

ASIAN SEED

THE OFFICIAL PUBLICATION OF THE ASIA & PACIFIC SEED ASSOCIATION

Advanta Seeds Names New CEO

Bhupen Dubey
takes the helm

The Seed Catalogue Story

Four centuries...
and still going strong

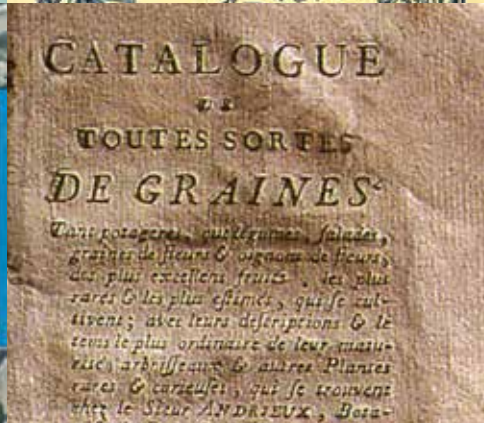
Seed Trade Growing in Asia

2nd part of GNIS report
on the seed trade

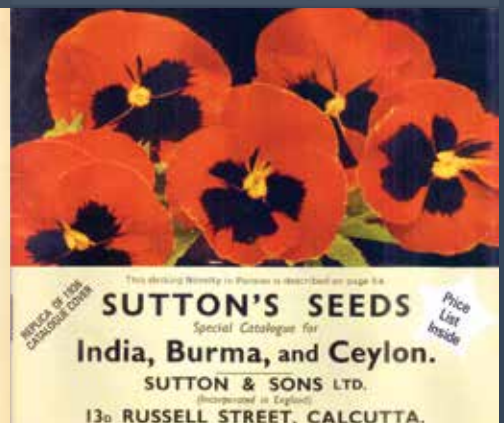
Seed for Thought

From maths to pest
lists by Dr. Radha
Rangannathan

VOL.22 NO.2
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The Seed Catalogue Story





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APSA Welcomes New Director

A lot has happened since I last wrote this message. Firstly, I would like to welcome APSA's new Director, Ms. Heidi Gallant, who will take up her position on 1 June 2016. You can see her profile on page 30. I'm sure you will all join me in wishing her the very best for her new position.

Ms. Gallant has certainly arrived at the right time, as preparations are going ahead at full steam for this year's Asian Seed Congress, which will be held on 7-11 November, 2016, in Incheon, South Korea. Registration for the Congress will open at the beginning of June. I'd like to remind you all to book early to secure the trading table, meeting room or booth that you may need. We will be sending emails to update members, but you can always check out the APSA website for announcements.

There will be an Executive Committee meeting at the beginning of June, during which EC members will be dealing with the registration of the association with the Thai authorities, and will consider all aspects of this year's congress, which as you know will be held in Incheon, South Korea on 7-11 November.

The Office Bearers will also report to the EC on a fact-finding trip to Manila, the Philippines, for ASC 2017. The OB members, together with Ms. Duangchai Pancom, APSA's events organiser, met with the National Organising Committee (comprised of members of the Philippines Seed Industry Association) to discuss the details

of hosting congress and to survey the proposed congress site (see page 31 for more details).

This issue of Asian Seed magazine focuses on the subject of seed catalogues, which continue to survive despite the arrival of the internet and cyberspace. APSA members have sent in some fascinating and beautiful examples of catalogues from across the region. We can trace the development of the seed industry through catalogues; about seed historians, for instance, and use them to find out how cultivars of certain crops have changed over time.

We can also see how the technology of printing and photography has affected how seed catalogues are designed, and how the development of

transportation systems assisted in the distribution of seed catalogues, which were among the first 'products' to be sold via mail order (which continues to this day).

Also in this issue is the second part of the economic analysis of seed movement in the region, researched and written by the statistics department of the French seed association, Groupement National Interprofessionnel Des Semences et Plants (GNIS).

In addition, please take a look at the profile of Mr. Bhupen Dubey, who was recently promoted to CEO of Advanta Seeds, and the Seed for Thought column, which for this issue was written by Dr. Radha Rangannathan, whose most recent work involved creating the ISF's Pest List Database. 🌱



Photo by John Clewley

Photo credit: Bloms Bulbs



A selection of seed catalogues from the USA, South Korea and Japan.



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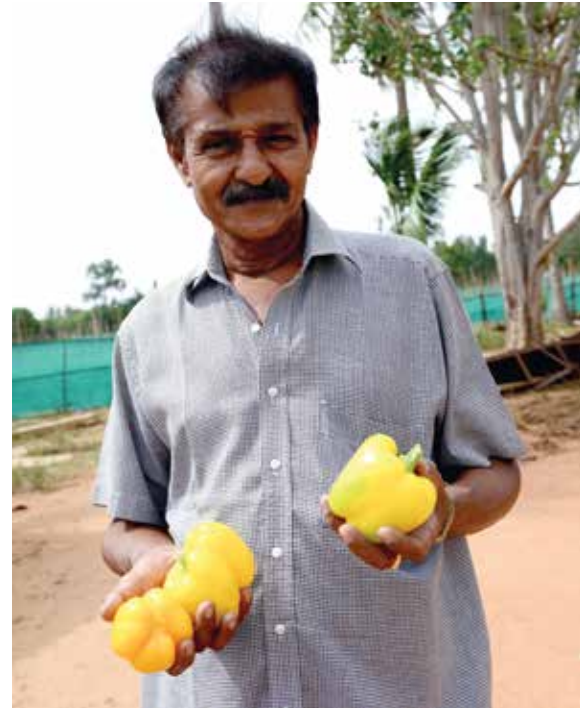
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East-West and DuPont-Pioneer Top Global Seed Index



Photos by John Clewley

Vegetable seed producer East-West Seed topped a global seed survey conducted by Access to Seeds, an independent, non-profit agency funded by the Dutch ministries of economic and foreign affairs and the Bill & Melinda Gates Foundation.

The index is the first of its kind, and attempts to further the debate on the role of seed companies in food security. In the Access to Seeds Index report for 2016, the rationale was described as, “The Access to Seeds Index measures and compares the efforts of the world’s leading seed companies to enhance the productivity of smallholder farmers. By matching the expectations of stakeholders in and around the seed industry with company performance, it helps clarify the role that the seed industry can play and brings transparency to the contribution of individual companies.”

The broad aim of the index is to improve smallholder farmers’ access to modern, more productive seed varieties. The report also

noted that leading seed companies should do more to reach smallholder farmers, especially in Africa, where the global seed industry is not as active as it is in South America, South and Southeast Asia, and East Africa. The index is based on widely available public information and a questionnaire that was sent to seed companies, with about half of the seed companies completing it.

The index measures companies in several areas, such as strategy and tangible targets on reaching smallholder farmers, engaging with ‘stakeholders’, and dealing with intellectual property rights. Additionally, the index also considers R&D and breeding, marketing and market access, and capacity building.

East-West Seed topped two of the three indices: the Global Index of Vegetable Companies (see chart top right) and another regional index that ranked seed companies in East Africa. The third index released was the Global Index of Field Crop Companies, topped

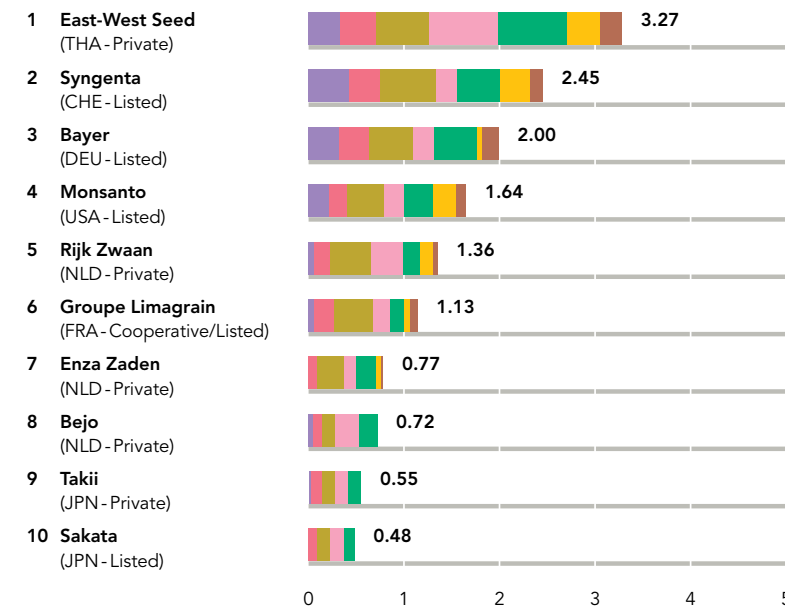
by DuPont Pioneer, and followed by Syngenta and Bayer.

The executive director of the Access to Seeds Index Foundation told European media that those companies that were ranked highest in the vegetable seed index tended to view smallholder farmers as a good business opportunity, while those ranked further down the index regarded serving them as part of corporate responsibility or promotion.

He noted that East-West Seed had deliberately relocated from Holland to Southeast Asia (initially the Philippines but now based in Thailand) with the intention of targeting and supplying smallholder farmers.

DuPont Pioneer, which ranked first on the Global Index of Field Crop Seed Companies, gained its ranking due to the fact that its strong breeding programme was based on which smallholder farmers were active. 🐾

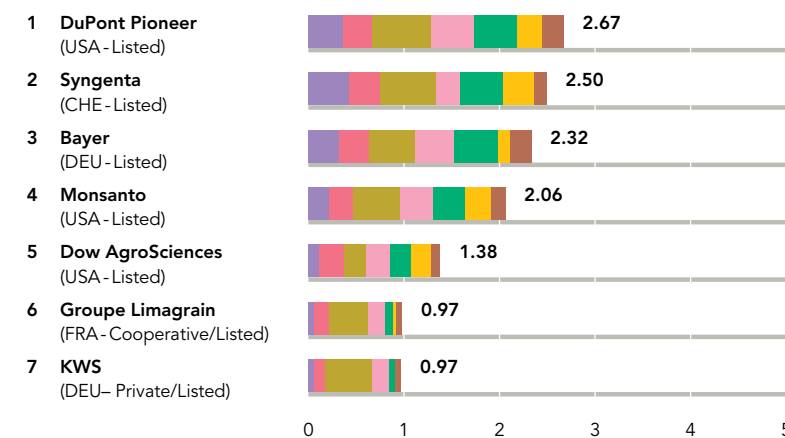
More information: accesstoseeds.org



Global Index of Vegetable Seed Companies

Measurement areas

- Governance & Strategy
- Public Policy & Stakeholder Engagement
- Genetic Resources & Intellectual Property
- Research & Development
- Marketing & Sales
- Capacity Building
- Local Seed Sector Advancement



Global Index of Field Crop Seed Companies

Measurement areas

- Governance & Strategy
- Public Policy & Stakeholder Engagement
- Genetic Resources & Intellectual Property
- Research & Development
- Marketing & Sales
- Capacity Building
- Local Seed Sector Advancement

Data courtesy of accesstoseeds.org

China's Roadmap for Genetically Modified Crops

On 13 April, the Chinese Ministry of Agriculture gave a press conference to brief the media about China’s ‘roadmap for genetically modified crops’, which was to give priority to non-edible cash crops. GMO expert Wu Kongming said that China had decided on a ‘prudent’ approach to introducing GMO crops, which meant that next in the pipeline would be indirectly edible crops, then edible crops. “China’s safety evaluation system on genetically modified crops is the world’s strictest in terms of technical standards and procedures.”

