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# Investigation and Analysis of Herdsman's Settlement in Xinjiang – A Case Study of Fuhai County

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**Abstract** This paper introduces the status quo of herdsman's settlement in Fuhai County of Xinjiang. As to the herdsman's settlement in this county, there are 5 models: centralized settlement, sporadic settlement, settlement along the river, striped settlement along hillside, flower-arrangement-style settlement. Through settlement, herdsman's production mode changes dramatically, along with concept of production and management. On the one hand, the herdsman enjoys the fruits of economic development of modern society; on the other hand, the natural grassland is protected effectively and border stability is guaranteed. The problems existing in herdsman's settlement in Fuhai County are analysed as follows: first, the funds for building herdsman's settlement are short; second, the natural grassland degrades and the existing forage land is critically insufficient; third, the holistic level of herdsman's settlement is low, and herdsman's production and living mode is backward; fourth, the former settlements lack long-term and systematic planning. By establishing the building standard and principle of site selection regarding settlement, this paper proposes optimization program for herdsman's settlement in Fuhai County, and points out the following measures for guaranteeing herdsman's settlement: increase support for herdsman's settlement, and further ease herdsman's self-fund-raising pressure; accelerate building of forage base so that the herdsman can settle; strengthen technology promotion and scientific training for grass-roots personnel in settlements; focus on solving the problem of follow-up industry concerning herdsman's settlement; combine herdsman's settlement work and pastoral area organically, and promote large-scale herdsman's settlement.

**Key words** Fuhai County, Herdsman, Settlement, China

Herdsman's settlement is an important livelihood project aiming at promoting great development and long-term stability in Xinjiang, a key initiative to improve production and living conditions of ethnic minority people, the need to build harmonious society, and even the need for national solidarity and border stability. Whether the work of herdsman's settlement gains or not, directly impacts the national cohesion and the state's international image. In recent years, through the joint efforts, a large number of herdsmen, by virtue of settlement, free themselves from the traditional nomadic way of life for thousands of years, to embark on the road to prosperity. However, according to statistics, at present, there are still more than 60% of herdsmen in Xinjiang in the nomadic state all the year round. The Party and the state council attach great importance to the development of Xinjiang. The work conference held in Xinjiang in May 2010, formulated a series of special policies, and brought forward the goal of accelerating pace of herdsman's settlement, achieving smooth herdsman's settlement basically within a decade regarding the issue of herdsman's settlement, that is, by 2015, achieving settlement of 106 000 herdsmen, and by 2020, achieving settlement of 169 000 herdsmen in Xinjiang. Fuhai County is a county with prominent characteristics of production mode of traditional animal husbandry, where the herdsmen rove around as nomads or rove in a semi-nomadic state all the years round. The phenomenon of having no fixed

abode or being fixed without the home is rife, and productivity of animal husbandry is very low. So conducting in-depth research on issues concerning herdsman's settlement in Fuhai County, and putting forward corresponding countermeasures and suggestions are of great significance and value.

## 1 Basic information of the study area

Fuhai County is located in northern part of Xinjiang Uygur Autonomous Region, standing at the southern slope of the Altai, south to Gurbantunggut desert. It is in 87°00' – 89°04' E, 45°00' – 48°10' N. It is adjacent to Fuyun County in the east, adjacent to Fukang City, Miquan City, and Hutubi County in the south, adjacent to Hebukesaier County and Jimunai County in the west, connected with Altay City in the northwest, and bordered by Mongolia. The length from north to south is 350 km, and the width from east to west is 25 – 150 km. The total area is 36 543.9 square kilometers. Fuhai County has jurisdiction over 6 townships, 61 administrative villages, 6 neighborhood committees, Fuhai Prison, 5 large military units and 6 county-level institutions. At the end of 2009, the county population was 97 000, and the total population under county was 64 000, composed of Han, Kazak, Hui, Uygur, Mongol, Tatar and other ethnic groups. The total population of farmer and herdsman was 40 000, and animal husbandry population was 16 000. The minority groups (mainly Kazakhs) accounted for 50.4%.

