and is beginning to expand outside the juice industry through the use of B2B products in non- juice B2C applications. Aintzane recently joining our management team, will certainly help to support service to this larger and increasing membership base.

Let us here also use the opportunity to express a big thanks, to Don Sporn, Klaus Heitlinger and Yuval Katzir who after so many years being active are taking a step back. Congratulations to the re-elected, re-positioned and newly appointed colleagues and last but not least a big thanks to Dirk during who's 6 years of presidency the IFU has transformed and prepared itself for an enhanced role on a global scale.

The new year will be different for sure and we have begun to plan our activities and agenda for 2021. At which point we all can safely return to live meetings is still uncertain, but on our itinerary we have the Juice Conference in South Africa mid-May, the Technical workshop and IFU University in Parma mid-June and with our partners the SGF and AIJN the Juice Summit early October. The roadshows with SGF also are very much on our agenda which like last year will be initially virtual events in the first part of the year.

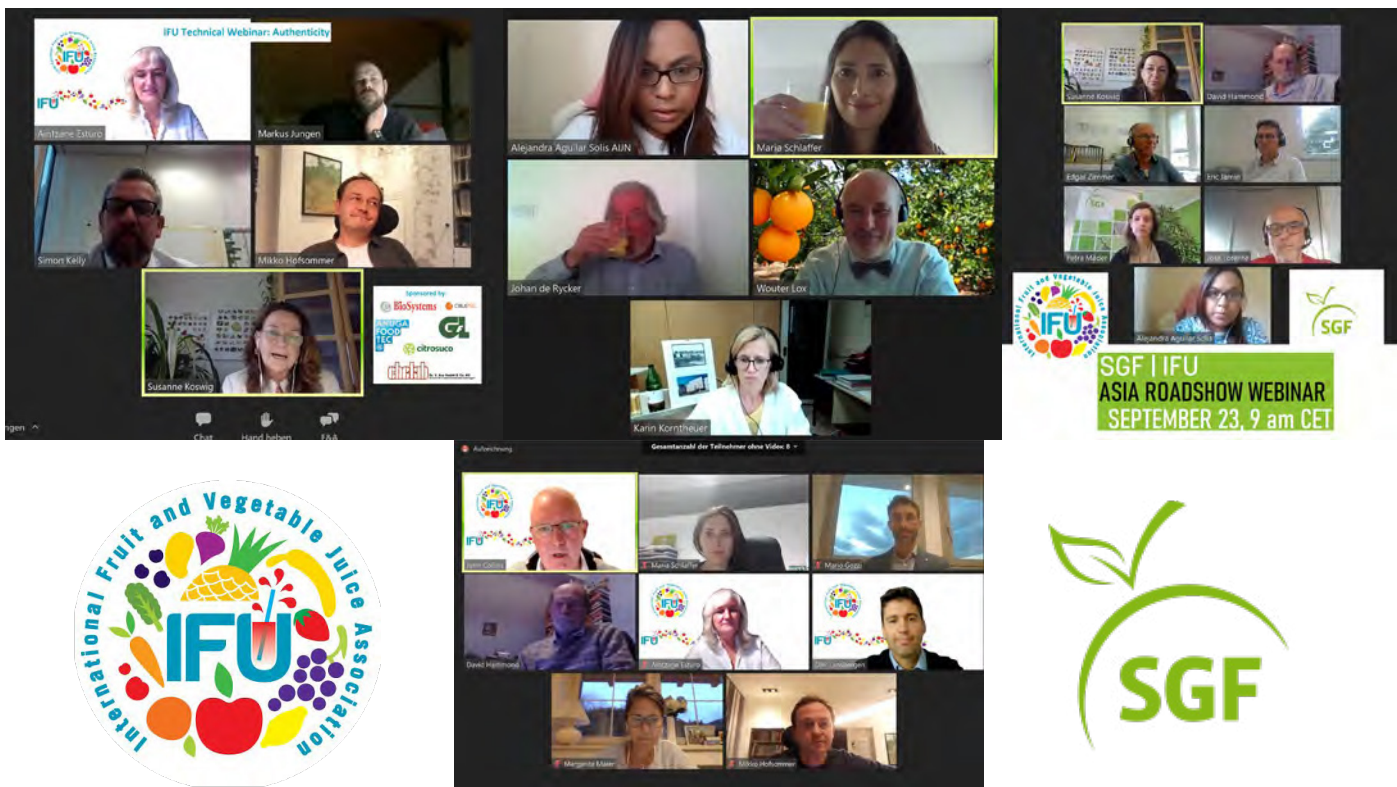
The IFU team has shown to be creative, committed improvisers and as well as our members. This has supported our industry, to put juices back in the diets of consumers worldwide as an important element in their nutrition to stay healthy. That creativity can also deliver funny results, you can see from the cover photo, made by Marina Kolganova from Russia, with which she became one of the winners of our cover competition.

With lessons learned, having found new ways to enjoying operate and wishing a bit of fun, a Juice-full 2021 you



Even during the pandemic, our Executive Director John Collins participated at the CBIA meeting – as virtual speaker!

KEES COOLS IFU
PRESIDENT



As we come to the end of 2020, I just wanted to highlight some of the services provided and work carried out by IFU to support all our members in the juice industry.

• **MORE STANDARDS AND PUBLICATIONS, ENHANCING THE MEMBERSHIP KNOWLEDGE LIBRARY**

- » 8 new/ revised standards issued
- » (Methods, Recommendations and Best Practice Guidance)
- » Summary of international legislation on additives and processing aids
- » Updates of major fruit crops
- » Compilation of crop data into a compendium, available in "Juicypedia" section of the IFU website

• **ACTIVE IN INTERNATIONAL ORGANISATIONS, WHERE IFU REPRESENTS THE JUICE INDUSTRY**

- » Providing updates from Codex, WTO, FAO, ISO and WHO
- » Participation in 10 Codex electronic working groups, providing position papers to proposals and developments.
- » Representing IFU at the Codex Alimentarius Commission held over 7 sessions.
- » Responding to 3 WTO notifications and 2 ISO specification proposals.
- » Collaboration agreements with FAO, World Citrus Organisation and OIV

- » 21 IFU Commission and working group remote meetings organised
- » Appointment of a full time Technical Director – Aintzane Esturo, providing additional member support
- » Launch of the "IFU Connector" project, giving an opportunity to link "Start Ups" with industry
- » IFU became a supporting organization in the "Hi Stab" juice project
- » Grew the International network to 212 members, with over 1,250 individuals registered.

• **NETWORKING IN IFU EVENTS, SUCCESSFULLY WENT VIRTUAL ENABLING GLOBAL MEMBER ACCESS**

- » Special Juice Authenticity webinar – free to members
- » Conversion of the Technical Workshop Program into a series of 4 webinars with 14 presentations
- » All webinars were made available to view on demand
- » All presentations (including past IFU event presentations) available in "Juicypedia"
- » 3 IFU/SGF Roadshow webinars (for different time zones)

As we transition into 2021 (The International Year of Fruit and Vegetables) we sincerely appreciate your continued support, cooperation and membership.



ACTIVE EXPERT COMMISSIONS (OPEN YOURS, JOHN COLLINS IFU EXECUTIVE DIRECTOR

Meet the **new members** of our **Executive Board!**

In the beginning of October, the IFU held elections during their virtual General Assembly. Not only have the members unanimously voted for Kees Cools as new President and Demir Sarman as Vice President, but also welcomed new regional representatives in their Executive Committee.

IFU Executives can stay on the board for two three year terms , and in 2020, the second term has ended for Dirk Lansbergen as President, Kees Cools as Vice President, treasurer Klaus Heitlinger and the regional representatives Demir Sarman (Eurasia and South Eastern Europe), Monther Alharthi and Yuval Katzir (Middle East and Africa) and Peter Gates (Oceania). First of all, we want to send a big THANK YOU to those leaving the Executive Committee, we wish them lots of success and look forward to seeing them at one of our live events in the future.

But as we see this year: not all “good bye`s” are meant to last forever, and there is always the chance that one day, we might re-welcome them in another position in our board.

Within the last six years, Dirk Lansbergen, founder of Juice Alliance, has reinvigorated the IFU and led the association into

very successful times by developing and following his “core and more” initiative. The association and its members would like to express their gratitude for all the work he has done and how he has inspired the Board. Kees Cools, former Vice President, is proud to take the role of President from Dirk. Kees is well known within the juice industry as long standing Executive Director of the Doehler Group, he is looking forward to getting even more involved in the IFU now than he was before. The role of Vice President is filled by Demir Sarman, Agribusiness, Energy and Industry Group President at Anadolu Grubu and former Managing Director and CEO of Anadolu Etap. Both have decades of experience within the juice industry and great networking possibilities within the food and beverage sector.

Peter Gates from the Australian Beverage Council and Managing Director of Doehler Australia/New Zealand has taken over the role of treasurer, while IFU also welcomed “new arrivals” to the Executive Committee: The new position as representative for Africa was taken by Slim Othmani, Chairman of NCA-Rouiba and active part of the Association of Algerian Beverage Producers (APAB), while Tatiana Paula de Campos, International Relations Manager at CitrusBR, will represent South America.

