

# SOILLESS AUSTRALIA

Protected Cropping Australia Industry Trade Magazine



2019 Conference highlights

**Fair Farms  
program launched**

**ALMERIA'S GOT THE  
WOW FACTOR**

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**SINCE 1990**

# Protected cropping in focus: Almeria, Spain



Nicky Mann visited the Spanish region of Almeria, which has more than 30,000 hectares under plastic. It was wow. Here's why.

This area is so extensive it can be seen from space. Even flying in to land at the local airport the expanse of protected cropping is an amazing sight. Incredibly these plastic greenhouses and the fruit and vegetable production businesses they cover didn't exist before 1974.

Most of the growers farm an average of one to two hectares each. The major crops are tomato (9000ha), capsicum (9000ha) and the rest produce cucumber, eggplant, zucchini and melon.



The study tour of Spain was organised by AUSVEG and Hort Innovations.

The structures are simple but effective. Most are a maximum of 4.5m high at the pitch and 3.5m high at the gutters with a manual system to open a long vent. Everything is insect netted (mostly with thrips net) or there is a strip of insect net above a pathway to allow for constant ventilation and keep an active climate.

The area is exceptionally windy so there is square wire both below and on top of the top roof to keep the plastic in place and the structures secure. The area also enjoys 3000 light hours per year. Winter temperatures are mild and don't fall much below 6C. Daytime temperatures reach around 20C. Inside the greenhouses temperatures reach 27-30C by midday. This diurnal range is beneficial for fruiting crops especially vine crops.

Summer temperatures are a different story with daytime temperatures soaring to 40C making it more challenging to grow good quality crops. Summer is also when growers in northern European countries are producing their own tomato, capsicum and cucumber so are not reliant on Almerian production and prices aren't as attractive during summer for Almerian growers.

In mid-February (late winter in the Northern Hemisphere) when I visited the area as part of a 12-person study tour with AUSVEG, most crops were in full swing apart from cucumbers that were all nearly at the end of their cycle.

Growers either sell to one of four auction houses in the region (40 per cent of growers) or to local co-operatives (60 per cent of growers). Growers usually plant an early crop of tomato, capsicum or cucumber, then follow this with a short melon crop in summer.

## Growing conditions

The rock-like soil in Almeria is not conducive for cultivation. To overcome the poor soil, local farmers have developed a system where the base of their structures are dug out and replaced with 30cm of soil brought in from the mountainous area surrounding Almeria. This bed is then covered with 5cm of animal manure or organic matter and finally topped with a 10-15cm layer of small stone gravel or coarse sand.

After every crop the ground is covered in plastic and the greenhouses closed up to achieve 60C heat inside which is done to sterilise the growing media. The entire 'substrate' mix is replaced every five years.

Water comes from rain runoff, from streams from the nearby mountains and from wells (fossil water) around 150-600m deep however it is in short supply and what is available has high salinity. The soil/organic matter/gravel system counteracts the salty water. All irrigation is done through drip tape.

Many growers don't mix their own fertiliser

## Speakers discuss the challenge of change

New crops and new ways were the hot topics of the 15th biennial conference of Protected Cropping Australia held at the Star Gold Coast on Queensland's Gold Coast in July reports Jennifer Stackhouse.

PCA's three-day conference, titled 'Seduction by Technology', put retail trends, berries, pollination, IPM (Integrated Pest Management), growing systems and medicinal cannabis under the spotlight.

Speakers attended from throughout Australia, the UK, Israel, The Netherlands and the United States and the busy trade exhibit attracted 85 exhibitors. The final day of the conference included tours to protected cropping farms on the Sunshine Coast and inland to the Lockyer Valley.

The one-day seminar dedicated to medicinal cannabis covered all aspects of this new crop from its history to legislation and grow systems. It attracted huge interest among the more than 573 delegates who registered for the conference.

Interest is high in this new medicinal crop explained session convenor Emily Rigby, who is a medicinal cannabis researcher based in Queensland. She said medicinal cannabis is said to be the fastest growing agricultural industry worldwide with a 17.1 per cent growth projected for the decade from 2016 to 2025.

The main factor holding up the growth of the medicinal cannabis industry in Australia is licensing. It takes around two years to receive permits to grow the crop in Australia.



Colourful tomatoes and capsicums on the Perfection stand.



Enza Zaden sponsored the exhibition lounge, which included these uplift lettuce decorations.



BBC Technologies displayed equipment for grading and sorting fruit on their stand at the trade show.



