

Implanting during dry conditions

Background

The onset of dry conditions or drought often raises the question about whether to implant cattle or wait until the season breaks. In such times, it is worth remembering that Compudose™ 400 has a payout period of 400 days.

This means Compudose 400 maximises growth rates year-round. In simple terms, cattle implanted with Compudose gain more weight in the wet season and lose less in the dry, cutting months from the age of turn-off.

Differences between implants

All implants deliver a level of hormone above a threshold to promote growth for a particular payout period. Once the payout period ceases, the available hormone drops below the threshold and growth promotion stops.

Compudose 400 is a medicated silicone rubber implant that slowly releases the active ingredient into the bloodstream over 400 days. The durable core aids in reducing crushing or breaking during implantation, ensuring consistent pay out and long-term performance.

By comparison, combination implants that contain both oestrogen and androgen are short-acting implants and have a payout period of 90 to 120 days.^{1,2} They consist of compressed pellets that are quickly absorbed into the bloodstream after implantation. Most combination implants have a minimum re-implant interval of 70 days.²

These features have important implications on the long-term benefits provided by oestrogen and combination implants. International and Australian research suggests the weight gain benefits provided by

oestrogen-only implants are maintained even after the pay-out period expires.^{3,4} By comparison, the weight gain benefits provided by combination implants can be lost if cattle are not re-implanted, turned off or maintained on good nutrition.^{3,4}

Proven liveweight gain advantage

The weighted average of more than 30 trials conducted in Queensland over the past 20 years shows that cattle implanted with Compudose 400 have a 16.1% liveweight gain advantage over non-implanted cattle.⁵ A number of these trials were conducted during dry or drought conditions (Table 1).

In one trial conducted at Tully River, Queensland, cattle implanted with Compudose 400 had higher average daily gains, even during periods of low weight gain or weight loss (Figure 1).

A large-scale trial compared the performance of Compudose 400 to Revalor® G (i.e. Revalor 400) and non-implanted cattle under various implant strategies in steers and heifers on "Coorabulka", a NAPCO property located in the channel country of western Queensland (Figure 2).

In this trial, good pasture conditions existed for the first 240 days. Pasture quality and growth rates began to decline during the next 81 days and very dry conditions existed for the following 97 days. This was concluded by good weight gains during the final 102 days. Cattle implanted with Compudose 400 had higher growth rates compared to non-implanted cattle throughout the trial, regardless of pasture conditions (Figure 2). This trial also confirmed Compudose 400 pays out for at least 400 days.

Table 1. Performance of implants during dry or drought conditions (Qld & NT)⁶

Location	Implant	Duration (days)	Starting weight (kg)	Average daily gain		Weight gain advantage (kg)
				Control	Compudose	
Charters Towers	Compudose 400	436	293	0.07	0.10	11.5 (42.9%)
Koumala	Compudose 200	190	395	0.13	0.22	18.4 (77.4%)
Ingham	Compudose 400	277	432	0.18	0.23	13.4 (27.7%)
Swan's Lagoon	Compudose 400	394	389	0.26	0.32	23.8 (23.7%)
Marlborough	Compudose 400	172	355	0.28	0.41	21.5 (44.5%)
Brandon	Compudose 400	370	422	0.33	0.41	29.6 (24.2%)
Barra Bore (NT)	Compudose 400	287	276	0.23	0.30	18.7 (28.1%)
Charters Towers	Compudose 400	307	435	0.34	0.44	30.5 (29.0%)

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Figure 1. "Tully River", Qld⁷

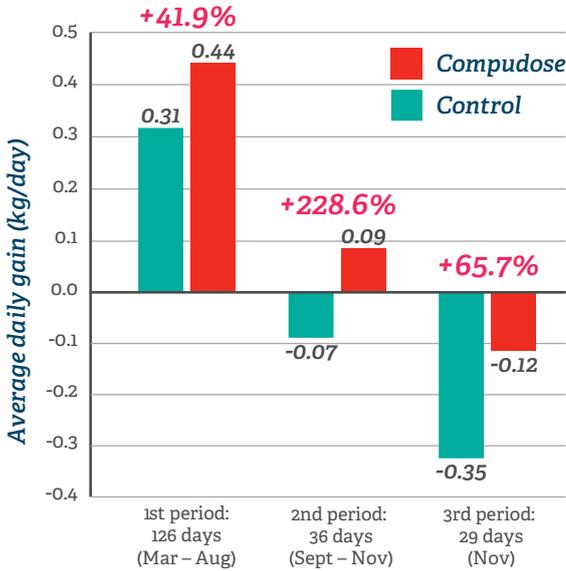
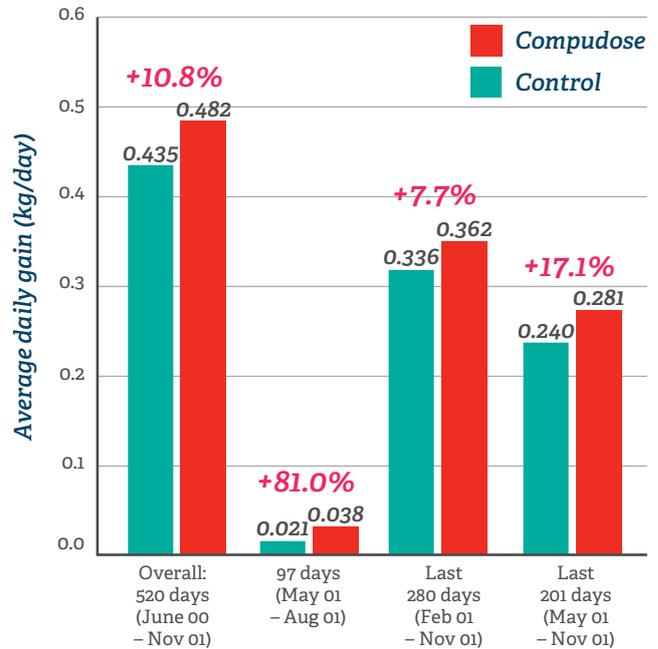


Figure 2. "Coorabulka", Boulia, Qld⁸



Conclusion

These trials clearly show that implanting cattle with long-acting Compudose 400 and Compudose 200 is still cost-effective, even during dry or drought conditions.

Compudose provides superior long-term liveweight gain advantage. Its payout period of 400 days ensures an economic response year-round, even in dry seasons, and that a functional implant is in place once the drought breaks. Importantly, any weight gain benefits may be maintained, even after the pay-out period expires.⁴ These features mean Compudose can be used with confidence when implanted up to 400 days before anticipated turn-off or as part of a whole-of-life implant strategy.

By comparison, combination implants deliver short-term liveweight gain but have a payout period of 90 to 120 days, which means weight gain benefits can be lost if cattle are not re-implanted, turned off or maintained on good nutrition.^{1,2} As such, combination implants are best used as terminal implants under good nutritional conditions.

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