



the **ARCHIBULL** PRIZE

CAREER SNAPSHOT



LI

LI IS A CONSULTANT AND
EXTENSION OFFICER
SPECIALISING IN PLANT AND
SOIL SCIENCE, MECHATRONICS,
PROGRAMMING, ROBOTICS,
NATURAL RESOURCE
MANAGEMENT, DATA ANALYTICS.

She said she wanted to make a difference. That was her response when Zhang Wei and his daughter Li would argue about her university choices. Why, he wondered, would a smart girl from Sydney choose to work in farming - a way of life that had trapped his parents in China and from where they had worked single-mindedly to allow him the chance to escape? She was fascinated by the challenge of it, she said. At one stage, he despaired of her ever finishing university, captivated as she was by the choice of subjects, exploring their interconnectivity. Plant and soil science, mechatronics, programming, robotics, natural resource management, data analytics. Thankfully her PhD was finished and Li assured Wei that there were many options. She was working with some friends on commercialising an idea and had been offered work in extension and consulting.

Recently Li had invited Zhang to accompany her to an awards ceremony on a cotton farm in Cecil Plains in QLD. A special award would be bestowed, she said. It was for this reason that he found himself with his daughter, 1.5 hours from Toowoomba, in a marquee between a river and a cotton field. A likeable Government minister announced an award for innovation and achievement in agriculture – he said the farm had achieved increases in yields of more than 10% over the past 5 years. The farmers had increased their profit through reduction in energy use, fertiliser use, water, and chemicals.

There was an air of celebration. Zhang noted that Li seemed to know everyone and be part of what seemed to be a team here. Agronomists, irrigation specialists, extension officers, commodity traders, PhD students, farm workers, policy officers, bankers and their families. It seemed like half the town were there, somehow connected to this farm. The owner was there, too, a woman, Zhang noted with surprise. Apparently she ran a number of businesses from her base on the Gold Coast, employing smart people and smart technologies to stay connected.

At one stage, with a bit of awkward fanfare, Li was singled out in the audience and presented with an award.

“Li Wei is at the forefront of multi-disciplinary research into developing and incorporating apps, smartphone functions and hardware which has allowed better use of limited resources including water, energy, fertiliser and labour,” said the Minister.

“Li has been involved in every step of the improvements on this farm from formulating algorithms which interpret digital information, developing components for on-farm robotic systems, to modifying off-the-shelf equipment like sensors and cameras for farmers to use on this farm and others.”

“To our right,” the Minister said, waving his arms in the direction of the silver shapes hovering over the white crop, *“You can see the cameras mounted on drones and the autonomously driven machines that has allowed Lin to collect data that has informed management decisions which have been pivotal in these enormous productivity gains.”*

“As Li’s research is rolled out further, we expect to see significant reductions in resource use and improvement in yield from farms across Queensland, Australia and the world. For this reason, she is a worthy recipient of the 2016 Drivers of Sustainable Change Award.”

Zhang looked on as Li was engulfed by people wanting to congratulate her. For the first time, he understood why this was the place his clever daughter needed to be.

This is Li’s career in agriculture.
What will yours be?