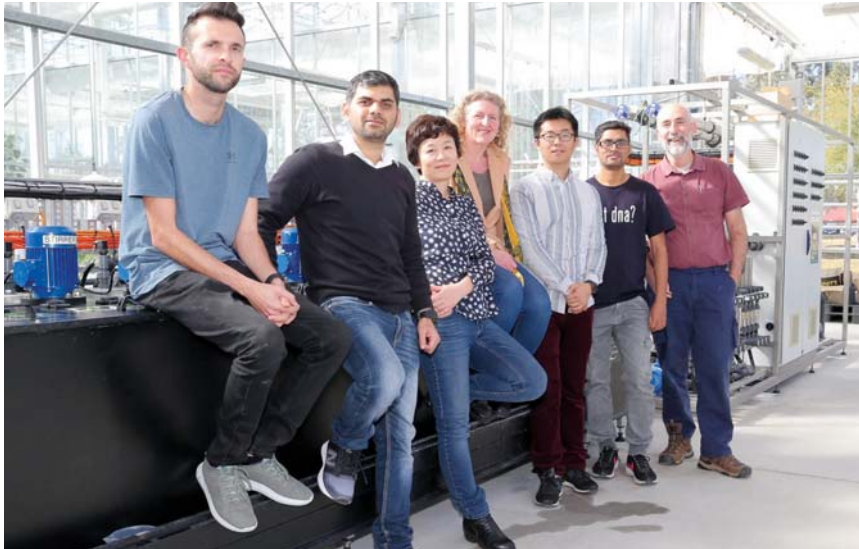
Delegates were able to chat to exhibitors during the breaks.



Cravo was one of 85 exhibitors at the conference.

Photos: Jennifer Stackhouse; Ashley Wainmley, Good Fruit and Vegetables

# Keeping you up to date



Staff of the newly established Protective Cropping Unit at Western Sydney University. From left to right: Goran Lopaticki, Dr Sachin Chavan, Dr Lihua Li, Michelle Mak, Dr Chenchen Zhao, Mohammad Babla and David Randall. (Absent: Assoc. Prof. Zhonghua Chen and Dr Wei Liang)

## Protective cropping unit gets going at WSU

A new protected cropping unit is being offered by Western Sydney University. On the academic team are David Randall, Senior Education Officer, who designs online teaching materials; Dr Lihua Li, who has been researching the technologies and putting together the lecture materials and who is the students first contact person during their studies. Also involved are Goran Lopaticki, Senior Technical Officer of Operations, who works in the National Vegetable Protected Cropping Centre on campus and is responsible for all the technology and sensor controls the greenhouse uses; Dr Wei Liang, Senior Technical Officer of Crop Management, who is in charge of the NVPCC's crops, both those for teaching and training and also those grown for research; Dr Sachin Chavan, the research scientist working on the SmartGlass project who will speak to students about the research behind new technologies during their on-campus workshop; and Associate Professor Zhonghua Chen, who is leading the Tertiary Pathway project.

"At this stage we have a very small cohort, which ensures individual students are mentored through their studies no matter their academic background," says Michelle Mak from WSU. "The units are open to all, whether you have studied agriculture at high school, TAFE/Tocal College or equivalent, or your sole education to date is from industry experience.

"The units run for one semester each, which is approximately 13 weeks, and are delivered primarily online to keep staff within the industry while they study. The only on-campus commitment is to attend a two-day workshop to gain first-hand practical experience within the NVPCC, to use the climate control software and to network with the student cohort."

The first unit, which is underway, looks at Protected Cropping Climate Control and Technology with a focus on how growers can understand and manipulate the growing environment to produce higher yields and extend the growing season. The next course available is a Protected Cropping Plant Nutrition unit that will run from November 25.

To find out more, see WSU online handbook ([handbook.westernsydney.edu.au](http://handbook.westernsydney.edu.au))



The Outstanding Achievement award went to Marcus Brandsema.

## Award winners presented at PCA conference

PCA Chair, Nicky Mann, presented awards to growers and industry members at the 2019 PCA Conference Dinner at the recent PCA conference on the Gold Coast. The recipients were:

**Chair's Award:** Job Roskam, formerly Managing Director, Brinkman Australia

**Service Award:** Saskia Blanch

**Young Achiever of the Year:** Lian Price, LaManna Premier

**Grower of the Year:** Ian Lines, Holla Fresh

**Industry Development Award:** Karen Brock, Brocklands Nursery

**Outstanding Achievement Award:** Marcus Brandsema, J&A Brandsema



Grower of the Year was presented to Ian Lines, Holla Fresh.



Karen Brock runs a tissue culture facility Brocklands Nursery and is president of Greenlife Industry Australia, the new national body representing the nursery industry. Karen was presented with the Industry Development award.

