

Ripe for Picking!

Despite some market volatility in recent years, agricultural machinery is a significant, and growing, industry. Carole Goldsmith looks at some of the Australian manufacturers seizing the opportunities in the sector.

Australia's agricultural machinery manufacturing is a \$2bn industry recording an annual average growth rate of 2.2% over the past five years, according to IbisWorld's October 2014 Agricultural Machinery Manufacturing Market Research Report, ANZSIC C2461. The report also reveals that the industry employs 6527 people within 866 businesses.

Agricultural markets have seen volatile conditions over the past five years, amid unstable commodity prices, weather conditions, production volumes and exchange rates. Nonetheless, three Australian manufacturers of agricultural machinery – GP Graders, Leda Custom Farm Equipment and New Touch Laser Cutting – are booming, with adding employees, exploring new markets, expanding opportunities, and enjoying custom-designed success.

GP Graders – Taking on the world

Australia's 2014 Exporter Of The Year and Australian Manufacturing award winner, GP Graders, is this country's foremost supplier of machinery for grading fresh fruit and vegetables, and the world's leading manufacturer of cherry sorting and packing machines. Trade and Investment Minister Andrew Robb congratulated the company's CEO Stuart Payne, at the Australian Export Awards

last November, for GP Graders' ongoing success exporting its machines. It currently has machinery in 18 countries, with key markets in Europe, the USA, Canada and Chile.

Payne speaks excitedly about his company's export expansion: "We are in the process of significant expansion through Europe. When in place, this will greatly increase our huge grading market across Italy, Spain and France. Last year we installed the world's largest cherry-grading machine in California. It can process 24 tons of fruit per hour and this is a 200% increase on previous machines."

He adds that the company is currently installing machines in Germany and Belgium, with prospective sales in Switzerland, Norway, Italy, Spain, Turkey and Greece. Explaining how he finds additional global business, Payne says: "It mainly occurs through our agent network or at international trade shows where company representatives approach me on our company's display stand.

"Everything we do in this company is an invention to meet a solution to a need. We receive a request, think about the design, develop it, test it and sell it. There are always new ideas and problems with grading fruit and we always aim to solve them."



Payne co-directs the company with his brother Ian, who manages production. Their father Geoff started the company 52 years ago, when he set up a small manufacturing and grading business to cater for local fruit growers in Mount Waverley, in Melbourne's eastern suburbs. How the company has grown since then!

As well as the company's head office and manufacturing plant in Mount Waverley, its international operations include GP Graders LLC (USA), near Seattle, and GP Graders Chile SpA, in Curico, south of Santiago. The business has around 70 employees in total, including 10 in the USA and 10 in Chile.

"Our Chilean workforce will be increasing to 20 by this August to handle our increasing grading machine distribution in Chile," adds Payne. "Last year we moved from an agency relationship in Chile, to running the business ourselves and opened GP Graders Chile SpA. We have an assembly plant at our US company and may do some machine assembling at our Curico business in the future."

Payne explains that the company's orientation of fruit and vegetable grading is towards small produce and includes anything that can be rotated such as cherries, Brussel sprouts, cherry and grape

tomatoes, small onions and plums. It still manufactures machinery for citrus, apples, pears and stone fruit, and is also producing several machines for abalone and oyster grading.

"However our largest market is in cherries and the cherry industry as a whole has grown over the past 20 years," Payne says excitedly. "There is an enormous demand for cherries in Asia. They are regarded as a delicacy and a luxury item, especially in China and Japan where they are given as gifts.

"In China, people buy cherries for the New Year's celebrations. Chinese buyers are even flying directly to cherry farms in Chile to buy entire cherry crops from the farmers directly. Some Chilean growers are making \$US40,000 an acre from their sales to China."

The majority of the company's sales are derived from its AirJet® cherry and grape tomato grader, which it claims is used by every major cherry packer in all leading markets globally. The machinery's unique camera technology categorises cherries according to size, colour, shape and defects, which cuts human sorting by 80% and increases accuracy to 97.5%.

