A NOTE ON YAK-KEEPING IN HUNZA  
(NORTHERN AREAS OF PAKISTAN) (1)  
by  
Hermann KREUTZMANN  

INTRODUCTION  

Agriculture in the high mountain oases of the Karakoram would be impossible without an additional system of animal husbandry which uses the vertical zonation of vegetation with its distinct ecological differences in each belt (fig. 1).  

The areas of permanent settlements are mainly located in the desert steppes zone (with a precipitation of 100 to 150 mm/year) where agriculture is entirely based on irrigation. Up to an altitude of 2500 meters above sea level double cropping occurs with a sequence of barley - maize and/or wheat - millets (Setaria italica L., Panicum miliaceum) or buckwheat (Fagopyrum esculentum, Fagopyrum tataricum). This is only possible on these relatively poor soils through application of enormous quantities of farmyard manure (20-40 tonnes/ha, cf. Whiteman 1985). "Alpwirtschaft" (2) guarantees extra pastures, a supplement to the nutrition, and allows a sufficient production of the necessary amount of manure in the homestead after the return of the animals from the high pastures which is essential for double cropping.  

In the former principality of Hunza (an autonomous state until 1974) in the Northern Areas (the former Gilgit Agency) of Pakistan, (Fig. 2), we find an "Alpwirtschaft" which shows cultural differences according to the social system of the three main ethnic groups -Shin, Burusho, Wakhi- of this region and according to their location in ecological belts. The Shin settled in the lower parts of the Hunza Valley up to the village of Hindi (2100 m); the Burusho dominate the central part of the valley between Murtazabad and Nazimabad with the highest population (2606 households out of 4441 households). Some Burusho families migrated under the direction of the ruler of Hunza to newly established villages in the Shin and Wakki region. The upper part of the Hunza Valley from Gulmit to the border of the Chinese Autonomous Province of Xinjiang is populated by wakhi people. They settle mainly in the Tehsil Ghujal of the Hunza Subdivision. Only in this area of Hunza Yaks form part of the livestock and Wakhi people are predominantly their owners.  

The permanent settlements of Yak-holders are located in an altitude range from 2550 m (Pasu) to 3500 m (Shimshal). Besides Yak-keeping farmers depend more on

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animal husbandry (sheep, goats, cattle) here than in the lower lying double cropped parts of the Hunza Valley. In Tehsil Ghujal single cropping with barley, wheat, peas, beans, and potatoes prevails, exclusively. The first Wakhi settlers came to this region at the end of the 18th/beginning of the 19th century after the expulsion of Kirghiz pastoralists by the ruler of Hunza. He accepted these Wakhi migrants of Ismaili faith as his tributaries and settled them in newly founded irrigated oases (Kreutzmann 1986). Ilban (taxes) had to be paid in kind with Yaks, goats and sheep. The ruler also claimed forced labour, e.g., they had to take his herds to the Mintaka/Kilik/Khunjerab Passes for grazing and to the pameer (in Wakhi language: high pasture) to the north of the present border between the Northern Areas of Pakistan and the Chinese Autonomous Province of Xinjiang, i.e. Sarikol, Taghdumbash Pamir, Raskam.

Livestock numbers are less in Burusho villages in Ghujal than in Wakhi settlements because they were founded only recently (1900–1960) and therefore had less access to high pastures, as most of them had been distributed much earlier.

ANIMAL HUSBANDRY IN THE WAKHI REGION OF HUNZA

The cultivated area of farms in Hunza is very small. The average farm size in Ghujal is 1 to 2 ha per household and therefore one would expect high livestock numbers (Saunders 1983). Surprisingly, the statistical data (Tab. 1) for Ghujal show a relatively small number of animals. One explanation is that in this traditionally overpopulated area with smallholdings concentrated in oases, only a few households can nowadays entirely live on agriculture. For example, in Pasu less than 1/5 of all
Fig. 2. Map of the Hunza-Valley in the Northern Areas of Pakistan, □ Yak-keeping area.
monetary incomes derive from "tilling the earth". Outmigration in search of better education, obtaining employment as a mountain guide, etc., is mainly responsible for this phenomenon.

The opening of the Karakoram Highway in 1978 increased mobility enormously. Only a few settlements are still without any access to roads, for example, Shimshal - 60 km away from the Karakoram Highway - can only be reached on foot in 2 to 3 days on a difficult path. This distant village has by far the highest numbers of livestock and is the only one which is self sufficient in the production of food grain in Hunza. The numbers of 3.54 Yaks and 61.57 goats/sheep per household are significantly higher than in the other settlements.

