

Comparative Analysis of Two Settled Livestock Producers in Northeastern Inner-Mongolia, China

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Abstract

Production data, family labor use, and economic results are provided for two settled herders in the Northeastern region of Inner Mongolia in China. One was a medium size livestock oriented household residing in a high-quality grass and crop production zone on the border with the Republic of Mongolia that had 20 cows, 100 female breeding goats and 400 female breeding sheep. The other producer household, that resided in a very low-quality grass and crop production zone on the border of Jilin province was small size and communal grazing land based, with 9 cows and 25 adult female goats. The net cash and in-kind income, if only direct costs (essentially out-of-pocket or cash costs) are taken into account, was 14.5 Yuan per hour of family labor for the medium producer, and 3.7 Yuan for the small producer. Addition of a cost for family labor (using an opportunity cost method) resulted in net income falling slightly, to 12.8 Yuan for the medium producer and 1.2 Yuan per hour for the small household.

中国内モンゴル自治区北東部の二種類の定住畜産経営に関する比較分析
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本稿は、中国内モンゴル自治区北東地域にある2つの定住畜産農家により収集されたデータに基づき、その経営状況を比較分析したものである。2つの農家のうち1つは、高質な草地と農地を有する、モンゴル共和国と隣接する国境地域に居住してある中規模の畜産農家で、計20頭の雌牛、100頭の繁殖用母ヤギと400頭の繁殖用母ヒツジを所有している。もう1つは、低質な草地と農地を有する、吉林省と内モンゴル自治区と隣接する地域に居住してある小規模の畜産農家で、共同用の草地を利用して、9頭の雌牛と25頭成年母ヤギを飼養している。

2つの畜産農家の純所得（現金収入と現物所得を含む）は、直接費用のみ（原則的に自己負担費あるいは現金支払経費）を計算すれば、中規模の畜産農家においては、家族労働力1人当たり時間当たりの所得は14.5元で、小規模の畜産農家のそれはわずか3.7元である。家族労働力の機会費用もコストに加算すれば、その1人当たり時間当たりの純所得は、中規模畜産農家では12.8元で、小規模畜産農家では1.2元で、やや減少する。

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Problem and Objectives

Roughly half of China is designated as grassland (including deserts and other areas suitable for grazing livestock). The grasslands *per se* are immense, accounting for about 30 percent of the nation's total area. Approximately 2.4 million km², or 85 percent of China's grassland and pastures, are in the temperate climatic zone. The prevalence of grassland in the Western region, low agricultural productivity of it, and general lack of water and other natural resources, are reasons for economic disparity between it and the other two areas of China, the East and Central regions. One problem facing planners and development strategists is what to do about the grasslands, and for that quantifiable data on livestock production is required. Provision of some of that information is a main purpose of the project being reported on.

This article is the fourth one in a series on economics, gender use and productivity in China's grasslands. The first one (Simpson, James R., Ou Li and Fuping Li, 2002) described the Participatory Rural Appraisal (PRA) method and included a case study in Xilinguole League, which lies on the border of the Republic of Mongolia and is roughly north and east of Beijing. The second was a case study in Xinjiang Province in the extreme Northwest of China on the borders of The Republic of Mongolia, Russia and Kazakhstan (Simpson, James R., Ou Li and Fuping Li, 2003). The third was a case study in the Tibetan speaking area on the southern end of the Qinghai Plateau in Sichuan Province north of Chengdu (Simpson, James R., Ou Li and Fuping Li and Yoshio Kawamura, 2005). Explanation of the complete computer program used on the project sites reported on in this article is given in the previous articles.

Project Area

Inner Mongolia Autonomous Region (Inner Mongolia) lies below about two-thirds of the Republic of Mongolia. The extreme northeastern part of Inner Mongolia borders on Russia (Figure 1). Rainfall increases in an easterly direction. Thus, the eastern end of Inner Mongolia has relatively high rainfall and grassland productivity, particularly in the north. One of the project sites, a medium size livestock operation, is located in this high productivity area. The other site, a small size unit, located in the south of Inner Mongolia on the border of Jilin province, has relatively low rainfall and grazing land productivity. Despite the large size of Inner Mongolia, only about 3 percent of China's 125 million cattle are found in it. The Region has 18 percent of the nation's 153 million sheep, and 9 percent of the country's 187 million goats.

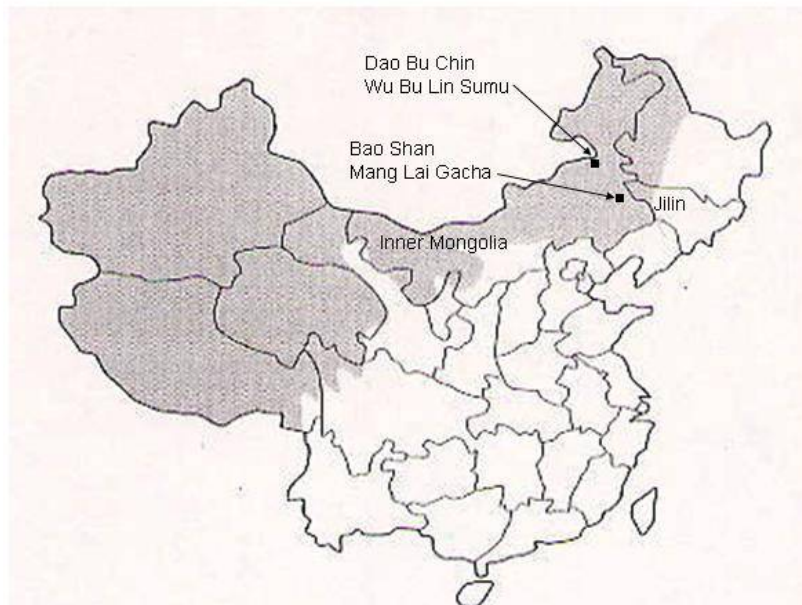


Figure 1. Location of the two herder case studies in Inner Mongolia, China, 2004.
Note: Dark area indicates pastoral area.

