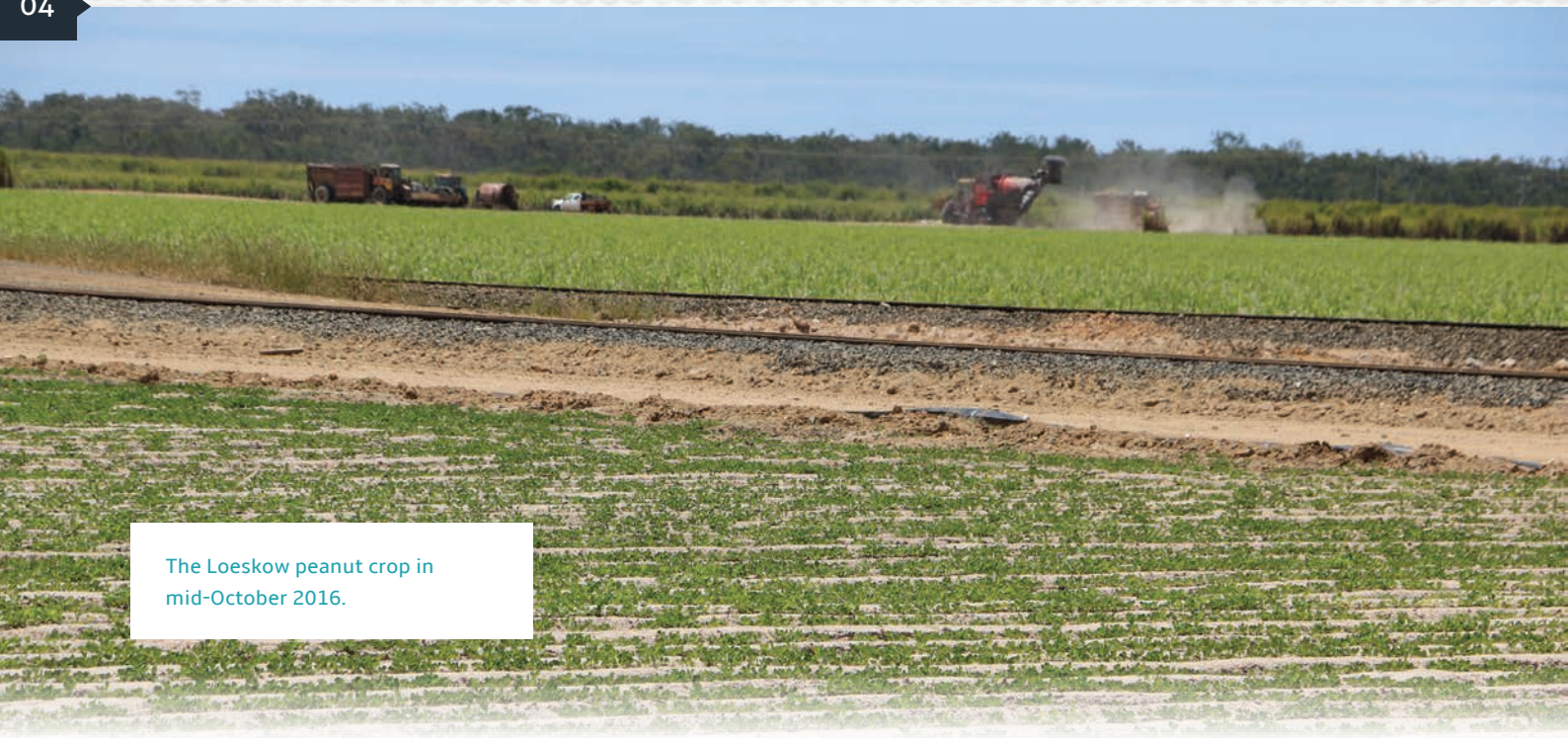

The Loeskow peanut crop in mid-October 2016.

