



Taiwanese tea exhibition opens in Szolnok

The Taiwanese tea exhibition "Formosa's golden treasure: Taiwan through a cup of tea" opened on January 27, 2017 at the Damjanich János Museum in Szolnok, Hungary, with more than 150 people taking part.



The exhibition is a joint project among the Taipei Representative Office in Hungary, Taiwan's Yingge Ceramics Museum, Library and Information Centre of the Hungarian Academy of Sciences, Ferenc Hopp Museum of Asiatic Arts, Hungarian Museum of Trade and Tourism, Hungarian Geographical Museum and Taiwan Alumni Association.

At the opening ceremony, Ambassador Tao Wen-lung of the Taipei Representative Office in Hungary shared an anecdote about how tea transported by land in ancient times ended up being called

cha, while by sea, was called tê. "In Magyarul, it's tea, so we can assume that few hundred years ago, your tea came from Taiwan," he said. Taiwan once played a major role in international tea export, Tao said, however, since the 1980s, most tea growers and merchants began targeting the domestic market. He added that tea in Taiwan is more than a beverage; it also represents "a peaceful and yet vibrant cultural aspect of Taiwan."

Also attending the opening ceremony were Deputy Director Chen Pao-chien of the Yingge Ceramics Museum and Director László Horváth of the Damjanich János Museum. Horváth thanked the Taipei Representative Office for making this exotic and educational exhibition possible. The director said museumgoers will be treated to Taiwan's fantastic tea culture, and most importantly, to learn more about Taiwan. Chen pointed out that Taiwan has many local varieties of teas and Taiwan tea drinkers are quite particular about their tea sets. The exhibition, Chen said, presents the beauty and uniqueness of Taiwanese tea art and

the aesthetics of Taiwan tea sets. Dr. Chiang Shu-ling from the Yingge Ceramics

Museum conducted a Taiwanese tea ceremony at the opening, much to the delight Hungarian the guests present.

Chiang also hosted a tea workshop on January 28 at the Damjan-

ich János Museum. The exhibition, which runs until April 28, 2017, features, among other things, tea sets from the Yingge Ceramics Museum, artifacts from Hungarian institutions, displays of different types of tea, a video presentation about tea culture

> and the tea ceremony in Taiwan, and information about the introduction of tea to Hungary. A drawing competition for elementary and secondary school children is also held alongside

the exhibition. Museumgoers are promised a journey through the history and the making of tea, an essential beverage for most Taiwanese people.



Passengers served by the Taiwan Taoyuan International Airport reached 42.3 million in 2016, putting Taiwan's main gateway onto a list of airports serving over 40 million passengers, according to Taoyuan International Airport Co. statistics.

Passengers served by the airport reached 32.21 million in the first 2013, year in which it served over 30 million. Passengers served by the airport increased for five consecutive years from 2012 to 2016, with the

rates of increase in the five years between 7.45 percent and II.15 percent, according to the company's statistics.

On average, the airport served more than 115,000 passengers per day in 2016. Taoyuan Airport has attracted six budget carriers in 2016 - AirAsia Philippines, Eastar Jet of South Korea, JetStar Pacific Airlines of Vietnam, Jin Air of South Korea, Malindo Air of Malaysia/Indonesia 🕏 and Tway Air of South Korea - which shows that airlines in Southeast Northeast Asian countries are interested in the Taiwan market. The airport company has begun a project to expand the size of

Terminal Two, which is scheduled to be completed in June 2018.

In 2016, the airport won the second place in the 2015 Airport Service Quality (ASQ) Award for "Best Airport by Size: 25-40 Million Passengers." The annual awards recognize the best airports in the world, according to the Airports Council International's ASQ passenger satisfaction survey.



National Taiwan University Hospital makes head, neck tumor surgery breakthrough

The world's first minimally invasive procedure for removing head and neck tumors was unveiled January 17 by National Taiwan University Hospital (NTUH) in Taipei, showcasing the country's leading-edge medical services, R&D capabilities and technologies.