Interview Results on Production, Land Use and Labor Use

The approach taken in this article was to compare and contrast the two producers, both of which were settled (meaning not nomadic or semi-nomadic), in an effort to determine the extent to which size and location have on sustainability of settled livestock households. The data and results can be used for project development initiatives in that part of Inner Mongolia, and have considerable implications for grassland projects as a whole.

Selected production data is given in Table 1 for the medium size producer. Three year averages (2003-2005) were used for data input to reduce fluctuations due to weather and economic conditions. This household had 20 cows of which 7 were mainly for milk production and 13 primarily for progeny production. The small producer had 9 cows of which 5 were mainly for milk (Table 2). The medium size producer had 100 adult female goats while the small one had 25 head. The medium size operation had 400 adult female sheep, but the small size one had none.

The animal species composition, number and size of animals in inventory vary during the year on livestock operations due to births and sales. Consequently, a system of equivalent units is utilized worldwide to compensate for all these factors. One way, termed animal units, uses a mature cow as the base. The other, called sheep units, uses a mature female sheep as the base. One cow usually equals 5 female sheep, but it can vary depending on breed types.

Grasslands and pastures vary in size and are used at different times of the year. In addition, grazing land conditions fluctuate due to season, forage species composition, past

use (or misuse), season, current use, and weather. As a result, the animal equivalent system is further refined to a monthly basis called animal unit months (AUM) or sheep unit months (SUM). Sheep unit months are the common denominator in China's grasslands since small ruminants (sheep and goats) are the major type livestock on them.

SUM are a good measurement of size between producers. The medium producer had 8,947 SUM while the small one had 1,432 SUM (data not shown). Thus, the medium household had 6 times more livestock equivalents than the small producer.

The amount of grazing land is another measure. The medium producer had a total of 4,580 Mu, equivalent to 420 Ha (one hectare has 15 Mu). Three quarters of that was in grazing land and 20 percent in hay land. Eight percent was used for both hay and grazing depending on the time of year (data not shown). Other land was rented for grazing in the summer and winter. The herder or laborers stayed in a traditional tent when livestock were grazed away from the family residence.

The small producer was in stark contrast to the medium one, having no grazing land. Rather, the aili (a type of village) in which the family resided, made up of 38 households, had a communal grazing system comprising 25,252 Mu (1,683 Ha) (data not shown). Each member paid a rental fee depending on the SUM grazed on it. This small householder had 16 Mu of arable land used to produce maize and maize silage, 20 Mu of hay land, and 5 Mu for the house and residence area. In effect, a total of 41 Mu was directly controlled by the small producer, less than 1 percent of the land area available to the medium producer.

The number of animals that can (or should) be grazed on a parcel of land for a given period of time can be determined based on grazing conditions. The medium size operation had 11,148 sheep unit months of grazing land available based on long-term sustainable use of that land, but actually had 8,947 SUM (data not shown). In this case, the land was 21 percent under-grazed. The small producer participated in a communal grazing system and thus data are not available to determine that household's stocking rate.

Analysis of family labor use by gender and season for both households reveals that, as in the three other studies published by these authors, females play a very important role in the production process (Tables 3 and 4). They are occasionally helped by relatives, especially in the medium size one, when time permits. The main livestock related work of females is milking and processing milk into cream, butter and cheese. They also assist in general care of animals, especially in the spring when offspring are born. The medium producer household is comprised of two females and two males associated with production, while the small operation has one of each.

The total amount of time spent by both males and females only on livestock related work in the medium producer household was 5,974 hours, compared with 1,944 by the small household. Thus, the medium producer only had 3 times more hours of family labor than the small one. Given that the medium size household had six times as many SUM of livestock as the small one, and 150 percent as much land area. The economies of size are readily apparent even though the medium one had 2 fulltime employees in its livestock operation. The small producer used no outside labor directly in its livestock operation; rather, it did contract labor for its crop side of the operation.

The two females in the medium household accounted for the equivalent of 29 percent of the time spent by males. In contrast, the female in the small household contributed 167 percent as much as the male to the livestock enterprise, primarily because the male was occupied with crop production.

One of the more important aspects of evaluating family labor, apart from gender issues, is consideration of the extent to which a household would be better off by leaving their livestock operation for other employment opportunities. This is a very important and critical issue in the western area of China (the whole of Inner Mongolia has officially been designated as being part of the Western Region) as overgrazing and depletion of associated natural resources is a serious environmental problem. The principal cause is human overpopulation—resulting in over use of the land—and out-migration is one way to mitigate it.

The method used to measure a household's potential benefit from leaving its livestock enterprise and moving to alternative employment, such as in an urban area, is by calculating the extent to which the hourly value of their labor would improve. The approach was to use the opportunity cost method from estimates derived during interviews. Two estimates were obtained. One was income from alternative work that they currently engage in or could do without migrating, such as daily commutes to an urban location relatively close to them, and work they might engage in or actually do such as sewing or preparing clothing for other individuals, making handicrafts, working for other herders etc. The calculations using estimates by females in the medium household resulted in 1.48 Yuan per hour for them (the exchange rate to \$US was 8.3 at the time of the analysis) compared with 2.47 Yuan per hour by the female in the small household (Tables 5 and 6). Calculations for males in the medium household resulted in 2.04 Yuan per hour, and 2.50 for the small household. The major reason for the differences is that the small household was located relatively close to an urban area while the medium size one was much more remotely situated.

It was calculated that if the family on the medium size operation moved to an urban area females could earn 2.84 Yuan per hour, and males 3.41 Yuan. This is a 92 percent increase for women and 67 percent increase for men and would seem to be quite favorable for them. But, they expressed little interest in moving despite the large differences in hourly wages because of contentment with their lifestyle, and total net income from their relatively large operation being sufficient for them

Calculations using estimates by the female in the small household actually resulted in a reduction in the value of her labor on an hourly basis, from 2.47 Yuan to 2.00 Yuan. The male hourly value remained the same. It was concluded that, despite a relatively small total net income, they were probably better off by not trying to migrate to an urban area.