IFU thanks the new, but of course also the “old” members of the Executive Board for their ongoing voluntary support of the fruit and vegetable juice industry. Make sure to read in the commission reports what they have achieved in 2020 and what accomplishments they are planning for 2021!



Kees Cools

Kees Cools, The Netherlands: *“The global juice business is facing many challenges while opportunities are manifold. The industry needs guidance and direction which IFU is providing”*

Demir Sarman

Demir Sarman, Turkey: *“I truly believe in the merits of juice world. We are proud of contributing to the well being of the individuals and the society, through health benefits and through sustainable agriculture and food systems of which we form a significant part.”*



Peter Gates

Peter Gates represents the Australian Beverage Council and is MD of Doehler Australia/New Zealand. He was appointed Treasurer of the IFU in October 2020. Peter has been a member of the IFU Executive Committee since 2016 and active participant on the Legislation Commission, a juice career veteran having spent over 20 years within Australia’s biggest juice processor and leading brand owner, which culminated in having total responsibilities for 5 manufacturing facilities. Most recently as MD Doehler ANZ at Doehler Group, a passionate regional advocate of the industry and broader food and beverage industry.

Slim Othmani

Slim Othmani, Algeria: *"I'm proud of being member of IFU for more than 20 years and my commitment and the one of my company to the development of the juice industry in my country and in north Africa became part of our DNA. The yearly conference and the continuous updates that we received from IFU helped us level-up the technical skills of our teams. Now has come to share with other countries of the region all what can be brought to their economies in terms of job creation and world value chain integration through a professional and dynamic fruit based drink industry.*

In the process of the booming economy of the African continent the agribusiness industry has a significant share and part of it is the fruit value chain. The world is in need of good and healthy products and African continent could fulfil this demand by creating awareness among the fruit transformation industry. I really wanted to make IFU the leader in fostering the development of the fruit industry in a sustainable manner. Attracting players of the value chain to join IFU will allow us to promote good practices within the industry and to create an impressive network of suppliers and buyers and last but not least to make available a diversified offer of products.



Tatiana de Paula Campos

Tatiana de Paula Campos , Brazil: *"I am very honored to represent Brazil and South America in the IFU Excom Board. As an International Relations executive and enthusiast, being able to promote the juice industry closely with distinguished professionals from different continents and countries will be a privilege. Looking forward to it!"*

David Hammond

Dr. David Hammond, UK: *"As the newly elected chair of the legislation Commission I am re-joining the Exec committee after a period of 8 or more years (previously sat as Chair of the analytical methods commission as it was called then). I always enjoyed the Exec meetings as it allowed me to have an additional influence on the Association and its activities to promote the fruit juice industry. It has been strange joining the group again as it is a whole new team and having remote meetings this year has been even stranger! However, with the new team within the organisation we have a great team to drive the interests of the Industry forward in the future."*



Margarita Maier

Spending today complaining about yesterday won't make tomorrow any better". This is why I joined IFU. Being part of the conversation is the best way to ensure sustainability in our industry.

Visit

<https://ifu-fruitjuice.com/page/whoswho> to get to know our Executive Committee Team members!



LEGISLATION LEGISLA TION Commission update Commission update



DR. DAVID HAMMOND LEGISLATION CHAIR

As mentioned in my last update the Codex Alimentarius Commission (CAC) did go ahead as a virtual meeting and was widely accepted by Codex members as a success. This meeting was to formally adopt items prepared by committees in the latter part of 2019 after CAC 42. The most relevant item for discussion at the CAC to IFU was the adjournment “sine die” of the Processed Fruit and Vegetable committee (CCPFV). IFU had discussions with the secretariate prior to CAC 43 to seek information what impact this would have if a revision of the Codex standard 247 was required in the future. It was stated a proposal could be made to the Codex executive committee (CCEXE) to re-instate CCPFV if required in the future, who could/would handle the item. An example of this was demonstrated during the meeting where the “fish and fish products” committee was re-started to develop new work. Other topics covered that maybe of interest to the juice area were a revision of the food allergen document and a document on the safe use and reuse of water in food production.

Although there have been no “physical” Codex meetings this year, work has been proceeding to fully develop positions for next year where the committees are to meet once again, either in a virtual format or later in the year hopefully as physical meetings. Topics under consideration by the LC, relevant to fruit juices, have been front of pack nutritional information, comments of revision of the code of practice for lead reduction in foods and we are just preparing to submit data to the “GEMS” database to assist the contaminants committee (CCCF) on its deliberations in the revision of MLs values for Cd in a range of foods and Pb in products aimed at infants and small children. Information coming out of the e-WG, prior to the cancellation of CCCF this year, suggested that there was no intention to revise the present MLs for fruit juices and purees, that were adopted in 2016 & 2018.

Another topic that has occupied the LC over the last few months is consideration of the need to revise the Codex STN for fruit juices (247) due to taxonomical name changes to a range of citrus fruits. With the developments in the application of DNA based methods, it is the considered opinion of experts that sweet orange, sour orange & grapefruit are not true species, but different hybrids of *C. reticulata* and *C. maxima* and therefore they should be renamed

to reflect this. However, it is interesting to note that the proposed name for orange (*C. aurantium*) will take the form that was initially used in 1753!!

The need for this change was promoted but steps in the US to possibly extend the scope of what fruit types could be used for orange juice production, due to high fruit prices, lack of raw material and lower juice qualities caused by “Citrus greening” in Florida. An IFU position paper on these two topics is in the final stages of formulation by the LC and once this has been approved, by the LC, it will be circulated to all IFU members for comment and adoption/rejection. I wish all members the best for the festive season and I hope that next year will be better than this one when we can once again join together to promote the interests of the juice industry.



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GEA vaculiq Vacuum Spiral Filter preserves the valuable properties of the fruit or vegetable components throughout the extraction process, allowing the taste to stand out. Learn more



GEA engineering for a better world

IFU participates on the 3-day seminar Codex Committee on Methods of Analysis and Sampling (CCMAS)

The Chair of CCMAS decided to organise a seminar covering the work of committee to update members and prepare them for the meeting next year in Spring 2021. The seminars were held on the 23, 24 and 25th of November in a half day seminar format.

The meeting aimed to inform CCMAS members of the work of the Standard Development Organisations (SDO) and the methods that come up for approval and to update on the work done by the E-WGs on assessment of Measurement uncertainty, sampling plans for STNs and possible criteria for selection between Type III as the Type II method. The overview STN 234 redevelopment and endorsement procedure were also given for different foods.

The SDOs (AOAC, AOC, USP, AACI, NMKL, ISO...) gave an overview of their work relevant to CCMAS to inform Codex members of the work of these organisations. The SDOs work in a similar manner to IFU expert panels/committees for the method development/ approval.

DAY 1

A number of the SDO's prepared an overview of their work relevant to CCMAS to inform Codex members of the work of these organisations. DAH had done an overview last year of our work.

Nearly all these organisation operate in a similar manner to IFU with expert panels/committees for their method development/ approval. Associations included were AOAC, AOC (oils), USP, AACI (cereals), NMKL, ISO etc.

DAY 2

This Codex guideline was published in 2004 and at CCMAS two years ago it was decided that this should be updated and revised. The existing guideline is a 6 page document which gives a range of definitions and explains a range of approaches to assess this value. It was based on the guide 98 of ISO (GUM), Eurochem guide, nordtest, some of which have been updated over the last few years. The proposed changes have been circulated for comment to member countries and observers and these have been incorporated into the modified document. There were a few outstanding points that need clarification prior to next year's meeting so the document can be approved and published.

- b. **Codex sampling plans (GL 50).** Development of sampling plans and selection of an appropriate procedure is a specialist job, which is often left to CCMAS to advise as the other Codex commodity committees do not have

the expertise to make a reasoned judgement. It is also possible that CCMAS takes the view that an inappropriate plan had been selected and a more appropriate one is proposed. To assist in this area New Zealand is preparing a computer application to assist in this area. Which may help, as I have been asked quite often how many samples should "we" look at the be statistically sure of the result so useful for everyone!!

- c. During the endorsement of methods by CCMAS there is often a problem as to which "rational" method (Type II & III) should be adopted as the type II method, to be used in trade disputes, and which should be left as type III. Sometimes this is clear due to the lower r, R, better precision or fuller validation scope but often it is very hard. So Switzerland has been heading up an E-WG to try and draw up some criteria to assist CCMAS with some tools to make this assessment easier and more robust.

DAY 3

The final day was looking at the ongoing work on re-validation of the methods in STN 234 and the work of the E-WG for method endorsement for methods referred from other committees to CCMAS for adoption.

As part of the redevelopment of STN 234 (Codex standard of endorsed methods) three sub-groups have been working on different groups of methods.

DAIRY

The first to launch looked at methods for dairy products & was headed by NZ. This has nearly completed its work with a few outstanding questions concerning specific methods, which it is hoped will be finalised at the next CCMAS meeting. As part of this process AOAC developed a review paper for its methods, which has been used by the other groups for the assessment of their methods.

