

**PMAC weekly update 20th to 27th August**

1. **Government agencies**: Communities encouraged to enter national biosecurity awards
2. **New Zealand News:**  Minister visits Viet Nam and Singapore; Sustainable Food & Fibre Futures launched; High Court judge urges MPI and fruit growers to co-operate, Biopesticide uptake; Horticulture levy votes successful; New Central Otago apricot co-operative sets up for business; Mr Apple's China road shows attract followers, build brand; NZ offers assistance to develop Fiji’s potato industry; Seeka first-half profit drops; Public visits planned for one of New Zealand's largest tropical fruit farms; NZ pipfruit industry heading for record 2018 crop; James Hutton Institute looks to New Zealand to help improve fruit flavour; Young Grower title goes back to the Bay; Horticulture welcomes major Biocontrol Milestone
3. **International news:** GAIN reports; Maersk Line goes live with CargoSphere Digital Rate Distribution; Bayer looking at 8,000 lawsuits related to Roundup; Chile: Despite super harvest cherry producers can't cover their costs; China remains the largest export market for Chilean cherries; Demand for imported food growing steadily in China; Growers who conduct third-party audits spend more on food safety; US: Panel formed to combat Cyclospora parasite; Luminescent bacteriophages flag Escherichia coli in water; Study: Environmentally-friendly farming can increase productivity; WWF study addresses food loss in fields; Strawberries may help against inflammatory bowel disease; Envisioning the future of crop protection

***Editors Comments***

*The articles this week cover a wide range of topics . If there is message from this week’s articles it is the positive news for New Zealand sectors and not so positive for some our competitors. The NZ levy increases have been endorsed by all of the sector bodies generally by all horticulturalists ( for Hort NZ levy increases). This is less likely to happen if producers are concerned about future sales. A new grower cooperative is being set up to promote New Zealand bred apricots , there are reports of a bumper year for New Zealand apples and another business is positively promoting its product in China. Its obvious New Zealand horticulture is not sitting still.*

*Meanwhile there are reports that despite increasing volumes and access to China returns to Chilean growers are falling . Articles not included from this weeks batch (and there is more than one) mention concerns about the American / China standoff and falling returns for producers in both countries.*

*For those who are interested in future innovations the news that there may soon be a 3 hour test for e coli in water may make packhouse monitoring of water a reality and the last article on the future of crop protection again reminds us that in the future the ability to decrease pesticide use and optimise the production of individual plants will become a reality in the medium term.* A

1. **Agency news**



* 1. **Communities encouraged to enter national biosecurity awards**

Community groups carrying out programmes to protect the local environment are encouraged by Biosecurity New Zealand to enter the annual New Zealand Biosecurity Awards.

There are 6 open entry award categories – Community Award, Māori Award, Industry Award, Local and Central Government Award, Science Award and Innovation Award; and 2 awards by nomination only – the Emerging Leader Award and the Minister's Biosecurity Award.

Receiving recognition for a community project carries a $2,500 prize. Last year's Community Award winner was the Banks Peninsula Conservation Trust for its Wildside Project. The Trust has been successfully running predator control programmes for over 30 years. Entries for the awards close on 31 August. [Full article available here](https://www.mpi.govt.nz/news-and-resources/media-releases/communities-encouraged-to-enter-national-biosecurity-awards/)



1. **New Zealand News**



* 1. **Minister visits Viet Nam and Singapore**

Minister of State for Trade and Export Growth Damien O’Connor is travelling to Viet Nam and Singapore this week to discuss agricultural and trade matters. In Ho Chi Minh City Mr O’Connor will further political links with Vietnamese representatives then travel to Ha Noi to meet with counterpart ministers.

 Mr O’Connor will then travel to Singapore to attend trade meetings, including a Regional Comprehensive Economic Partnership (RCEP) Ministers Meeting, the ASEAN-Ministerial Consultations with ASEAN, New Zealand and Australian Ministers, and the East Asia Summit Economic Ministers’ Meeting.   “The RCEP Ministerial Meeting comes at a critical point in the negotiations. RCEP covers 16 countries with a combined GDP of US$23 trillion (2015), almost half the world’s population and brings together countries that take more than half of New Zealand’s total exports.