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GP Graders currently has fruit-grading machinery in 18 countries, with key markets in Europe, the USA, Canada and Chile

Payne explains the machine's camera technology: "There are three cameras per cherry and each camera takes 10 synchronised images of every cherry. That's 906 images for each standard cherry lane. At the California site, where our largest machine is installed, it takes 36,000 images per second over the 40-lane grading site.

"The cameras illuminate the fruit and we can see the cherry or cherry tomato's grade including softness, bruising, rot or cracking. We rotate every cherry under the camera and the conveyor speed is 30.2 cherries per second. This multi-dimensional analysis enables us to measure size, colour grades and skin imperfections at high speeds and with perfect efficiency. The first quality graded cherries are sold for export and for domestic markets."

The AirJet @machines sell for \$US1.5m-\$US2.5m and its largest machine was sold to its California client last year for around \$US7m.

GP Graders invests around \$US4m-\$5m annually on R&D and Payne says: "We have a wonderful history of successful innovation. Eighty percent of what we begin to design is successful and leads to ongoing sales."

The AirJet @machines are all serviced on-site before the season, as the cherry season lasts just six to eight weeks. Each operator attends an intensive machine training course and GP Graders provides 24/7 on-line support throughout the season. Trained AirJet @ contract dayshift operators are also available for hire. This team of single young men have the very fortunate job of travelling the world operating the machines during the busy cherry season periods.

On the company's future plans, Payne says: "We will continue to grow and move into grading other niche fruit and vegetable markets where vision technology can be utilised to reduce cost and provide a guaranteed grade in terms of size and quality. There are a myriad of benefits this technology brings to our customers from storage to staffing, to assessing new markets, domestically and globally. Automation and implementation of technology in agriculture is expanding rapidly. We are moving towards a uniform consistency and quality of products supplied worldwide."

Leda – Consolidating operations

Leda is currently engaged in the process of consolidating its four businesses – Leda Custom Farm Equipment, Leda AG, Messor and Mallee Trailer Hire – on one site of around six acres in Mildura, in Victoria's north, over the next 12 months. The company is currently located on four sites at Mildura, Robinvale and Buronga in NSW. For Australia's only manufacturer of olive and grape harvesters, the move is certainly a positive step forward. Founder, owner and Managing Director Damien 'Henry' Higgins says: "We received a Victorian Government grant of \$250,000 from the 'Victorian Business Flood Recovery Fund' to build a new factory in Mildura. The new site will include a showroom, service department, manufacturing site, hydraulics department, engineering and customised manufacturing."



GP Graders' CEO Stuart Payne receiving the 2014 Exporter Of The Year award from Trade and Investment Minister Andrew Robb.

Leda builds around seven harvesters a year. The combined build for last and this year is eight olive harvesters and seven grape harvesters. All harvesters are custom-made for the client's particular requirements. The top of the range Colossus XL olive harvester sells for around \$950,000 while the grape harvester's price varies from \$200,000 to \$400,000.

Standing at a massive 5.85 metres tall and weighing 28 tons, the Colossus XL has a 96% efficiency in removing the olive fruit from fully grown trees. Leda has invested nine years of manufacturing and research to develop the machine.

With the combined experience designing and manufacturing the H-Series Tow grape harvester and the Colossus olive harvester, it was only a natural progression that the next step for Leda was to build a self-propelled grape harvester. With that, the H-Series P16 grape harvester was developed.

As well as the harvesters, Leda designs and makes approximately 1500 different variants of farming equipment products, many of which are custom-built and designed for clients' requirements. Employee numbers have also grown from 35 to 60 this year to handle the company's increasing business. One of Leda's strengths is its supplier relationships; and it has a very close relationships with local and national suppliers.

Higgins' love of designing farm equipment started long before he started his farm equipment business 16 years ago. "I worked with my father on a dry fruit property as a teenager and I started to design our own machines."