Interview Results on Production Costs

Production costs are divided into four parts. The first are direct costs, in effect what could be considered as cash (“out-of-pocket”) expenses. The second is a charge for family labor. These are calculated as opportunity costs, in effect the amount of income the family could earn in an alternative use of their time rather than in livestock related activities. Family labor is seldom paid a wage, even to the owner in modern farming and livestock operations. The third charge is for ownership costs, which are mainly depreciation of buildings and equipment, as well as insurance. The fourth charge is called capital costs. This is for the opportunity costs of the producer’s money being tied up in buildings, equipment, livestock, fencing, and so forth rather than being invested in some other enterprise, earning interest in a bank account, etc. The direct expenses have to be paid. A charge should be made for depreciation as new equipment, buildings and so forth must eventually be made. Family labor and capital costs can be added depending on the interest of the operator or the researcher. Capital costs are useful in analysis of alternatives to the enterprise being studied.

Direct annual costs, provided in Tables 7 and 8, reveal that the medium size operation has total direct costs of 56,242 Yuan, about 5 ½ times more than the 10,003 Yuan of the small unit. A charge was made for own produced animal feedstuffs, which are a transfer from cropping enterprises. The medium producer did not sell any crops, but the small one did. In both cases the charge is an estimate of the cost for producing the feedstuffs rather than the market price for which they would be sold or bought. Purchased feedstuffs are valued at market price.

Production costs are also shown as percentages of total direct costs to facilitate interpretation of them (Tables 9 and 10). Differences between the two type operations are striking. The medium size one had a larger percent of total cash costs on inputs purchased

from off-farm (such as purchased forage, medicines, taxes and contract labor) while nearly half of expenses by the small unit were for grazing land rental, in other words, the fee paid to the aili for communal grazing.

A summary of the actual amount of costs as additional categories are added, is given in Tables 11 and 12. The medium size producer had total annual direct costs of 56,242 Yuan, which is 6 times that of the small producer's total of 10,003 Yuan. This difference is placed in perspective by recognizing that the medium producer had 6 times as many sheep unit months of animals as the small one. The differences in these ratios (as in the previous results on gender use) reveal the economies of size attributable to a larger operation, and the benefits of being located on much better land.

Another way of presenting the relationships between the four categories is provided in Tables 13 and 14 in which the increasing costs are shown as ratios to direct costs only. For example, the addition of family labor, ownership costs and capital costs makes the total of all four categories 1.2 times that of direct costs for the medium operation, compared to 1.5 times for the small one.

Determination of costs per kilogram of product produced is problematic for grassland livestock operations due to the large number of species and commodities produced. The first problem is allocation between species. Choices are to base the allocation on the number of animals, sheep units, or other criterion. Alternatives and numbers were discussed with producers and proportions chosen. The second problem is that each species provides joint products. Cattle, for example, produce both milk and progeny for home use and sale. Goats produce meat and hair, and may produce milk for human consumption. Sheep produce meat and wool. One way to determine the proportions between commodities is to evaluate each individual cost item. However that is very cumbersome and time consuming.

Cattle provide a good example of the dilemma. The cow consumes forage and purchased inputs such as salt, and also requires medicines. Part of milk produced is consumed by the calf, and part is sold or utilized by the family. Additionally, the milk can be processed into products such as cream or cheese, which are sold or consumed by the family. So, how much of each expense should be allocated to progeny, and how much to each milk product? The approach taken for the two operations reported on in this article, and the other three articles in this series on grassland in China, has been to examine proportions of income produced by each of the joint products, discuss with the producers and then make an educated and informed choice with full recognition that some costs will be too high and some too low.

The average cost per kg (direct costs only given in this text) of all cattle milk products was almost the same for the two operations, 0.4 Yuan per kg for the medium one and 0.3

Yuan for the small one (Tables 15 and 16). A really big difference between the two producers was that the production cost of cattle progeny was 1.6 Yuan per kg by the medium producer compared to 10.9 Yuan by the small one. These differences are very important as they show the advantage of controlling relatively large amounts of good quality grazing land as opposed to paying a fee for use of communal land and a village appointed herder.

The prices per kg of commodities sold are provided at the bottom of the tables to facilitate comparison with cost per kg. For example, the direct production cost per kg of wool was 2.5 Yuan by the medium producer compared with a sale price of 5.0 Yuan. The small producer had no sheep. The direct production cost of mohair from the goats was calculated to have been 101 Yuan per kg by the medium producer and 90 per kg by the small one. The sale price for both was 240 Yuan per kg.

Income and Net Income

The proportion of income from cash sales, value-in-kind (meaning personal use by the household rather than being sold), and a combination of the two is given in Tables 17 and 18 by type of product produced. The value in kind is quite a small proportion of total income on both operations, 5 percent. The major difference between operations was income source. For example, animals accounted for 83 percent of all income sources by the medium operation, but just 69 percent by the small one. Mohair was the principal revenue source for the small one, 27 percent (of combined income) compared with 11 percent by the medium operation. Milk products were a minor source of sales and in-kind value.

Net cash income was considerably higher for the medium operation. If only direct production costs are taken into account, it was 80,534 Yuan for the medium one, 13 times more than the 6,206 Yuan of the small one (Tables 19 and 20). The medium one had a positive net cash income of 15,055 Yuan even when all 4 cost categories were taken into account. In contrast, the small one had a loss (a paper loss at least) of 6,257 Yuan. The major reason for the differences, apart from geographical setting and rainfall patterns, is economies of size and structure of the enterprises.