Mr. Wu said that at the moment China only plants insect-resistant

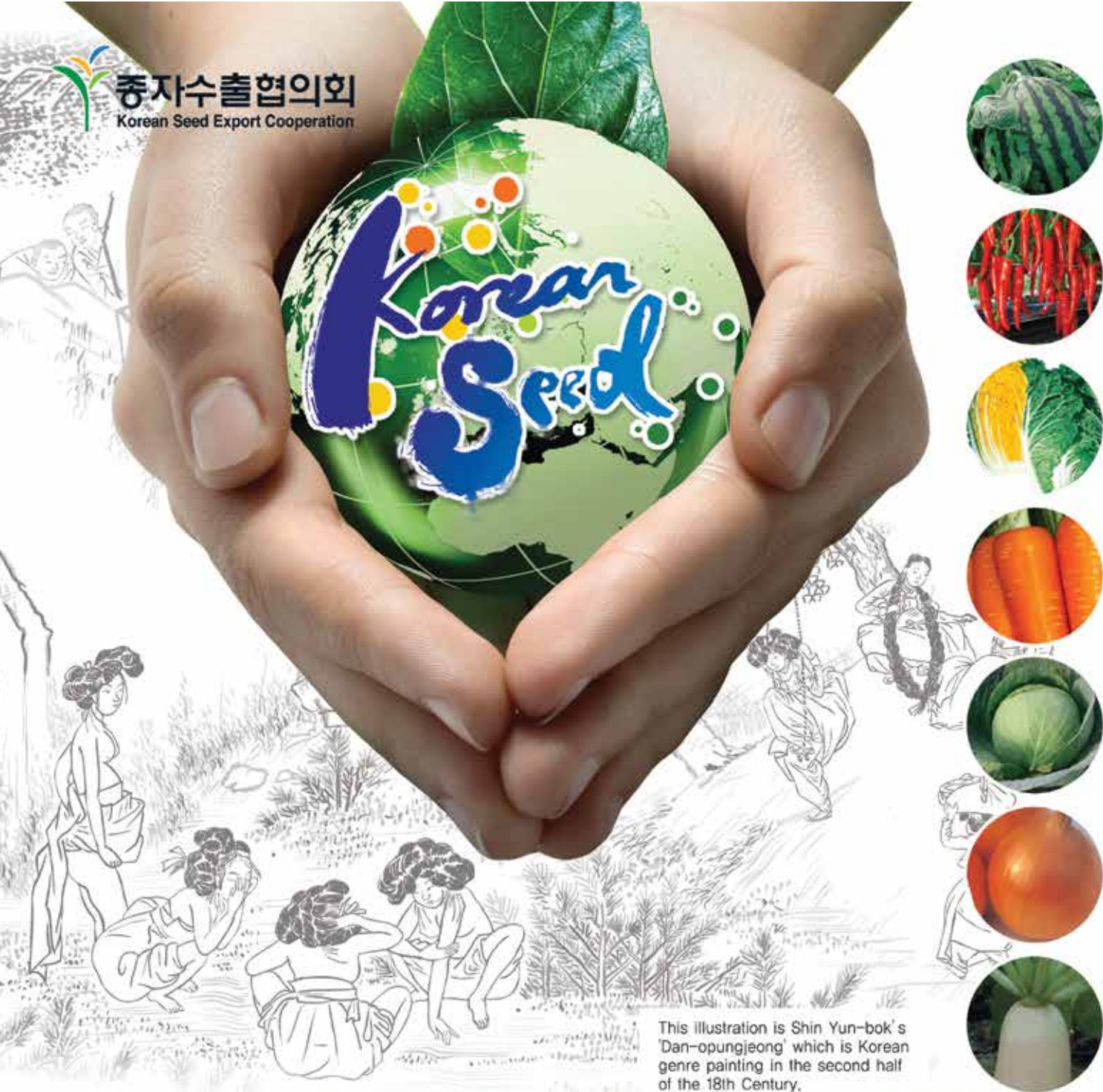
cotton and antiviral papaya for commercial purposes, although the country does import genetically modified soybean, corn, rapeseed, cotton and sugar beet. He added that in terms of GMO crops, the focus would be on cash and industrial crops for the period 2016-2020.

At the same press conference, the MOA announced that the authorities would focus on key agricultural seasons to prevent unauthorized seeds from entering China’s markets. The move follows a report by Greenpeace in January that claimed that farmers in the Northwest of China were growing

genetically modified corn. China only permits GM papaya and cotton for commercial cultivation.

In a related development, the Pakistani authorities, including the National Biosafety Committee (NBC) recently reviewed pending applications of multiple biotech crops for research and commercialisation. For corn, the NBC approved commercialisation of insect resistant and herbicide tolerant traits, and for cotton, the NBC approved commercialisation of an insect resistant trait. 🐾

Source: MOA, China Daily



This illustration is Shin Yun-bok's 'Dan-opungjeong' which is Korean genre painting in the second half of the 18th Century.

Beyond Seeds Share the World

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Ancient Genes and Vavilov To Protect Wheat



Russian scientist Nikolai Vavilov made it his life's mission to save and improve cereal crops. At the turn of the 20th century Vavilov went on several long journeys across the planet to collect plants, seeds, tubers and fruit. In fact, no scientist has ever matched the huge collection he created, which was stored in a seed bank in Leningrad (now St. Petersburg).

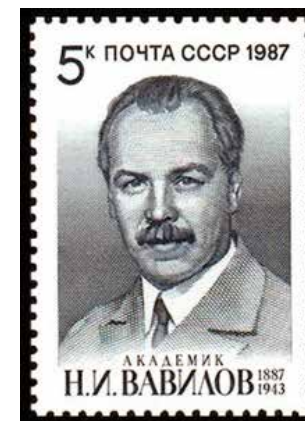
Now a team of researchers, led by Dr. Lee Hickey and doctoral candidate Adnan Riaz, from the Queensland Alliance for Agriculture and Food Innovation in Australia, have completed the world's first genome-wide analysis of Vavilov's collection of wheat seeds stored in Russia for over a century.

Vavilov theorised that cultivated crops had centres of origin, and he set out to prove this by traversing the world. After thirty years of plant hunting, he created the world's largest collection of seeds in Leningrad. The collection survived the siege of Stalingrad (as it was

called in the 1940s), when more than 1.5 million people died. Some of Vavilov's assistants starved to protect the collection. Their sacrifice enabled the Queensland-based researchers to access the seeds for their important research.

The researchers told the Australian media that Vavilov's unique seed collection offered them a snapshot of the ancient wheat grown around the world before the development of modern plant breeding. They examined 295 wheat strains using 34,000 genetic markers and found that modern Australian wheat cultivars did not have any of the ancient genes. As the different wheat has been characterised, the researchers are now working on the next phase of the project which is to re-establish the desirable traits into modern wheat cultivars. "We really hope to empower scientists and breeders," said Dr. Hickey, "to rediscover this genetic diversity."

Source: University of Queensland, agencies



Sakata and Indonesian Govt. Team Up

The Sakata Seed Corporation and the Indonesian Government have signed an agreement to allow the utilisation of local genetic resources to develop Sakata's flowering annual impatiens under its SunPatiens brand. The agreement was based on the Convention on Biological Diversity (CBD) in the horticultural plant category, and represents one of the few examples of an agreement to use native genetic resources between a government and a commercial seed company.

The agreement between the Japanese private sector and the Indonesian public sector was

based on the principles of the CBD and collaboration between Sakata and the Indonesian Agency for Agricultural Research and Development (IAARD).

The SunPatiens brand was launched in 2006 and part of the sales, of what is one of the most popular flowering annuals, will be allocated using the terms of access and benefit-sharing under the CBD to the Indonesian government; as part of the benefit sharing, Sakata will also transfer technology as a non-monetary benefit.

Source: Agencies

ChemChina Deal: US Lawmakers Want Deal Probed

Just a few weeks after Syngenta released an opinion of the purchase by ChemChina in which it stated that the purchase price of around \$43 billion was fair, US lawmakers, led by senators of the US Senate Agriculture Committee, called for the Department of Treasury to review ChinaChem's proposed acquisition for any potential effects on national and food security.

Source: Agencies



Photo by John Clewley

Advanta Seeds Names New CEO

One of India's major seed companies, Advanta Seeds, a part of UPL Group, has announced that Mr. Bhupen Dubey will replace outgoing CEO Claudio Torres.

Advanta Seeds is the first Indian multinational seed company with a global footprint. The company specialises in field crops and vegetable seeds. Advanta Seeds markets its products under Advanta, Pacific Seeds and Alta Seeds global brands and regional brands - Golden Seeds for vegetables in India, and Vereda for soybeans for Brazil.

Advanta Seeds has operations in more than 25 countries and sales in over 60 countries around the world.

UPL began as a small agri-chemicals company 40 years ago and has developed into a global producer

of crop protection products, intermediates, and specialty chemicals. UPL is the largest manufacturer of agrichemicals in India and claims a customer base in 123 countries. The UPL Group has a full agri-input value chain from seeds to post-harvest chemicals. The combined market capitalisation of the three main UPL companies (Advanta Seeds, UPL and UEI) is worth approximately \$2.5 billion. UPL acquired Advanta in 2006.

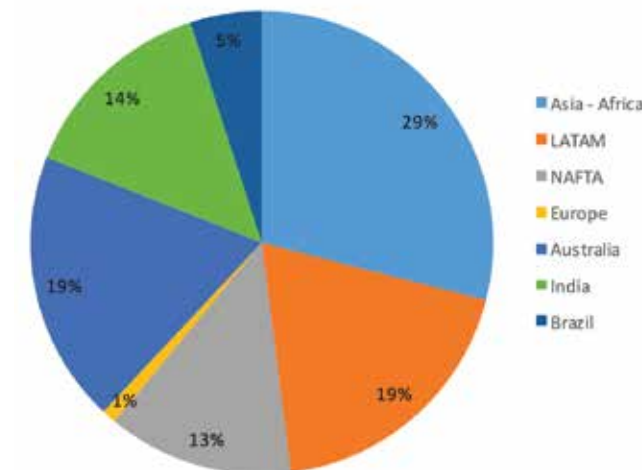
Bhupen Dubey talked about his 20-year rise to the top at UPL and Advanta, a recent interview with Dr. NK Dadlani, Director of Technical Affairs, and John Clewley, Managing Editor.