Leda's largest customer is Australia's premier olive company Boundary Bend. Higgins says: "Boundary Bend asked us to develop a single operator Colossus harvester three years ago. This harvester was custom-produced and it harvests an average of 110 trees per hour



The Colossus XL olive harvester stands at a massive 5.85 metres tall and weighs 28 tons.



Left: The Colossus XL has a 96% efficiency in removing the olive fruit from fully grown trees. Right: Leda is currently consolidating its manufacturing operations in one single site in Mildura, Vic.

using just one operator. We've developed the Colossus XL over the last 11 years alongside Boundary Bend and other highly respected olive growers in Australia."

He explains the Colossus XL process: "Once the olives are picked with the harvester, they fall onto a conveyor belt and are then transported on to a lift conveyor. The olives then move to another container where they are cleaned and transported to a bin for processing."

Recently Leda modified the Colossus olive harvester to enable it to harvest oranges. Changes included redesigning the collection buckets making them large enough to hold oranges. The conveyor also had to be redesigned to discharge the fruit from the rear of the machine instead of the usual side discharge system used. The cleaning system was adjusted to prevent the orange tree's larger leaves and sticks from becoming stuck and obstructing the system.

Leda supplies machines and parts to farms across Australia and Higgins says that they have plans to export machines in the future. When asked what the manufacturing industry needs in Australia, Higgins says: "The government should be providing manufacturing tax incentives to encourage manufacturers to make products in this country. Businesses are finding it too easy to go overseas to build their products."

New Touch Laser – custom design driving success

When Brad Drury started New Touch Laser 14 years ago, it was a two-man business. Today, the company employs around 60 staff and operates six laser cutting machines over 24 hours a day, at two sites in Bayswater and Clayton South, in Melbourne's east.

Drury and Alex Vandebroek formed a sister company called New Touch Fabrications in 2007, allowing them to deliver a complete range of fabrication services. The two businesses have since been merged allowing them to streamline the operation whilst improving lead time and customer service.

With Drury as Managing Director and Vandebroek as Operations Director, the joint-owners are proud of their company's continuous success. Although only 5% of its business is involved in the agriculture sector, it has provided a steady supply of interesting projects for New Touch.

Drury advises: "Since we started New Touch, we have been making various components for the agriculture industry. These range from small brackets to complete kits for rotary cow sheds, grading machines, large conveyor systems, water tanks and rotary hoes.

"The most interesting agricultural equipment that we've made components for is the rotary cowshed and many of these machines are exported to the USA. The cows are loaded on one side and the equipment rotates around the area they are milked. Other tasks can also be performed like feeding, washing and physical inspections."



New Touch co-owners Alex Vandebroek and Brad Drury.

As well as supplying the agriculture sector, New Touch has an extremely diverse customer base across Australia, ranging from sheet metal and machinery businesses, to furniture manufacturers, as well as the trucking, defence, construction and automotive sectors, to name a few.

Most of the components produced for its clients are done to customer designs received via its CAD software. Drury advises: "When we see an opportunity for a design improvement, however, we certainly get involved in giving feedback and assisting with the redesign to meet our customer's needs."

He describes the equipment they use in the business: "Our main machines are laser cutting machines, of which we have a variety of brands and models. These are all capable of performing slightly different tasks, from automation, 2D and rotary cutting up to 2000mm by 4000mm in size and 25mm thick Mild Steel and 20mm Stainless Steel. We also have press brakes, laser marking, welding and many other smaller machines required for fabrication. For the agricultural sector components, we mainly use the lasers and press brakes."

When asked where the opportunities for manufacturers lie in agriculture, Drury responds: "I think that the opportunities are similar in all industries? The government needs to develop policies that encourage and support businesses more and eliminate all the red tape and associated costs of being in business in Australia. This will make it more appealing for entrepreneurs and established businesses to invest and spend money in this country." **AMT**

- www.gpgraders.com.au
- www.leda.net.au
- www.newtouchlaser.com.au



New Touch makes many components for the agriculture industry on Trumpf lasers at its Clayton South branch.