Net cash income combined with in-kind income above direct production costs increased 9 percent by the medium size operator, from 80,534 Yuan to 87,960 Yuan, when in-kind income was added (Tables 21 and 22). The importance of in-kind income on the small operation is shown by an increase of 15 percent by the small producer when in-kind was added in

Net cash income per hour of family labor (combination of males and females) was calculated to be 13.5 Yuan for the medium producer, but just 3.2 Yuan by the small one

(Tables 23 and 24). These differences are related to size and structure as well as production methods such as use of considerable contract labor by the medium producer. The net income per hour of labor is calculated by dividing total net income by the number of hours worked. The differences in the two operations provides a very good economic comparison between them, especially considering that the estimates of opportunity cost per hour from the interviewees was similar for both size units.

The calculated income per hour of family labor by the medium size household decreased 13 percent when value in-kind income was added, from 14.7 Yuan to 12.8 Yuan (Tables 25 and 26). In contrast, there was a much larger decrease, 68 percent, by the small producer, from 3.7 to 1.2 Yuan, highlighting the importance of family labor on diminutive operations. Another important finding is that while the medium operation had a return of 3.8 Yuan per hour when all 4 cost categories were included, computations revealed a loss of 2.7 Yuan per hour.

Conclusions

Comparison of the two livestock operations in this article reveals the impact that geographical setting, rainfall, and size have on economic viability and productivity, and ultimately on quality of life and long-term viability of grassland livestock enterprises as China develops. The medium size unit had sufficient net income that its viability is assured well into the future. The small size operation on the other hand, with a tiny amount of land in a low rainfall unpredictable climate, and integrated into a little village that is based on a communal grazing system, has few options for economic development. Ironically, analysis of opportunity costs for that household indicates that currently there is no real advantage for the husband and wife to give up their livestock operation and migrate to an urban setting. Which is better for them, to be independent but with little hope or opportunity to increase total net income or (if government policy that restricts migration to urban areas changes), for them to move to an urban area?

The nation's GNP per capita is increasing very rapidly, particularly in the Eastern Region and especially in large urban centers. Unfortunately, the income gap is growing between urban and rural areas, and very small farms and livestock enterprises at or near a subsistence level have few options to substantially increase their net incomes commensurate with urban dwellers and larger size agricultural units. History of economic development reveals that small operations, like the one reported on in this article, have the risk of falling into a marginalized underclass and drifting into a culture of poverty if they cannot increase size and scope of their agricultural operation. Clearly, the family portrayed is not hungry, nor

is it poor by standards in most developing countries. Nevertheless, at some point, particularly if rainfall decreases or some other calamity strikes, it can be severely impacted.

References

Simpson, James R., Ou Li and Fuping Li and Yoshio Kawamura. "Structural Analysis of Tibetan Minority Pastoralists in the Qinghai Plateau Area of Sichuan Province of China." 龍谷大学国際社会文化研究所紀要 (*Society and Culture: Journal of the Socio-Cultural Research Institute, Ryukoku University,*) Vol. 7, March 2005, pp 253-266 (in English).

Simpson, James R., Ou Li and Fuping Li. "Economic and Institutional Structural Analysis of Semi-Nomadic pastoralists in the Extreme Northwest of China." 龍谷大学国際社会文化研究所紀要 (*Society and Culture: Journal of the Socio-Cultural Research Institute, Ryukoku University,*) Volume 5, 2003, pp 37-51. (in English).

Simpson, James R., Ou Li and Fuping Li. "Grassland Development in China: use of the Participatory Rural Appraisal (PRA) Research Method." 龍谷大学国際社会文化研究所紀要 (*Society and Culture: Journal of the Socio-Cultural Research Institute, Ryukoku University,*) Vol. 4, 2002, pp 191-203. (in English).

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Table 1. Production data for Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Cattle	Goats	Sheep	Camels and horses
Breeding Inventory					
Mature females	Head	20	100	400	
Breeding males	Head	2	3	8	
Total breeding	Head	22	103	408	
Progeny age at					
Weaning	Months	5.0	4.5	4.5	
End of growing season	Months	15.0	16.5	0.0	
End of fattening phase	Months	0.0	0.0	0.0	
Progeny potentially available after subtraction of death loss, and use for personal and contract purposes					
Total number born	Head	15	80	370	
Weaned	Head	15	76	356	
Sales, progeny					
Sold at weaning	Head	0	0	274	
Sold at end of growing	Head	12	55	0	
Sold at end of fattening	Head	0	0	0	
Total progeny sold annually	Head	12	55	274	
Sales breeding animals					
Cull females	Head	2	15	68	
Cull males	Head	0	0	1	
Total breeding animals	Head	3	15	69	
Cows mainly for milk	Head	7	0		
Cows mainly for beef or work progeny	Head	13	100		
Camels	Head				0
Horses	Head				7
Total annual fine hair/wool production					
Mature females	Kg	0	0	0	
Breeding males	Kg	0	0	0	
Growing phase	Kg	0	0	0	
Fattening phase	Kg	0	0	0	
Total production	Kg	0	0	0	
Total annual coarse hair/wool production					
Mature females	Kg	0	4	300	
Breeding males	Kg	0	4	6	
Growing phase	Kg	0	4	0	
Fattening phase	Kg	0	4	0	
Total production	Kg	0	4	306	
Home consumption of dairy products produced					
Cream	Kg	14	0	0	
Butter	Kg	18	0	0	
Cheese	Kg	75	0	0	
Milk	Kg	1700	0	0	
Sale of dairy products produced					
Cream	Kg	0	0	0	
Butter	Kg	18	0	0	
Cheese	Kg	35	0	0	
Milk	Kg	0	0	0	