[Full article available here](https://www.beehive.govt.nz/release/minister-visits-viet-nam-and-singapore)

* 1. **Sustainable Food & Fibre Futures launched**

Growing New Zealand’s food and fibre sectors sustainably and supporting a thriving economy are the hallmarks of a new investment programme announced today by Agriculture Minister Damien O’Connor. “We’ve taken the best of two MPI investment programmes – the Sustainable Farming Fund and the Primary Growth Partnership – to create Sustainable Food & Fibre Futures, or SFF Futures,” Damien O’Connor said.

 “With a budget of $40 million a year, SFF Futures provides a single gateway for farmers and growers to apply for investment in a greater range of projects that deliver economic, environmental and social benefits that flow through to all Kiwis. [Full article available here](https://www.beehive.govt.nz/release/sustainable-food-fibre-futures-launched)

**General**

* 1. **High Court judge urges MPI and fruit growers to co-operate**

A High Court judge has found the Ministry for Primary Industries made unlawful decisions in ordering apple and stonefruit growers to destroy tens of thousands of plants it deemed a biosecurity risk.

However, Francis Justice Cooke said the diligence and care demonstrated in MPI's decision papers could not be faulted.He encouraged MPI and the industries to work together to develop and agree on a more appropriate set of directions to address MPI's biosecurity concerns.

The judgment followed a two-day hearing in which a group of growers sought an urgent judicial review at the High Court in Wellington of the MPI directive for nurseries and orchards to contain or destroy 48,000 apple and stonefruit plants derived from plant material imported from a quarantine centre at Washington State University.The directive under the Biosecurity Act included original plant material imported between 2012 and 2017 and extended to budwood and propagated materials derived from the original plants, the group said. The directive affected 32 orchardists, nurseries, importers and intellectual property companies in Hawke's Bay, Waikato, Nelson and Central Otago.

Justice Cooke put in place an interim order at the close of the hearing requiring the parties to contain selected plant materials in a quarantine facility and to allow all other plant material to remain in situ and be subject to a spraying and/or netting programme agreed with MPI. The interim order also protected the parties from prosecution for failing to comply with MPI's directive for five days following the judgment, which was handed down yesterday. [Full article available here](https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12112817)

The Ministry claimed plant material imported from US facility Clean Plant Center Northwest over six years were “unauthorised goods” after the American institution failed an audit this year and its accreditation was later pulled. But Justice Cooke concluded that the MPI used the wrong set of provisions in making its order because the trees weren’t “unauthorised goods”.

Cooke also found that trees already planted in the ground in New Zealand could not be considered “goods” because they had become part of the land. He said the appropriate biosecurity powers are instead found in a different part of the Act, which may allow growers to get compensation. However, Francis Justice Cooke said the diligence and care demonstrated in MPI's decision papers could not be faulted. He encouraged MPI and the industries to work together to develop and agree on a more appropriate set of directions to address MPI's biosecurity concerns.

The apple and stonefruit group say they’re encouraged by the High Court judgement. Kerry Sixtus of Pattullo’s Nurseries: "We are encouraged by the High Court judgement and will move forward to engage with MPI as quickly as possible in order to achieve a suitable position that accommodates the needs of both parties." "The group has always believed that MPI should have taken a more considered approach to this issue from day one, rather than a blanket seizure of all plant material."

"We have now proven, and the High Court Judge has recognised, that MPI was using a sledge hammer to crack a nut. This now provides us with the opportunity to define a course of action for the different varieties and for the plants at different stages of growth."  [Full article available here](http://www.freshplaza.com/article/200077/NZ-apple-and-stonefruit-group-willing-to-engage-in-meaningful-discussions-with-MPI)

* 1. **Biopesticide uptake**

Kiwifruit exporter Zespri has been working with Plant & Food Research, AgResearch and the Bio-Protection Research Centre to develop and promote "next generation" biopesticides — pest and disease control products based on natural biological agents, including fungi, bacteria, yeast and plant oils. A UOA student doing an internship at Plant & Food Research, and has interviewed orchardists, suppliers, scientists, agri-chemical company staff and others in the industry. She found widespread negative, but inaccurate, preconceptions about biocontrol — that it is 'niche' or 'fringe' and unproven, that it doesn't work as well as chemicals, and that it's more expensive and labour intensive.