OILS AND FATS

This group started work last year and has worked over the winter etc. The review by some of the SDOs has been completed and there is now a need for a “round table” meeting to formally consider the various options. It is hoped this will take place in the spring, prior to CCMAS 41 next year, so that progress on this topic can be made next year.

CEREALS, LEGUMES AND PULSES

As with oils and fats this group started its work last year. Some reviews of the methods of the SDO's have been completed but not all and it is likely a similar “round table” meeting may be required early next year or later if the method assessments take longer than imagined.



METHODS FROM OTHER CODEX COMMITTEES

Several methods have been submitted to CCMAS for consideration, including some for the Noni juice standard, where our methods are represented for basic parameters such as pH and acidity. However, it is likely that if these are endorsed, they may well be as “type IV” as there is no validation data for this particular matrix.

CCNFSDU had sent some methods for heavy metals for consideration. With these types of contaminants and for some additives CCMAS does not normally endorse methods, but rather draws up criteria that procedures should meet that so that they would be considered to be “fit for purpose”. These criteria, if approved by the plenary session, will be sent back to CCNFSDU for consideration.

BACKGROUND

This was a new venture for Codex to assist with continuation of work of E-WGs and the fuller committee to try and put the committee into a better position to ensure items will be resolved at the next meeting. Nearly half of the people who attended the meetings had never been at a CCMAS meeting before so this gave them an introduction to the committee and its operations. Greg Noonan, the chair of the Phy-WG, from the US, has prepared an overview of terms etc that are used within CCMAS to act as an introduction.

The overall feeling of the meeting was that this was a good idea and Codex will consider it application for some of the other Codex committees to try and make up for this lost year.



STC ongoing activities report



MARIO GOZZI SCIENCE & TECHNOLOGY CHAIR

During the last semester, the IFU Science and Technology Commission has dedicated its efforts to bring forward several relevant projects and research topics.

Starting from the Best Practice Guideline preparation activity, after the publication of the second edition of the "Fruit Washing and Sanitation" BPG and "Screening of Additives and Processing Aids", the commission focused its attention on the development of the two other ongoing works:

1. "Haze stability in clear juices: Root causes and prevention" BPG: only a few chapters are still missing to this paper, for which a complete version to be submitted to revision process is expected in early 2021.

2. "By-products from juice processing: Management and valorisation" BPG: even though it started recently, the development of this BPG is showing excellent progress. In fact, some key chapters such as the one on waste-to-energy by-products and pectins extraction are almost complete, having received valuable input from committee members as well as contributions from external collaborators.

On the Nutritional aspects related to juices, the topic of Nutritional labelling systems has been approached.

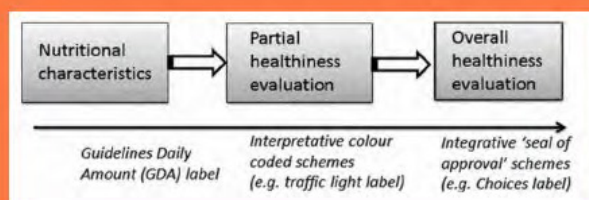
STC's collaboration with the University of Parma resulted in recent academic thesis dealing with this topic and providing quite a clear and synthetic overview of the different nutritional labelling systems utilized in various geographical areas.

Pedro Mena, Human Nutrition professor at Parma University coordinated these efforts.

Different systems of labelling, the front of package labelling (FOPL)

PURPOSES

- ▶ helping consumer in the final choice
- ▶ preventing chronic disease
- ▶ encouraging food industries to increase the healthiness of their products in order to have a better score in FOPLS



The FOPLs can provide semi-direct or direct nutritional indications depending on whether there is a partial assessment of the health of the product or total.

visit the IFU Technical Workshop the day before

IFU Technical Workshop
14.06.2021
Parma, Italy
For the Juice Industry. From the Industry Experts.

JUICE PROCESSING SUMMER SCHOOL

Parma, 14/06/2021 – 17/06/2021

SCHOOL OF ADVANCED STUDIES ON FOOD AND NUTRITION

Since Codex is also focusing his attention on nutrients profiling systems and food product labelling all over the world, it is important for IFU to start monitoring this topic closely to be in the position to formulate solid opinions as well as propose possible approaches during future exchanges.

Concerning the events on the calendar for scheduled for next June 2021, the STC is actively providing its contribute for their organization as well as the selection of scientific topics:

1. IFU-University Summer School: efforts are being made to ensure that the educational program, event locations and activities will be confirmed as similar as possible to those originally planned for 2020. The evolution of the Corona Virus outbreak and possible implications on the Summer School program will be kept under the radar.
2. IFU Technical Workshop: as for the other IFU commissions, the STC has been invited to propose topics to be presented during the workshop. So far, several topics proposal already emerged, such as the screening of additives and processing aids or the by-product valorisation. The latter topic in particular, because of its vastity, should be split into two different presentations, one about the macro area of energy production and the other about valuable substances extraction.

Furthermore, the options for the post conference Technical Tour are being evaluated. In fact, given the presence of several food processing equipment companies in the area, it was proposed to choose whether to focus the visits on juice processing facilities or rather equipment manufacturers.

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Microbiological working group report



DR. ANDREAS POLITZER MICROBIOLOGY CHAIR

The IFU Microbiological Working Group (MWG) has gained significant member participation this year, assisted by remote e-working. The MWG has met twice since the last newsletter was published and has been working on the update on MM 11 “Fruit Juices and Pathogenic Micro-organisms”, last published in 1999. As this is not actually a method and to be consistent with other IFU scientific publications, it has been revised and re-issued as a Microbiological Recommendation no. 1. The review includes bacterial, protozoal and viral pathogens in juices. The Recommendation is now available to members for download via the website

<https://ifu-fruitjuice.com/page/MicrobiologicalMethods>

The group in parallel has also undertaken a full revision of MM2 which has been written in the new format, as seen in MM12, and renamed “Method on the Detection and Enumeration of Potential Spoilage Micro-organisms of Fruits and Related Products”. The revision is now complete and ready for an inter-laboratory validation study which is scheduled to take place in April 2021.

Various laboratories based in Europe will participate in the validation of this revised method through an inter laboratory study. The enumeration procedure involves pour plating and/or filtration using OSA agar. Neogen will be providing the samples for assessment and will also be validating their procedure for which they will supply the necessary materials.

If you would like to participate in the Microbiology Working Group please provide the following information to

aintzane@ifu-fruitjuice.com

Company Name

Laboratory Address

Name of laboratory contact

Contact e mail address and telephone number.

Microbiological recommendation No. 1 (2020)

Fruit juices and pathogenic micro-organisms



AINZANE ESTURO IFU TECHNICAL DIRECTOR

ENGLISH

MICROBIOLOGICAL
RECOMMENDATION

No.1
2020



Fruit juices and pathogenic micro-organisms

IFU has recently released a new recommendation on fruit juices and pathogenic micro-organisms.

Most fruit juices have pH values that are in the acidic range (<4.5). This is an important barrier for microbial growth, however not always for microbial survival. The ability of bacterial pathogens to survive in fruits/fruit juices is well documented. In addition, the inability of protozoa and viruses to multiply in these products (and in foods) is also recognized.

Some foodborne disease outbreaks are associated with fruits and related to Norovirus and Salmonella. These problems have led an effort to develop more stringent strategies and measures to control the microbiological quality and safety of fruit juices, resulting in several guidelines being published by national food standard agencies. Relevant examples are the HACCP rule for processed juices and the 5-log reduction treatments for juices (FDA 2001, 2004).

Food microbiology has experienced considerable development in recent years, and this can be partially attributed to predictive modelling (McMeekin et al. 2008) and risk assessment (Hoornstra and Notermans 2001) approaches.

The new IFU Recommendation defines the temperature and acidity ranges where the different pathogens can live and survive and gives recommendations on how to eliminate the risk and what processing conditions are suggested to the industry.



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IMPROVE TRACEABILITY, PRODUCT INFORMATION AND CONSUMER EXPERIENCE





MAC activities activities



MIKKO HOSFOMMER METHODS OF ANALYSIS CHAIR

The last achievement of the MAC group is the publication of the Chlorophyll method. The validation of this method has been completed since the method returned acceptable repeatability (r), reproducibility (R) and HORRAT values (<2) and was accepted by the committee. This procedure allows the detection of chlorophyll in pineapple juices to be detected. The procedure is to ensure that excessive amounts of juice from the skin or not sufficiently mature fruits are not incorporated into the juice stream.

Other on-going activities carried out by the MAC are summarised here:

NITRATE RING-TEST: The validation of a simple colorimetric method for the determination of nitrate is almost completed (awaiting results from two labs). Discussion of these result is expected at the next MAC meeting in March.

FLOATING PULP: As the results from an interlaboratory comparison of a method to measure the floating cell content of juices was unsuccessful.

A working group (WG) was established to look at methods that can be used in this area and a recommendation covering this topic will be prepared by the group.