Table 2. Production data for Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Cattle	Goats	Sheep	Camels and horses
Breeding Inventory					
Mature females	Head	9	25	0	
Breeding males	Head	1	3	0	
Total breeding	Head	10	28	0	
Progeny age at					
Weaning	Months	2.0	7.0	0.0	
End of growing season	Months	40.0	18.0	0.0	
End of fattening phase	Months	0.0	42.0	0.0	
Progeny potentially available after subtraction of death loss, and use for personal and contract purposes					
Total number born	Head	5	25	0	
Weaned	Head	5	23	0	
Sales, progeny					
Sold at weaning	Head	0	0	0	
Sold at end of growing	Head	3	0	0	
Sold at end of fattening	Head	0	5	0	
Total progeny sold annually	Head	3	5	0	
Sales breeding animals					
Cull females	Head	2	12	0	
Cull males	Head	1	1	0	
Total breeding animals	Head	3	13	0	
Cows mainly for milk	Head	5	0		
Cows mainly for beef or work progeny	Head	4	25		
Camels	Head				0
Horses	Head				0
Total annual fine hair/wool production					
Mature females	Kg	0	0	0	
Breeding males	Kg	0	0	0	
Growing phase	Kg	0	0	0	
Fattening phase	Kg	0	0	0	
Total production	Kg	0	0	0	
Total annual coarse hair/wool production					
Mature females	Kg	0	4	0	
Breeding males	Kg	0	4	0	
Growing phase	Kg	0	4	0	
Fattening phase	Kg	0	4	0	
Total production	Kg	0	4	0	
Home consumption of dairy products produced					
Cream	Kg	22	0	0	
Butter	Kg	5	0	0	
Cheese	Kg	12	0	0	
Milk	Kg	0	0	0	
Sale of dairy products produced					
Cream	Kg	53	0	0	
Butter	Kg	0	0	0	
Cheese	Kg	27	0	0	
Milk	Kg	0	0	0	

Table 3. Family labor use by gender and season Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Time spent by gender					
Females					
Spring	Hours	730	37	329	365
Summer	Hours	152	152	0	0
Fall	Hours	152	152	0	0
Winter	Hours	320	320	0	0
Total	Hours	1,354	661	329	365
Males					
Spring	Hours	876	175	175	526
Summer	Hours	912	182	182	547
Fall	Hours	912	182	182	547
Winter	Hours	1,920	384	384	1,152
Total	Hours	4,620	924	924	2,772
Whole year total males and females	Hours	5,974	1,585	1,253	3,137
Females as a percent of males					
Spring	Percent	83	21	188	69
Summer	Percent	17	83	0	0
Fall	Percent	17	83	0	0
Winter	Percent	17	83	0	0
Total	Percent	29	71	36	13
Time use by type of animal species					
Females					
Spring	Percent	100	5	45	50
Summer	Percent	100	100	0	0
Fall	Percent	100	100	0	0
Winter	Percent	100	100	0	0
Total	Percent	100	49	24	27
Males					
Spring	Percent	100	20	20	60
Summer	Percent	100	20	20	60
Fall	Percent	100	20	20	60
Winter	Percent	100	20	20	60
Total	Percent	100	20	20	60
Whole year total	Percent	100	27	21	53

Table 4. Family labor use by gender and season Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Time spent by gender					
Females					
Spring	Hours	552	184	368	0
Summer	Hours	244	244	0	0
Fall	Hours	61	31	31	0
Winter	Hours	360	180	180	0
Total	Hours	1,217	639	579	0
Males					
Spring	Hours	184	92	92	0
Summer	Hours	122	61	61	0
Fall	Hours	61	31	31	0
Winter	Hours	360	180	180	0
Total	Hours	727	364	364	0
Whole year total males and females	Hours	1,944	1,002	942	0
Females as a percent of males					
Spring	Percent	300	200	400	0
Summer	Percent	200	400	0	0
Fall	Percent	100	100	100	0
Winter	Percent	100	100	100	0
Total	Percent	167	176	159	0
Time use by type of animal species					
Females					
Spring	Percent	100	33	67	0
Summer	Percent	100	100	0	0
Fall	Percent	100	50	50	0
Winter	Percent	100	50	50	0
Total	Percent	100	52	48	0
Males					
Spring	Percent	100	50	50	0
Summer	Percent	100	50	50	0
Fall	Percent	100	50	50	0
Winter	Percent	100	50	50	0
Total	Percent	100	50	50	0
Whole year total	Percent	100	52	48	0

Table 5. Opportunity cost of family labor use Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Cost			
		Current residence		Move to urban location	
Monthly basis					
Females	Yuan	400		500	
Males	Yuan	550		600	
Annual basis					
Females	Yuan	4,800		6,000	
Males	Yuan	6,600		7,200	
Hours per day to get hourly rate					
Females	Yuan	10		8	
Males	Yuan	10		8	
Days per month to get hourly rate					
Females	Yuan	27		22	
Males	Yuan	27		22	
Calculated hourly rate used to determine family labor cost per year					
Females	Yuan	1.48		2.84	
Males	Yuan	2.04		3.41	
		Total	Cattle	Goats	Sheep
Calculated family labor value per year					
Current residence					
Females	Yuan	2,006	979	487	541
Males	Yuan	9,411	1,882	1,882	5,647
Total	Yuan	11,417	2,861	2,369	6,187
Move to urban location					
Females	Yuan	3,847	1,876	933	1,037
Males	Yuan	15,750	3,150	3,150	9,450
Total	Yuan	19,597	5,026	4,083	10,487

Table 6. Opportunity cost of family labor use Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Cost			
		Current residence		Move to urban location	
Monthly basis					
Females	Yuan	400		440	
Males	Yuan	540		550	
Annual basis					
Females	Yuan	4,800		5,280	
Males	Yuan	6,480		6,600	
Hours per day to get hourly rate					
Females	Yuan	6		10	
Males	Yuan	8		10	
Days per month to get hourly rate					
Females	Yuan	27		22	
Males	Yuan	27		22	
Calculated hourly rate used to determine family labor cost per year					
Females	Yuan	2.47		2.00	
Males	Yuan	2.50		2.50	
		Total	Cattle	Goats	Sheep
Calculated family labor value per year					
Current residence					
Females	Yuan	3,005	1,577	1,428	0
Males	Yuan	1,818	909	909	0
Total	Yuan	4,822	2,485	2,337	0
Move to urban location					
Females	Yuan	2,434	1,277	1,157	0
Males	Yuan	1,818	909	909	0
Total	Yuan	4,252	2,186	2,066	0