It is reported that "Generally, biopesticides are more expensive and they don't visibly produce a fast result because they work by enhancing the vitality of the soil or the plants' natural resilience to pests and disease. But you can achieve just as good efficacy if you use biopesticides in conjunction with other biocontrol methods, like keeping tidy weed strips, monitoring for pests and diseases, and factoring in the effect of weather and other conditions." [Full article available here](https://www.nzherald.co.nz/the-country/news/article.cfm?c_id=16&objectid=12112095)

* 1. **Horticulture levy votes successful**

Horticulture groups seeking levy renewals have all had votes of confidence from growers to continue the work of the industry good organisations Horticulture New Zealand, TomatoesNZ, Vegetables New Zealand, Process Vegetables New Zealand, and Onions New Zealand. The individual groups’ levy referendums closed on 13 August and independent vote counting shows resounding support. The levy orders come up for renewal every six years.

Horticulture New Zealand’s levy rate for this year has been set at 14 cents per $100 sales of fruits and vegetables, and this is expected to raise about $4.6 million. This is spent on grower representation across areas important to their businesses including biosecurity; access to land, water and people; research and development; education and training; and maintaining quality assurance programmes[. Full article available here](http://www.freshplaza.com/article/199824/Horticulture-levy-votes-successful)

Next steps include application to the Ministry for Primary Industries for a new levy order, consideration of the application by the Agriculture Minister and, if approved, the Minister instructs Parliamentary Counsel to draft a new levy order. A new levy order must be in place before the previous one expires. The levy orders all fall due on 12 May 2019. [Full article available here](http://www.hortidaily.com/article/45249/New-Zealand-High-support-for-levy-renewals)

**Industry news**

* 1. **New Central Otago apricot co-operative sets up for business**

A new grower co-operative company is being set up to manage the release, marketing and licensing of new varieties of apricot. The varieties, known as NZsummer2, NZsummer3 and NZsummer4, have not yet been given brand names.

An interim board to establish the commercial entity has been appointed and has four directors from Central Otago, including interim chairman orchardist Nigel Hinton, of Alexandra. Mr Hinton said Summerfruit New Zealand's Apricot Co interim board was a sub-committee of the industry organisation and its role was to work through the establishment process of Apricot Co. Apricot Co was a working title for the business entity and might change.

''New varieties of peaches and nectarines etc may also become part of the new entity's business.

''Summerfruit New Zealand members want the commercialisation of these varieties managed by a grower co-operative in the best interests of growers and ensuring the opportunity to grow the new varieties are available to all growers.''

''The final board of AC will be elected according to the constitution, which is still being drafted,'' Mr Hinton said. ''There may be some transition period to the fully elected board.'' He also said Summerfruit New Zealand was funding the Apricot Co interim board to set up the legal entity. ''However, the funding model for Apricot Co has yet to be confirmed while the establishment costs and the running costs have yet to finally quantified. [Full article available here](https://www.nzherald.co.nz/the-country/news/article.cfm?c_id=16&objectid=12111546)

* 1. **Mr Apple's China road shows attract followers, build brand**

Mr Apple recently conducted a series of road shows in Shenzhen and Guangzhou with retail partner and leading retailer CR Vanguard. Considered a success by both Mr Apple and CR Vanguard alike, the road shows highlighted the importance of face-to-face sampling and consumer interaction as part of building a successful fruit brand in China.

Lisa Cork, Special Projects Manager for Mr Apple notes, “In 2018, Mr Apple launched a comprehensive China social and digital strategy with the goal of building the Mr Apple brand. We used both WeChat and Weibo to showcase Mr Apple and the flavour benefits of New Zealand apples. We learned a lot in the last eight months and we are continuously putting new ideas to the test to improve our China consumer engagement. The road shows were one idea that really delivered. Not only did the shows drive Mr Apple sales, they significantly increased our WeChat followers too.”

Mr Apple has been exporting apples to China for over 15 years.

Mr Apple is one of New Zealand’s largest, vertically integrated grower, packer, shipper and exporter of apples. Mr Apple exports nearly five million cartons to over fifty countries around the world and one in every four apples exported from New Zealand bears the Mr Apple brand. [Full article available here](http://www.freshplaza.com/special-article/199901/Mr-Apples-China-road-shows-attract-followers%2C-build-brand)

* 1. **NZ offers assistance to develop Fiji’s potato industry**

The New Zealand government has offered technical assistance to develop Fiji’s Potato industry. This week, the two countries have signed a bilateral agreement which will see more assistance being given to Fiji. [Full article available here](http://www.freshplaza.com/article/199926/NZ-offers-assistance-to-develop-Fijis-potato-industry)

* 1. **Seeka first-half profit drops**

Seeka, New Zealand's biggest kiwifruit grower, posted a 6.5 percent decline in first-half profit despite revenue rising. Reason for this was a further write-down of the value of its banana-sourcing business.

