

YAK PRODUCTION IN CENTRAL ASIAN HIGHLANDS**Chauri production systems in upper slope areas, Sindhupalchok, Nepal***R.S. Pande*

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**Summary**

The crosses of yak and local hill cow and vice versa are called Chauri, which are the main sources of households' income in Upper Slopes of Sindhupalchok, Nepal. The Chauris are raised under migratory systems in highlands at altitudes from 2500 to 4500 m. There are 131 Chauri herders rearing 2306 heads of Chauris, including six yak bulls in Upper Slopes of Sindhupalchok, Nepal. Shortage of pastures, hardship, low production and lack of veterinary services are the main causes that the herders are abandoning Chauri farming and shifting into other businesses. A field level workshop participated by 33 herders was conducted on 6th February 2004 by NACRMLP to investigate the status and opportunities for the improvement of Chauri production and management. It was revealed that Chauri population and the herd size are decreasing each year compared to those five years ago. The breeding yak become scarce, expensive and have to be brought from Tibet and/or from other parts of Nepal, which are located in 4-5 days walking distance. The availability of pastures also becomes scarce. The oak forest, being a major fodder during winter, has been seriously lopped out and threatened for its existence. The veterinary service is poor. The major Chauri products are Chhurpi (dried yak cheese), butter oil, skin, switch of tail, meat, pack and others. The ghee is consumed locally and/or collected by the traders to export to Tibet. The Chauri herders are finding difficulties to continue the Chauri farming occupations as a means of livelihoods. Interventions to improve the present conditions are urgently needed, otherwise the Chauri/yak farming could be a chapter of history in these areas.

**Keywords:** Chauri, yak, oak forest, pasture, migratory system, Sindhupalchok, Nepal

**Introduction**

The crosses of yak (*Bos grunniens*) and local hill cow (*Bos indicus*) and vice versa are called Chauri. The Chauris are more productive than female yak and are more adaptive to lower altitudes and are reared at the intermediate zone between cattle and yak (Joshi 1982). Chauri farming is a main source of households' income in the Upper Slope Areas of Sindhupalchok. (The Upper Slopes Areas of Sindhupalchok district is located about 100 km east-north to Kathmandu - the capital town of Nepal and it borders Tibet, P.R. China). The Chauris are reared under migratory systems, grazing around the Bhairabkund lake areas during summer and feeding oak forest leaves during winter. Due to continuous lopping, the oak forest is threatened to its existing (Pradhan et al. 2002). The herders are abandoning the Chauri farming occupations and shifting into other businesses, mainly due to lack of adequate pastures, low production of Chauris, hardship, low return compared to investment, and poor animal health care services.

**Materials and methods**

To assess the status and opportunities for the improvement of Chauri production and management a field level workshop was conducted on 6th February 2004 in Upper Slopes Areas (Listikot village) Sindhupalchok, Nepal, participated by 33 (six females) Chauri herders.

The major issues relating to the Chauri farming/management were collected from each of the participants. All

participants were asked to write major issues in a meta-card and/or explain to the facilitator to write in a white paper.

All issues raised by the participants were grouped into five major groups viz: 1) trend of Chauri population and the herd size; 2) Chauri breeding practices; 3) pasture and feeding systems; 4) animal health conditions; and 5) Chauri products and its marketing.

The present status, the positive/negative situations before and after five years, major problems and the recommendations for the improvement of each group were analyzed and discussed.

## Results and discussion

### *Trend of Chauri population and herd size*

The Chauri population and the herd size are decreasing each year. About five years ago, the population was approximately double (**Table 1**). Compared to the Chauri population, the number of herders maintains approximately the same during the last five years. However, in Tasitang village the number of the herders has been decreased. About five years ago on average each herder reared 20-25 Chauris but these days a herder is rearing only 10-15 Chauris. For example, in Kyangsing village, there were about 40-45 herders and the population of Chauri was about 1200 five years ago. They are reduced to 800 heads of Chauris and 33 herders.

Each year the production of Chauri calf are also decreasing. The estimated production of Chauri per year is 70-100 only (Tasitang -10; Temathan (Gumba) - 40-50, Kyangsing - 20-40) in the Upper Slopes Areas of Sindhupalchok.

The identified causes for the reduction in the number are: 1) casualty by leopard (e.g. during last year, the casualty of Chauris was over 105 by leopard from Tasitang, Bagam, Chhagam and Kyangsing villages); 2) high incidence of diseases (10-12 deaths each year from Tasitang, Bagam, Chhagam and Kyangsing areas); 3) natural death; 4) live export to Tibet (for meat purpose); and 5) others.

**Table 1.** Estimated Chauri population and herd numbers in Upper Slopes, Sindhupalchok

SN	Village	Number of herd	Number of Chauris
1	Kyangsing, Gumba	33	800
2	Bagam, Listi	23	350
3	Chhagam, Listi	11	156
4	Tasitang, Tatopani	6	80
5	Sapukhani, Listi	4	50
6	Temathang, Gumba	33	500
7	Liping, Tatopani	13	220
8	Bokchen, Tatopani	8	150
	Total	131	2306

It was discussed that about five years ago the community people had the only option to rear Chauri as a means of livelihoods but nowadays they became selective to choose from various options such as: 1) trading (Tibet-Nepal); 2) migrating to Kathmandu/Tatopani and other places; 3) going Malaysia and/or Arabian countries for employment; and 4) seasonal migration to India.

The new generation does not want to be involved in Chauri farming business because it is very hardy and return is also nominal. It was agreed that even the conditions of pastures would be improved, the Chauri population will remain the same, on the other hand, if the conditions remain the same, the population will reduce drastically.