Table 7. Direct (cash) annual cost Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Animals given to employees	Annual		Not shown as a cost. Rather is shown as a reduction in income.		
Purchased animal feedstuffs	Annual	600	200	200	200
Own produced animal feedstuffs	Annual	3,630	1,290	1,290	1,050
Purchased forage	Annual	0	0	0	0
Pasture expenses (hay land)	Annual	7,000	350	1,400	5,250
Hay harvesting cost	Annual	1,200	60	240	900
Salt	Annual	1,000	50	200	750
Minerals	Annual	0	0	0	0
Protein Supplement	Annual	0	0	0	0
Repairs, maintaince	Annual	0	0	0	0
Buildings (only part for business)	Annual	5,000	250	1,000	3,750
Fence	Annual	5,000	250	1,000	3,750
Vehicle repair (only part for business)	Annual	5,000	250	1,000	3,750
Veterinarian and other medical products	Annual	0	0	0	0
Animal medicines	Annual	7,000	1,400	2,800	2,800
Gas, water, electric(only business)	Annual	0	0	0	0
Telephone (only business)	Annual	400	20	80	300
Vehicle fuel (only business)	Annual	4,000	200	800	3,000
Other fuel (only business)	Annual	0	0	0	0
Taxes, government management fee	Annual	3,300	165	660	2,475
Marketing costs					
Transportation	Annual	0	0	0	0
Brokerage, other	Annual	350	18	70	263
Insurance	Annual	500	25	100	375
Contract labor	Annual	7,219	361	1,444	5,414
Grazing land rental	Annual	4,843	242	969	3,632
Miscellaneous, other	Annual	200	10	40	150
Total direct costs	Annual	56,242	5,141	13,292	37,809

Table 8. Direct (cash) annual cost Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Animals given to employees	Annual		Not shown as a cost. Rather is shown as a reduction in income.		
Purchased animal feedstuffs	Annual	840	756	84	0
Own produced animal feedstuffs	Annual	855	515	340	0
Purchased forage	Annual	0	0	0	0
Pasture expenses (hay land)	Annual	0	0	0	0
Hay harvesting cost	Annual	250	188	63	0
Salt	Annual	45	34	11	0
Minerals	Annual	0	0	0	0
Protein Supplement	Annual	0	0	0	0
Repairs, maintaince	Annual	0	0	0	0
Buildings (only part for business)	Annual	200	150	50	0
Fence	Annual	0	0	0	0
Vehicle repair (only part for business)	Annual	500	375	125	0
Veterinarian and other medical products	Annual	200	150	50	0
Animal medicines	Annual	1,070	286	784	0
Gas, water, electric(only business)	Annual	0	0	0	0
Telephone (only business)	Annual	0	0	0	0
Vehicle fuel (only business)	Annual	1,200	900	300	0
Other fuel (only business)	Annual	0	0	0	0
Taxes, government management fee	Annual	0	0	0	0
Marketing costs					
Transportation	Annual	0	0	0	0
Brokerage, other	Annual	0	0	0	0
Insurance	Annual	0	0	0	0
Contract labor	Annual	0	0	0	0
Grazing land rental	Annual	4,843	3,632	1,211	0
Miscellaneous, other	Annual	0	0	0	0
Total direct costs	Annual	10,003	6,986	3,017	0

Table 9. Direct (cash) annual cost, percent basis, Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Animals given to employees	Percent	Not shown as a cost, rather as a reduction in income because fewer animals are sold			
Purchased animal feedstuffs	Percent	1.1	3.9	1.5	0.5
Own produced animal feedstuffs	Percent	6.5	25.1	9.7	2.8
Purchased forage	Percent	0.0	0.0	0.0	0.0
Pasture expenses (hay land)	Percent	12.4	6.8	10.5	13.9
Hay harvesting cost	Percent	2.1	1.2	1.8	2.4
Salt	Percent	1.8	1.0	1.5	2.0
Minerals	Percent	0.0	0.0	0.0	0.0
Protein Supplement	Percent	0.0	0.0	0.0	0.0
Repairs, maintainance					
Buildings (only part for business)	Percent	8.9	4.9	7.5	9.9
Fence	Percent	8.9	4.9	7.5	9.9
Vehicle repair (only part for business)	Percent	8.9	4.9	7.5	9.9
Veterinarian and other medical products	Percent	0.0	0.0	0.0	0.0
Animal medicines	Percent	12.4	27.2	21.1	7.4
Gas, water, electric(only business)	Percent	0.0	0.0	0.0	0.0
Telephone (only business)	Percent	0.7	0.4	0.6	0.8
Vehicle fuel (only business)	Percent	7.1	3.9	6.0	7.9
Other fuel (only business)	Percent	0.0	0.0	0.0	0.0
Taxes, government management fee	Percent	5.9	3.2	5.0	6.5
Marketing costs	Percent				
Transportation	Percent	0.0	0.0	0.0	0.0
Brokerage, other	Percent	0.6	0.3	0.5	0.7
Insurance	Percent	0.9	0.5	0.8	1.0
Contract labor	Percent	12.8	7.0	10.9	14.3
Grazing land rental	Percent	8.6	4.7	7.3	9.6
Miscellaneous, other	Percent	0.4	0.2	0.3	0.4
Total direct costs	Percent	100.0	100.0	100.0	100.0

Table 10. Direct (cash) annual cost, percent basis, Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 200

