BACKYARD BEEF PRODUCTION IN THE PHILIPPINES

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INTRODUCTION

The Philippines is primarily an agricultural country. Growth in agriculture is crucial, considering that this sector is the base of 70% of the population. The livestock and poultry sub-sector, in particular, is a vital segment of the economy. It accounts to 1/5 of the gross value added (OVA) in agriculture or about 4 - 5% of the gross domestic products (GDP).

In the country, livestock is firmly integrated into the economic structure of farm and village life. Livestock raising is being recognized as a key element which contributes to rural income and to the efficient use of the available resources in the rural sector. The raising of farm animals is still on a small scale basis since it is intimately tied-in with farmers' activities and way of life. Cattle and carabao are mainly raised for draught purposes and as source of cash in time of needs. Also, these animals offer a means whereby crop products and farm residues as well as native vegetation in uncultivated areas are converted into meat, milk, hides and other by-products.

CATTLE AND CARABAO POPULATION

Table 1 shows the country's cattle and carabao population from January 1986 to January 1988.

Table 1. Cattle and Carabao Population by Farm Type (in million heads)

	CATTLE			CARABAO		
Year	B-Farm*	C-Farm**	Total	B-Farm	C-Farm	Total
Jan.1986	1.504 (83)	0.311 (17)	1.815	2.974 (99)	0.010 (1)	2.984
Jan. 1987	1.469 (85)	0.250 (15)	1.719	2.855 (99)	0.012 (1)	2.867
Jan. 1988	l.417 (87)	0.216 (13)	1.633	2.758 (99)	0.008 (1)	2.766

* Backyard farms
** Commercial Farms
Figures in parenthesis denotes percentage of population by farm type

During the past 3 years, the country's cattle and carabao populations ranged between 1.63 1.82 and 2.76 - 2.98 M heads, respectively. In the same period, both cattle and carabao showed a continuous decline in number which averaged to 4.15% for cattle, and 3.72% for carabao. This is mainly due to inefficient production coupled with the very high demand for feeder stock and slaughter animals. As a means to remedy the situation, the government has adopted a stop-gap measure allowing importation of 1,600 heads of feeder stock (cattle) every month since 1987 and has during the recent months, revised this figure to 3,250 heads per month.

Livestock raising remains a backyard enterprise. Approximately 85% of cattle and 99% of carabao total populations are raised in small holder farms.

SUPPLY AND DEMAND OF BEEF PRODUCT'S

Local beef/carabeef production has always been outstripped by demand. While human populations increased at the rate of 2.38% annually, cattle and carabao production showed an average yearly decline of 5.14 and 3.72%, respectively. From 1980-83, annual extraction rate for cattle averaged 17%; 4.9% for carabao. In 1988, 26% of cattle and 6.2% of carabao population were slaughtered. Inspite of these high extraction rates coupled with the reduction in per capita consumption of meat (2.22 }g in 1977 vs 1.44 kg in 1987), beef imports from 1980-87 increased at an average of 25% annua11y. This situation implies growing excess demand for beef in the country and consequently increasing import requirements of meat in the next 5 years.

GENERAL PRODUCTION PRACTICES

In general, cattle and caraaeo backyard enterprises are intended to provide work animals as well as meat and/or milk for home consumption and as additional source of income.

Backyard cattle raising consist of breeding and/or fattening one or a few head of cattle or carabao which are stallfed or tethered along roadsides and backyards. This practice is widespread all over the country, but is most common in Central and Southern Luzon areas like Batangas and Pangasinan. Roughage in the forms of freshly cut weeds, ipil-ipil leaves, cane tops, corn stover, rice straw, etc. whichever is available, is given unlimited. Concentrate mixture is fed at 0.5% of the animals body weight tlrough force-feeding or "dry" in feeding trough. Chopped ipil-ipil leaves or l cassava leaves when available, are added to the concentrate during the time of feeding-twice a day, I morning and afternoon. Home-mixed concentrates commonly consist of copra meal, rice bran, salt, \ ground oyster shell and molasses and their levels in the ration vary with prices. The "paiwi" system of livestock rearing is widely practised. Under this scheme, the livestock owner lends an animal to a caretaker and splits the income from animal sale 50/50 with the caretaker after deducting the cost of animal purchase.

In majority of the villages, livestock are usually maintained on a low to medium plane of nutrition since they are fed primarily with rice straw or corn stover or whatever available grasses in and around the farina's residence. Animals are either turned loose or tethered in the paddy field along roadside or in the backyard during off season period. Concentrate feeding is minimal and records relative to animal health and other inputs are generally lacking.

FEEDS AND FEEDING PRACTICES

Feeding of cattle/carabao is tied-up with the existing cropping system in the village with weeds from cultivated areas, orchard and idle lots being the principal forages. Moog (1986) described the feeding practices in the upland areas of Batangas, while Calub et al. (1987) reported the livestock feeding system in the rainfed lowland and irrigated lowland sites of Pangasinan.

