



The factory can produce 180 tonnes of seed a day to supply process growers with a consistent size seed piece

PRODUCTIVITY INVESTMENT DELIVERS RESULTS

Cutting edge technology has increased efficiency, reduced waste and trimmed seasonal labour requirements at Canterbury's Potato Seed Co-operative, a feat recognised by the presentation of the Innovation Award 2025 by Potatoes New Zealand.

Tony Benny

Since it bought a multimillion-dollar Optimal Vision potato seed grading system three years ago, the Ashburton-based co-op has continued to innovate, adding specialised equipment to cut larger tubers into optimally sized seed pieces.

"The optical will size the seed piece so we get whole seed, single cut, and multi-cut coming out at once and then that goes down one of the two lines to the cutter and it cuts the tuber, depending on that size data," says general manager Ken Small.

"We're aiming for a certain size seed piece that can support the plant until it's got its roots down."



Thanks to the advanced system the seed produced by the plant has consistent shape and size, dramatically improving planting efficiency and overall quality for commercial potato growers.

The plant specialises in producing seed for process growers who supply McCain Foods in Timaru. Previously McCain supplied the seed to growers, but in 2017 it handed that responsibility over to the growers, 12 of whom combined forces and formed the co-operative to handle the task.

In 2021 the co-operative's purpose-built storage facility in Ashburton was opened, featuring two 3000 square-metre coolstores with capacity for 8000 tonnes of seed.



Canterbury's Potato Seed Co-operative general manager Ken Small



The system dramatically improves planting efficiency and overall quality

The co-op works with seed growers, overseeing the five-year long process of taking newly imported genetic material that is multiplied in a laboratory via tissue culture to create mini-tubers that are then grown out in tunnel houses.

The line is further multiplied in the field by seed growers over four seasons until there are sufficient numbers to supply process growers.

"We start with maybe 20 to 30kg of mini-tubers and we end up with up to 600 tonnes of seed," says Ken.

Even when the variety being grown hasn't changed, new genetic material needs to be taken from the parent lines every year to ensure there is always fresh, vigorous stock coming through because with each new generation potatoes lose their vigour.

"We get asked why we don't push out to G5 or G6 (fifth or sixth generation) to get the cost down, but if you do that vigour disappears, disease levels climb and it all starts going wrong. So they'll keep that stock in the lab the whole time and they're just basically multiplying that up each year."

The co-op then buys the G4 seed from the seed growers and in the following spring that seed stock is graded and cut for supply to process growers.

"The whole driver is to try and make it sustainable for both the seed grower and the process grower. Bringing it all together in this facility and installing the optical grader has meant that yields for the process grower have gone up two percent year-on-year."

Ken attributes that to better control of the storage process and the cutting process.

He says the seed growers are growing a better product as well. "They are doing a great job and keeping the seed at high quality."

Cutting begins in the Ashburton plant prior to the planting season, in an effort to get ample supplies of seed stockpiled in the coolstore before demand skyrockets when planting starts. The factory can produce a maximum of 180 tonnes of seed a day.



The optical grading system sorts seed potatoes into whole, single cut and multi-cut sizes



Graded seed potatoes head down the lines to the cutting machine

"We have 13 growers and they would take 400 or 500 tonnes a day if they could, but we can't supply that much so we have to start early. We have a six-week window to plant it all and so if we don't pre-cut, we can't keep up with the planting crews.

"I'm the only one that prays for a little bit of rain at planting time to give us a little bit of a break and catch back up again."

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Thanks to the advanced system the seed produced by the plant has consistent shape and size, dramatically improving planting efficiency

The success of the Ashburton facility has been great for growers, says Potatoes New Zealand chief executive Kate Truffitt.

"This technology allows growers to maximise seed placement and spacing in the field with their potato seed planters.

"The result is improved potato plant stand in the field and even emergence, which optimises crop inputs of fertiliser and water whilst increasing potato crop quality and yield per hectare. Through a collaborative effort and a shared commitment to technological innovation, these growers are seeing exactly the practical return on investment in productivity that the industry needs innovation to deliver. ●



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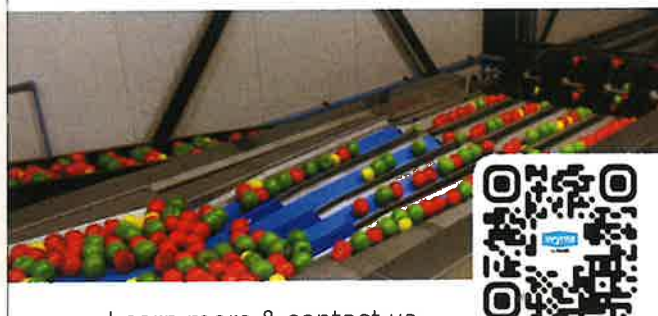
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