[Full article available here](http://www.freshplaza.com/article/199995/New-Zealand-Seeka-first-half-profit-drops)

**Crop news**

* 1. **Public visits planned for one of New Zealand's largest tropical fruit farms**

There are plans underway for the public to get access to a banana plantation in Northland early next year.With the success of "Pick Your Own" farms of other fruits, Hugh Rose from the Tropical Fruit Growers of New Zealand (TFGNZ) wants to show off the locally grown bananas and highlight the produce that can be grown in that region.

But Mr Rose says that while demand is extremely high for locally grown tropical produce across the country, especially with bananas (NZ has one of the highest rates of banana consumption per capita) he would like to see it remain a niche product for as long as possible. The TFGNZ adds that handling issues mean that it is simpler for growers to sell their products direct to the consumer at places like farmers markets.

"I do not see for the foreseeable future any of our fruit going into supermarkets because of the way we are marketing. We have demand from around the country that we can't meet from health food and organic shops, and other things like that, who are more than happy to pay the premium. At the moment we are getting our $7/per kilogram." [Full article available here](http://www.freshplaza.com/article/199813/Public-visits-planned-for-one-of-New-Zealands-largest-tropical-fruit-farms)

* 1. **NZ pipfruit industry heading for record 2018 crop**

New Zealand's pipfruit industry is headed for a record crop this year as it benefits from favourable growing weather, low Northern Hemisphere stocks, market changes, premium varieties, and a weaker New Zealand dollar, according to a report published tlast week by MyFarm Investments.

The vast majority of the 2018 apple crop has been picked and nearly 90 percent has been exported, said MyFarm Head of Investment Research Con Williams, who joined New Zealand's largest rural investment syndicator last month. Williams said the crop is expected to have increased by 5-6 percent from last year, registering a new all-time high. Williams said the past season had benefited from decent growing conditions in both the Hawke's Bay and Nelson regions, with the average fruit size the largest in about 20 years due to regular rainfall, heat and sunshine during the growing season.. [Full article available here](http://www.freshplaza.com/article/199721/NZ-pipfruit-industry-heading-for-record-2018-crop)

**Other**

* 1. **James Hutton Institute looks to New Zealand to help improve fruit flavour**

Delytics Ltd a Waikato company that provides advice on crop management . It is helping the globally recognised James Hutton Institute research organisation understand how to develop resilient flavour characteristics in raspberries that UK consumers will enjoy eating.

Delytics Ltd specialises in increasing the consumer acceptance and repeat purchase frequency of fruit by improving the eating quality to meet the desired taste experience of specific target markets.

The project aims to improve raspberry flavour by developing new breeding models and decision support tools. Supported through funding from Innovate UK, The James Hutton Institute contracted Delytics Ltd in the Industry and Innovation UK feasibility study: `Feasibility of developing a Novel Breeding Methodology to Improve Berry Flavour’. The project aims to improve raspberry flavour by developing new breeding models and decision support tools.

Consistent berry flavour has been a key consumer attribute that has challenged UK breeders and growers, resulting in low consumer acceptance. Understanding what drives flavour perception and how this is influenced by season and environment will allow a breeding model and robust markers to be developed. “Being able to combine Delytics’ understanding consumer liking with our understanding of genetics will allow us to tailor our breeding programme to produce raspberries consistently with the taste profile that consumers want.” [Full article available here](http://www.freshplaza.com/article/199748/James-Hutton-Institute-looks-to-New-Zealand-to-help-improve-fruit-flavour)

* 1. **Young Grower title goes back to the Bay**

After a lengthy battle, Danni van der Heijden was crowned Young Grower of the Year 2018 at an event in Napier.Danni, 24, was named the winner after a day-long gauntlet of horticultural challenges, testing her skills and knowledge to the limits. As the regional Bay of Plenty champion, she beat out six other contestants for the title, and also secured the national title of Young Fruit Grower of the Year, along with finance, innovation, and speech awards.

Danni works as a technical advisor for AVOCO in Tauranga, where her role includes technical support, data analysis, mapping, research, and avocado nursery support. She was thrilled to win and continue the streak of Bay of Plenty women taking the national title, following the example set by Erin Atkinson last year. [Full article available here](http://www.hortidaily.com/article/45320/New-Zealand-Young-Grower-title-goes-back-to-the-Bay)

**Biosecurity**

* 1. **Horticulture welcomes major Biocontrol Milestone**

The New Zealand horticulture industry has welcomed the Environmental Protection Authority’s (EPA) decision allowing the release of a tiny Samurai wasp into New Zealand, if ever there was an incursion of the brown marmorated stink bug (BMSB).

