

cooperatives of Bayabdavaa in Uyanga (Övörkhangai Aimag), Bayansukhait in Bayanlig Som (Bayankhonor Aimag), and Arvijikh in Otgon Som (Zavkhan Aimag) in engaging in wooden work, and those of Taikh in Dorvoljin Som (Zavkhan Aimag) in producing felt shoes.

2.6 Condition of Rural Society

2.6.1 General

The herders' population increased from 127,600 in 1988 to 390,500 in 1995, and the number of herders' households also increased from 66,300 in 1988 to 169,300 in 1995. The total population of the herders' families is estimated at about 740,000 or 32% of the total national population of 2,318,000. The average livestock population per household increased from 110 heads in 1990 to 156 heads in 1995 at an annual growth rate of 7.2%.

The situation of the herders' life in the rural areas has drastically changed after the economic transformation. In order to clarify the present living condition of the herders and farmers as well as their needs and desire for agricultural cooperatives, a questionnaire survey of rural households was conducted. The total number of sampled households was 184 consisting of 176 herders' households, whose income was mainly derived from livestock rearing through nomadic system, and 8 farm households whose income is mainly generated by the crop production. All the farm households breed livestock. Of the total sampled households, 79 households or 43% were members of agricultural cooperatives, and 105 households or 57% were non-members. The results of the survey are described in the following sections.

2.6.2 Socio-economic Condition of Herders and Farmers

(1) Household

The average family size is about 5.5 persons consisting of 2.8 males and 2.7 females in the sampled households. The largest family size is 11 members, and the most frequent family size is 5 members. The family members in working age, who are 16 to 59 years old for male and 16 to 54 years old for female, is 2.9 persons on average, and the maximum is 7 persons.

(2) Education Level of Family Members

As for the education level of household heads, 16% of the household heads did not graduated from elementary school, 38% graduated from elementary school, 36% graduated from secondary school, 6% graduated from high school, and 4% graduated from vocational school. For the family members in ages between 8 to 15 years old, 43% do not attend the compulsory elementary and secondary schools. The enrollment rate in compulsory schools has been lowering in the rural area since 1990. This is due to insufficient income to pay the cost for education, particularly for boarding schools in the Som center, and shortage of family labor force.

(3) Previous Occupation of Household Heads

Of the 176 herders' households, 56 households or 32% are those which recently became herders' households from other occupation. The heads of all the crop cultivation households were formerly tractor operators or mechanics of Negdels.

(4) Situation of "Khot ail"

In the Mongolian nomadic herding practices, the traditional custom of "Khot ail" plays an important role in livestock raising by sharing labor force within several households. 56% of the sampled households form Khot ail with an average size of 2 to 3 families.

The situation of Khot ail varies depending on the agro-ecological region. In Khangai-Khövsgol and Central and Eastern Steppe, Khot ail are formed in 70% to 90% of herders' households. In the Altay and Gobi Desert, on the other hand, Khot ail are formed only in 24% to 37% of herders' households.

(5) House Keeping and Herding Work

The main water source is well and rivers (small streams) in the summer season, and well, snow and ice in the winter season. All the family members are involved in taking water from the source, and 25% of the households use animal cart for transportation. About one third of the respondents answered the water taking work is hard.

The main house keeping activities such as cooking, washing clothes and sewing are done mainly by females. Herding livestock is undertaken by males. In the season of peak labor requirement, females are over-working with wool clipping, cashmere hair combing, taking care of off-springs, milkings and preparation of hay.

(6) Social Services

Before the economic transformation, major social services were provided by the Som administration and Negdels. After dissolution of Negdels, these services were drastically diminished due to limited financial sources provided by the Government, even though they are essential for herders' life.

The facilities for social services are usually located in Som centers and sometimes in Bag centers. Therefore, the distance of herders' households from the centers of Som and Bag is one of the limiting factors. The sampled households are located 19 km from the Bag center and 32 km from the Som center on average.

(7) Housing Facilities and Equipment

The main transportation measures for shifting pasture is animal cart, owned by 68% of the sampled households. About 12% have tractors, trucks and vehicles. Motorcycles are also possessed by 24% of the sampled households. Radio, binocular and sewing machine are popularly used by herders. As for power supply, 18% of the sampled households have generators, solar batteries and wind mill generators and utilize such electronic appliance as TV, radio, tape player and lighting.

Regarding farmers' households, most have tractors or vehicles or motorcycles. The sampled farm households are usually located in the Som center or Bag center, and they have houses and electric supply. Electronic appliances are popularly utilized in the households.