The surface water resources in Fuhai County are rich, and Irtysh River and Ulungur River run across the county. The surface runoff of the two rivers, reaches 4 billion cubic meters. The area of land that is appropriate for cultivation in the county

is 66 700  $\text{hm}^2$ , and 40 000  $\text{hm}^2$  of land has been cultivated. It is continental temperate climate with abundant heat in this region. The average annual sunshine time is 2 900 hours; the total annual solar radiation is 130 kcal/square centimeter; the frost-free period is 150 days, suitable for cultivation of a variety of crops. Fuhai County is one of major animal husbandry base counties in Xinjiang. The total area of natural grassland in the county is 2.33 million  $\text{hm}^2$ , and the total area of natural grassland suitable for animal husbandry is 1.53 million  $\text{hm}^2$ , mainly distributed in high mountainous region, low mountainous region and mountain front of Altai Mountains, vast plains of Junggar Basin in the south, Ulungur River valley and downstream delta.

## 2 The status quo of herdsman's settlement in Fuhai County

**2.1 The overall status of herdsman's settlement** The number of animal husbandry households in Fuhai County is 4 981, a total of 19 729 people. As of the end of 2009, 1 091 households completed herdsman's settlement in the entire county, and 3 966 households did not complete herdsman's settlement. The number of herdsman households which have not yet settled accounts for 78.42% of total number of herdsman households in the entire county. In all herdsman who have settled, 384 households have fully settled, a total of 1 897 people, with net income per capita of 4 636 yuan, housing area per household of 80 square meters (brick-concrete structure), the area of huts per household of 100 square meters, the area of artificial fodder land per household of 40 000  $\text{hm}^2$ , the area of natural grassland per household of 351.60  $\text{hm}^2$ , and 80 livestock per household; 500 households have settled half, a total of 2 489 people, with net income per capita of 4 096 yuan, housing area per household of 70 square meters (adobe-wood structure), the area of huts per household of 80 square meters, the area of natural grassland per household of 351.60  $\text{hm}^2$ , and 70 livestock per household; 3 966 households have not yet settled, a total of 19 767 people, with net income per capita of 4 033 yuan, the area of natural grassland per household of 351.60  $\text{hm}^2$ , and 80 livestock per household.

**2.2 Herdsman's settlement model** There is a diversity of settlement patterns in this county, including centralized settlement, sporadic settlement, settlement along the river, striped settlement along hillside, and lower-arrangement-style settlement. After herdsman settled or half settled, it has changed the former nomadic style of production and living dependent on natural conditions.

**2.2.1 Centralized settlement.** In centralized settlement pattern, in general, each household has 2.00 – 3.33  $\text{hm}^2$  forage and fodder land. The centralized settlements of 100 – 150 households have formed villages. This model can achieve unified planning, unified standards, with well-appointed animal husbandry infrastructure and convenient production. The herdsman settle in their own forage and fodder land orderly, basically achieving the requirements of owning water, grass, land, forests, roads, sty, breeding station, schools, hospitals).

**2.2.2 Sporadic settlement.** The sporadic settlement is

herdsman's self-reliant settlement model. The herdsman themselves input labour, and the main source of capital is the government disaster relief funds, pasture building funds and a small amount of subsidies for growing grass. The herdsman build 2 to 3 shacks and stalls, and 3 to 4 households concentrate. Each household develops 10 to 20 acres of pasture, paddling their own canoe. In this model of settlement and semi-settlement, there is no electricity or road, and sometimes even drinking water is difficult.

**2.2.3 Settlement along the river.** The settlement along the valley is a kind of herdsman's spontaneous settlement pattern, which is mainly distributed in the two sides of Irtysh River and Ulungur River. These settlers have irrigation pastures and natural grasslands. In general, each household has 20 to 30 acres of pasture, and 2 to 15 households live together, with scattered and disorderly residence.

**2.2.4 Striped settlement along hillside.** The herdsman who settle along striped hillside have a small amount of natural grasslands, and reserve certain amount of grass for feeding of livestock in winter. The herdsman in this settlement pattern are still in face of difficult production and living conditions. Although there are schools, shops, clinics and other facilities, the distance is too long, so it is not very convenient.

