

THE EFFICIENCY OF COMPENSATORY GROWTH IN BEEF CATTLE

E. F. THOMSON and H. BICKEL

Institute of Animal Production, Swiss Federal Institute of Technology (ETH), Zurich (Switzerland)

The mechanism of compensatory growth is still incompletely understood. A growth trial is reported using 24 *Swiss Browns* steers in which equivalent amounts of ME were supplied to control steers on a continuous growth path and to steers recovering from a phase of mild undernutrition.

Results are presented which show that during realimentation, compensating steers required 20 per cent less metabolizable energy (M.E.) per kg liveweight gain when receiving 8 per cent less M.E. than controls.

Cattle on an interrupted growth path were as efficient in overall terms as those on a continuous growth path. The variables which affect efficiency and their interrelationships are briefly discussed.

EFFICIENCY OF FEED CONVERSION IN UNDERNOURISHED AND REALIMENTED SHEEP

M. GINGINS, H. BICKEL and A. SCHÜRCH

Institute of Animal Production, Swiss Federal Institute of Technology (E.T.H.), Zurich (Switzerland)

Experiments with 7 wether sheep, which were undernourished and realimented led to the following results :

1. With a ration low in crude fiber (5.7 per cent of OM) digestibility of energy increased with increasing feeding level.
2. Maintenance requirements were lower during undernutrition (275 kJ/kg^{0.75}, 24 h) than during realimentation (374 kJ/kg^{0.75}, 24 h).
3. Partial efficiency of metabolizable energy was similar in undernourished (0.73) and realimented (0.75) animals and higher than calculated according to ARC (1965) for continuously fed animals (0.59).

"MAINTENANCE" REQUIREMENT IN LINES
OF PIGS SELECTED FOR BACKFAT THICKNESS IN DAILY GAIN

O. VANGEN and N. STANDAL

Dept of Animal Genetics and Breeding, Agricultural University of Norway, Ås - N.L.H.

This report refers the results of estimating maintenance requirements in two lines of pigs selected for 9 generations in two directions on an index equally combining backfat thickness and daily gain. The HP-line was selected for high growth rate and low backfat thickness, and the LP-line was selected for low growth rate and high backfat thickness. In two experiments, totally 28 pigs were individually fed "to maintenance". 8 kg feed per day, after being fed according to a weight norm till 65 kg live weight in one experiment, and to an age norm till 160 days in the other experiment. In the first experiment the HP-line maintained 6 kg more live weight, and in the other experiment 2-3 kg more than the LP-line. It was concluded that the HP-line showed lower maintenance requirements than the LP-line.