ASCORBIC ACID RING TEST: Two titration methods, HPLC, colorimetric and kit procedures for the measurement of this component are under validation. Some initial results from the labs were presented at the MAC meeting for the five test products. Overall, the results for 4 of the samples are comparable. However, the results for the blackcurrant nectar were less consistent, probably due to the colour interfering with some of the assay procedures. Recommendation number 5, reviewing methods for vit C determination, has been revised, but requires "fine tuning" prior to final review

by the MAC. It is envisaged that the recommendation will prioritise some method/s based on the statistical analysis. The critical difference between the assessment of Vit C and ascorbic acid (AA) is that the oxidised form of AA also shows Vit C activity and so has to be "captured" in the assay procedure in some manner.

PULPWASH DETECTION: A review of methods to detect second extracts of fruits in juice (pulpwash/ corewash) has been prepared and is under scrutiny by the committee prior to its publication.

MOULD DETECTION IN TOMATO PRODUCTS: Validation data from a number of interlaboratory assessments conducted by DRRR is ongoing. If these data are accepted by the committee the method will be published in its finalised form.

TRANSLATIONS: It has been decided to translate some more methods into a number of languages to assist laboratory staff who maybe less familiar with English. The translation will take place once these methods, IFU 11, 17, 17a & 80, have finished their validation and revisions.

THE INTERNATIONAL ORGANISATION OF VINE AND WINE (OIV): OIV contacted IFU to assist in defining methods for grape juice. An electronical OIV WG will be created where IFU will participate to avoid duplication of methods/work. A small IFU WG will look at the approach adopted by OIV for its approval of an automatic method for gluconic determination, to see if this approach could assist in our issues with the validation of other automatic enzymic determination procedures.

GfL Gesellschaft für Lebensmittel-Forschung mbH

Your expert lab for authenticity, microbiology, residues and contaminants

GfL is one of the leading laboratories in the field of fruit and vegetable juice with over 30 years of experience. Growers, distributors, the processing and bottling industry as well as retailers are our customers.

Convince yourself of our service!

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MARKETING commission update



MARGARITA MAIER MARKETING CHAIR

With one eye slowly closing to an unprecedented year in 2020, we open the other in positivity to start to build a strong, stable and innovative 2021 for our industry!

It is with this vision we have structured the new IFU Marketing Commission.

In 2020, we worked hard on clearly defining IFUs guiding principles – broken down into 4 pillars:

INFLUENCE

INDUSTRY Best Practice

INSIGHTS

INNOVATION

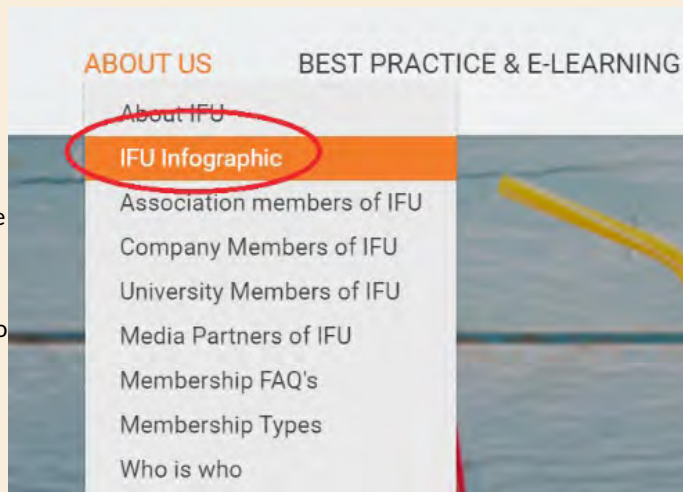
These 4 I's strongly summarize the VALUE IFU brings (and will intend to deliver) to all existing & new members of the association. By being part of the conversation, members will continue to be able to INFLUENCE the narrative of the industry, obtain BEST PRACTICE via access to invaluable Methods of Analysis, INSIGHTS into marketing data, processing tactics & technology. Finally, new to the Commission is our plan to bring industry wide INNOVATION into IFUs spectrum of membership offerings.

It is this INNOVATION pillar where we plan to launch the new IFU Start-Up Connector initiative, as presented in our previous Juice newsletter. This 'program' will look to attract new, young entrepreneurs of the industry – across the value chain – and 'connect' what we see as their new way of thinking, with the traditional stability & foundation of the industry's best blue-chip philosophies.

We welcome & encourage all new members interested in shaping IFUs trajectory to join the Marketing Commission – as we continue to breathe new life into our dedicated and growing membership base.

(left or right, on other side screenshot of one pager and of website, please also link the pictures to the website):

Have you already used our IFU wheel to communicate the benefits of being an IFU member to your colleagues, customers and partners? You can download the file on IFU`s website



VISIT:

https://cdn.ymaws.com/ifu-fruitjuice.com/resource/resmgr/ifu_brochure/ifuinfographic_2020.pdf

ANADOLU ETAP

Turkey's Largest Fruit Growing and Fruit Juice Processing Company
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YOUR GLOBAL FRUIT & VEGETABLE JUICE ASSOCIATION



Made up of industry players big and small, together we guide growth, development and policy for the sustainable health of industry whilst safeguarding the public interest.



Why should you join IFU?

IFU is guided by 4 pillars of collaboration to ensure you as a valued member take an active role as the industry continues to evolve. Our value wheel helps you better understand the areas of involvement, impact and collaboration. We would like to show you how your time is well invested by joining IFU.

IFU Events

- Webinar
- Explorations
- Roadshows
- Technical Workshop
- Juice Conference
- Juice Summit

IFU Connector Start up events

Watch this space.
Coming soon.

Publications

- Methods of analysis
 - Chemical
 - Microbiological
- Updates and revisions
- Recommendations
- Review of methods
- Best Practice Guidance
- e-learning materials
- Opinion papers and guidelines

Membership types and fees

Member type	Category	Fee	Votes	Benefits
FRIEND	1. For an individual person	€100	0	Member discounts
	2. Small company <25 employees <€25m Turnover	€500	0	Member discounts, Access to BPG, e-L, Rec. for €199
CORPORATE	Regular	€1,999	1	Member discounts, 3 licenses for methods
	Regular Plus	€2,298	1	Member discounts, 3 licenses for methods and BPG, e-L, Rec.
	Silver	€3,999	3	Member discounts, 10 licenses for methods and BPG, e-L, Rec. 2 free workshop and 1 Juice conference ticket
	Gold	€12,999	9	Member discounts, Unlimited licenses for Methods and BPG, e-L, Rec. 4 free workshop and 2 juice conference tickets
ASSOCIATION (Category depends on per capita consumption and total volume)	1	€1,100	6	Member discounts
	2	€2,200	9	Access for association employees to methods, BPG, e-L, Rec.
	3	€3,850	12	
	4	€5,500	15	

BPG = Best Practice Guidance, e-L = e-learning materials, Rec = Recommendations

All members have access to the members area of the website and can participate in Commission meetings

Contact: john@ifu-fruitjuice.com Tel: +44 1934 627844 <https://ifu-fruitjuice.com>



HiStabJuice Project



MASSIMILIANO PELACCI SCIENCE & TECHNOLOGY COMMISSION

The STC has been involved in the organization of the European Training Network PhD project named “HiStabJuice” within the European Research Framework Programme H2020 / Marie Skłodowska-Curie Actions.

The Marie Skłodowska Curie Innovative Training Network “HiStabJuice” is research project is a collaboration between 17 organisations, including 7 academic and 10 non-academic, from 7 countries (AT, DE, FR, IT, NL, PT, SL) across Europe. The research aims to analyse and compare in a normalised fashion the impacts of various available processing technologies on the stability of colour and nutrients in various fruit juices.

This project officially started on November 1st, 2020 and is currently requiring most of the time of several members of this committee, as well as other institutes and companies involved, to ensure that all the details will be defined in time for the Consortium Agreement to be signed within the deadline of December 31st, 2020.

Specifically, Phase 1 includes the characterization of the raw materials (strawberry, sour cherry and blue grape). That means the identification of the microbiota, endogenous enzymes and nutrient compounds contents.

Phase 2 deals with the development of the kinetics for reduction of microbes with the four different technologies under analysis (Conventional thermal, Ohmic, HPP, PEF). In this phase, the enzymatic and nutrients thermal kinetics as well as the impact of the food matrix (changes of different parameters such as pH, sugar, phenolic compounds, etc.) on thermal stabilization treatment will also be studied.

As last step, Phase 2 includes the scale-up with pilot-units trials to validate from the microbiological side the treatments with different technologies under consideration (thermal and non-thermal).



Phase 3 will happen after the validation processes are ultimate. This step will include the final pilot-scale trials with the three products under consideration, in order to simulate optimized industrial processes.

Lastly, the stabilized products will be filled and packaged in a large number of samples, to be distributed to different laboratories for the post-treatments analysis in Phase 4. These analysis will aim to evaluate the actual results of treatments in terms of enzymes, nutrients and bio-active compounds reduction as well as quality parameters loss.

These tools will play a fundamental role for the management of the many activities composing the whole project, from the various PhD students' transfers to the intricate logistics of materials and samples among the European Countries involved.