"I joined Hoechst as a scientist, straight after my Master's degree, I discovered that I had a flair for communicating and presenting in a simple, clear way, which is good

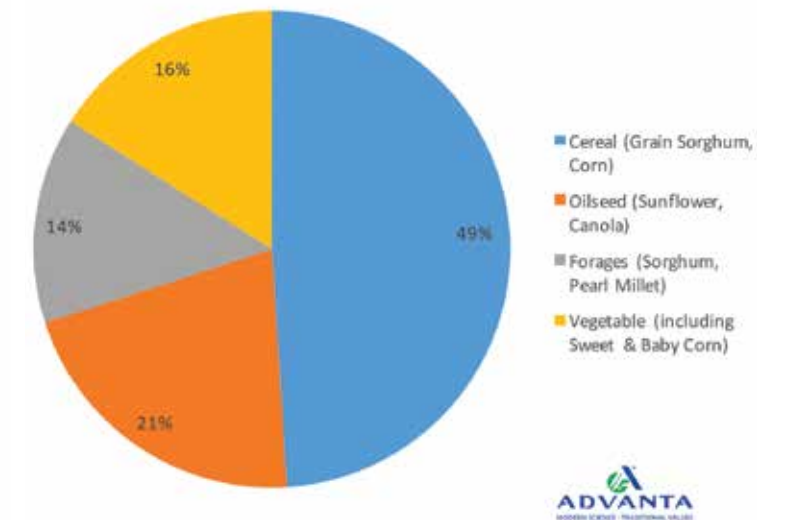
for marketing," he said. After this, Mr. Dubey went on to work with Agrevo, Aventis and Bayer Crop Science, during a period of intense M&A activity. "With every merger, I moved up the value chain."

In 2003, UPL contacted him and asked him to join the company to help it develop a successful domestic business, as it had done internationally. "At that time, the company was not a major player," revealed Bhupen. "I was 42 and needed a challenge. I jumped in, but it was difficult – it was a big culture shock." But his straight-forward managerial style helped him manage many business projects for UPL and Advanta India. He stated that he accepted the CEO role at Advanta Seeds because it was a 'global position' that required someone with his experience, drive and ability to work on integrated projects. 🌱

Advanta Seeds Revenue by Region 2015



Advanta Seeds Revenue by Crop 2015



ADVANTA
MODERN SEEDS - TRADITIONAL VALUES

Is the Seed Industry Important?

"Before I accepted the CEO position, I asked the board whether they were committed to growing the seed business, which they said they were." He added that agriculture is critically important in Asia, unlike in many developed economies, and that India has much untapped potential – it has a large percentage of arable land (48%) and over 30 climate zones, all of which are distinct advantages.

He pointed out that the trade gap between China and India presents an opportunity for farmers; moreover, he sees seeds as a catalyst for other growth. "I spend time or stayed with farming families for a week or more, so I base my ideas on the reality on the ground. I know the science and I know the social background." He commented that when the economies of Japan, China

and South Korea are taken out of the equation, the rest of the economies in Asia are agriculture-based with farmers operating at different levels. "So, we have to help them migrate their production upwards".

He explained how an expert had told them that Golden Seeds should change its product seed mix from 75% OP and 25% hybrid to boost the company's bottom line, but he said that in the case of green peas, growers (and consumers) preferred the sweetness of OP peas to hybrid varieties, and also liked 10 seeds per pod and higher germination rates. So Golden Seeds worked on germination rates for OP green peas and, after one year, was selling 1,500 tons of OP green pea seeds. He said that he believes that saved seed is also important for farmers as well. 🌱

Are Price Controls for Seeds Worth It?

"The legal wrangling over the price of cotton seed in various states in India is problematic", says Dubey. "I'm not really supporting the government's position to fix the price of seeds. I think as a general principle, the government sector should have no place in fixing the price of anything. Having said that, we have to understand the reality that the agricultural sector is really important in a country like India, so having one or two corporates controlling this market is unacceptable." 🌱

Bhupen Dubey

- Education: Masters in Agricultural Science, Diploma in Sales & Marketing
- Holds positions in Indian Society of Naturalists, Society of Pesticides and the Indian Society of Weed Science
- Recently appointed Director of the Agriculture Skill Council of India
- Member of NVA India Business Council (World Economic Forum)
- Director of Crop Life India and a member of management committee for ABLE AG
- Advanta Seeds statistics displayed above: 2 x pie charts on revenue and crop breakdown (2015)



AFSTA's Congress Calls for Engagement Between Seed Associations and Governments

The African Seed Trade Association (AFSTA)'s 16th annual congress was held in Nairobi, Kenya, on 1-3 March 2016. Over 400 delegates from the region and around the world attended the event, which was held at the Laico Regency Hotel, and more than 30 seed companies exhibited their work during the Congress.

This key event for the seed industry discussed the current issues affecting seed production and trade in Africa, including climate change, the impact of declining pollination

on seed production and seed harmonisation regulations.

During his opening remarks, Kenya's Cabinet Secretary of Agriculture, Livestock and Fisheries, Mr. Willy Bett, while vouching for self-regulation among seed traders, noted that the greatest potential in seed production anywhere remained with Africa; he said that it was time this was realised and taken advantage of in order to improve the standard of life in Africa.

He went on to say that time had come for seed companies to

engage more with the government to ensure that all factors affecting the sector were addressed. "I urge all national seed trade associations to be bold enough to continuously dialogue with their respective ministers for the development of the seed sector in Africa," he added.

He ended his speech by promising to fast track the enactment of the country's Seed Policy, which was ongoing at the time.

AFSTA immediate past President, Nick Goble of Pannar, South Africa, said that the Congress had come

at a time when the continent was still looking for solutions to food security, declining agricultural productivity and political instability in some regions. "I believe that the seed industry should contribute to a better Africa by continuing to make sure their products are exploited to their full potential", he said.

He emphasised the importance of the seed sector in attaining food security in Africa, and called on the delegates to continue their efforts to deliver quality seeds to farmers and to explore the enormous trading opportunities in Africa.

AFSTA's new President, Mr. Denias Zaranyika, said that no part of Africa was superior to another, hence the need to ensure the seed association had a regional balance in its operations, which he added would ensure that all the issues affecting seeds in Africa received equal attention regardless of where they had originated. The President further stated that for Africa to attain food security, all governments needed to work together to enable technological and innovative development to prosper. AFSTA's Secretary General, Mr. Justin Rakotoarisaona, added that the association had a big and important role to play in these processes.

The congress was preceded by a half-day workshop organised by Syngenta Crop Protection on seed treatment, which discussed how to manage MLND and the use of 'cruiser', a new technology used in tackling storage pests.

Various important issues concerning the African seed industry were considered during the event, including the following topics:

- Seed trade opportunities in dry land field crops
- How to expand access to market and investment in the seed industry for field crops
- Climate change and its impact on field crops
- An update on MLND in Eastern Africa
- Harmonised seed regulations for the Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Economic Community of West African States (ECOWAS), and Southern Africa Development Community (SADC)
- Highlights provided by the International Seed Federation (ISF) on the International Treaty on Plant Genetic Resources for Food and Agriculture and the Nagoya Protocol and its impact on the African Seed Industry

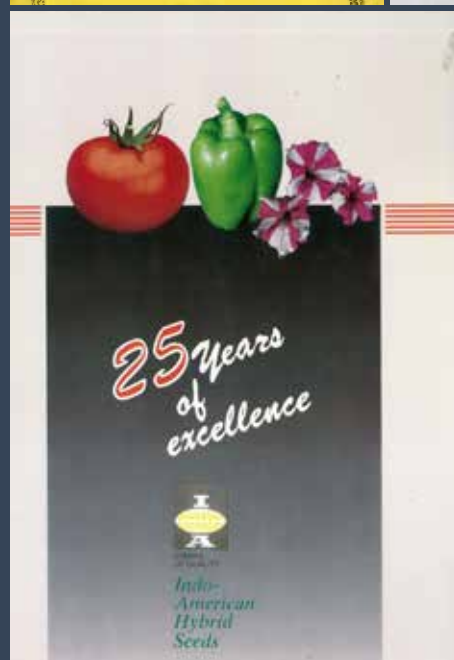
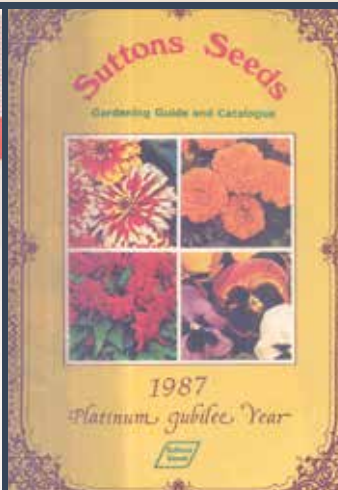
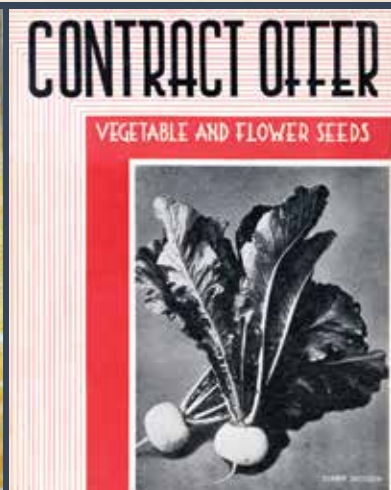
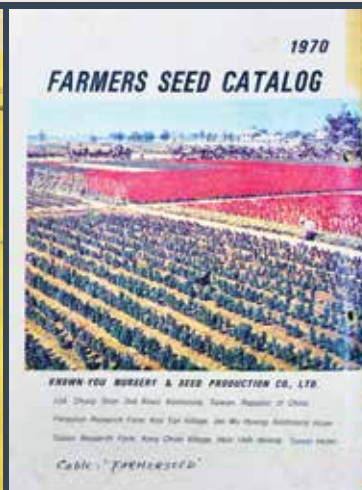
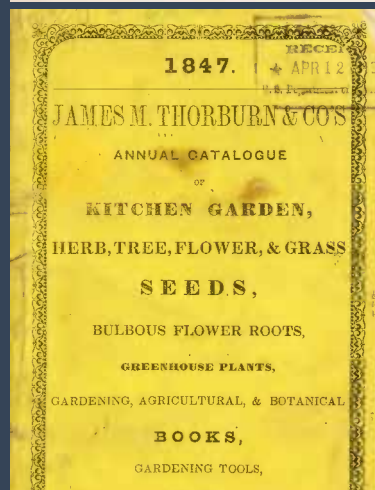
The annual Congress remains a popular event for the seed industry in Africa, attracting key players in the market and representatives from regional and international organisations. Organisations and agencies represented included the International Seed Federation (ISF), International Seed Testing Association (ISTA), Union for the Protection of New Plant Varieties (UPOV), Food and Agriculture Organization (FAO), Common Market for East and Southern Africa (COMESA), West and Central African Council for Agricultural Research and Development (CORAF/WECARD), and United States Agency for International Development (USAID).

The next AFSTA Congress will be held in Dakar, Senegal, from 28 February to 2 March 2017. More information: www.afsta.org





SCENE ON D. M. FERRY & CO'S SEED FARM. Weeding Cabbage.



THE SEED CATALOGUE STORY

Since humans settled down from the nomadic existence of the hunter-gatherer to practice agriculture, most seeds have been saved and then used for the next season or swapped for neighbours' seeds. It was only in the middle of the 18th century that the commercial seed industry started, with the founding of the earliest known seed company Vilmorin (now owned by Groupe Limagrain) in France in 1742 by seed expert Claude Geoffroy and her husband Pierre Andrieux, botanist to King Louis XV and chief supplier of seeds for the royal gardens.

