



Newsletter N° 2

WELCOME AGAIN!

The Congress Organising Committee welcomes you all again. We are on the go and on track with all the arrangements necessary for the best-ever ISSCT Congress in 2019. As part of these activities and according to the ISSCT procedures we hosted the Mid-Term Meeting during April. The ISSCT Executive Committee and Technical Programme Committee not only worked very hard but also had the opportunity to experience some of Argentina's most outstanding views and our friendly style.

Here we provide you updated information on items included in Newsletter #1 and add useful details about the Pre and Post Congress Tours. We also give an expanded overview of our region's sugar industry and the technology we apply and that you will see in these tours.

Additionally, we'd like to let you know that we have placed several advertisements in the most popular sugar-industry Journals that are intended to promote the Congress worldwide.

We've also launched our new website where you can access and share information related to the Congress that will allow you to plan your visit to our country next year. Please visit www.issct-argentina2019.com

We are pleased to be part of the COC. We strongly believe that it is worth the effort.

The Congress Organising Committee
Argentina

THE CONGRESS VENUE: HISTORY OF INGENIO SAN JOSÉ



José Frías Silva, a former governor of Tucumán province, and his two sons founded the San José Sugar Mill in 1848. It was strategically located amongst the numerous fields he owned and the 12 sugar mills that were then in production. During its early stages, San José had a wooden mill driven by oxen to produce not only sugar but also rum.

The railway arrived to Tucumán by 1876. This drove an urgency to access new technology for the whole industry. As a consequence, San José acquired a second mill tandem and incorporated the vacuum evaporation process.

Further development saw Tucumán sugar industry consolidate from 82 sugar mills in 1877 to 34 by 1895. San José witnessed a splendid era of 90 years through a period of outstanding productivity.

San José Sugar Mill was closed following a decision by the national government to reduce overproduction during a time of low international prices.

Its last harvest took place in 1967 and the workers, who had originally left their hometowns to work in the sugar mill, were gifted their houses through the generosity of the founding family.



In 1980 the chimneys, as well as some of the warehouses, had to be demolished for safety reasons. The main house is now used by the staff of Sociedad Rural de Tucumán and its original chapel is the district parish church.

TECHNOLOGY APPLIED IN ARGENTINA'S SUGAR CANE PRODUCTION

The most obvious technologies developed and incorporated by Argentine Sugar Cane agro industry include:

1. Development of new sugar cane varieties. Argentina has genetic improvement programmes that have delivered a high productivity impact not only in this country, but they have also contributed to productivity to other sugar cane areas in the world.
2. Biotechnology research teams in Argentina have developed genetically modified varieties - these have not been released yet for a commercial production.
3. Mechanical harvest, done with the latest generation machinery, has recently expanded in our sugar industry, providing a high level of efficiency. The Argentinean sugar industry has been closely observing the evolution of mechanization worldwide for more than seven decades. Starting in the 1990's, the new generation harvesters were adopted rapidly and now harvest 90% of the Argentinean crop.
4. Most of the crop is now harvested green, without burning and the residues are used as a trash blanket for the next crop. Over the last 30 years new equipment and more accurate technology have been developed for this productive system. In 2006, Argentina hosted the 8th ISSCT Workshop of Agricultural Engineering, under the main topic "Improving Sugar Cane Productivity under Green Cane Conditions". Argentina is now one of the top-ranked countries in implementing green harvesting.
5. A variety of modern irrigation systems are used, especially sprinkling with central pivot equipment, and subsurface drip irrigation, mainly in the northern region.
6. Techniques aiming to improve the quality of the raw material entering factories have been developed through the use of chemical ripeners.
7. Aiming at a production system based on a high quality sugar cane seed, Tucumán area is using an *in vitro* micro propagation technique coupled with a successful

- seedling nursery supply. This system has been used for replanting for over two decades, further driving productivity.
8. New distilleries equipped with technology allow better energy efficiency (vacuum systems, thermal integration with vinasse concentration).
 9. Dehydration systems with molecular sieves of low energy consumption as well as reduced environmental impact.
 10. Vinasse concentration systems in order to improve its final disposal.
 11. Vinasse burning systems to produce electrical power and potassium fertilizers.
 12. High productivity systems for producing ethanol using continuous fermentation.
 13. Dry yeast production for animal feed obtained from the separation of yeast by centrifugation in the fermentation system.
 14. New investment (boilers, turbo generators) in electrical power cogeneration systems.
 15. Disposal of effluents in compliance with current environmental regulations.