BMSB Council Chair Alan Pollard applauded the outcome as a major milestone against one of the greatest threats to New Zealand’s horticultural industry and urban communities. “Approving the release of Samurai as a biocontrol is an excellent step but there is more work to do before the wasp is ready to be used as a tool. It’s not the silver bullet and a stink bug incursion would require a multi-faceted approach."

“Mr Pollard said the decision was made possible through the collaboration of horticultural industry groups and the Ministry for Primary Industries (MPI), working together under the Government Industry Agreement for readiness and response (GIA). He also acknowledged the science community for its impartial research that resulted in the Council using crucial information to support the application. A NZIER report, commissioned by the Samurai Wasp Steering Group, has estimated that gross domestic product would fall by between $1.8 billion and $3.6b by 2038 if BMSB became established. It also estimated the horticulture export value could fall by between $2b and $4.2b. [Full article available here](http://www.freshplaza.com/article/199925/Horticulture-welcomes-major-Biocontrol-Milestone)



1. **International news**

**Comment**

* 1. **GAIN reports**

Gain reports are from the “Global Agricultural Information Network” and are produced by the USDA. They are designed to provide timely information on the economy, products and issues in foreign countries that are likely to have an impact on United States agricultural production and trade. The information in them is written for USA exporters but the majority is equally relevant to New Zealand. With regard to import regulations for a particular market New Zealand exporters should first check the countries ICPR on MPI’s web site. These are collated specifically for New Zealand product. However the Gain reports often provide additional information that is useful e.g. on grading and labelling, economic profiles. This week see:

1. **Australia Stone Fruit** Australian cherry production is forecast to increase to 18,000 metric tons (MT) in 2018/19, up 12.5 percent from the previous year.  Exports are expected to grow to 7,000 MT in 2018/19 compared to 5,000 MT a year earlier as mainland cherries have improved access into the Chinese market.   [Stone Fruit Annual\_Canberra\_Australia\_8-16-2018](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Stone%20Fruit%20Annual_Canberra_Australia_8-16-2018.pdf)
2. **Japan Stone** In marketing year (MY) 2018/19, reduced production and higher prices of U.S. cherries led to a 46 percent decline in exports to Japan to an estimated 2,800 metric tons (MT).  Japanese area planted continued its long-term trend of decline while a gradual shift from traditional to new varieties [Stone Fruit Annual\_Tokyo\_Japan\_8-16-2018](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Stone%20Fruit%20Annual_Tokyo_Japan_8-16-2018.pdf)
3. **Polish Apple Growers Expect Record Harvest** In marketing year (MY) 2018/19 Poland expects record apple harvest. FAS Warsaw forecasts Poland’s apple production in MY 2018/19 to reach 4.0 million metric tons (MMT), a 43-percent increase from MY 2017/18.  [Polish Apple Growers Expect Record Harvest\_Warsaw\_Poland\_8-17-2018](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Polish%20Apple%20Growers%20Expect%20Record%20Harvest_Warsaw_Poland_8-17-2018.pdf)
4. **Taiwan Exporter Guide** Taiwan is the seventh largest market for U.S. food and agricultural product exports. In 2017, Taiwan imported US$3.57 billion of food and agricultural commodities (including edible fishery products) from the United States.   This report is a practical guide for U.S. food exporters interested in marketing and shipping products to Taiwan. [Exporter Guide\_Taipei ATO\_Taiwan\_8-17-2018](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Exporter%20Guide_Taipei%20ATO_Taiwan_8-17-2018.pdf)
5. **Taiwan Stone Fruit** [Stone Fruit Annual\_Taipei\_Taiwan\_8-20-2018](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Stone%20Fruit%20Annual_Taipei_Taiwan_8-20-2018.pdf)

**Business**

* 1. **Maersk Line goes live with CargoSphere Digital Rate Distribution**

CargoSphere, the neutral rate network for container shipping, last week announced that Maersk Line has gone live with digital, fully-automated distribution of its contract rates and amendments.

Benefits to customers of 100% digital rate distribution include time and cost savings, improved data accuracy, online access to timely rates for better decision making, faster reconciliation of invoices and faster quoting to customers for freight forwarders and NVOCCs.