In Europe, the wealthy classes drove the boom in commercial gardening in Holland, England and France. For instance, one estimate suggests that between the 1660s and 1723, market garden acreage around London expanded eleven-fold to 110,000 acres. Newly established seed companies followed Vilmorin's lead, starting with Tezier (1785), then Groot (1813), Cornstock (1829), Takii from Japan (1835) and many others.

By 1850, both the public and private sectors were deeply involved in the seed business. More big name seed companies were established, like KWS (1856), Asgrow (1865), Sluis & Groot (1867), Royal Sluis (1868), Weibull (1870), Vander Have (1879) and Clause (1891). And around this time, the first seed associations were formed, beginning with the American Seed Trade Association (ASTA) in 1883.

To sell seeds, publicity materials had to be created and broadcast. The first PR materials were basically a printed price list which one could not really call a seed catalogue, these, and sometimes simple advertisements in published books, were not

illustrated. Eventually, some of the seed companies began to print and issue their price lists, which would include short plant descriptions. In England, William Curtis issued a simple catalogue with a few engravings of plants in 1774, and in 1804 the US-based seedsman, Bernard M'Mahon, issued the first seed catalogue as a pamphlet.

The first known illustration in a US catalogue was in one of Grant Thorburn's 1821 seed catalogues – you can see a similar style in the 1847 catalogue of James M Thorburn & Sons and in The Seedsman's Assistant by Charles Johnson (see page 17).

These illustrated catalogues were a development from books that featured plant illustrations using wood block engravings, which go back to the first illustrated plant book ever published, the Florilegium by Emmanuel Sweerts, a Dutch plant merchant. These kinds of plant books were called florilegia and they were tremendously popular with European aristocrats (as paper was scarce up until 1840, they were prohibitively expensive). A direct development from florilegia was the first printed seed catalogue, which was published by Rene Morin in France in 1621.

Many of the changes that were to revolutionise the pre-industrial societies of the USA, northern Europe and Japan, also influenced the development of seed catalogues. Rapid advancements in transport (especially rail and sea), communications (telegraph, postal service), materials (availability of quality paper, metal instead of wooden blocks for engraving) and technology (printing, machinery, etc.) boosted not only farming practices, but also led to the flowering of colour illustrated seed catalogues in the second half of the 19th century.

From Broadsheets to Seed Catalogues

As European colonial expansion reached its zenith in the second part of the 19th century, all kinds of plants flowed into Europe and the USA from all parts of the planet – from Central and South America, Africa and the ‘Far East’. The gardens of the upper classes and flower shops supplied by tradesmen created an interest in botany, flowers, exotic plants and, of course, seeds.

The earliest seed catalogues were simple price lists, which later developed into seed catalogues, according to Malcolm Thick, who said that “a most practical and important innovation employed by seedsmen (and nurserymen) was the printed seed catalogue. The earliest printed lists date from the 1670s and are single, broadside sheets, headed with the name and address of the seedsman ... The broadside was superseded by the pamphlet, the earliest examples of which are from the 1720s.”

Charles Johnson’s Seedsman’s Assistant (see photo, second, page 17) is an example of an early catalogue before the boom in illustrations. Plants and seeds were placed into categories like “Seeds of Roots, Salad-Seeds ... and Seeds to Improve Land.” In addition to descriptions of seeds and plants for sale, at the foot of the sheet would be a short advertisement for equipment like hand tools.

By the 1720s, the seed pamphlet had replaced most broadsheets, making it the proto-typical seed catalogue. Some illustrations, made via plates, were included, but they were expensive at this time and difficult to print, although that didn’t deter unscrupulous seed merchants from making pirated copies.

Thick notes another innovation: “A further elaboration on the catalogue was the publication of short books of instructions on gardening by seedsmen and nurserymen,

which included, or were arranged around, their catalogues.”

Thus, the basic template of the seed catalogue – descriptions of seeds, bulbs and plants, advertisements for tools and machinery, and explanations of horticultural techniques – was already in place in the 18th century.

Up until the 1840s most illustrations in seed catalogues were from wood block engravings, and colouring the pages of a catalogue was done painstakingly by hand. But technological changes would dramatically transform the seed catalogue. “Thereafter,” said Dr. Brent Elliot, writing on the Royal Horticultural Society’s website, “the development of the illustrated catalogue kept pace with the improvements in printing technology.”

Etching (c. 1515) and lithography (c. 1796) were already part of printing technology, but it was the introduction of chromolithography by Godefroy Engelmann in France in 1837, which was used in printing, advertising and for portraiture, that changed the ‘look’ of catalogues.

William Sharp introduced the technology to the USA in 1841, and it became a key element in the huge success of the illustrated tome, *The Fruits of America*, which was published from 1847 to 1851. Writing in the *Financial Times*, Susan Fraser noted that Sharp produced a stunning chromolithograph in 1854 of a *Victoria regia* lily, then considered to be one of the most beautiful flowers in the world. “These colour-blended chromolithographs presented both floriculture and printmaking as fine arts, and laid the foundation for enthusiastic reproduction of ornamental botanical novelties,” she said.

Dr Elliot said that seed houses, rather than nurseries, developed chromolith cover wrappers, which quickly replaced wood engravings. In the USA, many seed

companies were established after the US civil war, boosted not only by a peacetime economy, but also by improved transportation networks and postal reforms. It wasn’t just cheaper to produce illustrated catalogues, it was also cheaper to ship them anywhere, as modern mail order flourished, having been initially developed by Pryce Pryce-Jones to ship Welsh flannel to his customers in the 1860s.

Some of the seed catalogues from the period are truly beautiful works of art in their own right; the chromolithograph cover of an 1885 John Lewis Child catalogue (see far right photo below), which is a superb example of this printing technique.

The first seed company to be established in the USA was founded by David Landreth in 1784 in Philadelphia; his son published the first American floral magazine in 1832. But the magazine was not a success, partly because the cost of hand-coloured illustrations, and it was replaced in 1847 by Landreth’s *Rural Register and Almanac*, which was a much cheaper annual pamphlet which contained not only a guide to plants, but also horticultural techniques.

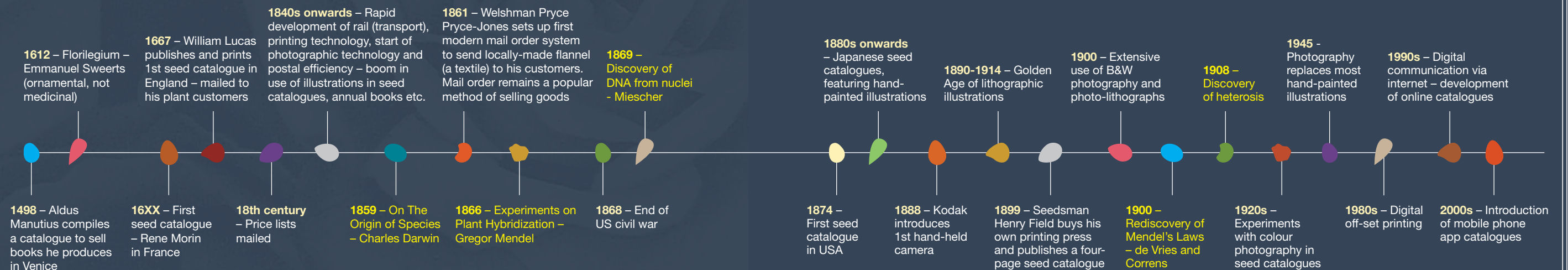
It should be remembered that pamphlets were used in the 19th century for trading and also for news, current affairs and political commentary. They were something like social media today – cheap to produce and easy to distribute, and very difficult for any government to control.

The boom in the use of illustrations had an interesting negative side-effect: realism. Some horticulturalists and farmers complained that the printed plant illustrations were so unrealistic that they gave a false impression of the plant that was grown. Perhaps one could call this an early example of ‘misleading claims’ in advertising.

And then there was another technological breakthrough that, as they say, changed the ball game: photography. When William Fox Talbot took the first modern photograph of Lake Como in Italy in 1833 while on his honeymoon, he began a process that would forever change the way humans saw themselves and the world they inhabited; nonetheless, it would take more than fifty years before black and white photography appeared in seed catalogues.



Timeline





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Simon Groot on Seed Catalogues

One of the seed industry's most respected seedsmen, Simon Groot, was in Bangkok recently. Managing Editor John Clewley took the opportunity to talk with the founder of East-West Seed about seed catalogues at the company's Bang Bua Thong headquarters on the outskirts of Bangkok.

Mr. Groot, one of the founders of APSA, has been in the seed business for sixty years; although he studied economics, he joined his family's company, Sluis & Groot, at the urging of his father. "I joined the company in 1960 and ran the flower department. It was an interesting time, as hybrid flower seeds – I remember for petunias – had been released. Hybrid seeds changed the seed industry from trading to plant breeding."

He said that his family business (he is the sixth generation seedsman from the Groot family) was established in 1813. "The records show that seeds were sold to traders for markets in Germany – 24 pounds of red onion seeds at something like three guilders a pound was the record for one Dutch trader who went to Germany to sell seeds". The Groot family business expanded to Sluis & Groot, which was in turn eventually bought by a German seed company Benary; Sluis & Groot is now owned by Syngenta.

Mr. Groot has made many friends in the seed industry in Asia and said that Japanese seed companies have been very influential in the development of the seed business – and how catalogues were made – in the region. "The Japanese started the seed business in Asia," he explained. "They have a strong history of gardening and farming technology and the technical level of Japanese farmers is very high."

He believes that Japanese farming technology helped develop the seed industry, particularly in China, Taiwan and South Korea. He noted that the success of Takii's hybrid cabbage varieties in the 1930s influenced its rival Sakata to take up producing vegetable seeds (see the Sakata catalogue cover on page 22).

One of his good friends was the head of Sakata's flower programme, Mr. Yoshito Iwasa, who was trained by the company founder, Mr. Sakata himself. Mr. Groot revealed that Mr. Iwasa collected seed catalogues mainly from the golden era of seed catalogues between 1880 and 1914, building up an impressive collection that is now housed at an agricultural museum in Yokohama.

After Mr. Iwasa passed away, his widow collected the catalogues and had them printed on high quality photographic plates and compiled into a privately published book, Catalogue of Catalogues (see above).

The book contains examples from all the major seed companies of the era, such as Burpee, Bliss & Sons, James Vick, James M. Thorburn & Sons (see page 17) and James Veitch. Mr. Groot was given a copy when it was published. He showed some of the best examples and it was a revelation to see quality colour plates of seed catalogues only hitherto seen online. Seeing seed catalogues in such detail highlights just why people collect these beautiful publications. The death of the printed seed catalogue may, to paraphrase Mark Twain, be greatly exaggerated.

The Seed Catalogue and Photography

Kodak introduced the world's first hand-held mass market camera in 1888, and some of the first catalogues to use photographs to show plants to their customers come from this period. Several sources suggest that Landreth was the first company to include photographs in their seed catalogues in the USA; what is interesting about this is that the company explained to its customers that it was introducing photographs to show that it was an honest company which would not exaggerate its claims as its competitors had done.