In an upland rice/corn cropping village of batangas, weeds (predominantly *Paspalum conjugatum*) constitute 70 - 90% of the feed from July to December, and no less than 40% during the other months. Fresh corn stalks, corn stover, coconut frond, jackfruit peeling and banana leaves and trunks are also gathered and utilized as feed on months when weeds from croplands are of limited supply. In a sugarcane-based farming village also of Batangas, weeds are the principal feed during the growing stage of sugarcane (wet season). Cane milling coincides with the dry season and during this period, 75% of the ration consist of cane tops.

In rice-based areas of Pangasinan, weeds compose about 50% of the livestock ration, supplemented by rice straw and other crop residues. Forage gathering is almost a year-round activity for the farm family. Paddy fields become communal grazing areas after rice harvest - during dry season in rainfed areas and for only 75 days in irrigated fields. Stall-feeding and tethering of animals are practised during the growing period of the rice crop. Rice straw is the principal feed source after rice harvest Other crop residues such as com and legume stovers are also utilized as feed source whenever available.

COMMON DISEASES AND PARASITES

In the Philippines, foot-and-mouth disease (FMD) is endemic in the-areas of Bulacan, Pangasinan, Batangas, Rizal, Metro Manila, Masbate and Cotabato. Three serological types of virus were identified namely; Type O_l, $C_2$and A_{24} that affects both cattle and carabao (including pigs).

Hemmorrhagic septicemia is still an important disease of large animals. Regular vaccination program is now being implemented all over the country. Scour or diarrhea due to bacterial infection is common among calves but its occurence has been reduced to the minimum through the observance of proper sanitation.

Liverfluke and intestinal worms are the most common internal parasites among ruminants. The economic losses due to liver fluke usually surpassed all economic losses from all other diseases combined.

PROBLEMS OF THE BEEF INDUSTRY

The major problem of the beef industry have been identified as follows:

1. Backyard cattle raising:
   a. *Credit* - livestock loan program are characterized by stringent lending policies and procedure, especially those pertaining to collateral requirements, interest rates and repayment period.
   b. *Production* - most of the farmers raise cattle not for business but as a "sideline" activity that serves as an emergency source of funds in case of financial problem. Hence, they are not very receptive to new and/or recommended production technologies. Also, this results in the selling and slaughter of good quality and breedable (sometimes pregnant) animals.

      Other problems include inefficient utilization of crop residues and farm byproducts and low quality forage feed on cut-and-carry system of feeding. Presently, animals used for draft purposes subsist mainly on poor quality roughages during peak of farm operations when good quality feeds are necessary for energy replenishment.
   c. *Marketing* - inadequate market information system; poor transport facilities in rural areas; high cost of transport and handling and low farm gate prices due to extended and costly marketing channels.

2. Commercial cattle raising:
   a. *Credit* - shortage of long term financing program for cattle ranching; high equity requirements for medium to large ranches.

b. *Production* - lack of quality breeding stock due to inefficient cattle breeding management and marginal quality of existing stock; low yield and quality of native pasture species; inadequate government incentive program on improving production; pasture tenure, squatters and peace and order problems; production-sharing scheme of the agrarian reform law.
c. Marketing - low farm gate prices which discourage commercial raisers to improve production; inaccessibility of ranches (lack of farm-to-market roads) and inadequate market information system.

CATTLE INDUSTRY DEVELOPMENT PLAN (1989-l993)

The government's declared cattle development policy is to deve1op a rural-based, small farmer-oriented cattle industry that will increase productivity, raise income, ensure profitability, promote self-reliance and improve their standard of living. In the pursuit of such developments, the government adopted a strategy of shifting cattle production from hill-beef ranchers to smallholder farmers with both breeding and fattening herd. In support of this strategy, a liberal credit program through a medium term loan of 5 - 7 years with a low interest rate of 7.5% annually shall be provided. Both government and non-government organizations shall assist the farmers with the required support services such as artificial insemination, feed resources development, health care and marketing assistance.

Also included in the plan is the selection of beef cattle shed areas as production zones and the utilization of anchor farms (commercial farm) for animal breeding purposes. Investments in cattle industry shall also be encouraged.

The immediate target is to reverse/slow down the decline of cattle population. In the 4th year of the plan period, the goal is to build-up cattle population.

POTENTIALS AND PROSPECTS

The potential for the beef (cattle and carabao) industry development remains bright considering the manpower, grazing lands, feed, animal base, technology and other resources available plus the strong capabilities of institutions directly engaged in the promotion of livestock research and development.

For feed resources alone, the country has approximately 1.8 M ha open grasslands which remains underutilized. In addition, feeds available from 3.5 M ha riceland, 3.1 M ha cornland, 3.0 M ha coconut and 0.4 M ha sugarcane areas have the potential of supplying the feed requirements of 11 M heads of cattle and carabao while the existing livestock population is only 4.5 M heads. Apparently, there are still a lot of unutilized crop residues and farm by-products which are potential feed sources. For technology, good prospects have been attained regarding improvement and utilization of native grasslands and available farm by-products. Significant findings have been achieved on upgrading of native cattle and carabao to improve their liveweight and reproductive performance.

Aside from meeting nutritional deficiency, adequate supply of livestock is also very vital towards the expansion of meat processing and tannery industry.

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