[Full article available here](http://www.freshplaza.com/article/199820/Maersk-Line-goes-live-with-CargoSphere-Digital-Rate-Distribution)

* 1. **Bayer looking at 8,000 lawsuits related to Roundup**

The number of U.S. lawsuits brought against Bayer’s newly acquired Monsanto has jumped to about 8,000, as the German drugmaker braces for years of legal wrangling over alleged cancer risks of glyphosate-based weedkillers. Bayer had previously disclosed 5,200 such lawsuits against Monsanto, which it acquired in a $63 billion deal completed in June.

“The legal headache adds to a number of distractions for Bayer, such as falling consumer care product sales and a rebuke on production practices from the U.S. drugs watchdog, as it seeks to strengthen its drug development pipeline and has begun integrating Monsanto into its organisation. [Full article available here](http://www.hortidaily.com/article/45346/Bayer-looking-at-8%2C000-lawsuits-related-to-Roundup)

* 1. **Chile: Despite super harvest cherry producers can't cover their costs**

This season's so-called super harvest of Chilean cherries, which lead to an increase in exports of more than 100%, lowered the producer's average return for a second consecutive year. In addition, since the size of the fruit harvested was smaller, producers were paid less and couldn't cover production costs. The Liquidation Analysis that Fedefruta carried out this year for the cherries marketed by exporters detected that the fruit's net return per kilo stood at US $4.16, i.e. one dollar less than in the previous season and 1.5 dollars less than in the 2015-2016 campaign.

The Federation of Fruit Producers of Chile (Fedefruta) will present these results next Tuesday, August 21, at its Rancagua Regional Meeting, which will also include a direct export workshop where experts will give tips to maximize the profits of the largest calibers.  [Full article available here](http://www.freshplaza.com/special-article/199778/Chile-Despite-super-harvest-cherry-producers-cant-cover-their-costs)

  **China**

* 1. **China remains the largest export market for Chilean cherries**

Chilean cherries not only compete with Australian and New Zealand cherries, but also have to compete with Chinese local fruit. A large number of cherries have hit the market (the volume has more than doubled in the past quarter) with nearly 162,000 metric tons on sale, pushing down prices. In the past two years, Chile has planted about 6,000 hectares of cherries each year. Based on the average yield per hectare and the time it takes for the orchard to enter production, Chilean analysts predict that production will double in four to five years.

In 2017-18, global exports increased by 94% to 187.14 billion tons, while non-Asian markets such as North America (+24%), Latin America (+72%) and Europe (+38%) had lower growth rates. In Asia, China has the largest share with 96%. South Korea imports almost doubled to 2.641 million tons. The US Department of Agriculture's Global Agricultural Information Network (GAIN) report shows that with the expended planted area, Chilean cherry exports in the 2017 and 2018 season reached 185,000 tons. [Full article available here](http://www.freshplaza.com/article/199888/China-remains-the-largest-export-market-for-Chilean-cherries)

* 1. **Demand for imported food growing steadily in China**

Chinese consumers' demand for imported food has been growing steadily as the standard of living is improving in their country. China's total food imports amounted to $58.28 billion last year, up 25 percent year-on-year, while the annual average growth rate over the previous five years was 5.7 percent, data has shown.

The European Union remained China's largest supplier of food, followed by the United States, New Zealand, Indonesia and Canada. Meat, oil, dairy and seafood were among the most popular food imports in China. [Full article available here](http://www.freshplaza.com/article/199908/Demand-for-imported-food-growing-steadily-in-China)

 **Food safety**

* 1. **Growers who conduct third-party audits spend more on food safety**

In an effort to understand produce grower food safety practices before the phased implementation (beginning in 2018) of the Food Safety Modernization Act’s Produce Rule (PR), ERS and USDA’s National Agricultural Statistics Service teamed to conduct the 2015/16 Produce Grower Food Safety Practices Survey.

Average measured costs for growers with third-party food safety audits ranged from about $2,000 annually for growers with $25,000 to less than $500,000 in produce sales to about $40,000 annually for growers with $5 million or more in produce sales. Growers who did not conduct third-party audits ranged from an average of $1,200 for the lowest sales category to $3,600 per year for the highest sales category, suggesting that those who did conduct audits spent 2 to 10 times more than those who did not. [Full article available here](http://www.hortidaily.com/article/45251/US-Growers-who-conduct-third-party-audits-spend-more-on-food-safety)

* 1. **US: Panel formed to combat Cyclospora parasite**

Recent Cyclospora outbreaks, with limited evidence as to how they originated, have perplexed federal and state public health officials as well as food safety experts throughout the fresh produce industry, including Fresh Express,” said the Chairman of a new group in the USA set up to counter these out breaks Olivo said. “The purpose of the Fresh Express Blue-Ribbon Panel is to assemble an interdisciplinary group of independent scientific experts to better understand Cyclospora’s mode of action and how the industry can better guard against future outbreaks.”

