

More value cuts from new robot

By TONY BENNY

New high-tech robotic machinery in Alliance Group's Smithfield meatworks near Timaru promises to increase the yield of high-value cuts from every carcass, says processing manager Kerry Stevens.

Alliance has just commissioned the primal-middle cutting plant that X-rays each carcass and then instructs two cutting machines where to cut, with millimetre-perfect accuracy.

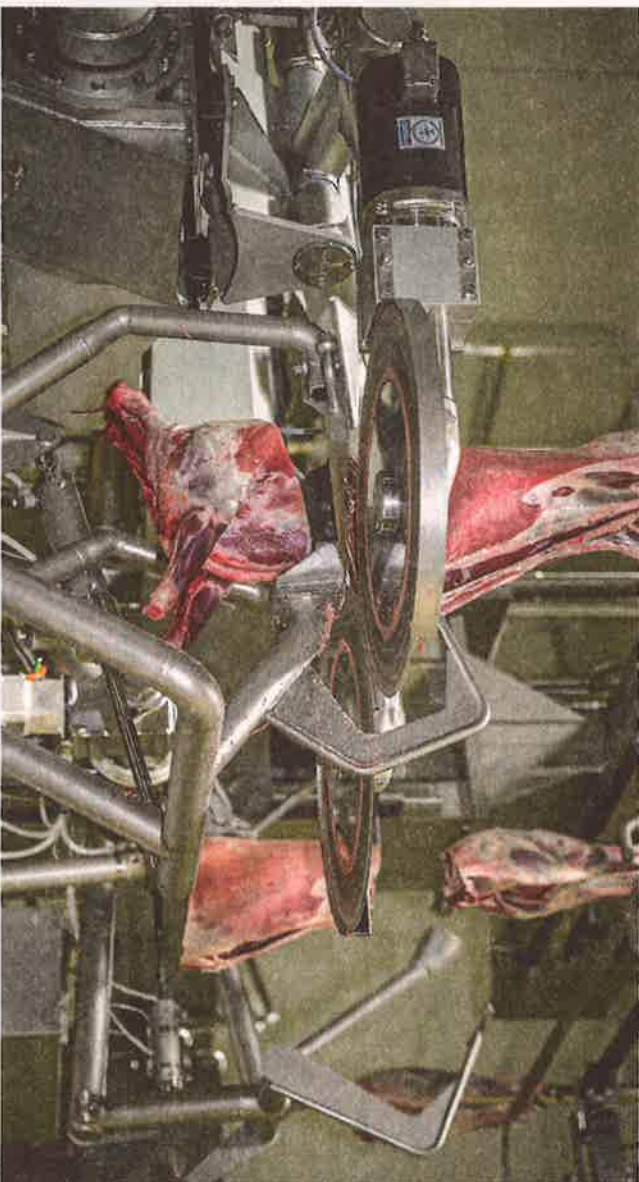
"The accuracy that it's able to produce means that we maximise the value added to every carcass. We measure our accuracy in millimetres and our calculations even include the thickness of blades," says Stevens.

After emerging from the X-ray chamber, the carcass is grasped by robotic arms that place it before two spinning blades which cut it into three parts, the hind, middle and forequarter sections. This first operation is performed by what's called the primal cutting machine.

The middle part then goes into the middles machine.

"It takes the flaps off and then takes the loin and, depending on the specification we want to produce to, will separate it into the loin products and the rack which is the front end of that."

The \$7.5 million plant is able to



The new robotic primal cutter in action.

automatically adjust to a wide variation in carcass size, a significant challenge in the red meat processing sector.

Carcasses are usually cut up manually, with staff feeding each one into a bandsaw, sometimes guided by an infrared light. The new machinery will do the job with far greater accuracy, Stevens says.

"The person cutting on a bandsaw will line up an entry point for the blade but generally they're

cutting quite square, whereas this machine will adjust the angle of the blade to cut through on certain angles to follow the ribs along.

"And if you think about those bandsaw cuts, the product on the left hand side of the blade might be worth one particular price per kg and the product that emerges on the right-side could be worth quite a lot more per kg."

"The machine can produce the various cuts to slightly different specifications depending on what

the market wants and what we're trying to produce."

Stevens says the main benefit of the robotic system is the increased yield of higher value cuts. "It's capturing product that's quite difficult to do by hand and as well as that, it's making sure that we push as much as we can into the higher value items."

The machinery was designed and built by Dunedin-based engineering company Scott Technology, which exports sophisticated



Each carcass is x-rayed and that information is used to guide the robotic cutter with millimetre-perfect accuracy.

processing machinery for the meat industry, appliance manufacturing and other industries around the world.

The cutting plant is the first of its type to be installed in a New Zealand meatworks and another is being put into Alliance's Pukeuri works, near Oamaru.

"There are some jobs that it does away with in the boning room but no individuals have lost their employment because we've just re-assigned those workers and natural attrition means that's easily accommodated," Stevens says.

"It's an integral part of our company's overall strategic objective to improve productivity and improve our performance generally."