

MATERNAL ANTIBODIES DO NOT INTERFERE WITH VEPURED® EFFICACY

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BACKGROUND AND OBJECTIVES

VEPURED® is a vaccine developed to protect piglets against edema disease (ED) from 2 days of age, even when maternally derived antibodies (MDAs) could still be present.

MATERIALS AND METHODS

Four groups of piglets of 2 days of age were included:

- VEPURED® + MDA (n=8):
Piglets with MDA: received 1 ml VEPURED® IM
- VEPURED® (n=8):
Piglets without MDA: received 1 ml VEPURED® IM
- CONTROL group (n=9):
Piglets with MDA: received 1 ml of PBS
- Sentinel group (n=8):
Piglets without MDA: left untreated

Challenge by an intravenous injection of VT2e toxin was performed in all groups of piglets (with the exception of the sentinel group) when MDAs disappeared in the CONTROL group.

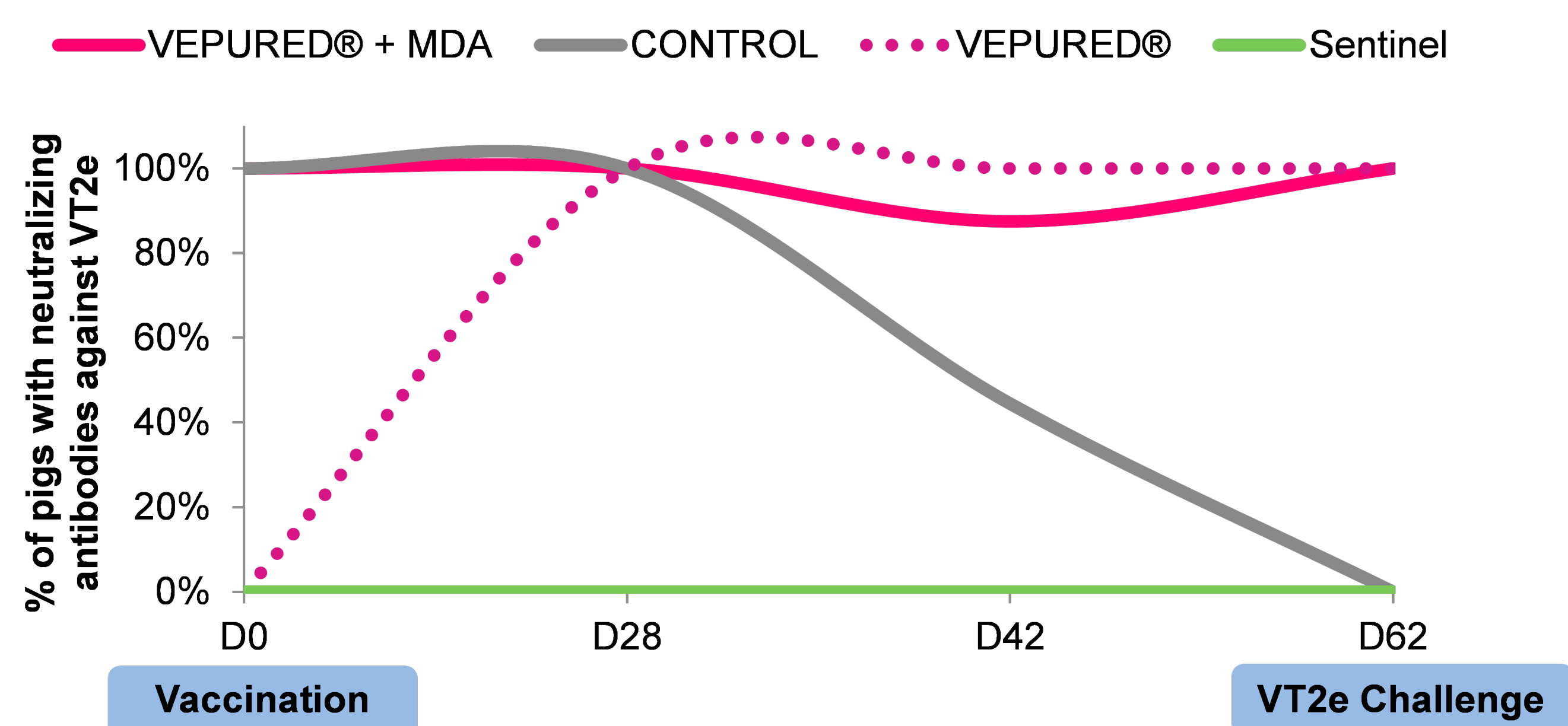


Figure 1. Neutralizing antibodies against VT2e evolution.