(8) Nomadic Movement

The average herders' households move about 90 km 6.5 times in a year. In winter the herders' households stay in winter shelters in order to minimize damage by cold and snow, and move in spring to pastures for the delivery of offspring. Then, they move to several summer camps to feed good grass for fattening livestock. The maximum moving

times in a year are 31 and the longest distance is 545 km annually in the Altay region. Under the better condition of pasture, some herders move only several km 2 or 3 times only. Moving is carried out mainly by animal cart, and vehicles and tractors are utilized in some cases.

(9) Livestock Holding Size

The average livestock holding size is 222 heads per household, ranging from 12 to 1,469 heads. In addition, 64 households or 36% of the sampled households are raising livestock entrusted by other households or organizations. As a result, the total holding size is about 270 heads per household including owned and entrusted livestock.

The livestock holding varies by agro-ecological region depending on the carrying capacity and grass quality of pasture. The largest holding size is 344 heads in the Altay region and the smallest is 191 heads in Khangai-Khövsgol. However, the holding size includes various composition of large and small animals. In order to adjust the difference of animal composition, the livestock is converted to sheep unit (SU). The result shows that the regional variation in holding size expressed in SU becomes small, ranging from 540 SU to 679 SU.

(10) Livestock Production

The livestock is composed of 2% of breeding males, 37% of reproductive female animals, 27% of offspring, and 34% of others including working animals or those under fattening. The parturition rate of female animals is 75% on average. The parturition rate of cattle and sheep is about 79% to 83%, while that of horse and goat is 63% to 67%. A limited number of households are raising breeding males. Of the 86 households owning camels, only 9 households own breeding males.

In 1995, the total number of livestock increased 27% by off-springs but, on the other hand, it was reduced by 28% by sales, self-consumption of herders' families, gifts and other loss due to diseases and natural disasters.

(11) Sales of Livestock Products

Herders sell their products mainly to naimmachines (private traders): 67% of

households sell live animals and animal hair, 69% skin and hide, and 47% dairy products. To agricultural cooperatives, 15% of herders households sell animal hair and 11% sell dairy products. Makha Impex is also a larger channel for selling live cattle.

Herders households sell their products and usually receive not cash but daily goods, since no shops are available near their living areas. The prices of products and commodities are decided through negotiation between traders and herders. This trading system is convenient for herders to obtain daily commodities, however, the process of price formation is not clear. Herders usually feel the prices are not fair because they have almost no information on marketing of products and commodities.

(12) Constraints and Requirement on Livestock Production

Regarding health and sanitation, 68% of the respondents answered they want better veterinary services. Enough supply of medicines and improvement of sanitary condition were also requested.

Variety improvement was not much concerned by the respondents, at the moment. Most herders understood that variety improvement would be effective for higher productivity and better quality of products.

As for feed and fodder, supplemental supply of feed and fodder in the case of natural calamity like heavy snowfall or dry spell was required. Herders expressed the needs for sufficient supply of fodder of lower and stable prices.

Water points are essential for grazing livestock, and the improvement of water source with better quality was demanded mainly by households living in the Gobi Desert and Central and Eastern Steppe regions.

Herders cited the limited sales opportunity as one of the severe constraints. Herders sell their products to private traders without competition among traders, and they feel that this situation is not advantageous to them. According to the sampled herders, opportunities of marketing products in cash at stable price are also highly required. In addition, some herders suggested that processing facilities will be effective for selling products.

Damage by wolves has been increasing in recent years. Associated hunting was

requested to be organized by respondents, particularly herders in the Altay region.

Deterioration of grazing capacity was mentioned by some respondents in the Altay and Khangai-Khövsgol regions. According to the interview, the density of grazing has been increasing recently, and they need to shift their livestock more frequently than before. The herders in those areas requested regulation by the Government like scheduling of pasture utilization, demarcation of pasture, and discussion between herders.

(13) Income and Expenditure

The average income is Tg.658,200, consisting of Tg.476,900 from livestock sales, Tg.56,600 from crop production, and Tg.124,700 from other income as shown in Table 2.6.6. The average income in the Khangai-Khövsgol region is lower than in other areas, because herders raise less goats and sell a small amount of cashmere. On the other hand, the livestock income in the Gobi Desert is higher than in other regions since the proportion of goats in livestock is higher and much cashmere is sold. In the Central and Eastern Steppe region, 58% of other income is generated from wage and remittance, then other income is much higher than in other regions.

The average expenditure is estimated at Tg.592,500 per household, and 86% of which is living cost, as shown in Table 2.6.1. In the average living cost, 45% is spent for food and 27% is clothes and shoes. The balance of income and expenditure of the average household is estimated at Tg.65,700 or 10% of gross income. Total expenditure is not covered by the production activity of herders and crop production. This shows that herders and farm households' budget heavily depends on other income.