Item	Units	Total	Cattle	Goats	Sheep
Animals given to employees	Percent	Not shown as a cost, rather as a reduction in income because fewer animals are sold			
Purchased animal feedstuffs	Percent	8.4	10.8	2.8	0.0
Own produced animal feedstuffs	Percent	8.5	7.4	11.3	0.0
Purchased forage	Percent	0.0	0.0	0.0	0.0
Pasture expenses (hay land)	Percent	0.0	0.0	0.0	0.0
Hay harvesting cost	Percent	2.5	2.7	2.1	0.0
Salt	Percent	0.4	0.5	0.4	0.0
Minerals	Percent	0.0	0.0	0.0	0.0
Protein Supplement	Percent	0.0	0.0	0.0	0.0
Repairs, maintainance					
Buildings (only part for business)	Percent	2.0	2.1	1.7	0.0
Fence	Percent	0.0	0.0	0.0	0.0
Vehicle repair (only part for business)	Percent	5.0	5.4	4.1	0.0
Veterinarian and other medical products	Percent	2.0	2.1	1.7	0.0
Animal medicines	Percent	10.7	4.1	26.0	0.0
Gas, water, electric(only business)	Percent	0.0	0.0	0.0	0.0
Telephone (only business)	Percent	0.0	0.0	0.0	0.0
Vehicle fuel (only business)	Percent	12.0	12.9	9.9	0.0
Other fuel (only business)	Percent	0.0	0.0	0.0	0.0
Taxes, government management fee	Percent	0.0	0.0	0.0	0.0
Marketing costs	Percent				
Transportation	Percent	0.0	0.0	0.0	0.0
Brokerage, other	Percent	0.0	0.0	0.0	0.0
Insurance	Percent	0.0	0.0	0.0	0.0
Contract labor	Percent	0.0	0.0	0.0	0.0
Grazing land rental	Percent	48.4	52.0	40.1	0.0
Miscellaneous, other	Percent	0.0	0.0	0.0	0.0
Total direct costs	Percent	100.0	100.0	100.0	0.0

Table 11. Annual costs based on cost type Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	56,242	5,141	13,292	37,809
Direct and family labor	Yuan	67,659	8,001	15,661	43,996
Direct costs, family labor and ownership costs	Yuan	77,459	8,491	17,621	51,346
Direct costs, family labor, ownership, and capital costs	Yuan	121,721	15,488	25,926	80,057

Table 12. Annual costs based on cost type Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	10,003	6,986	3,017	0
Direct and family labor	Yuan	14,825	9,471	5,354	0
Direct costs, family labor and ownership costs	Yuan	16,375	10,634	5,742	0
Direct costs, family labor, ownership, and capital costs	Yuan	22,466	15,501	6,965	0

Table 13. Ratio, other to direct production cost Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Family labor	Ratio	1.2	1.6	1.2	1.2
Family labor and ownership costs	Ratio	1.4	1.7	1.3	1.4
Family labor, ownership and capital costs	Ratio	2.2	3.0	2.0	2.1

Table 14. Ratio, other to direct production cost Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Family labor	Ratio	1.5	1.4	1.8	0.0
Family labor and ownership costs	Ratio	1.6	1.5	1.9	0.0
Family labor, ownership and capital costs	Ratio	2.2	2.2	2.3	0.0

Table 15. Cost per kg by commodities and cost type Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Cattle	Goats	Sheep
Animals produced				
Direct production cost	Yuan	1.6	2.8	4.0
Direct and family labor	Yuan	2.5	3.3	4.6
Direct costs, family labor and ownership costs	Yuan	2.6	3.7	5.4
Direct costs, family labor, ownership, and capital costs	Yuan	4.8	5.4	8.4
Milk products				
Direct production cost	Yuan	0.4	0.0	0.0
Direct and family labor	Yuan	0.6	0.0	0.0
Direct costs, family labor and ownership costs	Yuan	0.6	0.0	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	1.1	0.0	0.0
Yak hair				
Direct production cost	Yuan	0.0	0.0	0.0
Direct and family labor	Yuan	0.0	0.0	0.0
Direct costs, family labor and ownership costs	Yuan	0.0	0.0	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	0.0	0.0	0.0
Wool				
Direct production cost	Yuan	0.0	0.0	2.5
Direct and family labor	Yuan	0.0	0.0	2.9
Direct costs, family labor and ownership costs	Yuan	0.0	0.0	3.4
Direct costs, family labor, ownership, and capital costs	Yuan	0.0	0.0	5.2
Mohair				
Direct production cost	Yuan	0.0	101.3	0.0
Direct and family labor	Yuan	0.0	119.3	0.0
Direct costs, family labor and ownership costs	Yuan	0.0	134.3	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	0.0	197.5	0.0
Prices used in the analysis, per kg				
Progeny (average)	Yuan	7.6	5.6	7.6
Milk products				
Cream	Yuan	8.0	0.0	
Butter	Yuan	40.0	0.0	
Cheese	Yuan	30.0	0.0	
Raw milk	Yuan	2.0	0.0	
Fine hair, fine wool and mohair	Yuan	0.0	240.0	0.0
Coarse hair and coarse wool	Yuan	0.0		5.0

Table 16. Cost per kg by commodities and cost type Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Cattle	Goats	Sheep
Animals produced				
Direct production cost	Yuan	10.9	5.6	0.0
Direct and family labor	Yuan	14.8	10.0	0.0
Direct costs, family labor and ownership costs	Yuan	16.7	10.7	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	24.3	13.0	0.0
Milk products				
Direct production cost	Yuan	0.3	0.0	0.0
Direct and family labor	Yuan	0.4	0.0	0.0
Direct costs, family labor and ownership costs	Yuan	0.5	0.0	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	0.7	0.0	0.0
Yak hair				
Direct production cost	Yuan	0.0	0.0	0.0
Direct and family labor	Yuan	0.0	0.0	0.0
Direct costs, family labor and ownership costs	Yuan	0.0	0.0	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	0.0	0.0	0.0
Wool				
Direct production cost	Yuan	0.0	0.0	0.0
Direct and family labor	Yuan	0.0	0.0	0.0
Direct costs, family labor and ownership costs	Yuan	0.0	0.0	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	0.0	0.0	0.0
Mohair				
Direct production cost	Yuan	0.0	89.6	0.0
Direct and family labor	Yuan	0.0	158.9	0.0
Direct costs, family labor and ownership costs	Yuan	0.0	170.4	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	0.0	206.8	0.0
Prices used in the analysis, per kg				
Progeny (average)	Yuan	7.5	4.7	0.0
Milk products				
Cream	Yuan	8.0	0.0	
Butter	Yuan	30.0	0.0	
Cheese	Yuan	11.0	0.0	
Raw milk	Yuan	0.0	0.0	
Fine hair, fine wool and mohair	Yuan	0.0	240.0	0.0
Coarse hair and coarse wool	Yuan	0.0		0.0