The "Livestock Census" of AKRSP (Aga Khan Rural Support Programme, Gilgit) does not provide any information on the age and sex of Yaks. According to Dr. Farman Ali, Project Veterinarian in AKRSP, there is no tradition of Yak cross-breeding with cattle in Hunza, or in other Subdivisions of the Gilgit District (Nager, Haramosh, Gupis, Yasin). Similarly, there is no cross-breeding in the Wakhan of Afghanistan among the Wakhi settlers (Shahrani 1979: 75). The vocabularies of the Burusho and Wakhi do not include any words for crossbreeding. The termini for "Yak" are given in Tab. 2.

Tab. 1.- Villagewise Livestock-distribution in Tehsil Ghujal, Hunza.
Yak COY Zumo is the best milker
Zoi is best plough bullock
Bull Yakma

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male Yak
female Yak
Yak calf

<table>
<thead>
<tr>
<th>Burushaski</th>
<th>Language</th>
<th>Wakhi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorimer</td>
<td>Berger</td>
<td>Lorimer</td>
</tr>
<tr>
<td><strong>Male Yak</strong></td>
<td>lipay kara</td>
<td>lipay</td>
</tr>
<tr>
<td><strong>Female Yak</strong></td>
<td>lipay kara</td>
<td>lipay</td>
</tr>
<tr>
<td><strong>Yak calf</strong></td>
<td>lipay kara</td>
<td>lipay</td>
</tr>
</tbody>
</table>

Tab. 2. - Termin for "Yak" in Burushaski and Wakhi

Only herders on the Deosai Plateau and the Baltis of the Northern Areas who speak a Tibetan dialect are cross-breeding Yak with cattle in the region of Ganche, Hushe, Khapalu, as their eastern neighbours in Ladakh do. The administrative border of Baltistan with the Gilgit District roughly separates the areas where cross-breeding takes place from those where it does not, and corresponds with the distribution of ethnic groups. Tab. 3 gives a list of known cross-breds in the Gilgit Agency in 1926.

**PASTURING IN GHUJAL**

Generally, sheep and goats outweigh the livestock numbers. They are taken to the high pastures from spring to autumn and spend the winter in the permanent settlements. On the contrary, the pattern of pasturing for adult male Yaks is different, they are kept on the pastures with goats and sheep (May to September/October). During the summer period the non-milk giving Yaks are grazed near the snowline (4500-5000 m) high above the temporary settlements of the shepherds (3500 m) with corrals for the other animals. These Yaks are only tended during the winter months by a few shepherds on the pameer. For example, in Shimshal six men out of 123 households alternately stay there during the cold season. In certain grazing areas these Yaks are only checked from time to time, on 2nd November 1985 on the Khunjerab Pass 62 Yaks from Sost, Morkhun and Gircha could be seen at an altitude of 4600 m where they would spend the whole winter.

While in the Burusho area of Hunza women are traditionally not allowed to stay on the high pastures and the men fulfill all the tasks in this "territory of the fairies" (cf. Jettmar 1975), in the Burusho area of Yasin (3) and in the Wakhi area of Ghujal, there exists a different concept of "Alpwirtschaft": Here the women are solely responsible for tending the animals on the pastures from April/May to September/October where they do the milking, butter-making, gathering of firewood for qurut-production (in Wakhi language: qurut = dried milk curd; Lorimer 1958:107). Men only participate in leading the animals.

Tab. 3. - Known Cross-breds in the Gilgit Agency in 1926.
to the different stages of the pasture settlements, do the ploughing and harvesting for a single crop of barley, and control from time to time the whereabouts of the non-milk giving Yaks in the upper reaches of the pastures. Yaks are rarely used as pack animals but for one occasion: carrying the supplies and utensils up and milk products on the way down from the pastures. The main occupation of the shepherds is the daily leading of the animals to the grazing grounds which are sometimes 1 to 2 hours away from the pasture settlement. In the meantime the processed milk in the form of paei (yoghurt) is churned into butter. After separating the royan (butter) the remainder is boiled down for hours on the only fuel available - juniper wood - and then the dried product (called qurut) is formed into small lumps and placed on the roof of the huts to dry out in the sunshine until it reaches its final waterless condition.

