RESPONSE TO PROTEIN SUPPLEMENTS BY GRAZING BEEF CATTLE

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Over 4 months of winter and early spring in Armidale, 47 weaner cattle (approx. 145 kg) on dry native pasture, had access to a mixture (1:1) of soyabean meal and meat meal equivalent to 250 g/hd/d and roller drums containing urea/molasses. The protein mixture had a solubility of about 22%. At 4 periods, [^{3}H] propionic acid was included in both feed mixtures so that intake of each could be estimated from the amount of tritium app'earing in body fluids. Intake response relationships are shown in the figure.

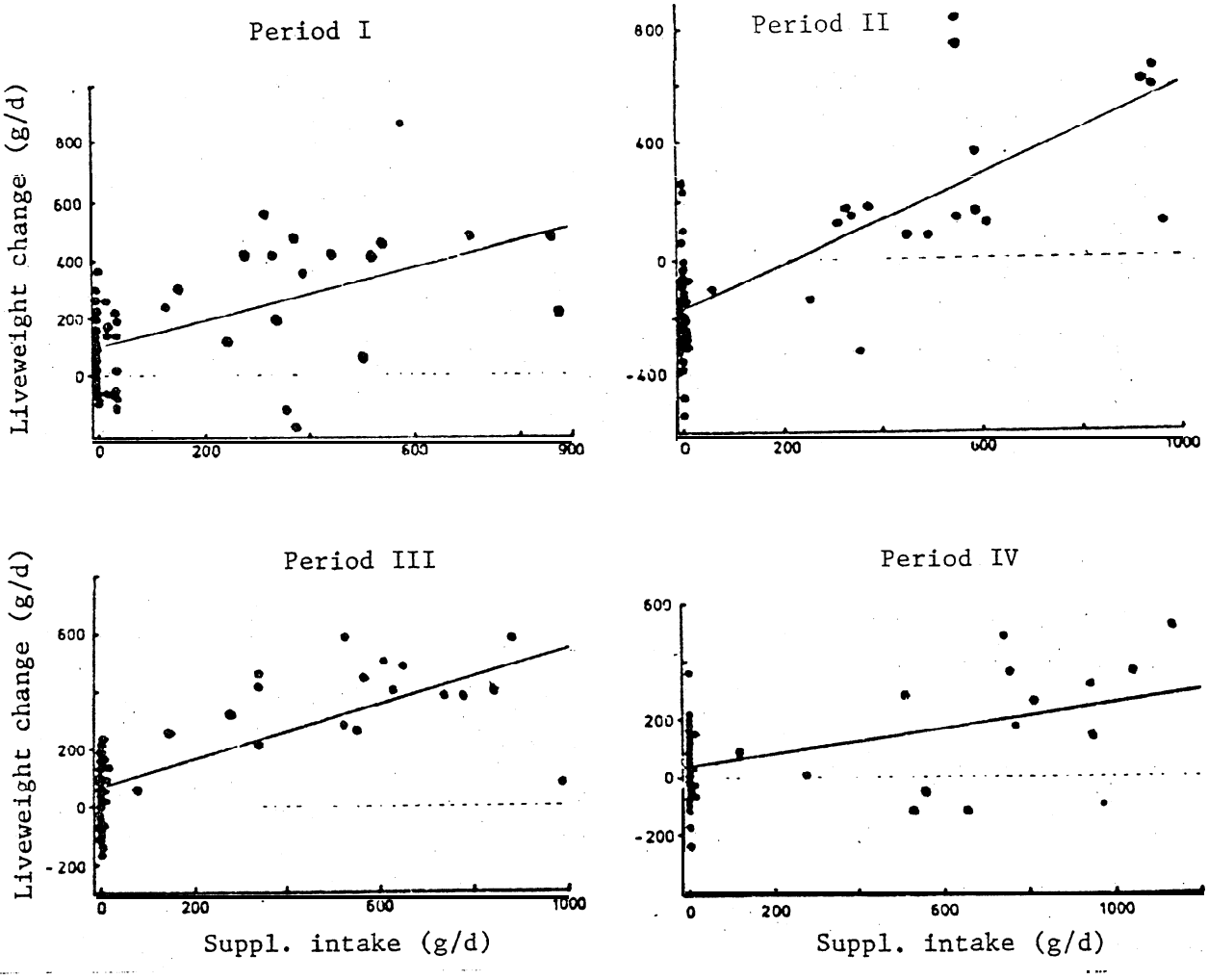

Figure Intake of soyabean/meat meal and liveweight change of weaners: periods 1 (July), 2 (August); 3 (September) and 4 (October),.

Over 130 days, the 17 regular consumers of the protein meal, gained an average of 20 kg/hd whereas the other 30 animals in the group lost 1 2 kg/hd. Although all animals. consumed the urea/molasses mixture (3-40 gN/hd/d) there was no relationship between intake of this mixture and liveweight change.

The conversion of'protein supplement to liveweight gain, was roughly 2:1 indicating that either there was increased FCR or, more likely, stimulation of intake of the basal pasture had occurred.

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