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The Long Term effect of a Growth Check

New research has recently come out from the Beef Cooperative Research Centre about the effects of early setbacks on the growth of cattle over their lifetime. This research shows that calves that have a major setback prior to weaning or if their mothers have a period of severe nutritional stress before they are born have lowered lifetime growth potential. Previously it was thought that nutritionally stressed cattle would exhibit compensatory gain and catch up with unstressed cattle given enough time on better feed. Any growth check before cattle reach 250 kg live weight can significantly alter the future growth potential of those cattle.

In a trial in central Queensland weaner steers were fed to gain weight rapidly or slowly or to lose weight. The steers that lost weight were about 140kg lighter than the rapid growth group at the end of the first winter. All of the cattle were then run together on pasture until slaughter some 2 years later. At slaughter the weight loss group was still 50kg behind the rapid growth group. There was no detectable difference in meat quality between the groups. Compensatory gain does not provide a complete catch up and requires a long time on better feed to take effect. The importance of holding weaners weight can still be seen some 2 years later.

In a second trial in northern NSW cows were fed or restricted so that they had low or higher birth weight calves. These lower birth weight calves showed reduced growth potential throughout their life in the back grounding and feedlot period. Calves from both groups were also limited in growth from birth to weaning. This restriction also lowered the growth potential of these calves in the back grounding and feedlot phases. No difference in meat quality or proportions of fat and muscle were detectable in this trial.

An earlier trial at Swans Lagoon research station showed that early weaned calves that grew at 0.4kg/day to feedlot entry weight did not gain weight in the feedlot as well as early weaned calves that grew out at 0.6kg/day. The slower growing calves also produced tougher meat at slaughter than the faster growing ones.

These trials show the importance of adequate nutrition particularly in the early stages of life. Any nutritional setback early in life can affect the beasts performance for the rest of its life. To achieve market specifications for all of the premium markets cattle must continue to gain weight throughout their lives. To produce a milk tooth Jap Ox would require an average daily gain of 0.7kg per head per day. Any setback would quickly take this target out of reach. For the full research report from the beef CRC go to the website, www.beefcrc.org.au and follow the publications link.

By providing adequate nutrition to younger stock and/or their mothers we can maintain the genetic potential for growth that they have. Any growth check in younger stock will limit this growth potential. By providing the correct supplement growth can be maintained and stock allowed to achieve their potential. Supplementation will also allow stock to reach the premium markets at the correct age and weight.

Rob Sands (Nutritionist)