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Evaluation of an animal health improvement programme in Nepal

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· Introduction

The United Mission to Nepal (UMN) Animal Health Improvement Project (AHIP) has been training Village Animal Health Workers (VAHW) at the Rural Development Centre farm in Pokhara for approximately ten years. The trainees are selected by community development projects run by the UMN and other organisations, and come primarily from many different parts of the mid-hills of Nepal. Since the start of the project approximately 350 VAHWs have been trained and the trainees have been followed-up to find out how they are progressing.

This paper is taken from a report on a project evaluation, and outlines some of the participatory techniques that were used by the team during the evaluation.

· Evaluation procedure

The evaluation was based on existing information within AHIP, some new information from projects, information from organisations involved in VAHW training and two field visits to Lalitpur and Palpa Districts. Two areas were chosen as case studies, because they have many AHIP-trained Village Animal Health Workers who have been working for a number of years. Consequently a large amount of information is available from their projects.

The villages are relatively accessible and whilst one is reasonably well developed the other remains fairly traditional. During the visits four members of the team stayed in the villages to collect general information from groups, men, women and local VAHWs, while two members visited and interviewed as many neighbouring VAHWs as possible.

Participatory research methods

General village-level information

The team collected background information from groups of men and women in the village using the following participatory methods:

- *Map:* showing the location of houses, crops, forest, grazing areas, grazing areas associated with disease, nearest sub-centre, VAHWs' homes etc.
- *Wealth ranking:* to stratify village members according to wealth.
- *Production information*: information gathered on livestock keeping, including the type of livestock kept and why, their contribution to the household, all inputs (grazing, food, supplementation, housing, routine activities) and outputs (milk, dung, cash from sales, deaths, births etc.) and the action taken when animals are sick.
- *Labour diagram*: showing division of livestock keeping tasks by gender and age.
- *Proportional piling and annual disease calendars:* for disease and general problems with livestock. First problems were listed and then proportionally piled to discover relative importance of each problem. Next, disease calendars were constructed with villagers;
- *Transect walks:* to meet farmers and women to check land use, animal husbandry etc. against ground map and

Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

other discussions, and also to conduct individual interviews.

- *Progeny histories:* for all adult females (buffalo, cow, goat, sheep) in herd. Information gathered for each offspring in turn including its sex, and its subsequent fate (see Table 1 for further details).

For all the above topics, an attempt was also made to establish the extent to which the situation has changed within the last ten years.

Semi-structured interviews with farmers and VAHWs

The team also interviewed male and female farmers and VAHWs individually. Through the use of a question list to guide the interview and maintain consistency, these interviews were more focused and structured than those described above. The interviews with the farmers were designed to gather information on the service they receive from the VAHWs, including:

- The frequency with which VAHWs have treated their livestock;
- The success of that treatment;
- The amount they were charged for this treatment; and,
- How they feel the service could be improved.

The interviews with the VAHWs aimed to assess:

- How they were coping with their work;
- How much treatment they have given;
- The catchment area in which they work; and,
- Ways in which they feel the training, or their own work, could be improved.

VAHWs were also asked to sort the household cards previously used during the wealth ranking exercise, according to whether they had treated, or vaccinated any animals belonging to each household. This was done to see if there was any bias by wealth or caste in the people they had served.

· Application of participatory research methods in the field

There now follows a more detailed account of how the methods described above were applied in the field.

South Lalitpur District

Three village development committees were visited in South Lalitpur District - Ikudol, Pyutar and Asrang. Although they are less than 50 kilometres from Kathmandu and the district headquarters in Patan, they are still fairly remote. The area is characterised by ridges and hills up to 8000 feet transected by river valleys 3500 feet below.

Between 1981 and 1987, the project sent 32 farmers to the Rural Development Centre (RDC) farm for AHIP training as Village Animal Health Workers. According to the Community Health and Development Project (CDHP) staff, 24 of them are still treating sick animals in their villages. On this visit we met 11 of them, six of whom are regularly treating animals. Of the remaining five, two are treating very few animals while three have stopped work altogether.

During the visit we used a number of rapid appraisal techniques including wealth ranking, mapping, diagramming and semi-structured interviews to learn about the area. We were particularly interested in the social organisation, agricultural and livestock practices, general and livestock-related problems, and how the village animal health workers are working.