The first four calls for positions have been launched:

- ESR 1. PhD Position in Protein Chemistry / Biochemistry for MSCA-ITN “HiStabJuice” <https://euraxess.ec.europa.eu/jobs/571568>
- ESR6. PhD Position in Industrial Engineering for MSCAITN “HiStabJuice - Establishing a strong and lasting international training network for innovation in food and juice industries: a 4D-research approach for fruit juice processing” <https://euraxess.ec.europa.eu/jobs/576085>
- ESR 8. PhD Position in Industrial Engineering for MSCA-ITN “HiStabJuice” <https://euraxess.ec.europa.eu/jobs/576086>
- ESR 9. PhD Position in Natural Sciences for MSCA-ITN “HiStabJuice” <https://euraxess.ec.europa.eu/jobs/571568>

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“Nutritional Profiles of Juices”

a reference book is ready for publishing



LIUDMILA HOMICH UNION OF JUICE, WATER AND BEVERAGES PRODUCERS (DRINKSUNION)



DRINKSUNION

UNION OF JUICE, WATER AND BEVERAGE PRODUCERS



Russian Union of Juice Producers has been working during four years (2016-2019) in the direction of determination of popular juice nutritional profiles and in 2020 Union of Soft Drinks and Mineral Water Producers finalized these activities.

Nutritional profile of juice is complete information on the content of nutrients and biologically active substances (sugars, organic acids, vitamins, minerals, dietary fiber, polyphenols, etc.) in the juice - in total more than 30 parameters. The profile shows the uniqueness of each juice and illustrates well the recommendation to consume one glass of juice per day and to alternate different juices in the diet.

A working group of specialists from companies – members of the Union was formed to work on these profiles. WG collected literature data, compiled research programs and conducted research on samples of industrial juices in domestic laboratories and abroad.

By examining the results, nutritional profiles of ten juices were formed: apple, orange, grapefruit, pineapple, tomato, pomegranate, grape, peach, carrot and cherry. A series of scientific publications on profiles was published in the journal “[Problems of Nutrition](#)”.

Recently a reference book “Nutritional Profiles of Juices” in Russian and in English was published and it contains ten profiles of juices. The reference book will be used:

- in the process of product development and juice products promotion,
- in communications with journalists and consumers,
- in communications with dietitians and nutrition specialists (it is planned that data from this reference book will be used when amending Russian tables of nutritional value of food products in the terms of juices, and will be then officially used when calculating diet for different population groups).
- in communications with State authorities to protect juice image as an integral part of a healthy diet.

Scientific research and reference book was published in collaboration with the Federal State Budgetary Scientific Institution “Federal Research Centre of Nutrition and Biotechnology”.

A digital activation program to share the realities of fruit juice directly with consumers



CAROLE PRISSET UNION NATIONALE INTERPROFESSIONNELLE DES JUS DE FRUITS

As we know, the French and European contexts are becoming harder regarding the food-processing industry in general and for juices & nectars in particular. The media that used to listen to us and relay our information are no longer doing so.

In the age of higher standards for healthy eating and transparency, of less sugar, of less industrial and more ethical products, it is more essential than ever to share our messages directly. Thus, in 2020, to fight against misconceptions and ignorance of all our stakeholders regarding our products, it became evident to us at UNIJUS that we should inform and educate the general public directly.

APPROACH & ACTIONS: complementary actions to help the category!

WE DEVELOPED A PROGRAM BASED ON 3 PILLARS:

- Publications on UNIJUS social media platforms (LinkedIn and Twitter), relayed as much as possible by our members;
- Creation of new content on resource sites: mesjusdefruits.fr (the UNIJUS consumers site) and paroledemamans.com (the reference site for pregnant women and young parents);

- Partnership with influencers: video on YouTube (AngieMaman) and Instagram-Moms workshops (Paris and Lyon).

ALL OUR ACTIONS CENTRED ON 3 KEY MESSAGES:

- Fruit juices are squeezed and packaged from fresh fruits for more convenience: nothing more!
- Fruit juices contain natural sugars, those from fruit, and this is also why they provide vitamins and nutrients from fruit.
- Breakfast is a chosen time to drink a glass of fruit juice - the right portion is 150mL, or a small glass.

We also created a campaign signature and hashtag: **#FiersDeNosJusDeFruits** (#ProudOfOurFruitJuices) for fruit juice professionals and **#FanDeJusDeFruits** specifically for influencers. This signature was present in every publication, tweet or presentation.





RESULTS & LEARNINGS: OBJECTIVES ACHIEVED

The quantitative and qualitative results of the campaign are very positive with a large achievement of the fixed quantified objectives with **more than 2.5 million contacts**.

Social media publications providing concrete information on processes, regulations, and nutritional properties and nutritional intakes worked very well.

These LinkedIn publications allowed a collective and united voice for the sector and category, based on collective messages. A beginning of mobilization of UNIJUS members to be intensified thereafter.

Our influencers partnerships were a real opportunity to share our messages with as many people as possible by capitalizing on their audience.

As an example, the YouTube video was seen by 120 000 people. The two Instagram workshops enabled us to reach up to 1.3 million people via 21 Instagram publications and 221 stories of the 18 moms-influencers who attended our events in Paris and Lyon.

Simple messages were very well understood and memorized - such as "There is no added sugar in fruit juice" or "Fruit juices are very interesting for their vitamin and mineral content". They are the main messages found in their posts and stories along with the reassuring and guilt-relieving tone of our speech.

Another victory would be the fact that there were extremely few negative comments following our posts. Proof that the French public needs information concerning fruit juice and that they are open to factual and positive facts about our products!

PROSPECT FOR THE FUTURE: REAL OPPORTUNITIES FOR 2021

Regarding the very positive results of this first year of actions, we (UNIJUS and members) are currently thinking about developing a new program for 2021.

There are real opportunities for next year to continue to inform and increase our reach!



A Question of Chlorate



FIONA PALMER BRITISH SOFT DRINKS ASSOCIATION

As with a number of EU National Authorities, the UK Authorities and the majority of respondents to the EU Commissions own consultation on the issue of chlorate BSDA does not agree that the pesticide regulation EC 396/2005 is the appropriate vehicle for chlorate regulation. However due to EU regulatory complexity this is where it lies and in June 2020

Commission Regulation 2020/749 amending Annex III to Regulation (EC) No 396/2005 as regards maximum residue levels for chlorate in or on certain products came into force, which included 'Footnote A' (below) which has been welcomed as a helpful compromise.

• Chlorate (A)

To take into account the specific situation of chlorate residues, in processed food (including for the purpose of this Regulation foodstuffs that have been derived using processes listed in Article 2(1)(n) of Regulation (EC) No 852/2004), that has come in contact with products containing chlorate residues, or that contains ingredients with such residues, such as processing aids or drinking water, used in compliance with the respective legal requirements, these additional contributions of chlorate residues should be taken into account when determining the permitted content of chlorate residues in or on the processed food products in accordance with Article 20 (1) of this Regulation. The burden of proof regarding the level of those additional contributions lies with the food and feed business operator.



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www.diamidex.com

*Colony Forming Units

The Health and Safety Executive (HSE) in the UK wrote to stakeholders including the BSDA, stating that 'the derogation from the MRL set will only apply where businesses provide proof that there have been legitimate additional chlorate residue inputs at the processing stage; such as through the use of potable water or other sources in processed food production, or through legitimate disinfection practices to maintain hygiene'

Industry has reiterated that any chlorate present is not due to plant protection products and informed HSE of the potential sources for chlorate and mitigating actions that are taken by FBOs.

BSDA has been working with the Food Biocides Industry Group (FBIG) in UK to develop a collection of industry guidance which includes a set of suggestions for what could be included in the statement to HSE:

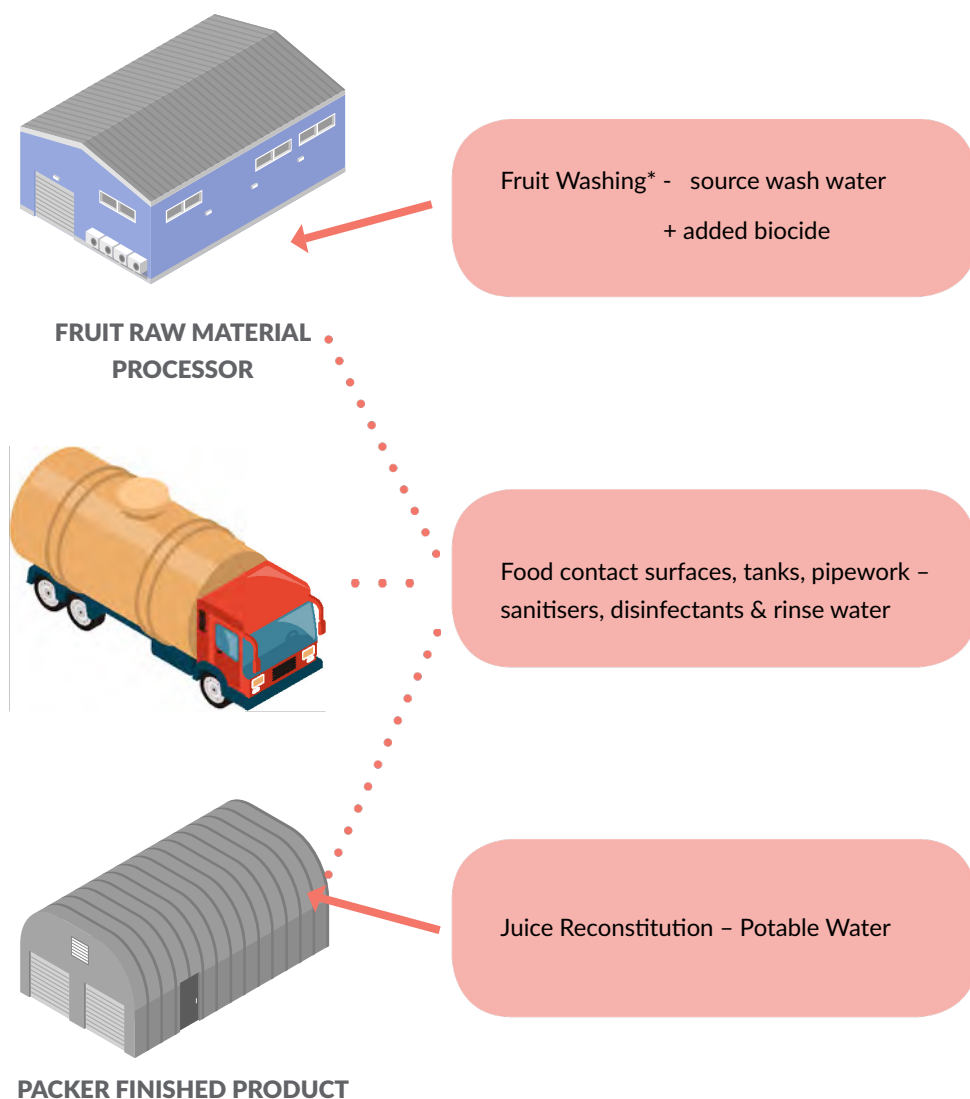
1. Identify stage(s) where chlorate may have been introduced from potable water
2. Identify stage(s) where chlorate traces may arise from the use Page 21 of hygiene biocides to assure produce safety and hygiene
3. Detail any monitoring that is undertaken
4. Refer to any industry guidance followed
5. Refer to any appropriate food safety accreditations currently held in relation to production, demonstrating that PPP usage is subject to external scrutiny (e.g. Global GAP, BRCGS v8, retailers' specific commercial requirements/ protocols)

As an example a flow diagram for reconstituted fruit juice to cover points 1 & 2 has been developed.

Expect that fruit juice packers and even those who use fruit and vegetable juices as ingredients in other drink products will be asking more detailed questions of juice processors to understand the potential of these raw materials to add to any traces of chlorate found in finished products.

Further information can be found at www.chilledfood.org/FBIG

KEY SOURCES LEADING TO ELEVATED CHLORATE LEVELS IN FRUIT JUICES FROM CONCENTRATE



Potential inputs of chlorate shown in red
*The fruit washing stage becomes more significant depending on the type of fruit. Where the whole fruit is used for juice extraction, e.g. apple & soft fruits, the potential for chlorate increases.

COP UPDATES



DR. ALEJANDRA AGUILAR SOLIS EUROPEAN FRUIT JUICE ASSOCIATION (AIJN)

The Code of Practice (COP) of AIJN is the maximum collection of reference guidelines (RGs) for 27 fruit and vegetables that contain parameters that a fruit or vegetable juice needs to comply within the European Market.

The AIJN COP has been mentioned in a vast number of scientific research studies and has been used as a reference for comparison of data in both science and industry settings. The COP is formulated by a group of experts in the Juice Industry, this group is called "COPEG" (COP Expert Group).

This year in particular and despite of the current challenges of 2020, the COPEG has courageously continued the work of the AIJN-COP. The Expert Group has had their annual meetings online and they are currently working in:

1. The preparation of the RG of blueberries that will be built in 2 parts: *V. myrtillus* (expensive highly colored skin and fruit flesh and often considered as wild) *V. corymbosum* (high bush) & *V. angustifolium* (low bush)
2. The generation of two more RGs for beet and pumpkin and for which we are currently working in the collection of data.
3. As part of the COPEG, it was recently been born the Microbiology Working Group (MWG). The core of this group is formed by experts with industry and academia experience and include researchers, auditors and in general industry people from around the world. The current work of the MWG is the review of the ACB Best Practice Guideline as well as the revision of parameters referred in the RGs that have to do with microbiological activity. The current group has 26 members.

4. Acerola is one of the fruits we have in the RG, however this particular RG has no isotopic parameter, we have quite interest in providing this parameter as soon as possible, using acerola puree as a natural form of Vitamin C. It has been known that acerola puree has been topped up with chemical sources of vitamin C and therefore it is critical to have some isotopic guide. COPEG is working now on data collection to have this new parameter in the Acerola RG.
5. COPEG is also now working in the next 6 fruits that will be part of the current document of "Nutritional Values". These fruits are Sour cherry, Pear, Peach, Blackcurrant, Carrot and Guava.
6. One AIJN member has had lately values that are below the minimum value for glucose in orange juice. COPEG will evaluate if the commentary note needs to be reviewed.
7. We had been in touch with an India producer of pomegranate juice. Brix values in the RG were too high for their products. It is now that COPEG will see if they will do a change in the RG or not.
8. COP has its own newsletter, "the COP News in 5". This newsletter is a bimonthly publication and here we publish all the updates that the COP is having along the year. This newsletter is for COP subscribers.

If you want to know more about the COP of AIJN please don't hesitate to contact us to receive more information about how to join and being a subscriber. You can find more information about it here: <https://aijn.eu/en/the-aijn-code-of-practice> or write us to COP@aijn.eu.



NEW JPA STUDY PUBLISHED PLUS US DIETARY GUIDELINES UPDATE



DIANE WELLAND MS, RD **JUICE PRODUCTS ASSOCIATION (JPA)**



A new JPA sponsored study entitled: [A longitudinal study on fruit juice consumption during preschool years and subsequent diet quality and BMI was published on-line this summer in BMC Nutrition](#). The study, which was conducted at Boston University and authored by Lynn Moore DSc et. al., found consumption of 100% fruit juice during preschool is associated with higher intakes of whole fruit and total fruit (through middle adolescence) and demonstrates that drinking 100% fruit juice early in life can have a positive effect on diet quality in later years without adversely impacting weight gain. The study, which followed preschoolers for a ten-year period, supports findings from several previous studies suggesting juice drinking in young children may promote better diet quality and higher intakes of whole fruit.

- Those preschoolers who consumed higher intakes of 100% fruit juice (≥ 1 cups/day) had significantly higher intakes of whole fruit and total fruit at 14-17 years of age than those children who consumed little or no juice ($< .5$ cups/day).
- Those children with the higher fruit juice intakes during preschool had significantly higher diet quality (according to 2015 Healthy Eating Index Scores) than those children with lower juice intakes at all ages.
- Preschoolers who drank more 100% fruit juice (≥ 0.75 cups/day) were nearly 4 times more likely to meet current US Dietary Guideline recommendations for whole and total fruit intake during adolescence than those preschoolers with low intakes.
- Fruit juice consumption was not associated with change in Body Mass Index (BMI) during childhood and into middle adolescence.

Data shows whole fruit and diet quality typically decline from early childhood through adolescence. This research found that

children who consumed about 1.5 cups of 100% fruit juice per day during the preschool years tended to maintain healthier diets into adolescence compared to children who drank less than $\frac{1}{2}$ cup per day during preschool years. In addition, over the follow-up period (10 years), juice consumption within the range typically consumed by these children (1-2 cups per day), was not associated with excess weight gain during childhood.

Fruit consumption, particularly whole fruit consumption, has many health benefits throughout the lifespan. Avoiding juice during these early formative years may have unintended effects on evolving dietary behaviors.

US DIETARY GUIDELINES UPDATE

The USDA 2020 Dietary Guidelines for Americans are expected to be released in late December or early January. The guidelines encourage Americans to choose healthy foods, beverages and meals as well as inform government feeding programs. New this year is a focus on nutritional considerations for each life stage, including pregnancy, lactation, children under 2 years of age (birth to 24 months), childhood, and adulthood.

