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## Cattle Performances and Socio-Economic Contribution in Different Farming Systems in Northern Mountainous Viet Nam

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### Abstract

In Viet Nam, cattle are kept at small, medium and large scales. Different systems for beef cattle production have to be evaluated for prospective increase in supply of beef. This study aims to analyse the performance and socio-economic contribution of cattle in different systems in the northern uplands to compare their suitability, efficiency and sustainability of beef production.

The fieldwork was conducted from May to October, 2007 in Son La province by using household and key person interviews, PRA tools and cattle body measurements. 73 farms were selected, including: 58 Thai and H'mong smallholders raising 2 to 3 Yellow cattle or crosses of Laisindh (small farms); 10 Thai farms raising Yellow cattle in their own livestock farms in the remote pastures with an average of 9 heads per farm (medium farms); and 5 large breeding farms raising each hundreds of exotic and Laisindh cattle.

The results show that Yellow cows of small farms had better reproductive performances than those of medium farms, with the first calving age (FCA) at 3.0 years compared to 3.3 years, and calving interval (CI) of 13.5 months compared to 17.2 months, respectively. Within small farms, FCA and CI of Yellow cows in remote H'mong farms were slightly higher than those in Thai farms (3.1 years and 2.8 years; 15.1 months and 12.6 months, respectively). In Thai villages, Yellow and Laisindh cows performed similarly. In large scale farms, Laisindh had a shorter CI (16 months) than Droughtmaster (18.6 months), with CI of Brahman in between. Cattle play important roles in providing work force, manure, and income to small farms, while a major function of cattle in medium farms is bank saving. Gross margin from cattle keeping was low in all systems. Medium farms had high net benefits (32 mVND per farm), followed by small farms (19 mVND per farm). In contrast, the net benefit of large scale farms was negative (-167 m to - 278 mVND per year) mainly because of high feed input and poor breeding and marketing management. Medium farms still showed the highest potential for beef production.

**Keywords:** Cattle performance, cattle production, northern mountainous, socio-economic functions, Viet Nam