First farmers were usually asked to draw a map of their part of the village and to discuss any related issues arising from this exercise. Some of the team would then carry out a transect walk, observing farms and interviewing people as they went along. Wealth ranking was used to explore wealth-related differences in farming techniques, livestock ownership and access to help when animals are sick.

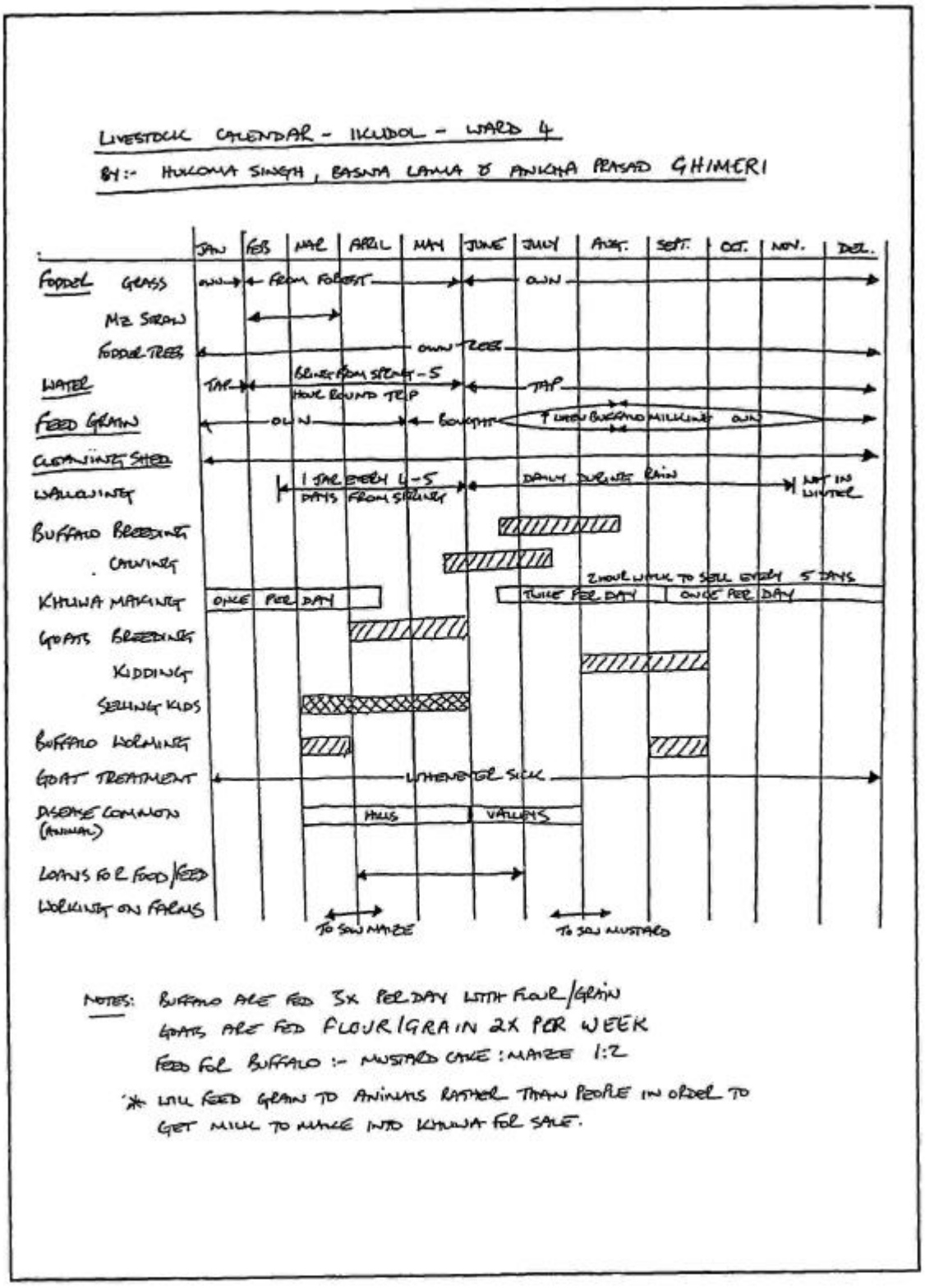
Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

Livestock-keeping and problem ranking in Ikudol

We asked a group of farmers to name and then rank the general problems they had in their village. We then asked the same group to describe all the inputs required for, and outputs derived from their animals, and how they varied during the year. The results of this have been included in a seasonal calendar (Figure 1). By allocating beans to each task, they were asked to show who did the work. Finally we asked them to name and rank the various problems they had with their animals.

Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

Figure 1. Livestock calendar, Ikudol

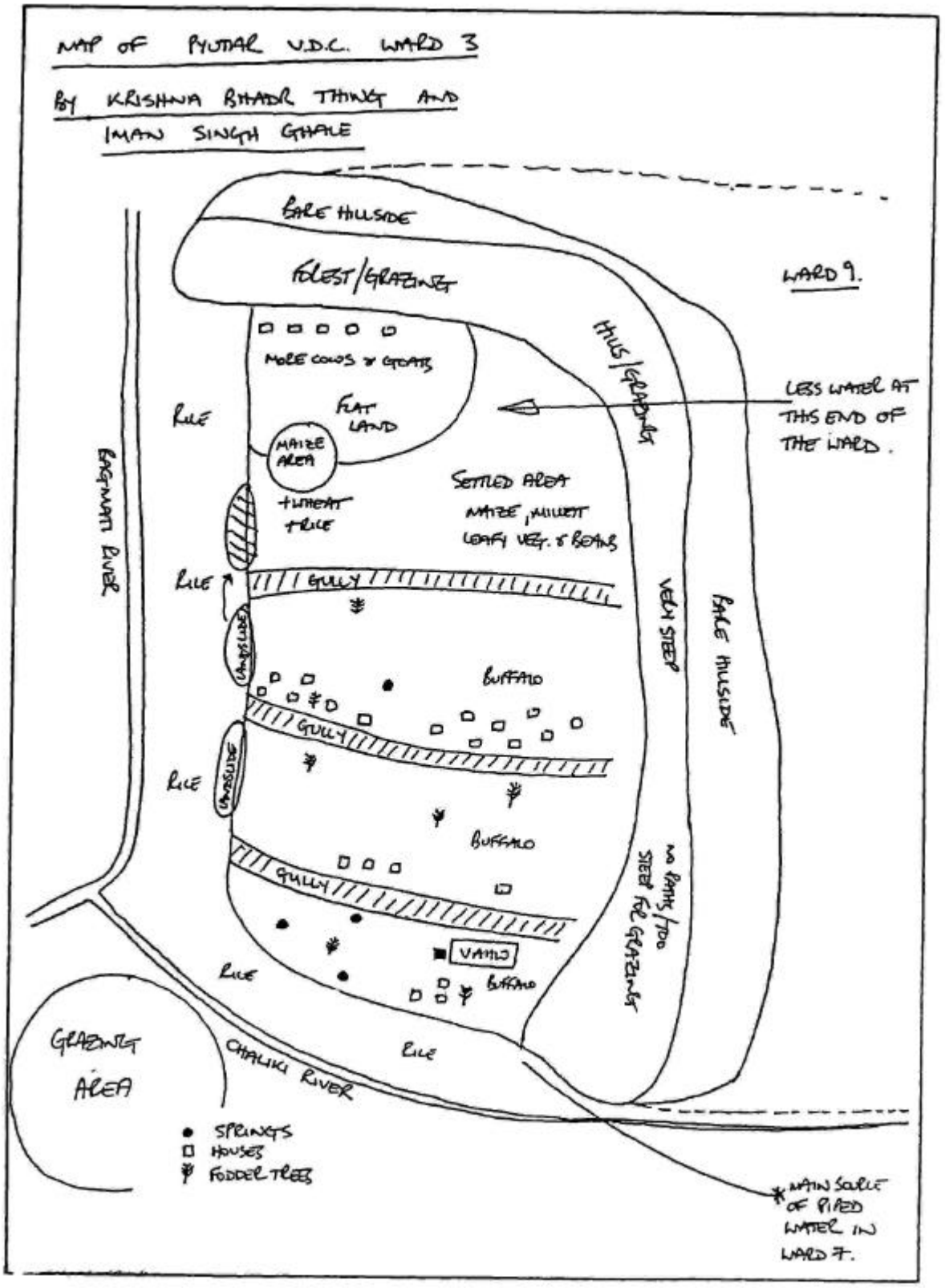


NOTES: BUFFALO ARE FED 3X PER DAY WITH FLOUR/GRAIN
GOATS ARE FED FLOUR/GRAIN 2X PER WEEK
FEED FOR BUFFALO :- MUSTARD CAKE : MAIZE 1:2

* WILL FEED GRAIN TO ANIMALS RATHER THAN PEOPLE IN ORDER TO GET MILK TO MAKE INTO KHUWA FOR SALE.

Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

Figure 2. Farmers' map of Ward Tree, Pyutar village



Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

Resource map of Pyutar

Pyutar Village Development Committee area is on the far side of Ikudol, down in the valley towards the Bagmati river. It is flatter, lower, and much more fertile. There are more people, the farms are closer together and a much wider range of crops are grown including rice, finger millet, various beans, pigeon peas, maize, vegetables, mustard, sesame, buck wheat and bananas and various fodder trees. There are more *murrah* and cross-bred buffalo and cattle.

We asked Krishna Bahadur Thing to help us to draw a map of the village (Figure 2). While doing so he told us that 15 years ago, the whole hill behind the village was forested, and that the whole area was wetter. Vegetables grew better then, and there were more cattle and goats which were taken out grazing. On the other hand the Bagmati River was wider and less predictable then, and now it is possible to cultivate more rice fields along its banks.

Progeny history in Ikudol and Pyutar

During the farmer interviews in both villages, we asked what had happened to the offspring from every adult female animal on their farm. Table 1 shows the results and gives an indication of rates of loss through sale, slaughter, gifts and disease. Where the age of death was known, all of the buffalo deaths occurred under six months of age; four out of 17 (c. 25%) at less than one month old and 10 out of 17 (c.60%) below three months old. In cattle three of the five reported deaths occurred at less than one month old, as did seven out of eleven goat deaths.

Table 1. Progeny history: the fate of offspring of animals in Ikudol and Pyutar

	Males		Females		Total	
BUFFALO (no. females = 38)	**n**	**%**	**n**	**%**	**n**	**%**
Retained	11	28	23	51	34	40
Sold	23	58	10	22	33	39
Given for share	1	3	-	-	1	1
Died	5	13	12	27	17	20
Total	**40**	**47**	**45**	**53**	**85**	**100**
CATTLE (no. females = 8)						
Retained	5	63	4	36	9	47
Sold	2	25	-	-	2	11
Given for share	-	-	2	18	2	11
Died	1	13	4	36	5	26
Exchanged	-	-	1	9	1	5
Total	**8**	**42**	**11**	**58**	**19**	**100**
GOATS (no. females = 20)						
Retained	7	14	18	36	25	25
Sold	32	65	19	38	51	52
Given for share	-	-	2	4	2	2
Died	9	18	5	10	14	14
Slaughtered	1	2	5	10	6	6
Lost	-	-	1	2	1	1
Total	**49**	**49**	**50**	**51**	**99**	**100**

Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

Palpa Valley District

The village of Baugha Pokhara Thok is about 12 kilometres from Tansen town, along a ridge away from the Palpa valley. It is not as developed as some of the villages in the Palpa valley because it does not have any irrigated land. Despite a number of development activities in the village, agriculture and especially livestock keeping is still largely traditional. However, many men from the village are, or used to be, in the Indian army, and therefore bring a lot of money into the village through wages and pensions.

From this village, eight VAHWs have been trained by AHIP and one by the government. According to CDHP, seven of these are still active. Although, as on the visit to South Lalitpur a number of rapid appraisal techniques were used to learn about livestock keeping in the area, on this shorter trip, the team mainly concentrated on the work done by the VAHWs and their relationships with the community and CDHP.