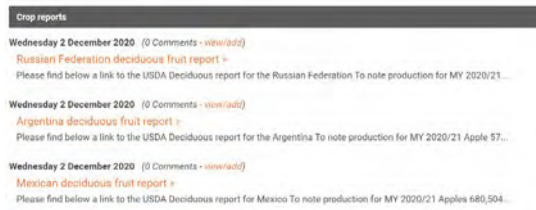
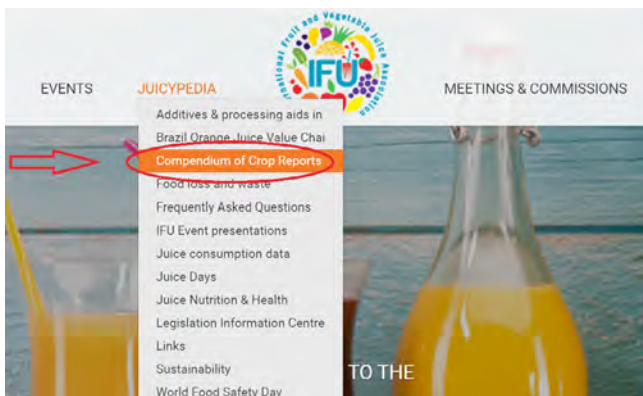
This summer a scientific advisory committee, the 2020 Dietary Guidelines Advisory Committee (DGAC), released a scientific report, which reviewed the science in all of the areas listed above. Overall, the DGAC report was positive towards 100% juice and noted that juice is a nutrient dense beverage, provides valuable nutrients to the diet, is recognized as nutritional equivalent to whole fruit and included in the US healthy dietary patterns. During the DGAC process, JPA was able to submit several oral and written comments supporting juice's role in a healthy diet, to both the DGAC scientists and the USDA.



The IFU Crop and Processing Reports

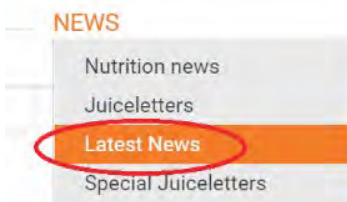
Have you already seen the IFU Compendium of fruit and processing crop reports?

Every member can access the file on www.ifu-fruitjuice.com under the **Juicypedia** section:



ABOUT THE COMPENDIUM:

This has been published from selected fruit crop and processing information that are from official or association sources. When new information becomes available, it will be sent to IFU members. The compendium will not always be updated when each new data set is published, but most of the data sets will also be published in our news section on www.ifu-fruitjuice.com:



43 pages
of fruitful
figures:

	Pages
Apples.....	3 to 7
Cherries.....	8 to 11
Grapefruit.....	12 to 13
Grapes.....	14 to 15
Lemons - Limes	16
Oranges.....	17 to 31
Peaches - Nectarines	32 to 37
Pears.....	38 to 41
Tangerines—Mandarins.....	42 to 43

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The most difficult of all harvests



MAURICIO MENDES CITRUS CONSULTANT

Photo taken in mid-October 2020 in the municipality of Jales north of the state of São Paulo

There is a saying among those who have been in the industry for a long time: “there is no harvest like the other”. The current one is overcoming itself; such are the difficulties faced.

The first signs that the season would be different were given by last year's bloom. Blooming in August and September 2019 was very good. However, a period with no rain in the following months accompanied by intense heat has caused an expressive fruitlet fall. The fruits developed until a 2-3 cm diameter size but were overturned by excessive heat. Rains came up in the end of October and is expected a new flowering.

The harvest season was preceded by the arrival of the COVID-19 pandemic. The great demand for labor, much of it coming from northeastern states in the country, concerned everyone and made us take extraordinary care to preserve the health of workers involved in the harvest and of other collaborators from other sectors of the properties.

Thus, the current harvest has been one of great surprises and has presented unusual challenges to citrus growers of the Brazilian citrus belt. The main consequences are presented below

The period without rain, from May of this year until this last month of October, was one of the most extensive ever recorded in the state of São Paulo, according to the graphs and tables below. In addition to drought, very high maximum temperatures were recorded, even at night, causing considerable weight loss and fruit quality. The water deficit was very significant in all regions. This is the main reason for the significant decrease in the volume of fruit produced in the “citrus belt”. The losses are more accentuated in the north of the state of São Paulo and in the Triângulo Mineiro, warmer and drier regions.

1. However, even further south in the state, losses were above normal. The first harvest estimate released by Fundecitrus, last May, brought an amount of 287.8 million boxes, 25% less than the previous harvest (2019/2020). What you see in the field is a volume of oranges quite below that number. The common perception among consulted technicians and citrus growers is that the final figure is expected to be below 250 million, perhaps below that.
2. The period without rain and with temperatures well above the average resulted in extremely withered orchards - plants even died in orchards without irrigation. Another aggravating factor this year was the scarcity of water for irrigation. There are properties that have an installed irrigation structure; however, they do not have enough water available to meet the needs of the plants.

Table 1 Total Rainfall between April and October (mm)					
Region				Variation	
	2019 (a)	2020 (b)	Normal (c)	b x c	b x a
Altinópolis	499	245	451	-46%	-51%
Araraquara*	359	124	425	-71%	-65%
Bauru	353	250	472	-47%	-29%
Bebedouro	383	130	328	-60%	-66%
Botucatu	427	243	494	-51%	-43%
Itapetininga*	279	163	366	-55%	-42%
Limeira	598	417	460	-9%	-30%
Matão	320	136	386	-65%	-58%
Santa Cruz do Rio Pardo	421	492	600	-18%	17%
São Miguel Arcanjo	318	395	570	-31%	24%
Frutal - MG	272	212	351	-40%	-22%
Uberlândia - MG	230	84	301	-72%	-63%
Average	372	241	434	-47%	-36%

Source: Prof. Paulo Sentelhas; Systema Agrymax (www.agrymet.com.br/agrymax)

* Araraquara and Itapetininga are major production citrus regions in Sao Paulo State.

- Due to the flowering in non-traditional months (December and January) there are a large number of “green”, not yet ripe fruits mixed with ripe fruits from the normal flowering (August-September 2019). This brings an additional difficulty to the harvesting operation that has to be carried out in at least two different times, resulting in a increase of the production cost for the citrus growers.
- This mix of fruits with different level of ripeness, impair the quality of the juices, especially due to the greater amount of limonin present in the green peels of oranges. On the other hand, in the northern regions of the citrus belt, the fruits are getting ripe much faster than normal, producing juices with a ratio (ratio between the amount of sugars divided to acidity) much higher than the average for the period of the year. Industrial income has been better this year than in the previous two years, at least until this time of the harvest (November 2020).
- As a further consequence of this year’s climate events, we will see an increase in the effects of HLB or greening. The symptoms of the disease, such as early fruit fall and low production, usually express themselves more strongly when there is a water deficit. In addition, the psilideo, vector of the disease, presented very high rates even in winter, indicating that we will have a greater number of infected plants in the next years. This has probably occurred because of the warmer climate which resulted in a very irregular or uneven plant vegetation.

WHAT WE CAN EXPECT FROM NEXT CROP?

The northernmost regions only flourished after the rains that fell in the last days of October. This late blooming should not have a good fruit set because they will be still small in the higher summer temperatures. Moreover, the loss of leaves was very great in the recent drought period, and this this will not allow for a large amount of fruit for next season, since the plant will not be able to provide the metabolites necessary for an expressive fruit set. A good 21/22 harvest is not to be expected for these regions.

In the most southern regions, which suffered less from water deficit, the flowering came in the normal period, between August and September. However, irregular rainfall and high winter temperatures (table 2), after flowering, have worried producers. What they see in their orchards does not indicate a good harvest for the second year in a row. My experience shows that the harvest after a year as irregular as this one is also not usually good.

Region	Number of days with temperature above 32oC – sept. -oct period			Variation	
	2019 (a)	2020 (b)	Normal (c)	b x c	b x a
Altinópolis	20	40	15	167%	100%
Araraquara*	21	40	12	233%	90%
Bauru	19	43	13	231%	126%
Bebedouro	40	49	23	113%	23%
Botucatu	14	34	9	278%	143%
Itapetininga*	29	48	21	129%	66%
Limeira	19	33	9	267%	74%
Matão	28	44	17	159%	57%
Santa Cruz do Rio Pardo	20	41	11	273%	105%
São Miguel Arcanjo	9	19	5	280%	111%
Frutal - MG	53	41	23	78%	-23%
Uberlândia - MG	45	36	25	44%	-20%
Average	26	39	15	188%	71%

Source: Prof. Paulo Sentelhas; Systema Agrymax (www.agrymet.com.br/agrymax)

* Araraquara and Itapetininga are major production citrus regions in Sao Paulo State.

Although it is common for citrus to have alternate crops, i.e., smaller crops followed by larger crops, the climatic factors presented in this article should result in two "small" crops in a row, the current and the next seasons.

Thus, Brazilian orange juice industries should process fewer oranges for two consecutive years.