The Fresh Express Blue-Ribbon Panel aims to address questions regarding the Cyclospora parasite’s mode of transfer to fresh produce, seasonal or supply chain concerns and potential targeted mitigation strategies. Although rarely life-threatening, Cyclospora is a single-cell parasite with a life cycle that involves a human host and that causes symptoms such as watery diarrhea, abdominal cramps, fever and fatigue in those who become infected. Cyclospora outbreaks have consistently appeared every spring and summer for years causing countless illnesses. [Full article available here](http://www.hortidaily.com/article/45295/US-Panel-formed-to-combat-Cyclospora-parasite)

* 1. **Luminescent bacteriophages flag Escherichia coli in water**

## Phage technology detects contaminated water faster than standard tests which could help prevent food and water borne illnesses . Now, a team of researchers at Cornell University, Iowa State University, and the organization Global Good/Intellectual Ventures has developed a sensitive, bacteriophage-based technique to detect one particular *E. coli* strain in water in less than half a day (Researchers found in great numbers of bacteriophages viruses all over our bodies. Bacteriophage viruses are harmless to humans yet lethal to bacteria, Nugen said. Bacteriophages prey on bacteria by hijacking the bacteria’s internal machinery to express the phage’s own DNA and then forcing them to self-destruct.

To adapt phages’ bacteria-killing abilities for bacteria detection, the researchers inserted the gene for a reporter enzyme into a bacteriophage called T7NLC. The reporter enzyme, a luciferase known as NanoLuc, glows when expressed by bacterial cells, thus detecting *E. coli*. Fused to the enzyme is a module that binds to cellulose to provide a way to collect the enzymes for analysis.

When researchers added the engineered bacteriophages to *E. coli* contaminated water along with insoluble cellulose pellets, the phages infected the bacterial cells. After the bacteria expressed the luminescent reporter enzyme, the cells disintegrated, freeing the enzyme, which clung to the cellulose pellets. Decanting off the water quickly concentrated samples. Using a laboratory plate counter or normal camera set to 30-second exposure time, scientists quantitatively measured the presence of under 10 colony forming units of *E. coli* per 100 mL within three hours. [Full article available here](https://cen.acs.org/biological-chemistry/biotechnology/Luminescent-bacteriophages-flag-Escherichia-coli/96/i34)



 **Sustainability**

* 1. **Study: Environmentally-friendly farming can increase productivity**

A major new study shows that the sustainable intensification of agriculture, a term that was once considered paradoxical, delivers considerable benefits to both farmers and the environment. In fact the study shows considerable progress has been made towards the sustainable intensification of agriculture, with sustainable approaches now being implemented on 163 million farms worldwide.

“It has long been thought that increased food production would have to come at the expense of the agricultural environment and its biodiversity, but this paper shows that this trade-off is not inevitable and the sustainable intensification of agriculture is both possible and increasing globally.” “The use of techniques such as integrated pest management, agroforestry, and micro-irrigation is expanding and are now being practised on 29% of farms worldwide, with the greatest advances in low and middle income countries. Our research shows this can deliver the ‘win-win’ of improved agricultural and environmental outcomes.”

The study concludes that sustainable intensification of crop production may be approaching a tipping point where it could become transformative. [Full article available here](http://www.freshplaza.com/article/199834/Study-Environmentally-friendly-farming-can-increase-productivity)

* 1. **WWF study addresses food loss in fields**

Just how much produce is the agricultural industry leaving in the fields post-harvest? The World Wildlife Fund dove into food loss numbers in their recent report *No Food Left Behind: Underutilized Produce Ripe for Alternative Markets.*

The report examines four crops during the 2017-2018 growing season at a set of farms in Florida, New Jersey, Idaho, and Arizona. The study measured that 40 percent of tomatoes, 39 percent of peaches, 56 percent of romaine lettuce, and two percent of processing potatoes were left in the field, often due to weather, labour costs or market conditions. The report also highlights the potential to increase availability of fruits and vegetables in the US by better utilizing what is already being produced. [Click here to read the report.](https://c402277.ssl.cf1.rackcdn.com/publications/1170/files/original/WWF_NoFoodLeftBehind_820_email.pdf?1534857179) [Full article available here](http://www.freshplaza.com/article/199919/WWF-study-addresses-food-loss-in-fields)

  **Health**

* 1. **Strawberries may help against inflammatory bowel disease**

Inflammatory bowel disease (IBD) is a set of painful conditions that can cause severe diarrhea and fatigue. Treatments can include medications and surgery. But now researchers report that a simple dietary intervention could mitigate colonic inflammation and improve gut health. In this case, a strawberry — or rather, less than a cupful of strawberries — a day could help keep the doctor away.