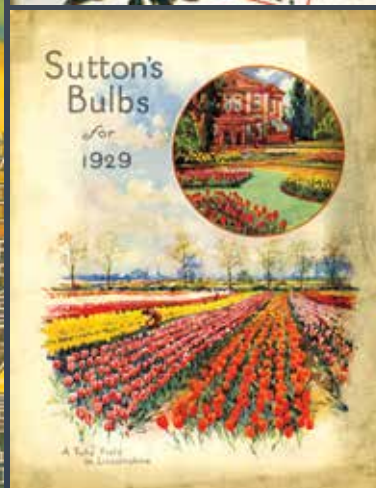
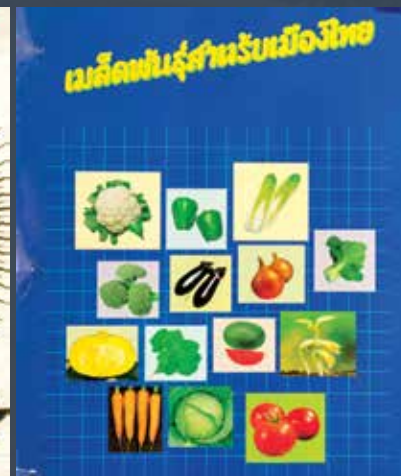
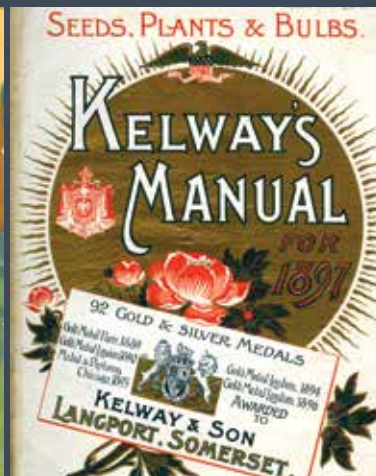
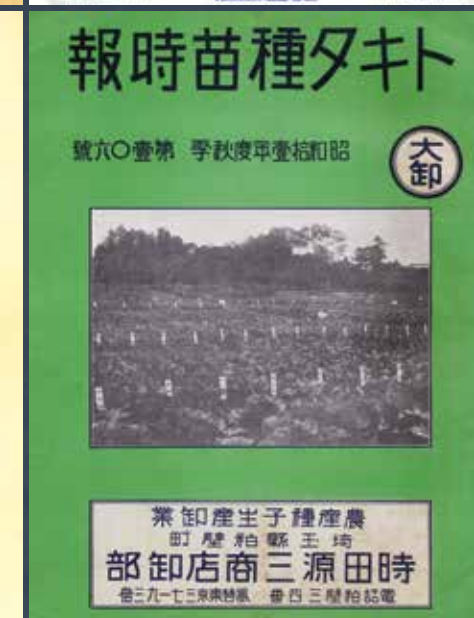
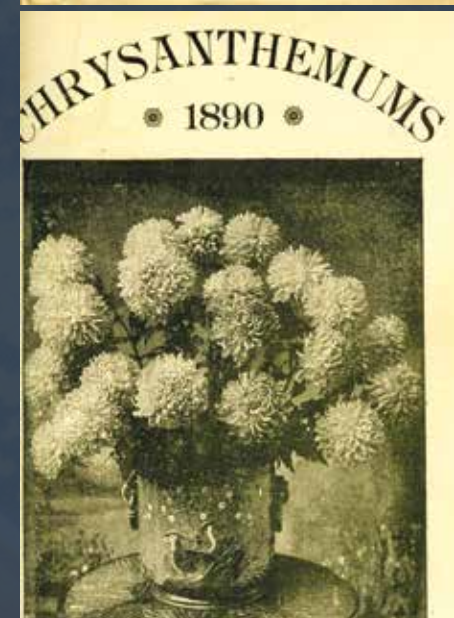
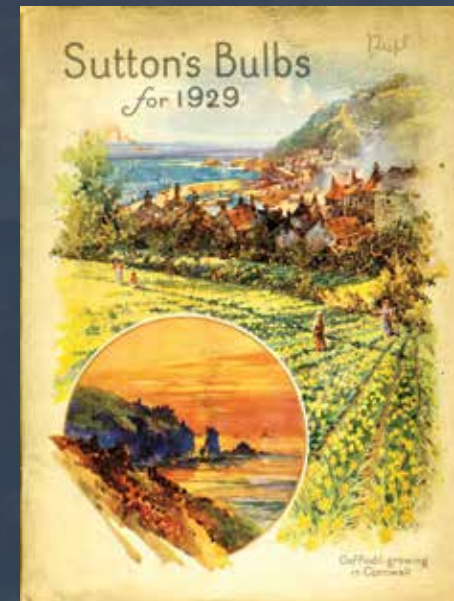
A good example of early black and white photography usage can be seen from the 'Chrysanthemum' catalogue on page 21, the early Tokita (green) cover on the same page, and the Yokohama Nurseries Company's 1897 catalogue on the bottom row of photos on the cover of this magazine.

From the 1890s through to the beginning of WW1 in 1914, photography competed with chromolithography; many companies adopted a mixed media approach by using a spectacular multi-colour chromolith as the wrapper on the cover of their catalogues, and black and white photographs inside. Gradually, photographs replaced engravings and lithographs, and by the 1920s their use declined

as advances in photography meant that sharp images replaced blurry and out-of-focus photos; a good example of quality black and white photography usage inside a catalogue is the detailed, tack-sharp photograph of garden peas inside a Sutton Seeds catalogue (see below).

Photographs were not just used to showcase a seed company's plant varieties. Photos of garden shows, group portraits at horticultural events, explanations of planting techniques and how machinery should be operated were also included in catalogues. In the 1950s, some US companies included photos of idealised suburban gardens. Sutton Seeds of England became well known for the photograph of its head office that would often appear on catalogue covers or prominently inside.

Despite experiments from the early days of photography in the mid-19th century, colour photography did not become widespread until the development of colour plate film in 1907. Kelway's Nursery of Somerset, England, claimed to have been the first British seed company to use colour photography in its 1913 seed catalogue, declaring in the introduction to its catalogue, "As we were the first to use, for horticultural catalogues, three-colour process blocks in order to faithfully represent drawings of flowers in colour,



we congratulate ourselves on being the first to present to the public, representations of photographs actually taken in colour direct from the natural object."

Two colour plates of a peony and a selection of delphinium flowers, from the catalogue of photographs inside Kelway's catalogue, can be seen on the top row of photographs above. The colour rendition is superb; they almost look like they had been painted. Indeed, some customers complained at the time that the colour photographs used in some catalogues were as misleading as early engravings!

Seed companies in England often provided photographs of seeds and plants for sale to shops and traders who wanted to create catalogues.

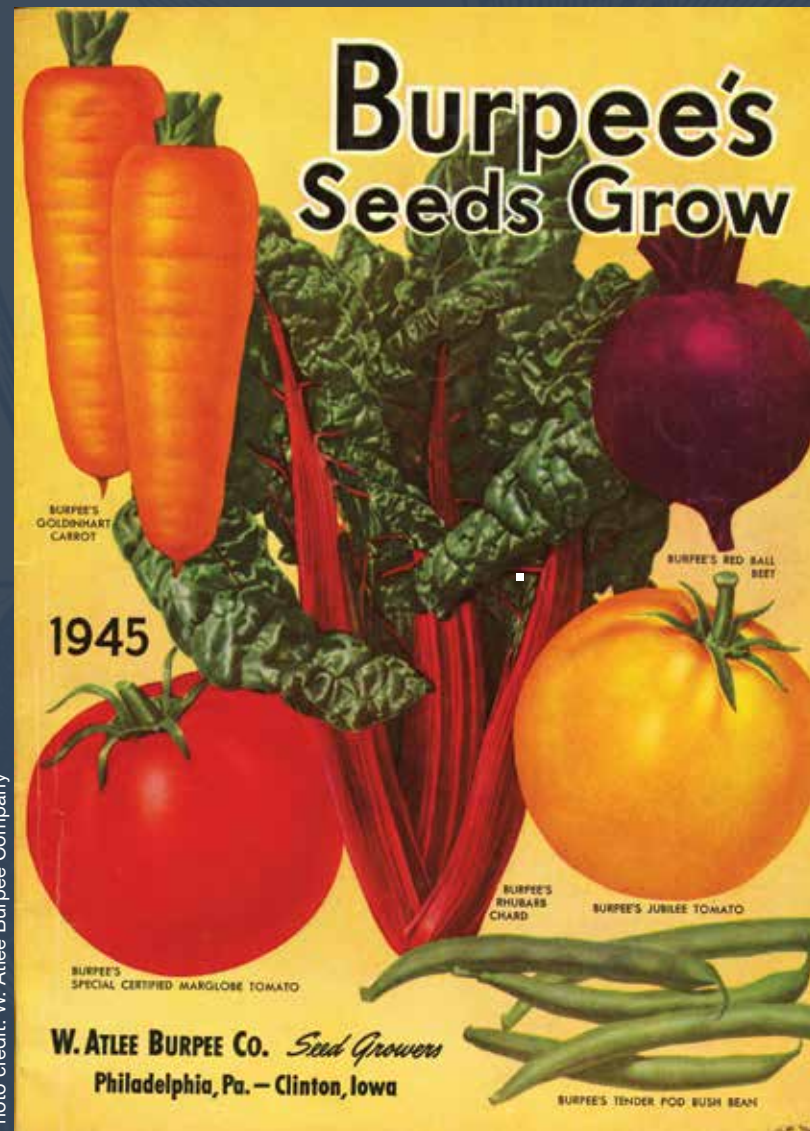
During the 1920s and 1930s, colour photographs were used in conjunction with whatever illustrations seed companies could find, so that catalogues from this period include chromolithograph covers, colour and

black and white photographs, drawings, and hand-painted plant illustrations. A good example of a beautifully painted cover is the Sakata catalogue on the right of the second row on this page; more utilitarian in style are the hand-painted vegetables on the 1945 "Burpee's Seeds Grow" catalogue on page 22; while the front and back covers of Suttons Seeds catalogue in 1929 show hand-painted scenes of gardens and landscapes, as seen above.

In WWII, the shortage of paper and ink forced seed companies and traders to print simple price lists and pamphlets on plain paper without illustrations. When the peacetime economic boom arrived in the 1950s, seed catalogues returned to their former glossy glory.

Colour photography, however, did not really appear regularly in many catalogues until the 1960s; two good examples of early colour photography from Asia can be seen from the catalogues of APSA members Chia Tai and Sakata Seeds on page 22.

Science and Seed Catalogues



The story of seed catalogues is more than four hundred years old and has taken us from the early days of single-page broadsheets to text-only pamphlets to comprehensive catalogues with engraved images to colour illustrated annual catalogues to websites and mobile apps.

Leafing through the pages of some of the old catalogues one can get a sense of how horticulture and agriculture have changed. Dr. Brett Elliot of RHS, writing on seed catalogues, noted that "Trade catalogues are of obvious interest for anyone researching the history of commercial horticulture; they are a primary source for the history of individual firms, for the economics of the commercial plant trade, for the history of flower shows (many firms took pride in listing, even illustrating, the awards they received at shows), and for aspects of the marketing of plants."