**2.2.5 Flower-arrangement-style settlement.** The flower-arrangement-style settlement is to settle in agricultural villages and the places near the township government through flower-arrangement-style. Under this settlement pattern, the public service facilities, and living facilities are fully equipped, which is beneficial to changes in the mode of production, but the land needed by production is short, affecting the production of herdsman settling here. In short, in five settlement patterns, the centralized settlement has better conditions and great development potential, in line with the basic requirements of construction of new socialist countryside. In other settlement patterns, the settlement level of herdsman is relatively low, but they can be as the auxiliary settlement patterns for herdsman's settlement, and complementary forms for herdsman's settlement work in those regions which are not equipped with centralized settlement conditions.

**2.3 Analysis of effect of herdsman's settlement** Settlement projects build a platform that can be developed for the production and life of herdsman, solve the herdsman's production mode of breeding livestock dependent on the nature and the living state of wandering about and working very hard. According to the survey, the gap between the herdsman's income per capita and that after settlement, on the average, is 550 yuan, and herdsman's settlement projects show the superiority.

**2.3.1 Herdsman's production mode changes dramatically.** After herdsman's settlement, the former nomadic production and living mode of breeding livestock dependent on the nature and migrating to wherever water and grass are available. The herdsman who settle have the matching forage land and natural grassland. In summer and autumn, part of the forage is stored as the feeding for livestock in the winter, which greatly enhances ability of the animal husbandry production to withstand

natural disasters. According to the survey, in the households which settle, the livestock mortality rate is generally below 0.5%, while in the households which have not settled, the livestock mortality rate is at 3%, and if it suffers from natural disasters, the mortality rate is as high as 10% or more, sometimes even more than half. The survival rate of newborn animal in the households which have settled is higher than that in the households which have not settled by 10 percentage points.

**2.3.2** The concept of production and management changes. The herdsmen who settle gradually walk the path integrating agriculture and animal husbandry, and implement the production mode of growing grass for livestock breeding. And a large portion of herdsmen who have settled, begin to start business, and develop courtyard economy and the specialty aquaculture, extending the agricultural industry chain and broadening sources of income of herdsman. At the same time, the herdsmen who have settled gradually accept the idea of modern market economy, and the herdsmen begin to launch mutual assistance and cooperation, thus the specialized households of grazing, distribution and so on, begin to appear.

**2.3.3** The herdsman enjoys the fruits of economic development of modern society. The public facilities in herdsman's settlements are good, and the living standards of herdsman are improved; in the settlements, the herdsmen have more opportunities to receive training of production techniques, enhancing herdsman's ability to develop production; in herdsman's settlements, the medical conditions are improved, and herdsman's physical quality has been greatly improved; in settlements, the spiritual and cultural life of herdsmen is rich and colorful. The herdsmen who have settled truly have a sense of security when they are old, and the spiritual and material life of herdsmen who have settled has been greatly improved.

**2.3.4** The natural grassland is protected effectively. As for the building of herdsman's settlements, it adopts the principle of "settling down livestock before settling down people, determining the grass before settling down livestock", vigorously develops the building of artificial forage bases. In settlements, the livestock breeding mode is transformed into the breeding mode of feeding livestock in a pen in winter and spring, grazing in pasture in summer and autumn, which effectively solves forage supply problem in winter and spring, reduces dependence on natural grassland, solves the problem of high livestock carrying capacity of pasture, ease the contradiction between people and livestock, between the grass and livestock, conducive to restoration of grassland vegetation and protection of ecological environment.

**2.3.5** The border stability is guaranteed. Fuhai County is a Kazakh-based multi-ethnic gathering area, and the ethnic minority population accounts for more than half of the total population of Fuhai County. Over the centuries, the diligent and intelligent Kazakh make an outstanding contribution to exploitation of the motherland territory, economic development, and the cultural prosperity. The animal husbandry in Fuhai County long depends on nomadism of Kazakh herdsmen in four seasons. The border line of Fuhai County is as long as 65 km, bordering Mongolia, Russia, and Kazakhstan. Good herdsman settle-

ment project will help strengthen national unity, promote economic prosperity in ethnic minority areas, maintain political stability and prosperity in border areas, and consolidate the motherland border.