MARKETING OF ANIMALS AND PRODUCTS

In October/November the majority of the Yaks are back in the permanent settlements. Those animals which are to be sold in the cold season are gathered, either for selling to a tradesman from Lower Hunza/Gilgit who comes directly to the villages of Ghujal, or are sold directly by the farmer himself. After the second crop has been harvested all fields in the oases of Hunza and Gilgit are open for free grazing; this makes it easier for the trader with his herd to wander from village to village and offer his animals for sale. In this season some people buy animals and make a small profit by slaughtering them and selling the meat to their fellow villagers. There is only one professional butcher in Hunza who operates a small shop in Aliabad (Central Hunza) all year round. The price of meat reflects the esteem of different animals:

<table>
<thead>
<tr>
<th>1 kg Goat/sheep</th>
<th>22 Rs</th>
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</thead>
<tbody>
<tr>
<td>1 kg Yak</td>
<td>15 Rs</td>
</tr>
<tr>
<td>1 kg Beef</td>
<td>13 Rs</td>
</tr>
</tbody>
</table>

The peak season for buying Yaks, goats and sheep is before 21st December - tumushalin-, the local New Year. This date marks the time for the slaughtering of animals for the whole winter season up to April. Every family stores at least one goat by hanging the meat in the cool and dry store. Shimali and rich families elsewhere can afford to buy a whole Yak, whose value lies between 4000 - 6000 Rs. Other Yak products for marketing are sherma (rugs) woven from Yak hair and wool, which are necessary for every household as sleeping mats for the whole family. Short Yakhair is plaited into ropes, are used for carrying heavy loads. Yaktails are turned into dusters.

RECENT DEVELOPMENTS OF ANIMALS HUSBANDRY

The Livestock Census of 1985 indicates an enormous decrease in livestock numbers when compared with colonial reports. Also during the fieldwork (Aug.-Dec. 1984, Mar.-Nov. 1985) it became obvious that out-migration and locally improved educational facilities reduce manpower for agriculture, e.g. children attend school instead of grazing the herds. This development was intensified after the construction of the first jeep road and especially since the opening of the Karakoram Highway in 1978. National and international development agencies promote the use of chemical fertilizers as their strategies are focussed on intensifying grain production. The dependence on farmyard manure is reduced through increased application of chemical fertilizers and the development agencies advertise cooperative efforts in buying them, offer fertilizer loans with no interest, supply extension training courses and new high yielding wheat varieties which demand chemical fertilizers.
In connection with animal husbandry AKRSP tries far reaching measures which can have significant consequences for the future: vaccination of all animals, improvement of local cattlebreeds by artificial insemination with New Jersey-semen from USA, increasing the quality and amount of fodder and introduction of pashmina goats, whose soft, fine undercoat can be processed to cashmere wool, on a large scale for higher profits in livestock-keeping. All these development projects are in an early stage and the response of the local population has to be awaited. The Yak is left out of all these considerations although it is the only animals which appears to be fat and healthy compared to the skinny stallfed cows of the permanent settlements at present.

CONCLUSION

In general, it can be noted that the transition from subsistence farming to part-time farming, i.e. transfer of the daily workload to women and elder men and occupation of the former full time farmer in Government Service, as driver, shopkeeper, etc., somewhere else, caused a rapid decrease in livestock numbers. In the first place, overgrazing is not the main problem here, but lack of manpower leads to an exhaustion of easily accessible pastures and abandonment of remote grazing areas. For the future one can expect a further reduction of the number of Yaks in Hunza and consequently most of the pameer-areas, which are only suitable for these "high altitude" adapted animals, will no longer form a part of the sophisticated system which uses all the ecological zones.

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NOTES

(1) The fieldwork to this study was made possible by a grant of the German Research Foundation (Deutsche Forschungsgemeinschaft -DFG) to a research project of Prof. Dr. Fred Scholz (Geographical Department of Free University of Berlin). Dr. Alnasir Babul and Dr. Farman Ali of AKRSP supplied valuable information. The credit for the translation of the manuscript into English goes to Sabine Felmy, Berlin.

(2) "Alpwirtschaft" : This term is used in English literature for "mixed mountain agriculture" (Guillet 1983 : 562) or as "economy based on alpine pastures" (International Geographical Glossary). In French language: "élevage avec estivage". While in the European Alps "Alpwirtschaft" is dominated by bringing cattle to the high pastures, in the Karakoram high numbers of sheep, goats and some Yaks are put there.

(3) Oral communication by Susan York, London.

REFERENCES


BERGER, H., (forthcoming).- Das Hunzaburushaski.