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The participants cited an example of Helambu village (neighboring village located in 4-5 days walking distance) where a few years ago the Chauri population was more than 2500 heads but now none is rearing a single Chauri. The same phenomenon could happen in these areas also, if the problem remains the same. The present herders are also keen to sale their herds and want to shift into other businesses. Most of the Chauri herders are keen to replace the Chauris with improved cattle (Jersey and/or Brown Swiss) if cows would be available to them and management skill would be provided.

#### ***Chauri breeding systems***

Chauris are the products of yak and hill cattle (Aule gai) and/ or Kirko (bull) and Nak (female yak) (Joshi 1982). Most of the yak reared in Upper Slope Areas is the progeny of yak and hill cow.

The yak are brought from Tibet and/or Rasuwa and they are expensive. One adult yak costs about NRs 25000.00-32000.00/each (NRs 75 = 1 US\$). There is a shortage of yak bulls also. About three yak bulls are reared in Kyangsing and another three in Tasitang in the Upper Slope Areas (at altitudes of 2700- 2900 m).

The yak bulls are selected based on following criteria: 1) at least three years of age; 2) physically fit, strong and stout; 3) well developed and pointed horn; and 4) white in coat color.

Farmers reported that the Chauri born from "Kirko" (Tibetan cattle) cow and yak is much better than the Chauri from yak and hill cow. There is no systematic approach followed for selection of yak and/or cow for Chauri production. Participants were keen to improve the performance of Chauri through genetic upgrading, and cited the example that one of the herders practiced crossing between Jersey cow and the yak and the Chauri (progeny) is quite good in milk production. However, it is difficult for mating between Jersey cow and the yak. So, herders were proposing A.I. for Chauri production from improved cow and yak.

#### ***Pasture and feeding systems***

The availability of pastures and fodder is becoming scarce. The Chauri remains in alpine pastures (3000-4500 m) for two months of July and August and the rest of the year in lower altitude oak forest (2500-3000 m). The oak forest has been seriously lopped out and threatened to its existence. Due to the shortage of pastures, the productivity of the Chauris has been decreased significantly and the Chauri farming business is no more beneficial. If the productivity of the pastures would not be improved and/or the supply of forage could not be adequate, the herders will start abandoning the Chauri farming business within next five years.

The participants identified following measures for the improvements of the pasturelands and forage development:

- Renovation of native pasturelands by over-sowing with improved species (perennial rye grass, cocksfoot, white clover and others).
- Clearance of weeds and fallen trees from the pasturelands.
- Provision for drinking water, trails, bridges for easy access to the pasturelands.
- If the alpine pastures could be improved, the Chauri could stay for three months and will reduce the grazing pressure in oak forest.
- The on-farm pasture could be developed between the altitudes of 2500 to 2800 m for Chauris.
- Alpine and/or cold tolerant fodder trees should be planted as a source of fodder.
- Involvement of all herders in the formation of the Central Committee under the Forest User Group for the development of policies for pastureland management.

***Animal health conditions***

The major diseases are FMD, Red water, infertility and parasites (such as tick, flea, worms and others), which occur mainly during summer season (March/April to June/July). Each year about 10-12 Chauris die from various diseases. There is a lack of veterinary services provider. The only Veterinary Service Center is located in about 4-6 h walking distance. The farmers are adopting some local medicines to cure some diseases, for example, animals got Red water disease are fed on “Chhyang” (a locally brewed alcohol) and mustard oil, Tibetan tea leaves, the excreta of insects collected from trees and others.

***Chauri products and its marketing***

The major Chauri products are Chhurpi (dried yak Cheese), Ghee (butter oil), Soh-si (by-product of the ‘Dhundre/Theki’ milk bucket and used for soup making), skin (mat), tail-switch (for religious purpose), Jopkyo (for meat and pack) and others. The most of the ghee produced in the areas are consumed locally (by Ani-Gumba at Chhagam) and/or collected by traders to export to Tibet. Most of the Chhurpi produced is sold to the traders, who visit the herds regularly and export to Kathmandu and India. The recent price of the Chhurpi was NRs 440.00 and for ghee NRs 500.00 per Dharni (about 2.5 kg), respectively. Herders are happy with the price and the marketing systems.

Some male Chauri and/or old unproductive Chauris are sometimes exported to Tibet for meat purpose, through illegal way, because the HMG/Nepal regulations do not allow export the live Chauri to other countries. In the other side, the Tibetan government does not allow entering the live animals from the quarantine point of view.

***Training needs***

The herders identified following topics for the training: 1) field level training to herders in ‘animal health improvement’; 2) quality Chhurpi making training to all Chhurpi makers; 3) improved crossbred cattle farming tour and training; 4) hay making training *in situ* to the herders; 5) establishment of pasture and fodder tree nurseries; 6) training on fodder conservation such as hay- making; 7) establishment of improved pasturelands for demonstration; and 8) others.

***Closing remarks***

Development of infrastructures (roads, markets) and easy access to Kathmandu and Tibetan markets has attracted the young generations in other lucrative occupations. The young generations are being attracted towards the Arabian and other countries for seasonal jobs. Present security situations have deteriorated the life of the rural people, especially the younger are reluctant to stay in village areas. On the other hand, the Chauri herders, who keeps the tradition, are finding difficulties to continue the Chauri farming occupations as a means of livelihoods mainly due the acute shortage of feeds and fodder, high incidence of predators, lack of insurance, credit facilities, lack of veterinary services, hardship in Chauri farming business, harsh environment conditions and others. Interventions to improve the present conditions are urgently needed, otherwise the Chauri/yak farming will be a chapter of history in this areas.

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