### 3 The problems existing in herdsman's settlement in Fuhai County

**3.1 The funds for building herdsman's settlement are short** Because herdsman's income in Fuhai County and even the Altay region is low, there are many local financial difficulties, and it lacks the large state project inputs, so only relying on local finance to complete the work of herdsman's settlement is unrealistic, needing manifold financial support. According to the current price level, the building of living facilities of each herdsman household which has settled, needs investment of 70 000 to 80 000 yuan, the subsidy of the county finance for each household is about 20 000 to 25 000 yuan, and the herdsmen have to raise 40 000 to 50 000 yuan by themselves. By estimates of income of herdsman in whole region, except for a few wealthy households, most of the households have meagre income and lack self-accumulation, with too heavy financial burden, and some even lose reproduction ability, so that the enthusiasm of herdsman's settlement is not high.

**3.2 The natural grassland degrades and the existing forage land is critically insufficient** In the natural grassland of Fuhai County, the carrying capacity of grazing is overloaded, and 40% of usable grassland in the whole county degrades, and the seriously degraded grassland accounts for 40%. As the population in pastoral areas grows rapidly, the labour forces are surplus, the owning amount of livestock per capita is relatively small, and the contradiction between grass and livestock, between human and livestock stands out, having a great impact on improvement of animal and husbandry economy and herdsman's life quality. In current Fuhai County, there are 0.2 million acres of artificial grassland, mainly distributed in the valley area, which is used to meet the production needs of farmers and herdsmen that have settled. If according to the matching requirement of 12 acres of forage land per capita in settlements, Fuhai County needs to establish 0.208 million acres of new forage land, to meet the supporting standard of forage land in settlements. The water and soil resources in Fuhai County are rich, but the seasonal water shortage is serious. Since the controlling water conservancy construction lags behind, the building of forage bases can not be carried out simultaneously with settlement projects, and there is a serious shortage of forage, affecting the progress and effect of herdsman's settlement project.

**3.3 The holistic level of herdsman's settlement is low and herdsman's production and living mode is backward** Currently, 3 966 herdsman households have not realized settlement standard in Fuhai County, and the proportion of herdsmen having not settled is 78.42%. These herdsmen having not settled adopt traditional nomadic way of living and production, of no fixed abode, moving from place to place in search of water and grass. Annually, they move dozens of times, even

hundreds of times, and trek thousands of kilometers. They long endure the hardships of an arduous journey, and many herds-men suffer from arthritis, ulcers and other diseases. Some of the herdsman's children are placed in boarding school, becoming a generation of "unattended children" on the prairie, and some herdsmen households lack labour forces, the young children of herdsman also become nomadic herdsman, unable to receive the normal education.

**3.4 The former settlements lack long-term and systematic planning** The former planning of settlements in Fuhai County is devoid of systematicness, so that the forage land and irrigation and water conservancy facilities of some herdsmen who have settled are not complete and perfect; the soil texture of farmland assigned to herdsman is poor, with serious salinization and low land yield benefits; the superiority of herdsman's settlement is not fully reflected; the production and living of herdsmen who have settled is ineffectively improved. For some herdsmen who settle dispersedly, lighting, drinking water of animal and human and other basic survival issues have not yet resolved, and the supporting facilities are not perfect, which causes these herdsmen go back again to nomadic life, detrimental for herdsman to shake off poverty and lead well-off life.

## 4 Optimization program for herdsman's settlement in Fuhai County

In the process of promoting herdsman's settlement projects, we should combine fostering new herdsman, establishing new pastoral area and developing modern animal husbandry organically; guide the herdsman to shuck off nomadic life, go out of the mountains, walk toward prosperity, and share civilization; promote fundamental change in herdsman's production and living mode and sustainable socio-economic development of pastoral area; establish new pastoral areas with affluent life, harmonious civilization, and good ecology.

