

DRY SEASON SUPPLEMENTATION OF CATTLE IN NORTHERN THAILAND
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Large areas of the highlands in northern Thailand are covered by the grass *Imperata cylindrica* which results from shifting cultivation practises for opium and other agricultural crops and is maintained by annual fires. One means of utilizing these grasslands more 'efficiently is by grazing; although cattle raised in the highlands at present are not veryproductive. Supplementation of cattle grazing native range was considered to be one means of increasing the productivity 'of the industry.

Eighteen native female cattle (mean age 3 yr.) were allocated at random about the mean weight of 130 kg into three groups. Each group grazed native pasture and two groups received a supplement of either molasses/urea/minerals fed from a roller lick or half day grazing on improved pastures (predominantly *Desmodium intortum*). The experiment lasted 182 days over the dry and wet seasons, the supplements being fed over the first 98 days (dry season) only.

TABLE 1: Liveweight change of cows based on fasted weights (kg).

	Dry season (Feeding period)	Late dry- early wet	Feeding period & compensation period
Molasses/urea/ minerals	11.4	9.1	29.1
Half day im- proved pasture	15.8	10.2	19.0
No supplement	3.8	1.6	14.0

Live weight change difference amongst the treatment groups were not significant over the early-mid dry season period although the group receiving the legume supplement tended to be superior. During the late dry-early wet season period the liveweight gain of the supplemented groups did not differ significantly (P 0.05) but were both significantly higher than that of the control group. No compensatory weight gain was recorded over the subsequent wet season.

A similar experiment at present in progress which compares a urea molasses/mineral supplement to no supplement on native pastures has also shown a significant (P 0.05) liveweight response to the supplement during the late dry-early wet season.

The nitrogen content of *Imperata* is known to be low except in young regrowth (Holm, 1971) which may be limiting in energy content. The possibility of phosphorus or sulphur deficiencies must also be considered in the light of severe soil deficiencies of these nutrients (Gibson, 1976). Such a response to supplementary feeding has been recorded previously (eg. Siebert and Kennedy, 1972) although its application to the Thailand highland situation is new. Night supplementation of cattle could be easily introduced because cattle return to villages each night in many cases. Present work aims at determining the specific nutrients deficient in native pasture.

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