Developed by NTUH's Otolaryngology-Head and Neck team, the advanced surgical method effectively removes recalcitrant head and neck tumors and results in an aesthetically pleasing appearance. To date, NTUH has successfully performed more than 200 operations on patients with tumors in such organs as the lymph nodes, salivary glands and thyroid. Dr. Yang Tsung-lin, attending physician at NTUH's Department of Otolaryngology, said the procedure is a significant breakthrough as nearly 90 percent of cases require open surgery. "The new approach reduces the impact of operations on the head and neck and increases surgical precision."

According to Yang, traditional head and neck open surgery leaves an unsightly 8-10 centimeter scar, whereas the new procedure leaves a smaller one. "It combines endoscopy, robot-

ic surgical systems and an innovative instrument to leave a much smaller incision along the hairline of the posterior neck, making the approach more acceptable to patients," he said. The surgical method is made possible through the use of Yang's Retractor, an automatic mechanical wound opener developed by the medico. Yang received a National Innovation Award for the device in 2015, and it is patented in a number of markets worldwide, including Taiwan, Japan, the United States and mainland China.

The procedure was documented three years ago in an article authored by Yang and published by the prestigious British Journal of Oral and Maxillofacial Surgery. This was the first time a piece from Taiwan on robotic surgery for head and neck tumors appeared in a Science Citation Index journal.

Taiwan Q4 GDP up 2.58%, beating forecast

Taiwan's Gross Domestic Product (GDP) grew 2.58 percent in the fourth quarter of 2016 from the same period a year earlier, beating an earlier forecast of 2.37 percent in November, according to preliminary data released by the the Directorate General of Budget, Accounting and Statistics (DGBAS) on January 25.

After seasonal adjustments, the Q4 growth rate was up 0.47 percent from the previous quarter and 1.89 percent year-on-year, according to the DGBAS.

In the wake of the better than expected GDP figure in the fourth quarter, Taiwan's economy is expected to have grown a minimum of 1 percent in 2016, the directorate said. The higher than expected GDP growth for the October-December period largely reflected stronger than expected private consumption, investment and import/export growth, DGBAS specialist Huang Wei-chieh said. The DGBAS attributed the growth to increased domestic in-

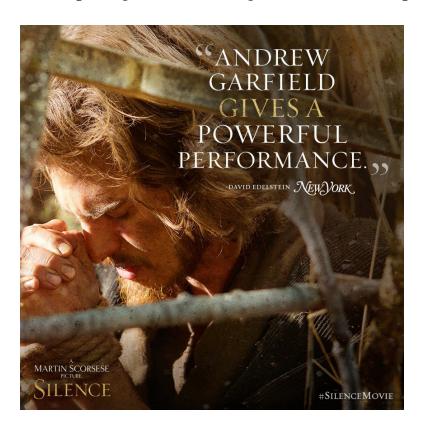


vestments in advanced manufacturing processes by the semiconductor sector and fleet expansion by domestic airlines. In addition, domestic enterprises

posted a 30.4 percent increase in capital equipment imports for the quarter, the biggest increase since the first quarter of 2011, the GDBAS said.

Scorsese says his dream of filming 'Silence' was achieved in Taiwan

Oscar-winning director Martin Scorsese said January 19 in Taipei that his dream of filming the historical drama "Silence" was achieved in Taiwan, and he hopes to give the film as a "gift" to the Taiwanese people.



"It's an extraordinary thing to be here to present the film, a film that I have been working on for many, many years," the 74-year-old American director said at the premiere of "Silence" in Taiwan.

"It has been a dream of mine and that was brought to fruition here in this extraordinary country of Taiwan. It was a great inspiration and I hope that it does justice to all of you," said Scorsese, who had attempted to make the film for three decades. Scorsese attended the event along with the film's producer Emma Tillinger Koskoff and co-writer Jay Cocks. Taiwanese director Hou Hsiao-hsien made an appearance to show support for the film.

