

Healthy and heavier cattle turned-off rehabilitated mining land.



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In very simple terms beef cattle production is all about maximising kilos/hectare.

Based on that premise rehabilitated mining land in the Upper Hunter can be successfully returned to grazing enterprises.



ON TRIAL: NSW Department of Primary Industries technical specialist, Pastures, Neil Griffiths and Yancoal's environmental specialist Bill Baxter inspect the steers before their weigh in.

That was message that came from a grazing trial conducted from January 2014 to June 2017 at two mines Yancoal's Hunter Valley Operations (HVO) near Singleton and BHP's Mt Arthur mine near Muswellbrook.

Gross margins/hectare, for the first intake of steers, ranged from \$180 for those running on native pastures to \$301 for those on the rehabilitated land.

“The trials showed steers grazed on the rehabilitated land were heavier, achieved better fat cover and were just as healthy as steers grazing on adjacent undisturbed land,” said NSW Department of Primary Industries technical specialist, Pastures, Neil Griffiths.

“The snap shot showed the cattle grazing the rehab sites gained more weight, had better condition and were worth more money than mates grazing at the comparison sites.

“On the rehabilitated land there was no change in ground cover, no increase in weeds, no heavy metal toxicity and a variety of pastures species existed.”

Mr Griffiths presented the final results from the trial at the Upper Hunter Mining Dialogue annual forum held in Singleton on Wednesday.

To test for heavy metals blood samples were taken from the cattle on entry and exist from the study sites. Results were within normal ranges not high or low although in the second intake copper was low at both sites.

Similar results have been replicated at other sites including [Glencore’s Liddell Mine cattle grazing trial](#) and mining companies are no doubt hoping the trials will go some way to allay community fears about the sustainability of rehabilitated land.



WEIGHTS: Glencore's land & property manager, Nigel Charnock, Gary Johncock, general manager, Colinta and agronomist Neil Nelson with some of the trial steers in April this year

The HVO trial was conducted on land rehabilitated 30 years ago while the Mt Arthur site underwent rehab 15 years ago and Mr Griffiths said that meant the land had stabilised and provided an ideal site for the grazing comparisons.

Mr Griffiths is keen to continue work on mine rehabilitation and is looking to examine past and present work on grazing land to establish what works best, are the trial results typical or not and where can improvements be made in rehabilitation especially in regard to fertilizers – does bio-solids work?

“There are a range of questions we would like to investigate with the aim to establish best practice in rehabilitating land for grazing purposes,”he said.

“We may find that certain final landforms are better or certain fertilisers and or grazing management achieve better outcomes. But to answer these questions research is required.”



HVO rehab site photo taken in May 2017.