Peanut rotation lifts marginal soil production at Bundaberg

The Loeskow family at Bundaberg is successfully using a peanut rotational crop to improve soil health and lift sugarcane production. ***By Brad Pfeffer***

The Loeskow family admit that the soil on their 1600 hectare property generally does not look like the type of country that is capable of producing plant-cane crops of 200 tonnes of cane per hectare (TCH).

And while they aren't there yet, Jason Loeskow said that with the right management and conditions that the lofty goal of 200 TCH could be possible, thanks to introducing peanuts into the rotation at the end of the crop cycle.

Last year, they averaged 104 TCH and this year an 107-108 TCH average, with some of the best autumn-plant cane blocks after peanuts yielding 175 TCH.

"This soil is about as marginal as you can find in the district," said Jason, who farms with his father Neville.

"We are only about 5km from the coast and there are some parts of the 1150 ha under cultivation with cane that have problems with salinity.

"But we believe that if we get everything right then up to 200 TCH is possible on this dirt, with the peanut rotation, and I'd like to think that we could get to a 115 TCH average."

The journey with peanuts began in the 1980s, following a transition from grazing to cultivation that occurred over the previous 20 years. The virgin country had comfortably produced 100-120 TCH, but the Loeskows had seen that drop steadily to 100 TCH and then 80 TCH.

"If we do plough-out replant today, which we did five years ago, we will only get around 60-70 TCH."

Peanuts were first introduced to their farm to control nematodes, which were creating a large expense with nematacide application required for their control. The peanuts also allowed for better weed control of grasses.

"There were questions about planting peanuts into poor soils, but we determined it was the only way to lift our cane production," Jason said.

"The severely salt affected country might only yield 2 t/ha of peanuts, but at least that gives us the opportunity to grow 100 TCH the following year."

They have a strong focus on inputs for both crops to achieve results. Both crops require around 5 ML/ha, although with peanuts being the high-risk and high-cost crop they receive the priority.

They generally need 5 t/ha to recover costs and expect to average 6 t/ha in their better soil for the peanuts, which are typically planted in September or October.

With about 20 percent of the farm planted to peanuts, they also know that getting the peanut crop right is vital for setting up a good subsequent cane crop cycle.

"About one third of our expenses go to the peanuts, be that wages or fuel or fertiliser."

They have also made an investment in machinery over the years that has allowed them to conduct all of the peanut farming themselves, as well as do contracting work, which has helped the economics stack up.

He said he expected a peanut price this year of about $1600/t, which although isn't as big a jump as the cane price in 2016, was still the highest they had seen.

They have also focused on a range of factors that have all contributed to productivity, such as GPS guidance, timing farming practices, recovering or reclaiming land that is severely salt affected, and ensuring that ground is levelled perfectly for flood irrigation.

Their main varieties are KQ228$^{\Phi}$ for early sugar, Q232$^{\Phi}$ for salt tolerance and ratooning, Q240$^{\Phi}$, Q238$^{\Phi}$, and Q208$^{\Phi}$.

In summary, Mr Loeskow said that for their situation the peanuts were the difference in making their sugarcane operation viable.

Research through the Sugarcane Yield Decline Joint Venture (SYDJV) has shown the value of rotational cropping as a tool to address yield decline, including the benefits of peanuts to control nematodes in poorer, sandy soils.

Senior Farming Systems Agronomist with the Queensland Department of Agriculture and Fisheries, Neil Halpin, said that in the Bundaberg region this was an important consideration for the long-term of cropping industries such as sugarcane and legumes.

"With strong competition for land for high value agriculture, our cane and legume country is moving increasingly into marginal soil, so this is the type of work required to keep production in those soils," he said.

"We have a lot of data on the benefits of legumes and the industry has a strong understanding of the sugarcane response that comes from breaking the cane monoculture with a grain legume. In the past a lot of that has been via a manure crop, but being able to harvest and grain crop and make money from it makes sense as well."

Bundaberg farmer Jason Loeskow inspects peanuts earlier this year.