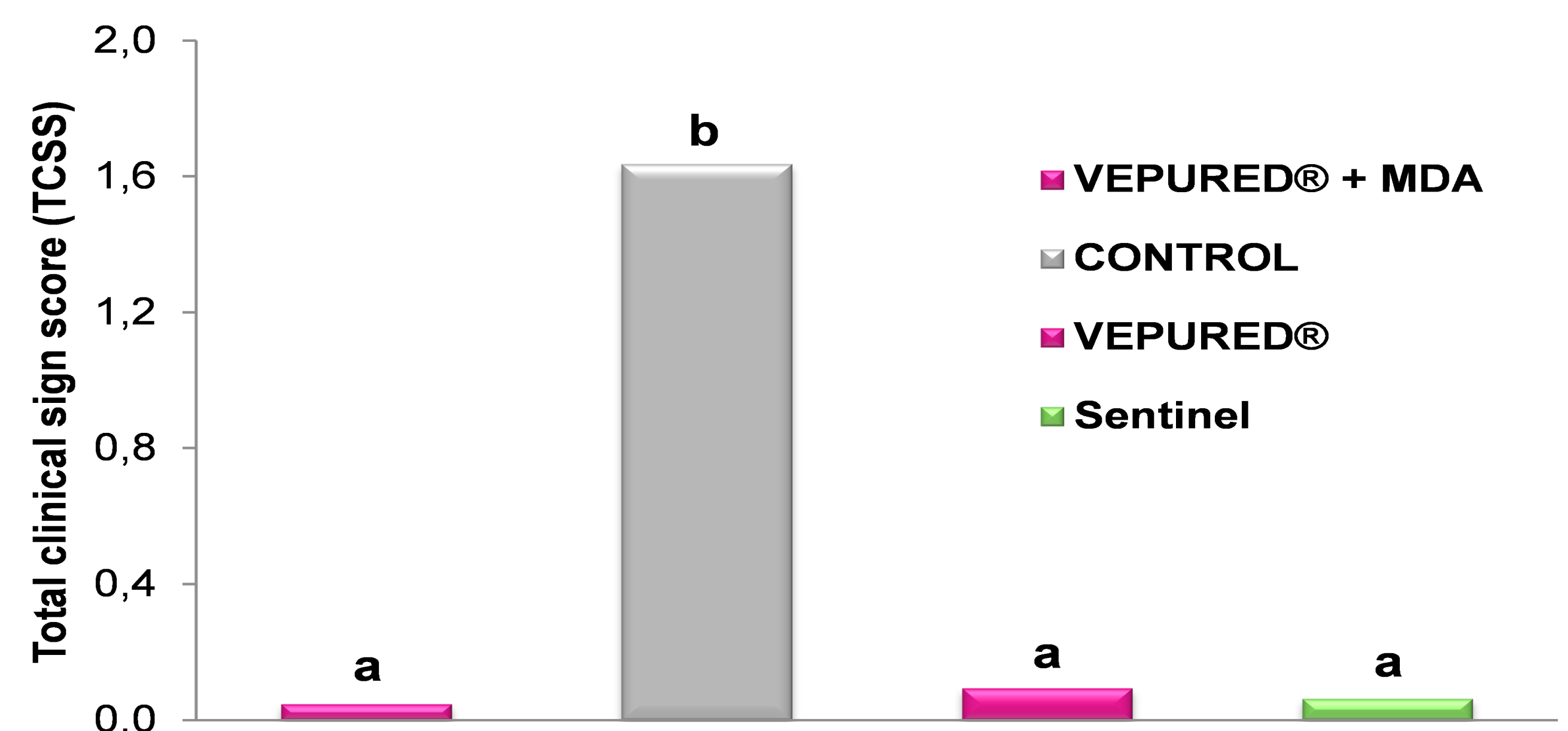
RESULTS

All the vaccinated piglets, with and without MDA, were fully protected against ED mortality (Figure 1).

Group	Mortality (%)
VEPURED® + MDA	0
VEPURED®	0
CONTROL	77.8
Sentinel	0

Table 1. Mortality % after VT2e challenge.