But decreased inflammation wasn’t the strawberry’s only conferred benefit during this study. Colonic inflammation adversely impacts the composition of microbiota in the gut. With IBD, the abundance of harmful bacteria increases, while levels of beneficial bacteria decrease in the colon. Following the dietary treatments of whole strawberries, the researchers observed a reversal of that unhealthy microbiota composition in the IBD mice. [Full article available here](Strawberries%20may%20help%20against%20inflammatory%20bowel%20disease)

 **Innovation**

* 1. **Envisioning the future of crop protection**

One of the biggest challenges facing farmers — and many consumers — is how to control destructive insects, diseases, and weeds while avoiding or reducing the negative effects associated with using agrochemicals. There is growing support for new products and methods that address these issues, and there are a number of viewpoints on the best means to do so.

The following comments come from a panel discussion in Silicon valley Some speakers felt that synthetic pesticides can be more sustainable than their organic counterparts. Others stressed that opportunities abound in the field of what is known as biopesticides, which are naturally occurring substances that control pests by non-toxic mechanisms, as [defined by the EPA](https://www.epa.gov/ingredients-used-pesticide-products/what-are-biopesticides). The panel also touched on innovations in robotics and automation that can dramatically reduce the quantity of agrochemicals necessary to control weeds, insects, and diseases.

In the past decade, an increasing number of consumers have expressed concern about the safety of traditional pesticides and shown support for organic farming methods. According to the USDA’s [Agricultural Marketing Service](https://www.ams.usda.gov/publications/content/organic-production-handling-standards), the goal of organic farming is to “integrate cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.” The department [reported last year](https://www.ams.usda.gov/press-release/2016-count-certified-organic-operations-shows-continued-growth-us-market) that there were 24,650 certified organic farming operations in the United States — a 70 percent increase since 2008.

But, as panelist Danny Royer pointed out, “organics are not pesticide-free “Pesticides used in organic farming still contain chemicals,” “You are just deriving those chemicals from a different source, and they’re usually less concentrated. But when farmers have to apply these pesticides 10 times versus two times, that’s not sustainable.” Panelist Ron Meeusen argued that certain synthetic pesticides, which may require fewer applications due to their efficacy, could potentially still be more desirable than their all-natural counterparts. Meeusen is the managing director of Cultivian Sandbox, a venture capital firm that has raised $250 million and invested in 23 food and agtech companies.

Although some panelists observed that natural products can have a reputation as being less effective than synthetics, the demand for biopesticides is skyrocketing in response to rising consumer demand for sustainably produced foods.

Reflecting the impact of consumer demand, Meeusen pointed out that companies are now pursuing alternate approaches to crop protection, including protective physical coatings for plants and electronic devices that emit frequencies capable of destroying mosquito larvae, for example. “There are many non-chemical, non-biological approaches being explored, some of which may be made even more effective when you combine them with robotic and automation technologies,” he said.

While the panelists acknowledge that pesticides are here to stay, some agtech companies are working to give growers tools to address rising pest resistance and increasing regulatory pressure derived from ecological impact. Traditionally, instead of targeting weeds, the chemicals are sprayed across entire fields. According to a Pesticide Action Network statistic cited in [Scientific American](https://www.scientificamerican.com/article/pesticide-drift/), 95 percent of pesticides applied in this fashion miss their targets and are wasted.

This is where artificial intelligence can be a huge help. A new method informally dubbed “see-and-spray” uses robots programmed to determine the differences between plants and weeds. Bots equipped with cameras essentially roam fields looking for weeds and spraying them directly with herbicides. If the robot identifies a healthy plant, it can be programmed to drop fertilizer instead. Blue River Technology, a California-based company developing such systems, was [acquired](http://fortune.com/2017/09/06/john-deere-blue-river-acquisition/) in 2017 by John Deere for $305 million. [Full article available here](https://www.agdaily.com/insights/the-future-of-crop-protection/)

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