Livestock keeping: division of labour by wealth class

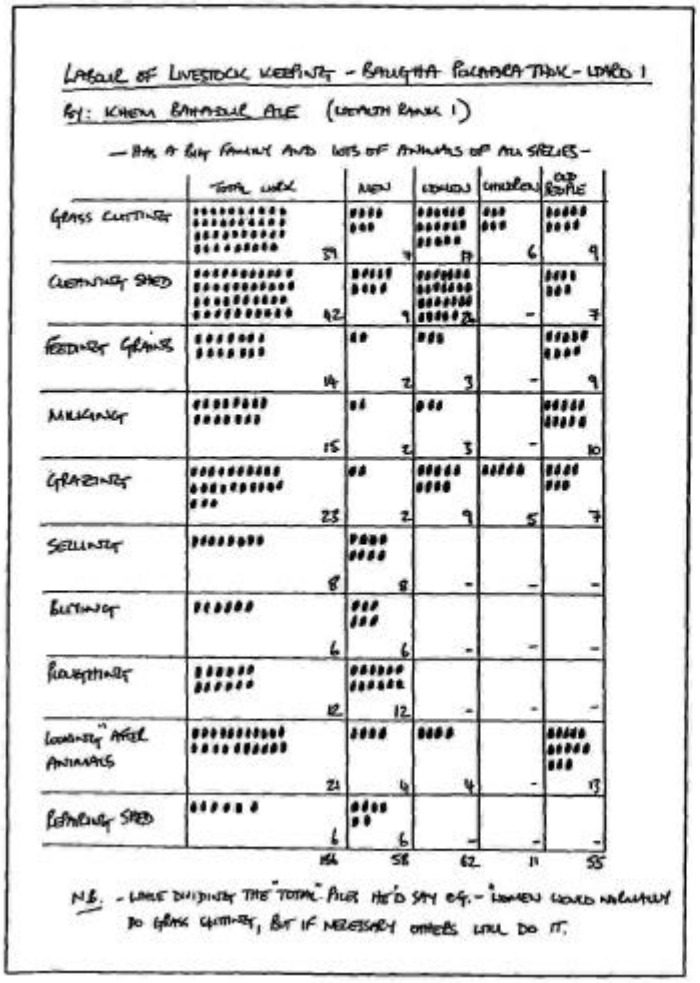
The information obtained from the wealth ranking was used in this exercise to assess how the division of labour is affected by wealth. Khem Bahadur Ale is a farmer ranked top in the wealth ranking exercise (Rank 1). He has a big family and many different types of livestock. He allocated beans to each of the tasks involved in livestock keeping to show who does the work (Figure 3a).

However, Man Kumari gave rather a different picture (Figure 3b). Her father is in wealth rank 5, they have four cows and a pig and her mother is very ill and cannot do much work.

Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

Figure 3. Division of Livestock Labour by Wealth Class

a) Wealth Rank 1 Farmer



LABOUR OF LIVESTOCK KEEPING - BAHUTHA POKHARA THOK - LOKED 1

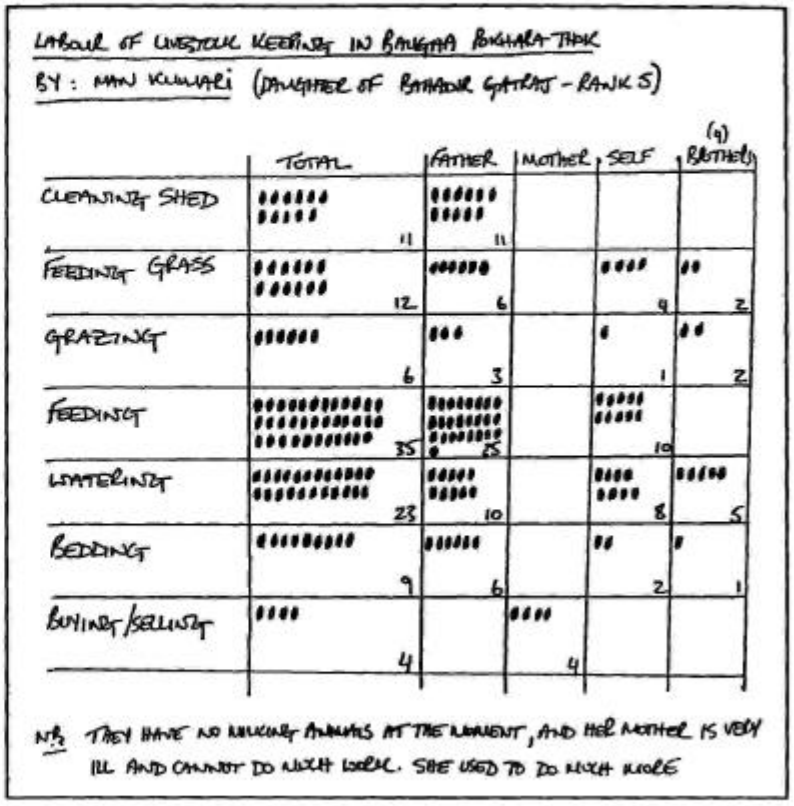
BY: KHEM BAHADUR ALE (WEALTH RANK 1)