Art historians and those researching the history of illustrations and the technological development of printing find seed catalogues a treasure trove of information.

Seed catalogues also serve as a resource for plant breeders looking for specific cultivars or traits in cultivars like pest resistance. The introduction of new exotic species can be tracked as well, as can some of the botanical names that were first published in seed catalogues - they are a key resource for plant researchers.

They are also a subject of great interest for collectors, some of whom actively trade seed catalogues on websites like eBay. Horticulturalist Liberty Hyde Bailey, for instance, began collecting seed catalogues after joining Cornell University in 1888, which he used to note new crop varieties and changing horticultural techniques; he donated more than 100,000 catalogues and related printed material (see page 19).

For those interested, there are many academic websites that showcase collections of seed catalogues: The US Department of Agriculture's National Agriculture Library, Cornell University, Oregon State University, the Royal Horticultural Society's Library and the Biodiversity Library are just a few of the sites available. Most have special collections on seed catalogues.



The Future of Seed Catalogues

Rapid developments in transport and postal efficiency enabled the seed industry to boom during the latter part of the 19th century. And getting into the seed business made some people very wealthy. American John Lewis Childs joined a florist in New York as an apprentice in 1883; he left a year later to start his own business, leasing land and printing 600 copies of an eight-page catalogue. Through a flourishing global mail order trade, Childs built a substantial business; by 1909, he owned 1,000 acres of farmland, a printing press to print catalogues and a horticultural magazine called Mayflower.

Child's success, however, was over-shadowed by that of the W. Atlee Burpee, who set up a mail-order poultry business in 1876 with two other investors. Two years later he established his own company under his own name and expanded his product range by including seeds, and started producing colourful catalogues and buying up competitors like the James Vick Seed Company; M&A activity and consolidation in the seed industry has been going on for a long time.

From distributing a few thousand catalogues during the early years of its existence, by 2015, Burpee had become the biggest seed company in the world, distributing a million catalogues and processing up to 10,000 orders a day. And many of those companies that embraced seed catalogues as a marketing and informational tool, as well as modern mail order, are still with us – APSA member Takii of Japan, for instance, is still a major seed company, having initially prospered from its mail order business which began 180 years ago.

If the new transport systems, better postal systems and modern mail order of the 19th century, propelled

the boom in seed catalogues at the beginning of the 20th century, will the 'digital revolution' we are currently undergoing transform the seed catalogue once again? Will the printed seed catalogue become extinct as some commentators like Debra Prinzing have suggested: "Printed seed and nursery catalogues are somewhat of an endangered species these days."

Websites have been a fixture for some time now; they continue the mail order seed trade in a way that is not so different from the days of John Lewis Childs and Burpee. Some of the larger and medium-sized seed companies have also embraced social media as a means of communicating with their customers, using sites like Facebook to augment their web site presence. And if the trading tables of the Asian Seed Congress are anything to go by, some traders have now switched to using a laptop or iPad to display their products; that said, there are still many other traders who also like to use seed catalogues.

But the biggest challenge from the digital world to the continued presence of the much-loved printed seed catalogue is the development of the mobile phone app. As so much trade is now being done via consumers' smart phones, we can expect more and more seed companies in the region to follow some of the larger seed companies and utilise this new technology to sell seeds. While the doom and gloom merchants may tell you that the seed catalogue is becoming extinct, the reality is that most companies will continue to use all the marketing tools at their disposal, which means that seed companies will keep one foot in the printed world of seed catalogues and the other in cyberspace. 📱



Photos courtesy of APSA members, including Sakata Seeds, Tokita, Enza Zaden, Vilmorin, Indo-American Hybrid Seeds, Chia Tai, Takii, KOSA, Known-You Seeds, Clover Seeds, Hungnong and Joongang

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Various seed company and academic websites, notes from OSU Special Collection & Archives Research Center

Photographs of Sutton's Bulbs (pages 20-21), Child's (cover, page 17), Tokio Nurseries (cover), Chrysanthemums and Gill Bros, Kelways (pages 20-21), Burpee's (page 22) and Sutton's peas (page 20) from the Nursery and Seed Trade Catalogues Collection, OSU Libraries Special & Archives Research Center.

Seed Trade Growing in Asia, Part 2

by Marie-Pierre Debrabant, economic and statistics department of Groupement National Interprofessionel Des Semences et Plants (GNIS)

Seed Exchange in the ASEAN Region

While the ASEAN* Economic Community was formalised on December 31st 2015 in order to create a common market for the 10 ASEAN member countries, thus facilitating the circulation of people, goods and investment in the region, economic reforms, to be progressively implemented, will not be completed until 2025.

This economic region, which is 7th ranked in the global economy and has a population of 625 million people, is

becoming more and more attractive to foreign investors; by 2020, the market of food products in the ASEAN 5 (Indonesia, Malaysia, the Philippines, Singapore, Thailand) should exceed \$600 billion on a growth of more than 6% per year.

In this context, the need for food security has become stronger and stronger, which means that seed exchange is being driven by sustained growth.

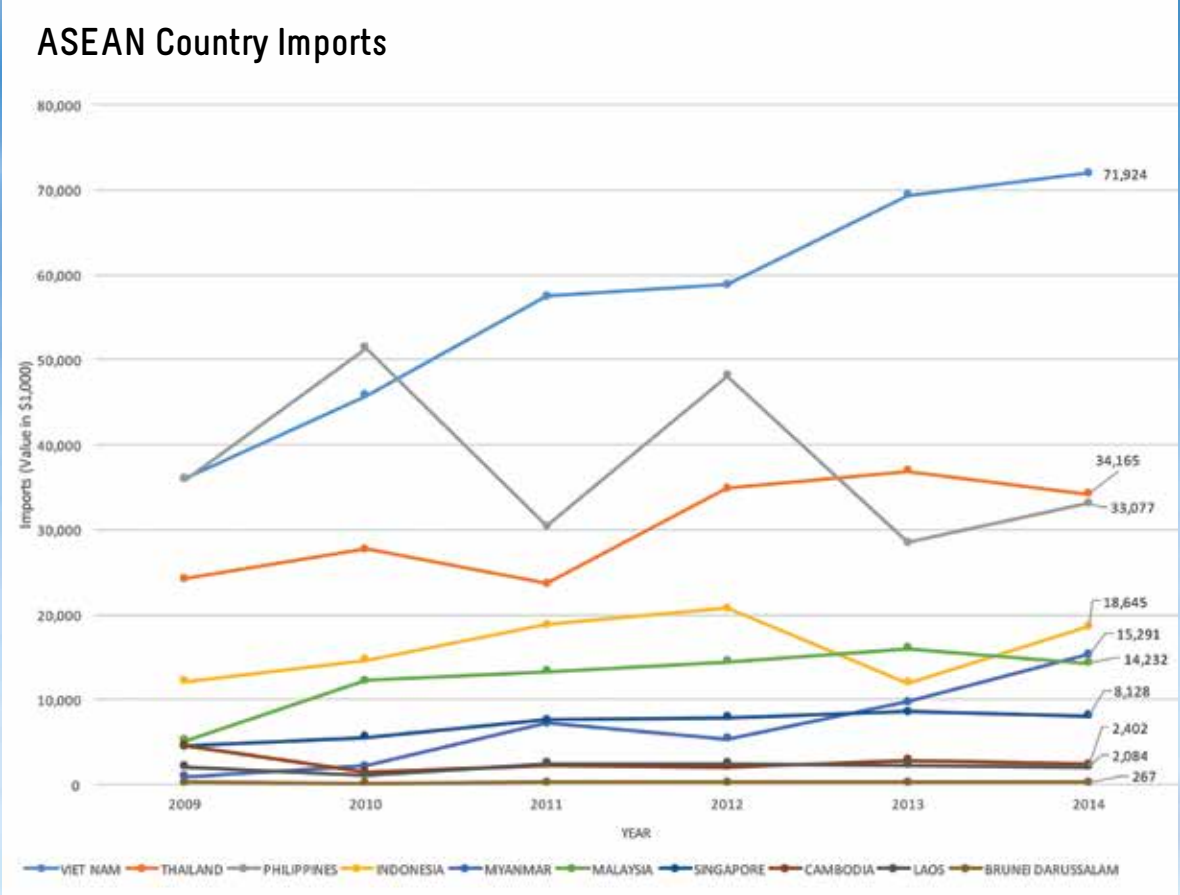
Sustained Growth Drives Seed Sector in ASEAN

During 2009 to 2014, seed imports in ASEAN countries increased by 59% to \$263.3 million, with Vietnam ranking as the top importer with a total of \$85 million, ahead of Thailand (\$39.8 million) and the Philippines (\$38.5 million). However, Myanmar's import figures were exceptional, as they increased dramatically from \$1.1 million to \$18.1 million between 2009 and 2014; Malaysia also had spectacular import growth during the same period, with imports in 2014 trebling from 2009 to \$16.7 million. The ASEAN countries themselves provide seeds for the region, with the exception of the Philippines, which imported nearly \$17.3 million worth of maize seeds from South America and \$8.6 million from South Africa.

The top crop group imported by ASEAN countries was maize seed, worth \$107.5 million, an increase of 31% from

2009; in second place were vegetable seeds, which also showed a noteworthy increase of more than 68% to \$71.7 million, while potato seeds (\$10.6 million) ranked third (mainly from the UK and Australia), followed by soy (\$6.5 million) and millet (\$4.6 million) from the USA. The market for forage seeds (\$4.8 million) was mainly secured by the USA (22%), India (20.7%) and Australia (20.2%).

Of the \$156.6 million of imported seeds in Asia, 66% came from ASEAN countries, which was eight percentage points higher than in 2009 (58%). Thailand was the leader in the ASEAN market with \$86.3 million in seed revenues, considerably ahead of Indonesia (\$5.4 million) and the Philippines (\$4.8 million). The USA supplied 8.2% of the ASEAN market for seeds, just ahead of Argentina (7%), South Africa (3.8%) and the Netherlands (3.2%).



Vietnam, ASEAN's Top Seed Importer

Vietnamese imports have been growing steadily for many years. Imports increased from \$44.5 million to \$85 million between 2009 and 2014, making this country the top seed importer in ASEAN. Vietnam sources most of its seeds in Asia (83%), with 60% coming from ASEAN countries. The USA supplied 6% of Vietnamese seed demand, the EU 5% and Oceania 4%.

Some 54% of Vietnam's maize seed imports came mainly from Thailand (82%); vegetable seeds were around a fifth (19%) of the country's imports and were provided by Thailand (39%), New Zealand (12.5%), Italy (12%) and China (11%). The USA supplied 96% of Vietnam's soybean seeds.

*ASEAN = Association of Southeast Asian Nations (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam). ASEAN was founded on August 8, 1967 with five members: Indonesia, Malaysia, the Philippines, Singapore and Thailand.

Thailand, Distribution Hub for AEC

Thailand is the second biggest exporter in Asia behind China, generating \$197.8 million in seed revenues; as it imports about \$39.8 million worth of seeds, its trade balance for seeds is a positive \$158 million. However, seed exchange with Thailand, for both imports as well as exports, remained concentrated on Asia.