**4.1 The building standard of herdsman's settlement** The construction of herdsman's settlements should be implemented in accordance with the standard as follows: first, having tap-water, having electricity, having roads, having radio and TV, having telephone; second, having house, having stalls, having forage land, having trees around court walls, having silo, that is, each household has house more than 60–80 square meters meet the seismic requirements of housing project for low-income urban residents, over 50 acres of forage land with perfect water conservancy facilities, stalls above 100 square meters with high standard, over 50 cubic meters of silo, trees around court walls with neat layout; third, the supporting technical service system in settlements, supporting cultural rooms, supporting schools, supporting clinics, supporting shops and other public facilities. By standard construction, it makes the herdsman completely away from the nomadic living and production state of no fixed abode, wandering about; it makes the herdsman have neat, clean, and convenient settlement houses with good anti-seismic performance; it makes the herdsman use strong warm livestock stalls; it makes the herdsman have access to safe water and electricity; it makes the herdsman real-

ize breeding livestock in stalls in winter and grazing in summer. In a nutshell, the standard construction lays a solid foundation for herdsman to shake off poverty.

### 4.2 The principle of site selection regarding herdsman's settlement

**4.2.1** We should facilitate herdsman's living and production on the spot or in the vicinity. Settlements should be selected in habitable areas in herdsman's grazing routes as far as possible. It should rely on existing settlements and villages, to ensure water supply, electricity and road security, facilitate herdsman's grazing and living, as well as schooling of herdsman's children. It should avoid large-scale dismantling and construction, and long-distance relocation.

**4.2.2** The settlement construction should avoid earthquake-prone areas, storm-prone areas and other disaster-prone areas. In the settlements to be established, the hydrological condition, meteorological condition and other conditions should meet the requirements of settlement: the ground is fair, the geological structure is good, obtaining materials is easy and the climate is suitable. It should meet the seismic requirements, choose safe areas for construction and avoid the areas with security risks of earthquake, storms and other disasters.

**4.2.3** The settlement construction must not occupy farmland and basic grassland. *Land Law of the People's Republic of China* clearly provides that we should strictly restrict the conversion of agricultural land into construction land, control the total amount of construction land, and conduct special protection on arable land; any institution and individual which uses land must strictly determine the use of land according to the overall planning of land use. So when Fuhai County chooses herdsman's settlements, it should fully take counsel from the local planning departments and land departments, ensure the connection with local land planning, urban construction planning, industrial development planning and other planning, and avoid the occupation of farmland and basic pastures.

**4.3 Layout of herdsman's settlement** 8 standardized herdsman's settlement areas and 37 herdsman's settlements are built in a centralized manner. The water and electricity supply facility, health care facility, schools, settlement management centers, technical service stations, roads, biogas project and other supporting facilities are also built. These 8 standardized herdsman's settlement areas are Huanghuagou Area, Huangerhai Area, Beiganqu Area, Qibawoyi Area, Halabiya Area, Akedala Area, South Bank Area of Wu River, Saerkumu Area. The specific layout can be shown in the following table.

## 5 The measures for guaranteeing herdsman's settlement

**5.1 Increase support for herdsman's settlement and further ease herdsman's self-fund-raising pressure** For the low-income herdsman, self-raising funds of 40 000 to 50 000 yuan are far more than the funds that the majority of herdsman households can afford. Therefore, we must increase investment in herdsman's settlement project. On the one hand, Fuhai county government should increase investment in herdsman's

settlement, incorporate the building of herdsman's settlement project into social undertaking development and infrastructure building planning and the county budget, and provide financial support for herdsman's settlement; on the other hand, it should grasp the policy opportunities of counterpart support, take advantage of support projects of Daqing and capital for Fuhai

County, to vigorously promote herdsman's settlement project; thirdly, it should take full advantage of the national support funds, mainly by virtue of funds of comprehensive agricultural development, poverty alleviation and other projects, to accelerate the pace of herdsman's settlement.