"Silence," which was shot in Taipei, Hual-§ ien, Taichung and other places in Taiwan, will go on general release in Taiwan on February 17. The film is an adaptation of Japanese writer Shusaku Endo's 1966 novel of the same name. It is about the persecution of two Jesuit priests who traveled to Japan in the 17th century to find their mentor and spread Christianity.

The film's cast includes "Taken" star Liam Neeson and "Amazing Spider-Man" star \$\frac{\xi}{x}\$ Andrew Garfield.

High-Tech Harvest

Taiwan Review By Pat Gao Photos by Huang Chung-hsin

Taiwan's technological expertise is leading an agricultural revival.



Last July, a series of powerful typhoons battered Taiwan, affecting millions of people in a scenario that occurs each summer and fall in the East Asian nation. Typhoon Megi, which made landfall September 27 in eastern Taiwan's Hualien City, was responsible for more than NT\$2.78 billion (US\$85.5 million) in damage to the agricultural industry alone, not counting over NT\$570 million (US\$17.5 million) in losses in the fishing, forestry and livestock sectors, according to the Cabinet-level Council of Agriculture (COA).

In southern Taiwan's Pingtung County, however, a number of specially designed greenhouses weathered the storms, their structures mostly unscathed and the crops inside intact.

The facilities are reinforced with steel beams and powered by solar panels that partially cover their roofs. These generate ample electricity to power atmospheric regulation and irrigation systems, with the excess sold to the national energy grid.

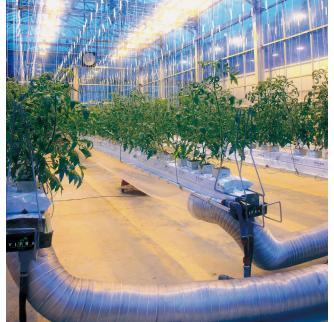
The construction of typhoon-defying, power-generating farming facilities is made possible through the application of practical ideas and advanced technologies designed to protect against adverse weather conditions such as cold snaps, droughts and floods, according to Lur Huu-sheng, a professor in the Department of Agronomy at National Taiwan University (NTU) in Taipei. Lur pointed out that in five of the last 10 years, annual agricultural losses due to climate

factors reached NT\$10 billion (US\$307.7 million). "In the face of climate change threats, embracing new technologies could help establish a model for sustainable agricultural development," he said.

Regarding other major issues in the agricultural sector, such as the shrinking labor force and increasingly liberalized global markets, Lur said the development and use of new automation and mechanization technologies also play a central role.

Experience and Ingenuity

Located in the Western **Pacific** along the Tropic of Cancer, Taiwan is exposed to natural hazards such earthquakes, flooding and tropical storms. This necessitated has development the of technologies to protect the nation's farms and resulted in valuable exper-



tise that Taiwan is putting to use in and around the region. "Our talent for building such agricultural facilities as tropical greenhouses can be utilized in other tropical and subtropical zones, giving us distinct advantages in both knowledge and ability over other developed countries like Japan," said Lur.

Based in northern Taiwan's Hsinchu City, the government-supported Agricultural Technology Research Institute (ATRI) is aiding international and Taiwan-owned businesses in Southeast Asia. Working in collaboration with the Taipei-headquartered World Taiwanese Chambers of Commerce, the ATRI has signed a number of memorandums of understanding with firms and business organizations on fos-

tering cooperation in technology transfers and industrialization.

Research conducted by the COA's research organizations and experimental centers and agriculture departments at universities around the nation has led to the establishment of some of the largest biofertilizer and biopesticide plants in Southeast Asia.

These factories are located at the COA's Pingtung Agricultural Biotechnology Park, which opened in 2003 and now houses more than 90 companies.

