

## Business Case Australian horticulture grower reduces bird presence by up to 90%

<b>Location:</b>	Melbourne, Australia
<b>Application context:</b>	Vegetable farm ( <i>Agriculture</i> )
<b>Problem definition:</b>	Bird damage to celery crops ( <i>All year</i> ) and iceberg lettuce ( <i>October to April</i> )
<b>Bird species:</b>	Australian Wood Duck ( <i>Chenonetta Jubata</i> ) and Crows ( <i>Corvidae</i> )
<b>Bird behavior:</b>	Foraging
<b>Time of the year with bird problems:</b>	All year round
<b>Time of the day with bird problems:</b>	From dusk till dawn
<b>Number of systems:</b>	5 x AVIX Autonomic Mark II
<b>In use since:</b>	2018
<b>Laser projection area:</b>	283 hectares ( <i>700 acres</i> )
<b>Bird reduction after the laser deployment:</b>	90%



# Laser bird deterrent helps Australian farmers repel wood ducks

## Australian horticulture industry

Almost 90% of all fresh vegetables stocked at Australian supermarkets are grown in Australia<sup>1</sup>. Australian vegetable growers produce a range of vegetable crops for commercial sale to meet the demands of the market. As a result of meeting the market demands, vegetable production in 2018 was the sixth-highest valued agricultural industry in Australia. The gross value of vegetable production increased in 2018 by 5% to 4.1 billion Australian dollars<sup>2</sup>.

As the gross value of vegetable production increases every year, all threats to production become more of a risk to a farmer's supply and revenue. Wood ducks are one of the threats that have caused severe damage to vegetable crops. For example, lettuces, sweet corn, and tomatoes, which hold a high gross value. As a result of this damage, local farmers have to protect their crops in a cost and time-effective manner.

## Alternative VS traditional bird control methods

There are many bird control methods available to Australian horticulture growers, but each has its limitations. Scare guns or sound-based methods create noise disturbance for neighbors. Visual methods such as a scarecrow or netting do not work as a permanent solution, as birds become habituated to them. This leads farmers to search for alternative bird control methods that will decrease their crop loss and increase their revenue. The exact scenario occurred at Gazzola Farms.

Gazzola Farms is an Australian family-owned and operated company since 1932. One of two locations on the Mornington Peninsula is run by Dean and Alex Gazzola, they manage 500 acres of vegetable crops in Boneo, Victoria. The farm grows celery all year round and iceberg lettuce from October to April. There is a heightened risk of damage by wood ducks with crops being harvested all year round.

Gazzola Farms often spotted 20-30 ducks in each field, with both lettuce and celery crops significantly damaged. At times employees would recall that overnight Gazzola Farms could lose a couple of hundred dollars worth of lettuce as a result of ducks foraging. Gazzola Farms attempted to scare birds away with a scare gun and sound devices. After exhausting almost every method in the book, they began searching for an alternative solution.

## A 90% reduction in bird presence using a laser system

In 2018 through E.E. Muir & Sons (an Australian partner of Bird Control Group), Gazzola Farms found the AVIX Autonomic manufactured by Bird Control Group. E.E. Muir & Sons is an Australian owned company since 1927, they provide superior services to help farmers protect their farms in an environmentally friendly manner and increase farmers' profitability.

The AVIX Autonomic Mark II is a laser bird deterrent system designed to help farmers rid themselves of birds, the laser emits a strong beam of green light that spooks birds as it crosses their path without causing any physical harm. As an automated bird deterrent, the system can function effectively 24/7 to keep birds away. The laser bird deterrent has a wide projection range and can be programmed to accommodate a variety of applications. If the laser is deployed before the harvest season farmers can begin to disperse birds and within a few months reduce their bird presence by more than 70%.

## Effective results

After a few months of Gazzola Farms installing the laser bird deterrent, they immediately saw the results. Dean Gazzola says "Since the laser has been installed we've had almost no bird activity on the crops or the areas the laser system covers. The crops not covered by lasers seem to be where the birds congregate and we are hoping once the last laser is installed we will have no bird life near the crops at all."



"We are extremely happy with the system, I would definitely recommend it to my neighbors as it is easy to use and extremely user-friendly. We will continue to get more until all parts of the farm are covered."

**Dean Gazzola**, Manager of Gazzola Farms, Melbourne, Australia

<sup>1</sup> <https://ausveg.com.au/resources/economics-statistics/australian-vegetable-production-statistics/#majorcrops>

<sup>2</sup> <https://www.agriculture.gov.au/abares/research-topics/surveys/vegetables>