FIGURES OF SUGAR CANE PRODUCTION TODAY IN NORTHWEST ARGENTINA

The production characteristics of Tucumán, on the one hand, and Jujuy and Salta, on the other, are quite different. This is due mainly to temperature, rainfall, types of soils, water availability for irrigation and production structure. All of them are shown in the following table:

Main differences between Sugar Cane production areas of Argentina

CHARACTERISTICS	TUCUMÁN	JUJUY & SALTA
Temperature regime	Cold between June and August	Mild winters
Growth period	Late August – mid April	Early August to May
Rainfall	750 -1,500 mm	600 - 750 mm
Dry Season	July to October	June to November
Irrigation	20% of planted area	100% of planted area
Frosts	Severe	Moderate
Soils	2-3% organic matter	1-2% organic matter
Harvest Season	15 May to 15 November	May to November
Harvest	90% mechanical	100% mechanical
Number of Growers	5,800	120
Size of Farms	Small – Mid - Large	Large

CALL FOR PAPERS

If you're intending to present a paper or poster at the Congress (and we encourage you to!), you must send an expression of interest to the ISSCT Editor, Dr Peter Allsopp, by 31 August this year. The form can be found on the ISSCT website www.issct.org. Remember that you will need to send a manuscript by 31 December, 2018.

PLENARY SESSIONS UPDATE

The ISSCT Technical Program Committee is excited to be planning innovative plenary sessions to be delivered at the ISSCT Congress in Tucumán in September, 2019. While topics and guest speakers appointment/selection have yet to be finalized, we are exploring the following topics:

1. Soil as the Key to Productivity. This session would cover a broad range of soil-related issues with the objective to more fully understand the nature of sustainability and effects on sugarcane productivity and profitability.
2. Sugar Beet vs. Sugar Cane. This session would examine improvements in sugar-beet technology and lessons that may be applicable to sugarcane productivity and processing.
3. Climate-Change Driven Opportunities. This session would discuss climate- change impacts on the sugar sector and associated opportunities in alternative energy production.
4. Improved Milling Designs. This session would examine principles for designing an efficient 21st century sugar cane factory.
5. Science in the Age of Social Media: This session would discuss the challenges for scientists and scientific organizations in communicating in the age of social media.

We expect the sessions and speakers to be finalized in the next few months, and look forward to seeing you in Tucumán in 2019!

CONGRESS REGISTRATION FEE

The following rates will apply for the Congress Registration Fee:

- Early Bird rate (**up to February 15th 2019**) **USD 1,250**
- Premium rate (**up to March 31st 2019**) **USD 1,350**
- Standard rate (**up to Jul 31st 2019**) **USD 1,500**
- Late rate (**up to Sep 2nd 2019**) **USD 1,700**

INFO ABOUT PRE AND POST CONGRESS TOURS

The Congress Organising Committee is planning Pre Congress and Post Congress Tours where all delegates can see in detail the main characteristics of sugar production and management of farming areas in Tucumán before the Congress, and later in Salta/Jujuy. As we pointed out in the last Newsletter, Argentina's sugar cane industry has introduced significant technological innovations over the last few years. These have driven levels of productivity much higher than the notoriously low yields of a couple of decades ago.

In both Tours we'll focus on showing you these innovations, considering they are of high interest to all visitors from the world of sugar. To give you full insight, we have several fields displaying the different techniques used when planting, growing, harvesting and handling sugar cane. These visits are intended to be easy going, entertaining and understandable for all delegates. For factory-focused delegates, the selected sugar mills will demonstrate some of the technological developments that they've implemented recently. These will be something for everyone!

Additionally, we are planning to visit several of our region's Research Centres that are devoted to R+D in sugar cane.

LATEST NEWS ABOUT AIRLINE ROUTES

We are proud to announce all visitors that Tucumán has added new airlines since our last release of Newsletter #1. Our province now has three different international and three domestic routes. These will allow easy access for Congress participants from all parts of the world, and a chance to visit other parts of amazing Argentina.



VISAS

Some Congress delegates will need a visa to enter Argentina. Please find the country list in this link <http://www.migraciones.gov.ar/accesible/indexA.php?visas>. It is your responsibility to ensure that, if you need one, you have the correct visa.

