

PIGLET MORTALITY IS MORE DUE TO LACK OF ENERGY THAN LACK OF IMMUNOGLOBULINS (IGG)

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Background

Piglets are born without immunoglobulins (IGG) and with low amounts of body energy. Thus maternal colostrum is essential for the piglets to survive. Piglets insufficiently supplied with colostrum antibodies will die from infections during the first week of life. Piglets with inadequate uptake of colostrum energy will die from hypothermia or lack of energy within the first two days of life.

This pilot investigation should elucidate if piglets die from lack of immunoglobulins, lack of energy or a combination.

Materials and Methods

221 piglets born in 27 DanAvl litters (16.9 live born piglets per litter) were earmarked and weighed at birth. They stayed with their mother sow for at least 24 hours, when they were blood sampled for test for serum immunoglobulins. Following blood sampling litter size was reduced to 14 piglets per sow.

Results

200 piglets survived until weaning, so consequently 21 piglets died (9.5 %).

Four piglets died before blood sampling. Birth weight of these piglets was 0.7; 0.8, 1.2 and 1.4 kg, respectively.

Five dead piglets had below 10 ng/ml of serum IGG. They all had empty abdomens indicating, that they did not obtain colostrum nor milk. 12 dead piglets had obtained sufficient levels of colostrum antibodies. Despite of this, only one of these piglet had significant amounts of milk in the abdomen at death. This could indicate, that lack of sows milk, but not of colostrum was involved in the course of death in these piglets.

Conclusion

The primary cause of death in 10 of 21 piglets was probably lack of sows milk but not lack of colostrum antibodies.

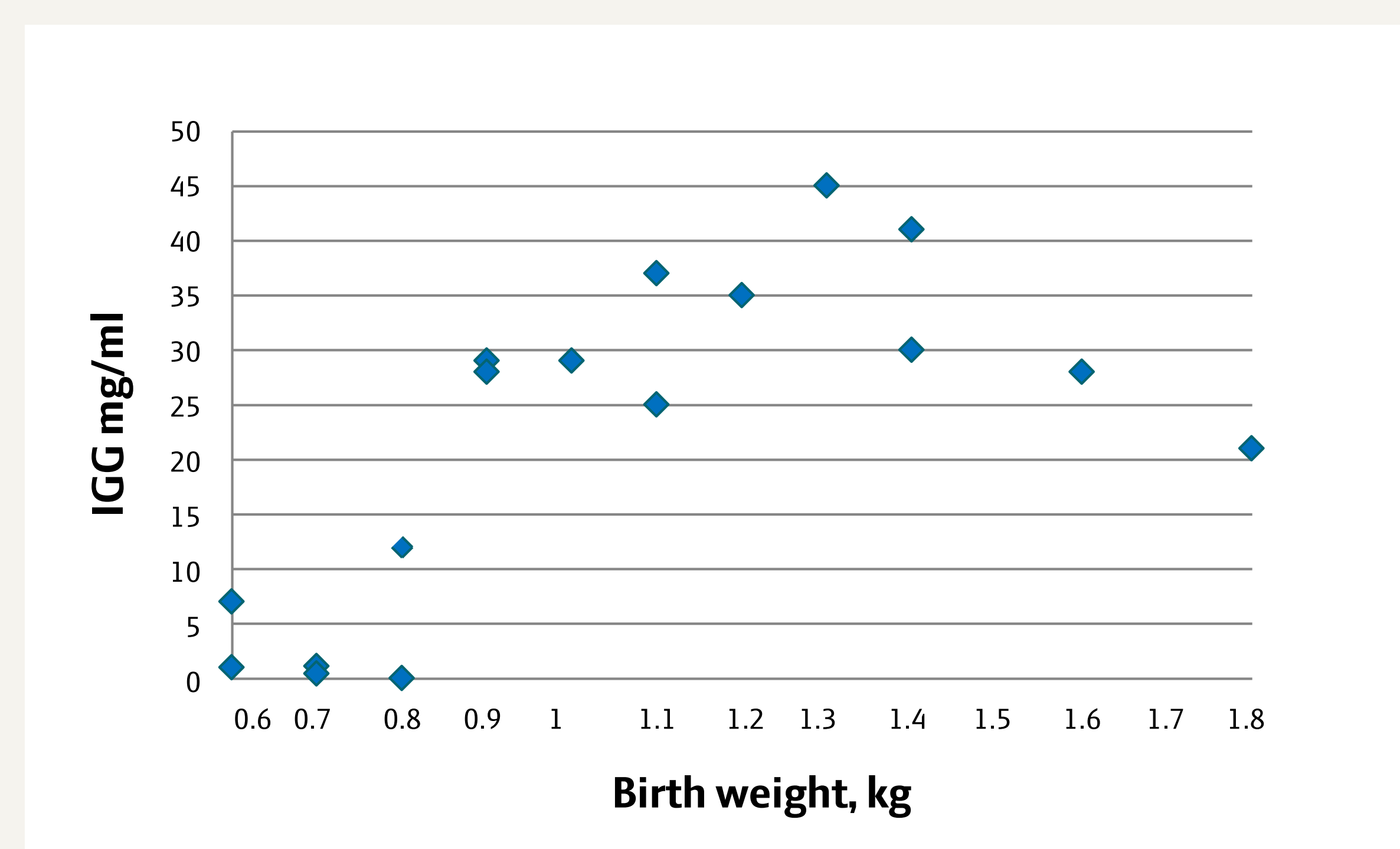


FIGURE 1. BIRTH WEIGHT AND IGG IN DEAD PIGLETS.