**Table 1 Layout of herdsman's settlement in Fuhai County**

Area name	Area layout
Huanghuagou Area	100 households per village on the average in Tuoshialeyi Village of Xie Township, Ahekaireshi Village of Ka Township, Akewutikule Village of Kuo Township, Saertele Village of Ka Township, Mieketiefu Village of Qi Township.
Huang'erhai Area	200 households, 989 people in Bozitala Village of Xie Township; 80 households, 409 people in Hezilewuyingke Village of Qi Township; 20 households, 93 people in Xiaosaikelu Village of Qi Township.
Beiganqu Area	120 households, 582 people in Die'en Village of Ka Township; 180 households, 889 people in Halasu Village of Ka Township; 190 households, 950 people in Kaerwutikeli Village of Ka Township; 50 households, 263 people in Kailetiekai Village of Ka Township; 40 households, 196 people in Saerkumu Village of Ka Township.
Qibawoyi Area	60 households, 288 people in Kuokeye'ertu Village of Hashiyun Township; 160 households, 785 people in Buerlie'ke Village of Kuo Township; 100 households, 487 people in Qibawoyi Village of Kuo Township; 150 households, 686 people in Qiganjidie Village of Qi Township; 80 households, 409 people in Saikelu Village of Qi Township.
Halabiya Area	110 households, 545 people in Aleha Village of Xie Township; 60 households, 297 people in Halabiya Village of Xie Township; 160 households, 739 people in Halatie'resiken Village of Xie Township; 80 households, 381 people in Xitearele Village of Xie Township; 90 households, 419 people in Jingshikaisa Village of Xie Township; 60 households, 311 people in Malahai Village of Xie Township.
Akedala Area	40 households, 218 people in Akezhela Village of A County; 196 households, 988 people in Duzigende Village of Kuo Township; 170 households, 808 people in Kuokezhuoerga Village Kuo Township; 100 households, 523 people in Akedala Village of Qi Township; 70 households, 362 people in Saerbulake Village of Qi Township.
South Bank Area of Wu River	90 households, 478 people in Akearele Village of Ka Township; 50 households, 244 people in Halahuoying Village of Ka Township; 80 households, 409 people in Akeareli Village of Kuo Township; 180 households, 948 people in Qileharen Village of Kuo Township; 100 households, 509 people in Bolie'ketuobie Village of Qi Township.
Saerkumu Area	120 households, 592 people in Saerhumulao Village of Ka Township; 170 households, 853 people in Tangbala Village of Ka Township; 110 households, 573 people in Woyikuola Village of Ka Township.

## 5.2 Accelerate building of forage base so that the herdsman can settle

According to the needs of ecological environment protection and building of China's Western Development, it should not only achieve the goal of protecting and improving grassland ecology, but also achieve the "win-win" goal of poverty alleviation and affluence for the herdsman<sup>[1]</sup>. The key is to strengthen the building of artificial forage base in the pastoral areas, and enhance the supply capacity of forage. Only by solving the supply problem of forage for livestock, can we make the livestock in pastoral areas retreat from the overloaded natural grassland, can we move the herdsman from the areas with the serious ecological problems<sup>[2]</sup>. Construction principle should be based on determining land according to the land. From the long-term consideration, we should keep soil and water balance, and avoid new grassland degradation. Construction mode is focused on development of linked pieces of conserved lands, complemented by scattered or sporadic development, to conduct unified planning, unified organizing, unified construction, household contract, household operation, and household benefiting. According to the measuring basis of program research on Xinjiang herdsman's settlement and forage land building, we can adopt the following parameters: providing 1.8 kg of forage (dry matter) to each sheep per day can meet the nutritional needs; in accordance with the ratio of 4:4:2 of grass, silage, and feed, the planting ratio of artificial forage land is appropriate (12 000 kg/hm<sup>2</sup> of hay yield in pasture, 67 500 kg/hm<sup>2</sup> of yield per unit of silage, 10 500 kg/hm<sup>2</sup> of yield per unit of corn in forage land, 15 750 kg/hm<sup>2</sup> of yield per

unit of byproduct of corn stalk) (the ratio of staple products and byproducts is 1:1.5)<sup>[3]</sup>.