Imports grew by 41% between 2009 and 2014. The share of maize seeds decreased significantly from 31% to 15%, to the benefit of vegetable (56.5%) and potato seeds (15.5%).

The Asian share of Thai imports significantly decreased over the period: from a high of 67%, it dropped to 55% (with 33% from ASEAN). The EU share rose six percentage points to 16%, the NAFTA zone eight points (13%) and South America three points (5%). Only seed sourced in Oceania declined over the period, in this case from 13% to 10%.

More than 40 countries supply Thailand with vegetable seed; India, New Zealand and Japan provided 40% of vegetable seed imports, followed by China (11%) and the Philippines (9%). For maize seeds, on the other hand, Thailand remained focussed on two countries, India (53%) and Vietnam (37%), which became the second-ranked supplier since 2012, at the expense of Indonesia. Regarding potato seeds, the United Kingdom, leader on the Thai market with a 57% market share, increased the value of its potato seed trade by \$2.1 million over the five-year period; Canada (15%), Australia (14.5%) and the Netherlands (13%) supplied the remainder.

Thai exports, for their part, continued to increase sustainably at an average of 25% since 2009, with 73% of its seed output going to Asia, which generated \$143.8 million, including \$91.1 million for ASEAN countries.

Although vegetables remained the top crop species to export (generating \$94.3 million), their share of the overall seed market share has declined considerably from 74% to 48% to the benefit of maize, which represented, in 2014, 42% of the exports (\$82.3 million).

Thailand exports vegetables seeds to over 96 countries across the world (up from 61 countries in 2009), but most of it went to Asia (\$49.8 million) and mainly to ASEAN countries, generating \$16.7 million. India was the top customer (\$11.9 million), followed by Vietnam (\$6.6 million) and China (\$5.6 million). Partners outside Asia include the USA (\$26.2 million), the Netherlands (\$10.9 million) and France (\$2 million).

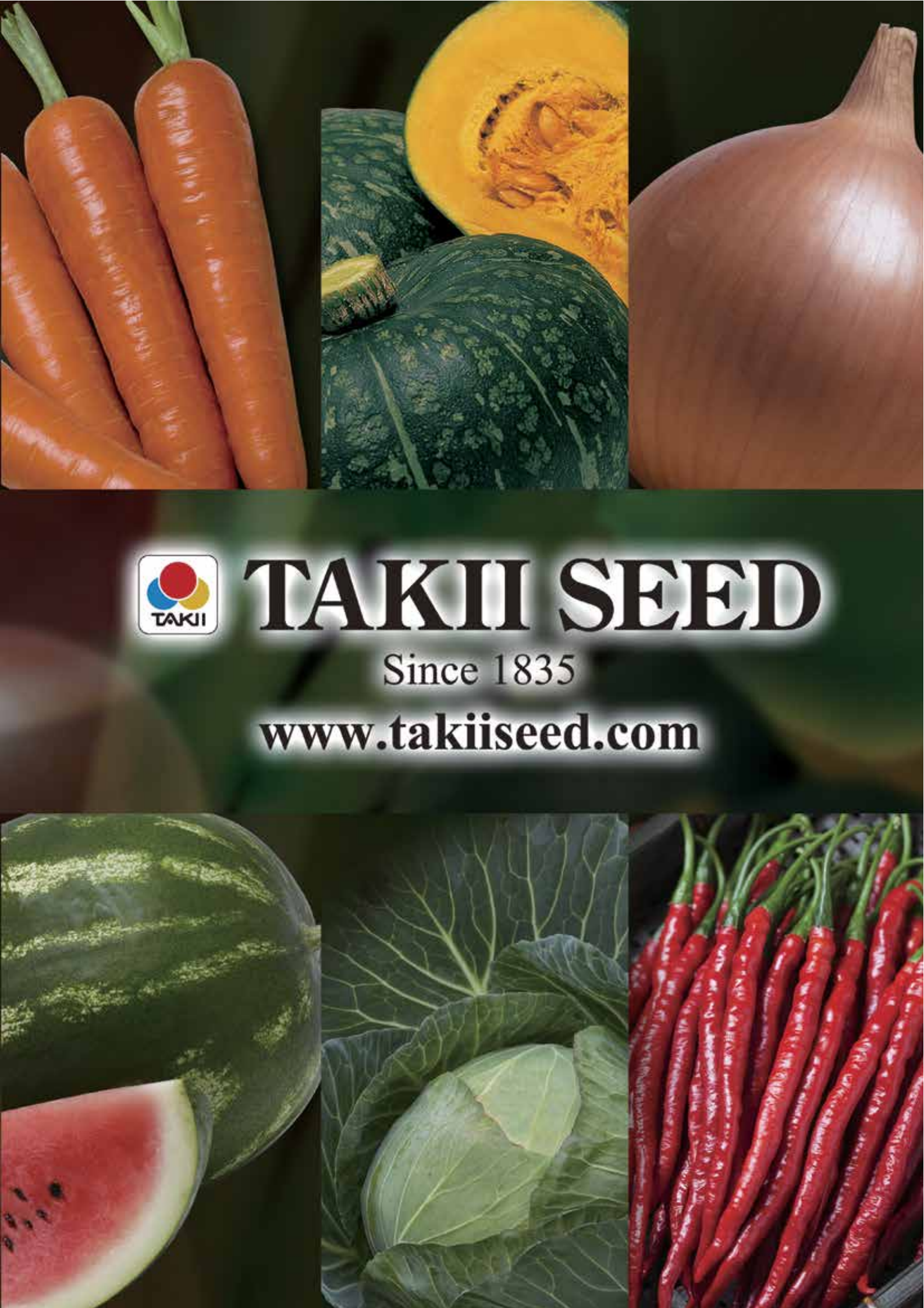
In contrast, almost all of Thailand’s maize seeds are sold in Asia. Since 2011, Vietnam has been the top customer for this crop and, since then, has accounted for more than half of the Thai maize seeds exports alone. In 2014, exports accounted for \$42.7 million. Somewhat behind stood Myanmar (\$11.5 million), Pakistan (\$6.5 million), Indonesia (\$4.5 million) and Sri Lanka (\$3.6 million), which collectively supplied seed to over 37 client countries across the world, 13 more than in 2009.

COUNTRY	SUPPLIERS								
	WORLD	ASIA	NAFTA*	OTHER AMERICA	EU	OCEANIA	OTHER AFRICA	MIDDLE EAST AND NORTH AFRICA	OTHER EUROPE
VIETNAM	71,924	59,852.2	4,766	710	3,448	2,982	164	2	
THAILAND	34,164	18,918.9	4,409	1,539	5,353	3,490	441	13	0
PHILIPPINES	33,077	6,868.2	2,923	14,418	557	539	7,371	400	2
INDONESIA	18,615	13,186.0	2,652		1,632	1,145			
MYANMAR	15,291	14,878.8			294	118			
MALAYSIA	14,204	8,341.0	2,656	8	2,385	723	42	49	
SINGAPORE	8,128	7,090.7	257	51	561	157	2	8	2
CAMBODIA	2,402	2,162.4		221		5	14		
LAOS	2,084	2,071.9			9	3			
BRUNEI	267	166.6	62		6	33			
TOTAL	200,156	133,537	17,724	16,946	14,245	9,194	8,035	472	3

thousands of U.S. dollars *The North American Free Trade Area

COUNTRY	PARTNERS								
	THAILAND	INDONESIA	PHILIPPINES	VIETNAM	MALAYSIA	MYANMAR	SINGAPORE	LAOS	TOTAL
VIETNAM	42,504	902	67		3	152			43,626
MYANMAR	14,613				9				14,622
INDONESIA	6,114		1,168	2	1,593		13		8,889
MALAYSIA	4,015	937	970	436			14		6,371
THAILAND		1,556	1,841	2,011	1	872		31	6,312
PHILIPPINES	2,689	783		52					3,524
CAMBODIA	1,571	1		411	161		6		2,150
LAOS	1,445								1,445
SINGAPORE	349	475	13	70	243				1,151
BRUNEI	43	12		1	51		20		126
TOTAL	73,342	4,665	4,059	2,983	2,060	1,023	52	31	88,216

thousands of U.S. dollars



The Philippines, Struggling Under Climate Pressure

Seed imports to the Philippines, a country that is sensitive to adverse climatic conditions, fluctuated significantly between 2009 and 2014, i.e., declined by 41% in 2011 (\$37.6 million) and 2013 (\$33.2 million), but rebounded by 58% in 2012 (\$55.3 million) and 16% in 2014 to \$39 million.

Of all the ASEAN countries, the Philippines is the only one to import from largely outside Asia: 44% of its seed needs came

from South America, 22% from South Africa, 21% from Asia, and 9% from the USA.

Maize seeds were the largest single crop group, capturing 72% of all imported seeds, mainly from Argentina (57%) and South Africa (31%). Vegetable seed imports increased from 14% to 22.5% and came mainly from Japan (34%), the USA (21%, especially for onion seeds) and Thailand (18%).



Indonesia, Myanmar, Malaysia, Singapore: Continuous Growth

INDONESIA

Like Thailand, Indonesia has experienced significant seed import growth – imports jumped by 54% to reach \$22 million in 2014 and were mainly composed of maize seeds (33.5%) and vegetable seeds (31%), followed by cereals (11.5%) and potato seeds (9%). Like most of the countries in ASEAN, Indonesia sourced most of its imported seeds from Asia (71%), with ASEAN providing 67% of that figure, followed by the USA (14%), E.U. (9%) and Oceania (6%). The ASEAN group represented 48% of imports, which were dominated by Thailand's 69% market share, which covered 83% of maize seed needs. Japan dominated the market for vegetable seeds with a 49.4% market share, substantially ahead of Thailand (14%). The USA was the leader for cereals (millet, durum wheat and soya), while the market for potato seeds was shared between the UK and Australia with 53% and 47% shares, respectively.

MYANMAR

Among all ASEAN members, and as a result of the lifting of the international embargo, Myanmar has recorded the strongest growth in seed imports. In just five years, seed imports jumped from \$1.1 million in 2009 to \$18.1 million in 2014, at an average of 96%. The country sourced its seeds mainly in Asia (97%), with most coming from Thailand, which is the undisputed leader in the Burmese market with a 96% market share. The Burmese demand was centred on maize (64%) and vegetable seeds (22%). The remainder was comprised of cotton and potato seeds.

MALAYSIA

Malaysian seed imports tripled from 2009 to reach \$16.7 million in 2014. Imports comprised vegetables (31%), maize (16%), fodder (16%) and cereals (7%). Most seeds were sourced in Asia (59%), the USA (19%), Europe (18%) and Australia (4%). Around 45% of imports originated in ASEAN countries, namely, Thailand, the Philippines and Indonesia. From 2009 to 2014, the Netherlands overtook Malaysia's Asian partners to garner a 46% market share and become the leader of the vegetable seed market. Demand for fodder seeds (\$2.7 million) was met by USA with a 28% market share (mainly for alfalfa) and the Philippines, which became a market co-leader in 2014 with a 28% market share at the cost of India (22.5%) and Australia (19.5%). As for maize seeds, almost all the imports, or around 95%, came from Thailand.