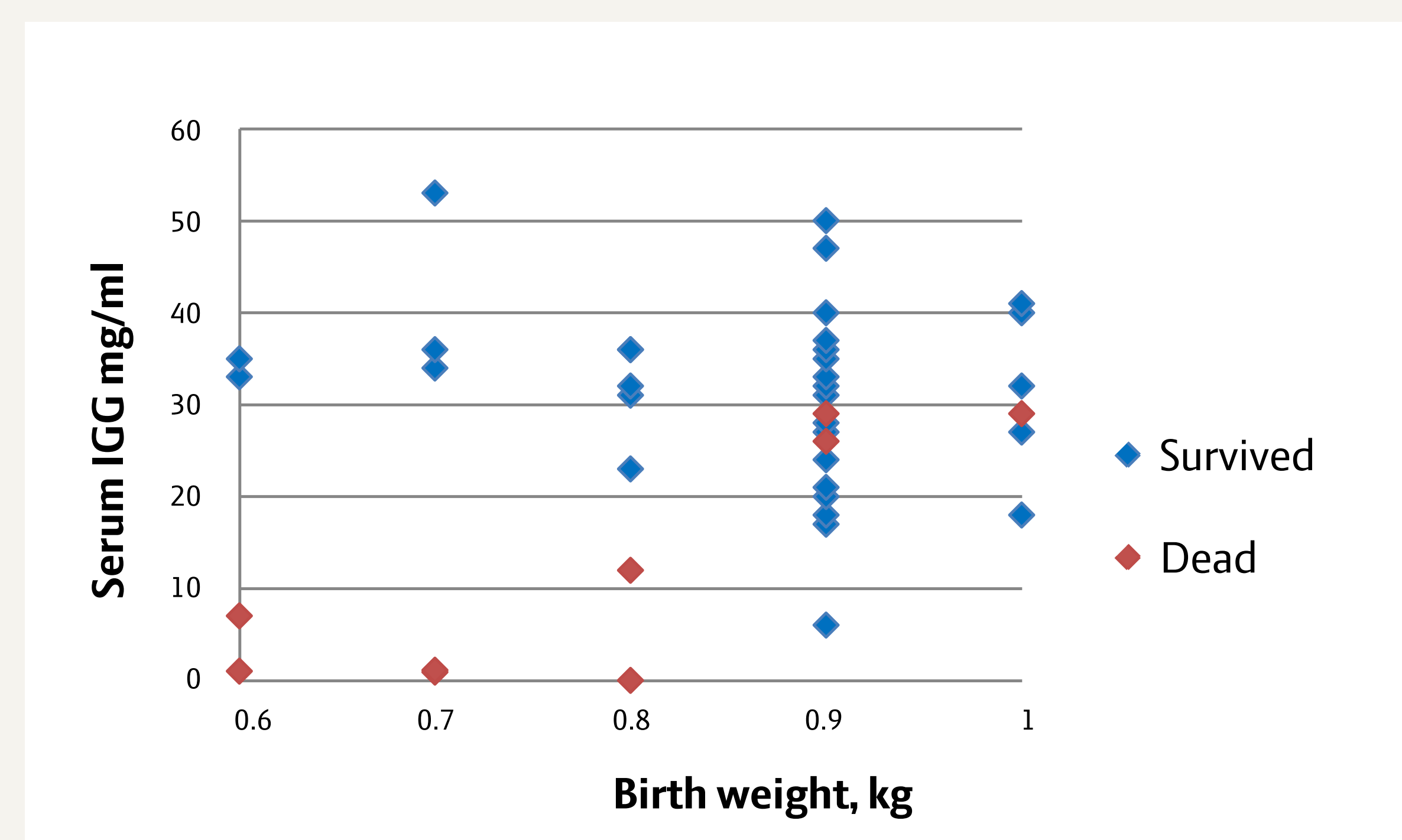


FIGURE 2. SERUM IGG LEVELS IN THE 41 PIGLETS WITH A BIRTH WEIGHT OF 1 KG OR LESS.

RESULTS				
IGG	Dead before blood sampling	Low colostrum intake 0-10 mg/ml IGG	High colostrum intake 10-45 mg/ml IGG	
No. piglets	4	5	12	
Abdomen	Empty	Empty	Empty or nearly empty	Full
No. piglets	4	5	10	1
				Not autopsied
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