Vaccination with VEPURED® resulted in a statistically significant reduction in both, the incidence and the severity of clinical signs associated with ED, even in the presence of field representative MDA levels (Figure 2).



Significant differences are represented by different superscript letters (Mann-Whitney; $p < 0.05$).

Figure 2. Total clinical signs score after challenge.

Vaccination helps to control growth retardation associated with ED, as was demonstrated by the equivalent performance of the vaccinated and challenged groups and the sentinel group (Figure 3).

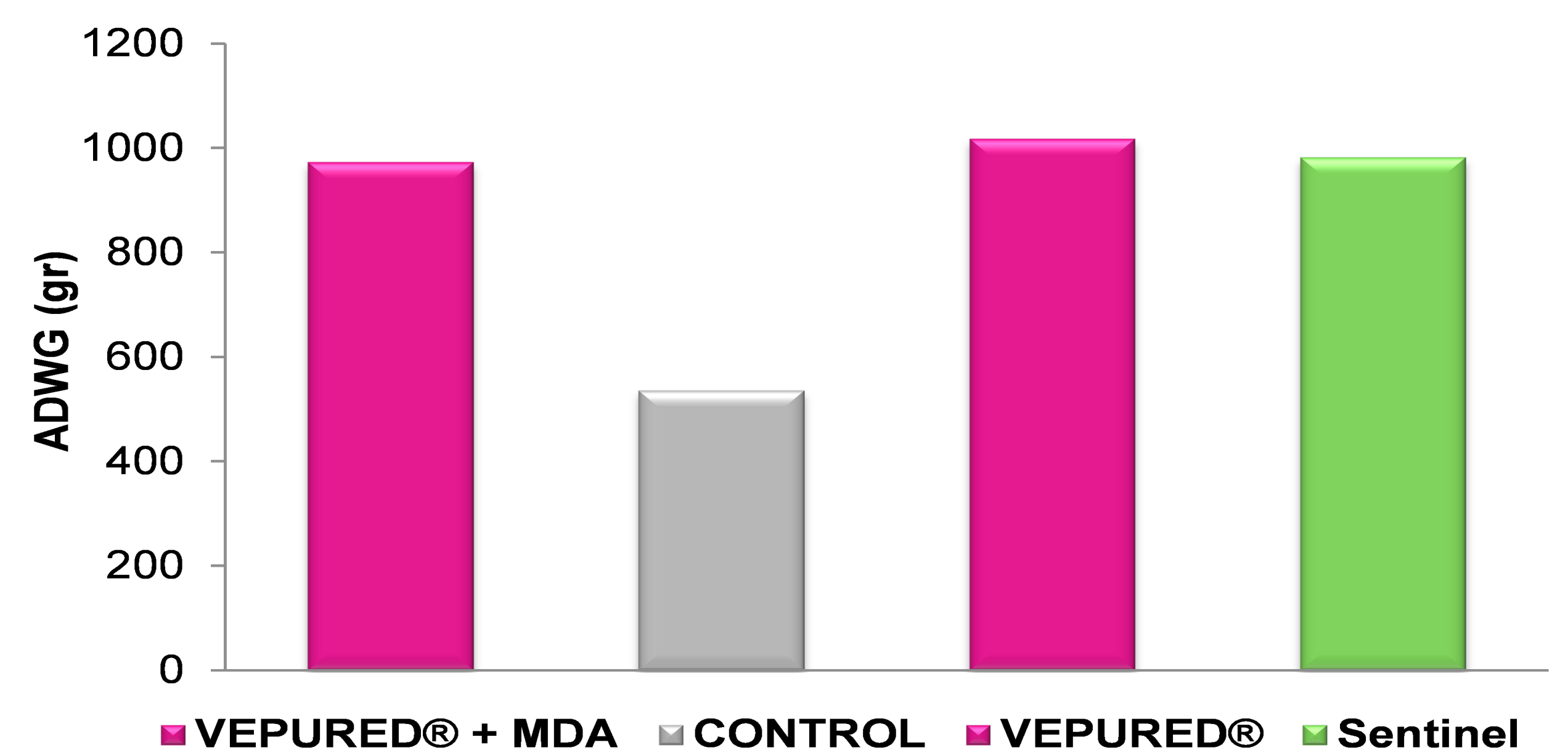


Figure 3. Average daily weight gain (ADWG) after challenge.

DISCUSSION AND CONCLUSIONS

VEPURED® efficacy was clearly demonstrated in the presence of field representative MDAs.