Chinese citizens, please visit http://www.migraciones.gov.ar/accesible/indexA.php?aut_viaje

ACCOMMODATION

Tucumán and the neighboring districts offer a wide variety of stylish, modern and traditional hotels. The following list of hotels has been updated for attendees wanting to plan their visit. Rates will be available in the next Newsletter; they are currently under negotiation by the COC with the Hotel Bureau.

Hotel	Category in *	Rooms available	Web
1- Sheraton	5	124	www.sheratontucuman.com
2- Catalinas Park	5	143	www.catalinaspark.com
3- Garden Park	4	80	www.hotelgardenpark.com.ar
Hilton Garden Inn	4	103	https://hilton-garden-inn-tucuman.negocio.site
4- Tucumán Center	4	67	www.tucumancenterhotel.com.ar
5- Amerian	4	47	https://www.amerian.com/
6- Bicentenario	4	67	www.hotelbicentenario.com.ar
7- Hotel del Jardín	4	129	www.hoteljardin.com.ar
Hotel Sol San Javier	4	55	http://www.hotelsolsanjavier.com.ar/
Howard Johnson	4	17	http://www.hjverbabuena.com.ar
8- Carlos V	3	57	www.hotelcarlosv.com.ar
9- Metropol	3	75	www.swisshotelmetropol.com.ar
10- Premier	3	94	www.hotelpremier.com.ar

Hotel and Venue location: The map shows the location of the main downtown hotel area as well as other hotels, all located at short distances from Congress venue. The airport is also included for better reference.



City hotels - Enlarged area (reference numbers in table above)



TUCUMÁN: Congress Host

Tucumán is the smallest province of Argentina and yet it is the undisputed cradle of our Independence. This province offers a wide variety of stunning landscapes including mountains like Cerro Negro -4,460m above sea level- to green valleys and plains with different crops growing all over the year. With temperatures that may range from 10°C to 30°C in September, the province offers visitors five different tours to experience unique adventures, meet its friendly people and share delicious and ethnic gastronomy.

- **Historical City Tour:** Immerse yourself into the roots of the province where Argentinean Independence was promulgated. You can visit the Casa Histórica (<https://casadelaindependencia.cultura.gob.ar>) witness of this historical event that made Tucumán be appointed “Historical City” in 1999, due to the richness of its cultural heritage. Visit the Museum of Sugar Industry (<http://smt.gob.ar/MIA>), nestled in the heart of *Parque 9 de Julio* and showcasing the pioneering facts of Argentinean sugar industry.



- **Las Yungas Circuit:** Take a tour among green leaves and landscapes filled of fresh air. Our *Yungas -the ecosystem characteristic of the province stretching out up to south Bolivia-* comprises thick canopy, colorful flowers, amazing birds, and even some hidden waterfalls. Heading west of San Miguel, the city of *Yerba Buena* offers an array of stylish restaurants and cafés with great views to *Cerro San Javier*, located 25 km from downtown. From this dreamy place, 1,300m above sea level, visitors may have spectacular views of the city. *El Cadillal Dam*, at about 25 km north San Miguel de Tucumán, nestled amidst wild nature, is the best place to practice water sports, mountain biking, wall climbing or trekking. There is also a chairlift to reach the top of the Cerro Medici and to observe the Sierras de Medina and the impressive water mirror from there.



- **Valles Calchaquies Circuit:** This circuit takes travelers through its dense vegetation up to *Tafi del Valle*, an amazing village nearly 2 hours from the city and about 2,000m above sea level. *Amaicha del Valle* and *Ciudad Sagrada de Quilmes* are archeological sites that showcase our pre-Columbian history where some descendants of aboriginal dwellers kindly welcome visitors.



Artisan and Wine routes are worth visiting to experience the creative and ethnic-style handicraft of our locals and also to taste the best wines produced in cool climates.

- **Southern Circuit:** The city of Simoca -80km away from the capital city- hosts a local market especially on Saturdays. Hundreds of products, such as spices, regional food, sugar cane by-products in different shapes and flavors, can be obtained. Picturesque Sulky carts and gauchos riding their typical horses are also part of this traditional weekly event.



- **Valle de Choromoro Circuit:** A journey enmeshed in vegetation followed by places to enjoy quiet days in *estancias* (ranches) and discover almost unexplored areas that keep historical and archaeological treasures only known by its inhabitants. *Piedra Pintada* is a sacred, historical and archaeological site with more than 45 engraved stones from the late 19th century. *San Pedro de Colalao* is a small village located in the department of Trancas, famous for its excellent cheese and other dairy products.