## 5.3 Strengthen technology promotion and scientific training for grass-roots personnel in settlements

With the continuous advance of herdsman's settlement, technology is increasingly important for the herdsman. Therefore, in the process of herdsman's settlement, we should always adhere to the principle of relying on science and education to rejuvenate animal husbandry, to continuously improve the contribution of science and technology to animal husbandry. We should also pay attention to the value-added practical technologies, and improve the quantity and quality of animal products<sup>[4]</sup>. Cultivating and fostering a large number of grass-roots technology professionals, and continuously improving the quality of the vast majority of farmers and herdsmen have become two urgent tasks. It is required to improve the herdsman's professional knowledge and skills; promote advanced science and technology of animal husbandry; speed up conversion of scientific and technological achievements; carry out science and technology training, science popularization lectures and so on, to continuously improve the scientific and cultural quality of herdsmen<sup>[5]</sup>. The scientific workers should take advantage of fallow season to carry out the activity of "Technology Winter", and other forms of animal husbandry technical training in settlements, in order to foster and create a large number of new herdsmen with awareness of market economy, who can use science and technology to breed livestock, and effectively promote the modernization of grassland animal husbandry.

**5.4 Focus on solving the problem of follow-up industry concerning herdsman's settlement** The prominent increase in herdsman's income after settlement, on the one hand, hinges in a large measure on the fundamental change of traditional economy and production mode, and on the other hand, depends on opening up new employment opportunities. The traditional animal husbandry has short industry chain, which is low value-added industry, so it is difficult to solve problems of herdsman's income and employment. Therefore, herdsman's settlement must rely on the development of modern agriculture and animal husbandry. A settlement without industry support, must be a settlement with weak economic base, unsound function, and insufficient development impetus, so we have to pay attention to follow-up industry development of herdsman who have settled. First, the government should vigorously support the development of non-agricultural industries and specialty industry in pastoral areas, in order to create more employment opportunities for herdsman who have settled. From some settlements with good basic conditions and potential for agricultural development, we should vigorously support the herdsman to develop agricultural production, and implement integration of agriculture and animal husbandry. When implementing capital inputs into the pastoral areas, we should increase the inputs of productive capital, and solve the follow-up industry problem of herdsman realizing settlement to the extreme, so that herdsman who have settled can settle themselves down and get rich. We have to remove barriers for the herdsman to go to city, loosen employment and settlement conditions in the city, optimize the policy environment for herdsman to settle in the city and start business, and protect the legitimate rights of migrant workers, so that they can enjoy the same national treatment as urban residents. We should formulate *Preferential Methods for the Herdsman's Settlement* in the City as soon as possible, to encourage and guide the herdsman to settle in the city. Second, we should combine herdsman's settlement with poverty alleviation and development, aseismic buildings, new rural construction, preventing diseases, education, sanitation, and other projects that benefit people, with the development of "two-river" basin and other major projects; implement the supporting project planning of herdsman, grass and livestock; improve the level of work for herdsman's settlement as quickly as possible, to lay the building foundation for change from traditional animal husbandry to modern animal husbandry. Third, the building of health care, information, finance, commerce and other social service systems in pastoral areas, is not only an important part of herdsman's settlement building, but also an important condition for the development of social productive forces in pastoral areas, so we should further strengthen and improve the building in the process of herdsman's settlement<sup>[6]</sup>.

**5.5 Combine herdsman's settlement work and pastoral area organically, and promote large-scale herdsman's settlement** After the herdsman's living way changes from nomadic pattern to settlement, the urbanization process will also be started. The herdsman's settlement will promote the forma-

tion of villages, and cities in pastoral areas. The herdsman's settlement interacts with the building of small towns. The herdsman's settlement provides the accumulation of population, capital and other factors for the building of small towns, while urbanization creates good living environment and development space for herdsman's settlement, conducive to transfer of surplus labour in pastoral areas, and the development of culture, science and technology, education, medical care and other undertakings, which is the development direction of herdsman's settlement building. With enhancement of level of marketization in pastoral areas, rapid pace of urbanization, diversification of industrial structure, increase in the herdsman's income, the herdsman's living mode also has a new trend to settle in small cities or towns, especially after the government implements the herdsman's off-site removal, flower-arrangement-style settlement, centralized settlement and other patterns, and new building policy of pastoral areas<sup>[6]</sup>.

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