CATTLE PERFORMANCES AND SOCIO-ECONOMIC CONTRIBUTION IN DIFFERENT FARMING SYSTEMS IN NORTHERN MOUNTAINOUS VIETNAM

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INTRODUCTION

In Vietnam, cattle are kept at small mixed farms, specialised cattle farms, and large scale farms. However, the economic evaluation of the production performance of different cattle breeds in the local environment and regional beef production systems is limited. Different systems for beef cattle production have to be evaluated for identifying the possibility to supply beef.

This study aims to analyse the performance and socio-economic contribution of cattle in different systems in the northern uplands to compare their production efficiency and profitability of beef production.

METHODOLOGY

SITE: Son La province, North East Vietnam

DATA COLLECTION

- Selection of 73 farms, including 58 Thai and Hômong small mixed farms in Mai Son and Yen Chau districts; ten Thai farms raising cattle in their own livestock farms on remote pastures (medium farms); and five large breeding farms
- Using household and key person interviews, PRA tools and cattle body measurements

DATA ANALYSIS: SAS software version 9.1 by using linear models (PROC GLM) and Kruskal Walist test

Tab. 1:Selection criteria for investigated farms

	Small mixed		Medium	Large scale
Ethnic group	Thai, Hômong	Hômong	Thai	Thai,Kinh
Location	Near town	Remote	Remote	Near town, remote
Farm (n)	45	13	10	5
Breed	Yellow, cros. Laisindh	Yellow	Yelllow	Exotic, Laisindh
Cattle/farm (n)	1-5	1-9	3-21	93-650

RESULTS

CATTLE PERFORMANCES

Tab.2: Performance of Yellow cattle, by farm type

Parameter	Small mixed		Medium	
	n	Mean	n	Mean
Age at first calving (years)	41	3.0	23	3.3
Calving interval (months)	29	13.5	16	17.2

Difference between farm types at p<0.05 for age at first calving; p<0.001 for calving interval (Kruskal Walist test)

Tab.3: Performance of Yellow cattle in small mixed farm, by ethnic group

Parameter	Thai near town		Remote Hômong	
	n	Mean	n	Mean
Age at first calving (years)	19	2.8	22	3.1
Calving interval (months)	18	12.6	11	15.1

Difference between ethnic group at p<0.05 (Kruskal Walist test)

Tab.4: Performance of exotic cows in large scale farms

	Brahman	Drought master	Laisindh
CI (months)*	17.6^{ab}	18.6^{a}	16.0^{b}
AFC (years)	2.5-3.5	2.5-3.0	2.1-2.5

LSM in the row with different superscripts differ signigicantly at p<0.05

SOCIO-ECONOMIC CONTRIBUTION

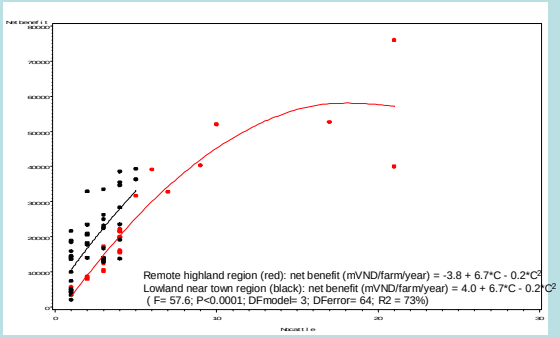

Fig. :Plots of net benefit from cattle production versus number of cattle (c) kept per farm in small and medium farms

- High loss of cattle production in large scale farms (net benefit of -167m to -278mVND/farm/year) because of high feed cost, poor breeding and marketing management.

CONCLUSIONS

- Yellow cows showed good reproductive performance under conditions of both, small mixed and medium farms, in the study regions.
- Cattle played multiple functions and brought high benefits to the small mixed farms, especially non-market benefits. However, the intensification for cattle production is restricted by forage and labour shortage.
- Where common pastures available, cattle played a major role as bank saving. Medium farms showed the highest potential for beef production
- The development of large scale farms is constrainted by high feed costs. Productivity and economic efficiency of the farm depend on professional management of beef production.

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