— HAS A BIG FAMILY AND LOTS OF ANIMALS OF ALL SPECIES —

	TOTAL LABOUR	MEN	WOMEN	CHILDREN	OLD PEOPLE
GRASS CUTTING	31	4	17	6	9
CLEANING SHED	42	9	28	-	7
FEEDING GRASS	14	2	3	-	9
MILKING	15	2	3	-	10
GRAZING	23	2	9	5	7
SELLING	8	8	-	-	-
BUYING	6	6	-	-	-
PLOUGHING	12	12	-	-	-
LOOKING AFTER ANIMALS	21	4	4	-	13
BEDDING SHED	6	6	-	-	-
	158	58	62	11	55

N.B. - WHILE DIVIDING THE "TOTAL" FIGURE HE'D SAY EG. - "WOMEN WOULD NORMALLY DO GRASS CUTTING, BUT IF NECESSARY OTHERS WILL DO IT.

b) Wealth Rank 5 Farmer



LABOUR OF LIVESTOCK KEEPING IN BAHUTHA POKHARA THOK

BY: MAN KUMARI (DAUGHTER OF BAHADUR GAIRAT - RANK 5)

	TOTAL	FATHER	MOTHER	SELF	(4) BROTHERS
CLEANING SHED	11	11			
FEEDING GRASS	12	6		4	2
GRAZING	6	3		1	2
FEEDING	35	25		10	
WATERING	23	10		8	5
BEDDING	9	6		2	1
BUYING/SELLING	4		4		

N.B. THEY HAVE NO MILKING ANIMALS AT THE MOMENT, AND HER MOTHER IS VERY ILL AND CANNOT DO MUCH LABOR. SHE USED TO DO MUCH MORE

Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

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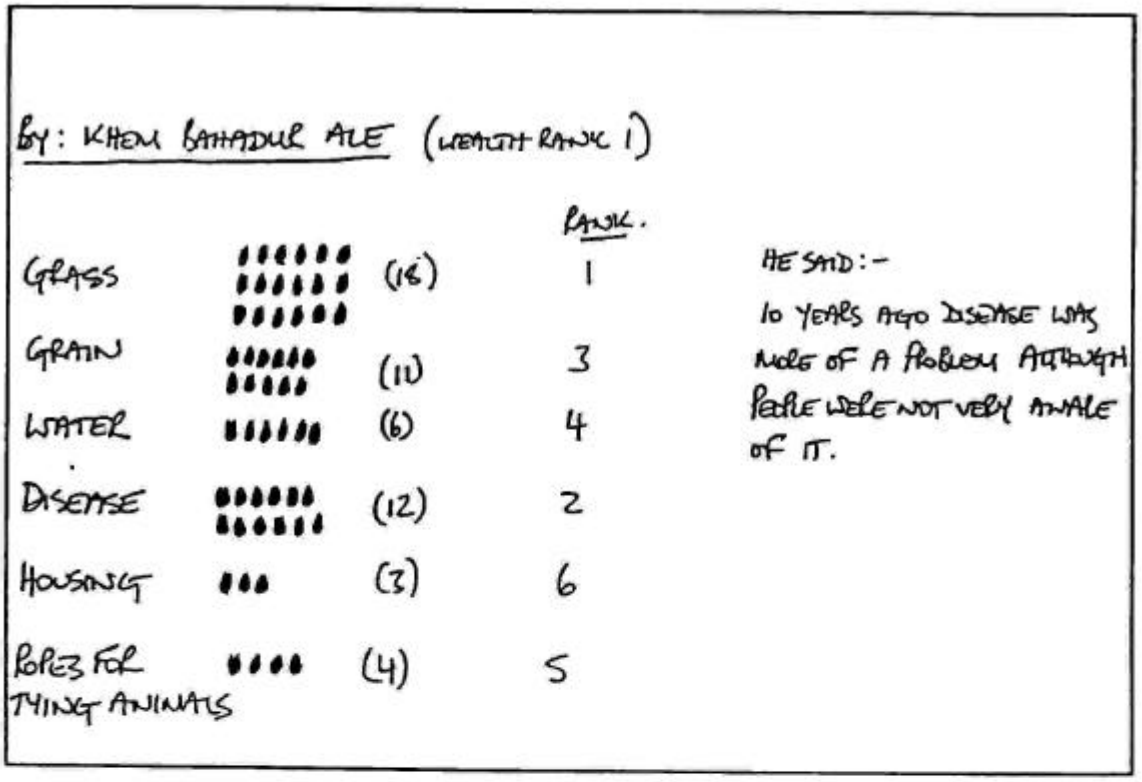
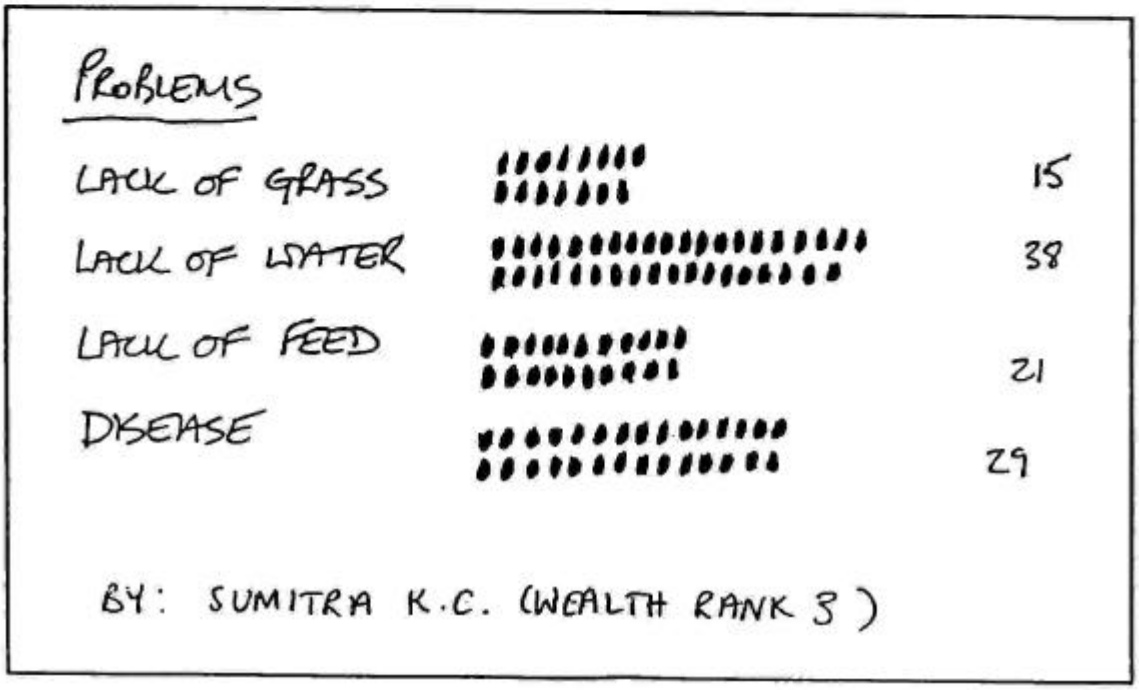
Figure 4. Livestock problem ranking by wealth class

a) Wealth rank 1 farmer





b) Wealth rank 3 farmer

Source: RRA Notes (1994), Issue 20, pp.58–66, IIED London

Livestock problem ranking by wealth class

The results of the wealth ranking exercise were also used to understand how wealth affects people's perceptions of livestock-related problems. Khem Bahadur Ale is another farmer ranked top in the wealth ranking exercise. He considered lack of grass to be the biggest problem, followed by disease and the lack of grain (Figure 4a).

However, Sumitra K.C. has only two buffalo, three oxen and five goats. Her husband is in wealth rank three and has an outside job. Her perceptions differ slightly - she ranked the lack of water first followed by disease and the lack of feed (Figure 4b).

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