MAURICIO MENDES

Citrus Consultant

Agriplanning Brazilian Agribusiness Company

GCONCI (Citrus Consultant Group)

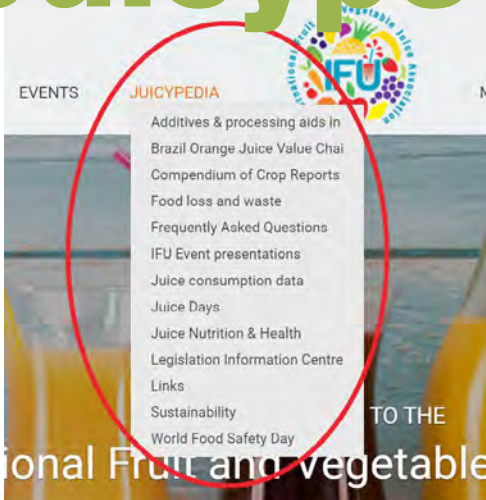
Mauricio Mendes is a citrus consultant since 1980 and Citrus grower since 1988. Has worked to major Citrus Farms in Brazil. Is COO of a 6.000 ha Citrus Farms operation in the SW of Sao Paulo State. Mauricio is also Beachead Advisor for New Zealand Trade Enterprise. Also has been partner and CEO, for 14 years, of Informa FNP which is one of the most important Agribusiness consultant company in Brazil. FNP was recently acquired by HIS Markit.

Mauricio is also member of GCONCI, Citrus Consultants Group, which gathers 17 Consultants. GCONCI provide direct technical assistance to over 40 million citrus plants (25% of the Brazilian Citrus Belt)

What is IFU's Juicyclopedia?

IFU's Juicyclopedia is a section on www.ifu-fruitjuice.com where you can find interesting information, figures, the IFU scientific review on Juice Nutrition and Health, the Legislation Information Centre and the slides of the most recent IFU events. This is something we are often asked: Can I access the slides from the Technical Workshop, Roadshow, Webinar....

Check out the different chapters – but make sure to log in as a member to have full access!



ADDITIVES AND PROCESSING AIDS IN JUICES:

Background & content

The regulations governing the use of additives and processing aids for the production of fruit and vegetable juice not uniform throughout the world.

In order to highlight the similarities and divergences between the legislations of different countries/regions, we reporting the authorizations, prohibitions and maximum limits (when present) for the most common juice additi

In addition, for each region included, the relevant reference legislation and the year of publication has been list

In conclusion, on the last page, the definitions of the terminology used in the screening as well as of the food ce been specified.

Please click on the image below to access this review

BRAZIL ORANGE JUICE VALUE CHAIN



FOOD LOSS AND WASTE

FAO INTERVIEW
Mr. Raulo Rude, Team Leader Food Losses and Waste, Nutrition and Food Systems Division, FAO

Link here.

FOOD LOSS AND WASTE DATABASE

The Food Loss and Waste database is the largest online collection of data on both food loss and food waste and their causes reported throughout the literature. The database contains data and information from openly accessible reports and studies measuring food loss and waste across food products, stages of the value chain, and geographical areas.

Link here.

EVENT PRESENTATIONS

Past event presentations

A list of some of the past IFU presentations exclusively available to members

IFU SGF 2020 Roadshow Webinar

IFU methods, SGF update on remote audits, ALN CCP update, Advanced analytical methods to ensure fruit juice integrity, Sustainability and use of fruit juice by-products. Trends in production data acquisition.

Link

Technical Webinars - 2020

14 presentations on the themes of Processing, Sustainability, Quality and Authenticity

Link

Special Authenticity Webinar 2020

Special authenticity webinar held on the 25th May 2020. Manual Document 'Sugar, acidifier' and 'Makko-Häpöppönen' 'Detection of foreign fruits'

Link

BOOST YOUR IMMUNE SYSTEM WITH OUR VITAMINS + ZINC COMPOUNDS



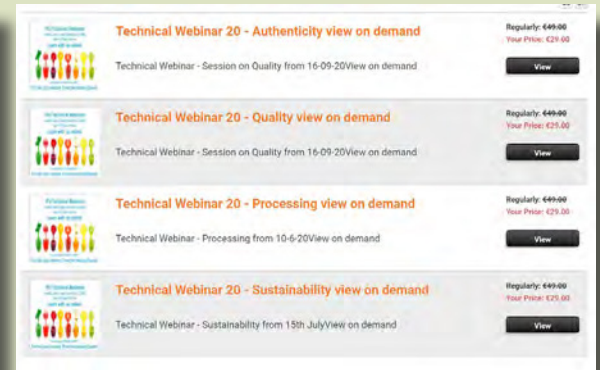
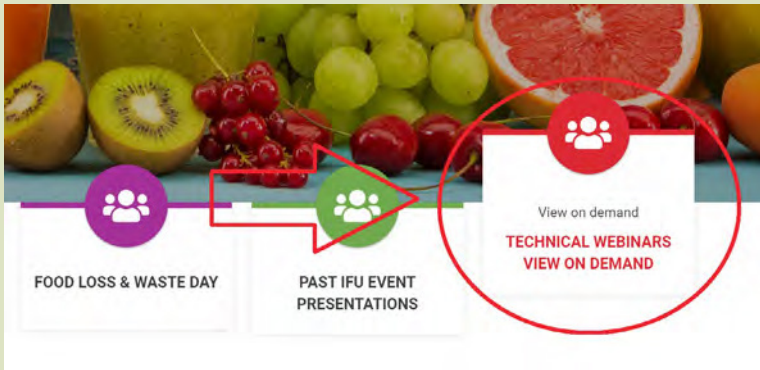
For more information enter our website at prodalim.com or send us a mail to sales@prodalim.com

Prodalim Group
Juice Specialists

IFU Technical Webinars 2020

... can now be seen on demand!

The price to download is **29 Euro** for each webinar (49 for non-members).



PROCESSING



Dr. Barbara Franceschini, SSICA:
Microbial safety and stability of fruit and vegetable low-acid products



Dr. Davide Imperiale, SSICA:
Water and steam quality used for processing



Antonio Aldini, JBT:
Raw material shelf life affected by processing and storage temperature

SUSTAINABILITY



Dr. Nigel Halford, PhD, Rothamstead Research:
GM developments of fruits



Martin Gehlen, Tetra Pak:
Sustainability of Cartons



Stuart Anderson, BP:
Infinita project - recycling PET bottles

QUALITY:



Karin Korntheuer, HBLA und Bundesamt für Wein- und Obstbau Klosterneuburg:
The ingredients of Blueberries



Prof. Johan de Ryker, Fruit Juice Matters:
Categorisation of processed foods & beverages



Dr. Alejandra Aguilar Solis & Wouter Lox, AIJN:
European legislative and AIJN COP updates

AUTHENTICITY



Dr. Simon Kelly, International Atomic Agency:
A new rapid stable isotope method to detect addition of sugar to fruit juice



Dr. Susanne Koswig, SGF:
Quality and authenticity observations in the juice market



Markus Jungen, SGF:
New analytical insights for lemons and limes



Mikko Hofsommer, GfL:
New techniques for the analysis of pineapple juice

We thank our sponsors BioSystems, Citrusuco, GfL - Gesellschaft für Lebensmittel-Forschung, Anuga FoodTec, CibusTec and chelab Dr. V. Ara GmbH / Co. KG for supporting our webinars.



BioSystems



Dr. V. Ara GmbH & Co. KG
Institut für Lebensmitteluntersuchungen



Save the dates

Due to the current pandemic, we will only list IFU events that we are responsible for and hope to give you a bigger update on events in our juice letter in summer 2021.

As always: We can offer free tickets for IFU members for all food & bev fairs organized by Koelnmesse/Cologne Exhibition Center (except Sial in Paris and Anuga fair in Cologne) – send an email with the names of the visitors to Maria and she will make sure you'll get your ticket!

You can also contact Maria if you are interested in becoming a sponsor of one or all of our events!

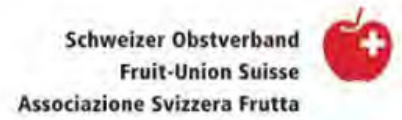
DATE	EVENT	LOCATION	LINK
16th to 18th March	 <p>SGF IFU ROAD SHOW WEBINARS MARCH 16, 2021 MARCH 17, 2021 MARCH 18, 2021</p>	online	<p>Choose your preferred timeslot. Presentations will be the same, but different discussions are expected.</p> <p>EMEA Tuesday 16th of March; 10-12:30 am CET ASIA Wednesday 17th of March; 8-10:30 am CET AMERICAS Thursday 18th of March; 5-7:30 pm CET</p> <p>Registration will soon be available on https://ifu-fruitjuice.com/page/Events</p>
11th - 11th May	 <p>IFU JUICE CONFERENCE May 11 & 12, 2021 South Africa</p>	South Africa – Stellenbosch (near Cape Town)	https://ifu-fruitjuice.com/event/JuiceConference2021
14th June	 <p>IFU Technical Workshop 14.06.2021 Parma, Italy</p>	Parma, Italy	Registration will soon be available on https://ifu-fruitjuice.com/page/Events
15th - 17th June	 <p>IFU UNIVERSITY SIBENS SCIENTIA</p>	Parma, Italy	https://ifu-fruitjuice.com/event/IFUUniversity
5th October	IFU Executive Committee	Belgium - Antwerp	
6th October	IFU Commission meetings & IFU General Assembly	Belgium - Antwerp	
7th - 8th October	 <p>JUICE SUMMIT powered by IFU, IFA, IFA</p>	Belgium - Antwerp, Hilton Hotel	https://www.juicesummit.org/

NEW MEMBERS



Itacitruservices srl







04-08.12



IFU

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