Table 17. Annual income based on commodities Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Cash income (sales)					
Animals sold	Percent	82.3	71.0	52.0	97.3
Milk products (sold)	Percent	1.2	6.3	0.0	0.0
Mohair (sold)	Percent	10.5	0.0	48.0	0.0
Yak hair (sold)	Percent	0.0	0.0	0.0	0.0
Wool (sold)	Percent	0.8	0.0	0.0	1.4
Total cash income	Percent	94.9	77.3	100.0	98.8
Personal use value (value in kind)					
Animals	Percent	0.5	0.0	0.0	0.9
Milk products	Percent	4.4	22.7	0.0	0.0
Mohair	Percent	0.0	0.0	0.0	0.0
Yak hair or sheep wool	Percent	0.0	0.0	0.0	0.0
Other	Percent	0.2	0.0	0.0	0.4
Total value in kind	Percent	5.1	22.7	0.0	1.2
Combined cash income and value in kind					
Animals	Percent	82.8	71.0	52.0	98.2
Milk products	Percent	5.6	29.0	0.0	0.0
Mohair	Percent	10.5	0.0	48.0	0.0
Yak hair and sheep wool	Percent	0.0	0.0	0.0	0.0
Other	Percent	1.1	0.0	0.0	1.8
Total combined cash and value in kind	Percent	100.0	100.0	100.0	100.0

Table 18. Annual income based on commodities Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Cash income (sales)					
Animals sold	Percent	65.5	93.6	34.1	0.0
Milk products (sold)	Percent	1.7	3.3	0.0	0.0
Mohair (sold)	Percent	27.4	0.0	58.1	0.0
Yak hair (sold)	Percent	0.0	0.0	0.0	0.0
Wool (sold)	Percent	0.0	0.0	0.0	0.0
Total cash income	Percent	94.7	96.9	92.2	0.0
Personal use value (value in kind)					
Animals	Percent	3.7	0.0	7.8	0.0
Milk products	Percent	1.6	3.1	0.0	0.0
Mohair	Percent	0.0	0.0	0.0	0.0
Yak hair or sheep wool	Percent	0.0	0.0	0.0	0.0
Other	Percent	0.0	0.0	0.0	0.0
Total value in kind	Percent	5.3	3.1	7.8	0.0
Combined cash income and value in kind					
Animals	Percent	69.2	93.6	41.9	0.0
Milk products	Percent	3.4	6.4	0.0	0.0
Mohair	Percent	27.4	0.0	58.1	0.0
Yak hair and sheep wool	Percent	0.0	0.0	0.0	0.0
Other	Percent	0.0	0.0	0.0	0.0
Total combined cash and value in kind	Percent	100.0	100.0	100.0	0.0

Table 19. Annual net cash income based on cost type Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	80,534	16,543	18,204	45,787
Direct and family labor	Yuan	69,117	13,682	15,835	39,600
Direct costs, family labor and ownership costs	Yuan	59,317	13,192	13,875	32,250
Direct costs, family labor, ownership, and capital costs	Yuan	15,055	6,195	5,571	3,539

Table 20. Annual net cash income based on cost type Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	6,206	1,786	4,420	0
Direct and family labor	Yuan	1,383	-699	2,083	0
Direct costs, family labor and ownership costs	Yuan	-167	-1,862	1,695	0
Direct costs, family labor, ownership, and capital costs	Yuan	-6,257	-6,729	472	0

Table 21. Annual net cash and in-kind income Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	87,960	22,913	18,204	46,843
Direct and family labor	Yuan	76,543	20,052	15,835	40,656
Direct costs, family labor and ownership costs	Yuan	66,743	19,562	13,875	33,306
Direct costs, family labor, ownership, and capital costs	Yuan	22,481	12,565	5,571	4,595

Table 22. Annual net cash and in-kind income Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	7,118	2,068	5,050	0
Direct and family labor	Yuan	2,295	-417	2,713	0
Direct costs, family labor and ownership costs	Yuan	745	-1,580	2,325	0
Direct costs, family labor, ownership, and capital costs	Yuan	-5,345	-6,447	1,102	0

Table 23. Net cash income per hour of family labor Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	13.5	10.4	14.5	14.6
Direct and family labor	Yuan	11.6	8.6	12.6	12.6
Direct costs, family labor and ownership costs	Yuan	9.9	8.3	11.1	10.3
Direct costs, family labor, ownership, and capital costs	Yuan	2.5	3.9	4.4	1.1

Table 24. Net cash income per hour of family labor Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	3.2	1.8	4.7	0.0
Direct and family labor	Yuan	0.7	-0.7	2.2	0.0
Direct costs, family labor and ownership costs	Yuan	-0.1	-1.9	1.8	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	-3.2	-6.7	0.5	0.0

Table 25. Net cash and in-kind income per hour of family labor Dao Bu Chin, Wu Bu Lin Sumu, medium size herder with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	14.7	14.5	14.5	14.9
Direct and family labor	Yuan	12.8	12.7	12.6	13.0
Direct costs, family labor and ownership costs	Yuan	11.2	12.3	11.1	10.6
Direct costs, family labor, ownership, and capital costs	Yuan	3.8	7.9	4.4	1.5

Table 26. Net cash and in-kind income per hour of family labor Bao Shan, Mang Lai Gacha, small size herder/crop farmer with house, Inner Mongolia, China, 2004

Item	Units	Total	Cattle	Goats	Sheep
Direct production cost	Yuan	3.7	2.1	5.4	0.0
Direct and family labor	Yuan	1.2	-0.4	2.9	0.0
Direct costs, family labor and ownership costs	Yuan	0.4	-1.6	2.5	0.0
Direct costs, family labor, ownership, and capital costs	Yuan	-2.7	-6.4	1.2	0.0