Organic Approach

Lee said that advances in biotechnology are highly beneficial to the agricultural industry. The study and use of microorganisms in industrial decomposition and fermentation processes, for example, are crucial for the emerging organic pesticide and fertilizer sectors. In 2007, he noted, "organic agricultural product" became a legal term through its inclusion in the Agricultural Production and Certification Act promulgated the same year. This was followed soon afterward by government initiatives

that subsidize farmers' use of nonchemical fertilizers and pesticides. Moreover, Lee said, "microbiology plays a leading role in circular agriculture, which includes transforming and recycling the waste and byproducts of production processes."

According to Lur, turning formerly discarded materials such as animal excretions and fruit peels into usable resources "cuts production costs and reduces the social cost of environmental pollution."

The ATRI's Plant Technology Laboratories have targeted microbial agents, as well as plant seedlings and food safety, as potentially lucrative. Currently, around 60 companies that research and produce plant, animal and aquatic technologies have staff members interning at the ATRI's facilities. "They're not just learning about cutting-edge technologies, but also relevant management concepts and skills," Lee said.

According to the ATRI chief, his organization is committed to furthering Taiwan's efforts to form a complete value chain in the country's agricultural technology sector,

from research to application and eventual commercialization.

Better Crops

Institutions such as the Taipei City-based Agricultural Biotechnology Research Center (ABRC) have also added momentum to technological

progress. The organiza-

tion was established in 2006 under Academia Sinica, Taiwan's foremost research institute.

One of the ABRC's major fields of study is plant stress biology, which concerns plants' responses to unfavorable conditions such as high temperatures, droughts and flooding, as well as pollu-



tion by heavy metals. Its goal is to help crops cope with adverse environments. "Global warming and its impacts on local flora have been among our central concerns for several years," said Yeh Kuo-chen, a research fellow and interim

director of the ABRC who studies the molecular mechanisms of heavy metal homeostasis in plants.

Yeh pointed out that the ABRC takes a primarily Taiwan-centric approach to most of its research. "We study and keep records of local agricultural re-

local agricultural resources such as bacteria

endemic to Taiwan that can be used to fight diseases commonly affecting rice crops," he said. Working in tandem with the semiofficial Taiwan Banana Research Institute, established in 1970 and located in Pingtung's Jiuru Township, the center studies the development of the tropical fruit, one of Taiwan's major agricultural exports.



Taiwan District Agriculture Research and Extension Station



The interim director said the ABRC's ultimate goal is to foster the next generation of agricultural scientists. Echoing that remark, Lur said, "Young people are taking part in a farming revival driven by innovation. Taiwan's advanced high-tech industry and superior farming techniques give it a great advantage in spearheading a new era of smart agriculture."

Tea seed oil factory in New Taipei's Pinglin reveals gourmet secret

A by-product of Taiwan's renowned tea industry, tea seed oil is growing into an essential ingredient of various Taiwanese gourmet foods, such as stir-fried chicken with tea seed oil, and consumers can now see how high-quality oil of this kind is produced in New Taipei's Pinglin District, home to Baozhong tea.

The tea oil model factory, set up in 2015 as part of the Pinglin Tea Cultural Museum at the Pinglin District Farmers' Association, is

the first factory in northern Taiwan to show visitors how tea seeds are pressed into premium cooking oil, according to the New Taipei Agriculture Department.

Tea oil contains 90 percent monounsaturated fatty acids,

thanks to which it is dubbed in Taiwan as "Oriental olive oil," department officials said.

Lin Wen-kung, chief executive of the Pinglin District Farmers' Association, said machines at

the factory have been running without pause since their inauguration to offer consumers a healthy oil product. The Pinglin tea seed oil

factory is operated as a tourism factory, which red as a tourism factory, which red allows visitors to watch the complete production process through windows. "We let consumers see with their own eyes how a perfectly pure oil product is made," Lin said.

The tea output of Pinglin District accounts for 60 percent of the total in New Taipei City. The district is also famous for the production of Wen Shan Baozhong tea.