SINGAPORE

Between 2009 and 2013, Singapore recorded a sustained increase in seed imports from \$5.6 million to \$10 million, averaging 18% growth during the period, although this was reversed in 2014 when imports contracted 4.8% in 2014 to \$9.6 million. The country's seeds were mainly sourced in Asia, in particular, from India (33%), Japan (17%) and China (16.5%). The ASEAN group accounted for only 16% of seed imports, mainly through Indonesia, Thailand and Malaysia. Vegetable seeds were a predominant 83% of seed imports and worth around \$8 million; India provided 33%, followed by Japan (18%), China (15%) and the Netherlands (7%). The other imported seed species were flowers (8%) and fodder (2.4%).

Cambodia and Laos: Highly Dependent on ASEAN



Like the Philippines, Cambodia and Laos are the only countries to experience a decrease in seed imports: -47% (worth \$2.8 million) for Cambodia and -2% (\$2.5 million) for Laos, between 2009 and 2014.

The two countries sourced seeds almost exclusively in Asia, in particular from ASEAN countries, which provided more than 90% of their imports. For these two countries, the demand was mainly for maize seeds, which represented more than 80% of seed imports. Thailand was and remains the market leader for both countries, providing 72% of Laos' seed needs and 79% of the demand from Cambodia, with Vietnam providing the rest.

One can see that seed exchanges within ASEAN are highly conditioned by trade agreements that the Community has signed over the years with India and China, and also with South Korea, Japan, Australia and New Zealand.

The exchanges with those countries are likely to intensify, especially with a project like the Regional Comprehensive Economic Partnership (RCEP), which aims to merge these areas into one (and the only existing) free trade area.

However, this project faces competition from other trade agreements, such as the Trans-Pacific Partnership (TPP), which includes only some of the members of ASEAN (Singapore, Malaysia, Vietnam and Brunei) and extends right across the Pacific Ocean, and is obviously being promoted by the United States. 🇺🇸

Important Membership Announcement

To provide quality service to all members, we need your support.

Starting 1 January 2017, APSA will send invoices out to all members for the annual membership fee, which is due and payable upon receipt and is not adjustable.

APSA also requests members to update membership information within 30 days of receiving the invoice, making sure that all names, information, and email(s) are correct and current.

To begin this process, your membership fee for 2016 will be pro-rated to end 31 December 2016. So, if your membership fee ends 31 May 2016, APSA will invoice you for the remainder of the year, starting from 1 June 2016 to 31 December 2016 only.

During this time, members will still enjoy all privileges previously offered by APSA. To ensure that emails are not rejected or filtered as spam, add apsa@apsaseed.org to your approved email contacts.

Any questions? Contact apsa@apsaseed.org for more information.

New Director Joins APSA

APSA is delighted to announce the appointment of a new Director, Ms. Heidi Gallant, who will take up her position on 1 June 2016. Ms. Gallant was most recently the Executive Director of the British Chamber of Commerce in Taipei; she is also CEO of Hai Ying Creative Inc.

Ms. Gallant is a Canadian national who grew up in a small farming community in Ontario. She moved

to Taiwan after having worked in the insurance industry for ten years, for which she was designated as a Fellow of the Insurance Institute of Canada (University of Toronto); while in Canada, she also worked in business management.

She moved with her family to Asia in 2009 and has been based in Taiwan since then. After working in the insurance industry, she switched to working with trade associations

and chambers of commerce, gaining experience in strategies for expanding membership numbers, organising major events, as well as lobbying and advocating public sector agencies and government departments.

Ms. Gallant said that as Executive Director of the British Chamber of Commerce in Taiwan, she delivered a five-year organisational strategy plan that was followed through and seamlessly implemented. She added that, "Membership organisations, in my view, are about building relationships. I hope to show you, our members, how valuable you are to APSA by communicating with you frequently and brainstorming exciting new ways for our APSA team to engage with you ... in order to better serve your business interests. I enjoy responding to requests from members and will encourage you to contact me directly when you are in need of my help."

"I am looking forward to working on the Asian Seed Congress 2016 in Incheon and to meeting you all in person."

Ms. Gallant is a keen volunteer; some of her voluntary roles include chairing the Canadian Chamber of Commerce in Taiwan and working as a Master of Ceremonies for numerous charity events. She studied at the University of Toronto, the Insurance Institute of Canada, and the National Taiwan Normal University. At the latter institution, Ms. Gallant studied the Chinese language.

APSA's new director is married and has a daughter aged six and a son aged two. 🐾



OBs Meet NOC in Manila for ASC 2017



In March 2016, APSA's Office Bearers (OBs) – President Zhiping Wang, Vice President Brenda Dossey and Treasurer Jack Metzelaar – along with APSA's Event Organiser, Duangchai Pancom, travelled to Manila to meet the National Organising Committee (NOC) of ASC 2017.

The meeting was held on 2-3 March at the Marriot Hotel in Manila. The NOC comprised of members of the Philippine Seed Industry Association (PSAI), led by former APSA President Dr. Mary Ann P. Sayoc.

On 2 March, representatives of the Marriot Hotel made a presentation of the facilities of what will be the congress hotel venue, including the ballroom, trading table areas

and meeting rooms, exhibition space, and food and beverage facilities. The NOC followed with a presentation/proposal made by the NOC on the organisation of the event.

In the afternoon session on 2 March, meeting participants then made a site survey of the proposed alternative hotel venues.

On 3 March, the OB and NOC agreed to future meetings and the date for signing the Congress Hosting Agreement. The budgetary, financial and legal aspects of hosting the ASC 2017 were also discussed. The two teams also made an inspection of the proposed APSA Golf Tournament venue, the Malarayat Golf & Country Club. 🐾



VSAT Meeting in Myanmar



Myanmar's Ministry of Agriculture & Irrigation and the Netherlands' Embassy hosted a roundtable meeting (RTM) in November 2014 to consider the development of Myanmar's vegetable sector. The RTM was attended by more than 100 representatives from the trade sector, government services, growers, input suppliers and civil society organisations. A major outcome was the establishment of a 'Vegetable Sector Acceleration Taskforce' (VSAT) to drive the development of the sector. APSA was included as a private-sector representative in this important group.

Established in March 2015, VSAT met six times during the year and formulated several programmes; it organised many activities, including a Dutch Mission to develop a proposal for cooperation in seed sector development, consumer preference market research, a wholesale market study, a mission for Myanmar delegates to study the potato production chain in the Netherlands, a study tour to Vietnam to study vegetable

production practices and the market set-up, a mission on crop protection & pesticide risk programme planning, and a training programme for Certified Super Trainers.

The governments of Myanmar and the Netherlands jointly organised the Second Round Table Meeting (RTM 2) on 3 March 2016 to seek a consensus on how to develop the sector and the VSAT's implementation and communication plan. Inaugurated by the Minister of Agriculture, RTM 2 was attended by nearly 150 participants; it was structured to develop future programmes through five 'Working Groups' - Seed Industry; Agro-Chemicals & Food Safety; Production Knowledge & Extension; Post-Harvest Marketing, Supply Chain Logistics & Infrastructure; and Legal Infrastructure & Institutional Framework. Dr. Narendra Dadlani, APSA's Director of Technical Affairs, coordinated the Working Group on the Seed Industry.

The main recommendations of the Working Group on the Seed Industry were:

- The formation of a Myanmar National Seed Association to lobby for the seed sector with the government, and to be consulted on the formulation of rules/laws concerning the implementation of Seed Law and PVP etc.;
- To simplify and streamline the variety registration process, including developing uniform testing mechanisms for all crops, accepting test data from countries with similar climates to expedite the introduction of new varieties, ensuring appropriate seed quality assurance, and holding regular and more frequent meetings of the National Seed Committee and Technical Seed Committee; and
- To facilitate seed movement across borders via the introduction of implementable regulations.

It is hoped that the implementation of the recommendations, approved by the meeting, will start soon. 🌱



From Maths to Pest Lists – Joining the Dots

By Radha Rangannathan



When I was growing up and looking at career opportunities, the seed business wasn't one that featured in discussions with friends, family or well-wishers. I chose to study mathematics as the main subject in my undergraduate studies, and statistics for my masters degree. Jobs working with numbers, teasing out the story that lay behind them or finding new questions they posed were aplenty then. But the course of my professional life soon changed. When employed with a small firm of management consultants, I was assigned projects on rural forestation schemes and the silk handloom industry in India where I discovered farming and agriculture.

Soon I was back in university, studying for a masters degree in forestry from Oxford University. My new career as a researcher in mixed cropping systems began at the International Crops Research Institute for the Semi-Arid Tropics

(ICRISAT) in Hyderabad, India. A Ph.D. in agricultural sciences from Wageningen Agricultural University followed. It was the start to a peripatetic way of life, a postdoc at the International Rice Research Institute (IRRI) in the Philippines, a visiting scientist back in India at ICRISAT, a short stay at the Queensland Department of Plant Industries in Toowoomba (AU), some years at KWS SAAT AG in Einbeck, Germany, before joining ISF in Switzerland.

KWS marked yet another defining moment in my professional life. I had taken a long road from seeing small marginal farmers eking out a living growing mulberry plants that silk worms fed on, to understanding the impact plant breeding could make on the lives of farmers. ICRISAT and IRRI had given me a public sector perspective on agricultural research and now I was experiencing the private sector. KWS, and Andreas Büchting in particular, gave me the unique opportunity to bring together these different strands of

experience and perspective, and make comparisons over time, group or geography, to comprehend the context and challenges facing the seed industry.

I joined ISF in 2002 as the Director of Technical Affairs. The Secretariat was much smaller than what it is today and I learned the ropes from Bernard Le Buanec, a teacher par excellence. There is so much to the seed industry! I was meeting so many people and travelling to different meetings for different events. My first APSA congress was in 2002 in Vietnam.

Fast forwarding to 2016, my responsibilities in ISF are concentrated in the area of phytosanitary matters. International seed trade and seed movements have grown steadily every year; re-exports are a way of life in the seed industry. Regulatory oversight of seed movements has also grown significantly in the past years, as seed may present a pest risk when introduced to environments where associated pests could establish and spread. Close attention to seed health and rigorous quality management are the norm in the seed industry. Recent technical meetings of ISHI-Veg have brought together 60 plus seed pathologists from around the world, including India, the Philippines and Thailand.

A more recent activity keeps me busy – the ISF Pest List Database, which includes an assessment based on sound scientific information of the risks seed poses as a means for the movement of regulated pests. Note the emphasis on regulated! The assessment is confined to pests that are currently being regulated by one or more countries. The database is still a work in progress and in the first instance will cover 12 vegetable crops that are most traded internationally. I take my hat off to the team of dozens of company seed pathologists who have contributed hours of their time to the eight crop specific regulated pest lists that are online on ISF's website [worldseed.org].

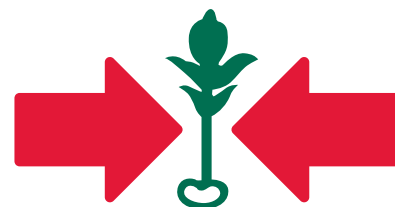
There is still so much for all of us in the industry to do! 🌱

Asian Seed Congress 2016

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