2.6.3 Perception and Wishes of Herders and Farmers for Agricultural Cooperatives

(1) Situation of Members

1) Reason for Participation

According to the respondents who participate in agricultural cooperatives, the main reason for their participation is to receive the same kind of production and social services as those provided by Negdels, because most cooperatives have been established based on the former Negdel system. The second major reason is to secure a channel for sales of their

products and purchase of daily necessities.

2) Activities of Cooperative

On the performance of ACs, 41% of the AC member respondents replied as satisfactory and the rest of them gave negative opinions. One fourth of the AC member respondents thought the activities were less active than they expected.

3) Participation to Cooperative Activities

Only 32% of the members are participating positively in selling their products and purchasing daily commodities through the agricultural cooperatives. The remaining 68% are not participating, and this means that they sell their products and purchase daily goods through other channels.

(2) Reason for Non-participation in Cooperatives

About one fourth of the respondents who don't participate in agricultural cooperatives have cooperatives within the same Som. Those respondents could be classified further into two categories. The first category, representing about 10% of the respondents, includes those who have enough economic activities and can procure necessary services by themselves. The second category includes those who left the cooperatives, and who feel difficult to joint again.

More than half of the non-AC member respondents answered that they don't have a cooperative to participate in within the same Som, and they don't have enough fund as well as knowledge and experience to establish a cooperative.

(3) Knowledge of Cooperative Principles

The sampled households were inquired about knowledge and understanding of the cooperative principles. 61% of them had already known the principles, and 34% understood the meaning of principles.

(4) Necessity of Cooperatives

About 80% of the respondents answered that a certain organization like cooperative is necessary to support their production and daily life. The people in rural areas expect those services to be provided by agricultural cooperatives.

(5) Cooperatives Activities Requested by the Respondents

The majority of respondents indicated they are interested in the sales and supply activities of the cooperatives, since they usually have difficulty in selling their products and purchasing daily necessities. They also mentioned banking and credit function as the second probable activities of cooperatives. Other activities such as processing, insurance and collective contracts are also desired by more than half of the respondents. It is expected that increase of the value of products, stabilization of the supply of daily goods, and creation of employment opportunities will be induced by the processing activities.

2.7 Administration and Agricultural Support Services

2.7.1 General

In the process of structural reform and transition to the market economy from the centrally planned economy, significant changes occurred in public administration. Under the previous system of command economy, line ministries, notably the Ministry in charge of the agriculture sector, carried out policies and plans through direct control of all activities related to their sectors. Direct control of state farms and Negdels was the fundamental feature of the system.

The name and mandate of the Ministry in charge of the agriculture sector changed successively, i.e. Ministry of Agriculture and Food Industry (1986-1990), Ministry of Agriculture, Light and Food Industry (1990), Ministry of Agriculture (1990-1994), and Ministry of Food and Agriculture (1994-1996). In August 1996, the Central Government Structure was reorganized, reducing the 13 ministries to 9 ministries, among which the three Ministries of Food and Agriculture; Trade and Industry; and Energy, Geology and Mining were totally or partially merged into the new Ministry of Agriculture and Industry (MAI). A reorganization chart of the ministries is shown in Fig. 2.7.1

2.7.2 Ministry of Agriculture and Industry

The organizational structure of the MAI was initially composed of 5 departments; Agriculture Department, Geology and Mining Department, Industry Department, Trade Department, and Cooperation, Legislation and Information Department under the leadership of the Minister and the State Secretary. Further in June 1997, the structure of MAI has been reorganized as shown in Fig. 2.7.2. The new structure of the Ministry of Agriculture and Industry consists of 4 departments (Strategic Planning and Unified Policy Department; Sectoral Policy Implementation and Regulation Department; Information, Monitoring and Evaluation Department; and Administration and Management Department). The Strategic Planning and Unified Policy Department consists of 3 teams (Food and Agriculture Team; Trade and Industry Team; and Geology and Mining Team), the Sectoral Policy Implementation and Regulation Department of 2 teams (Project and Program Implementation Team; and Policy Implementation Team), and the Information, Monitoring and Evaluation Department of 2 teams (Monitoring and Evaluation Team; and Information Team). The total number of staff members of MAI including the Minister is 83 at the moment. Separate from the internal structure of MAI, 3 regulating agencies (State Agriculture Inspection Agency; State Trade and Industry Inspection Agency; and State Geology and Mining Inspection Agency), 3 implementing agencies (State Reserve Agency; Mineral Resources Implementing Agency; and Agricultural Implementing Agency), and the Agricultural Research and Extension Center are attached to MAI, under the direct supervision of the Minister but funded separately from the Ministry.

The successive reorganization resulted in a sharp decrease of staff members of the Ministry, of which the major roles and functions are the formulation of policy, planning, programming and monitoring at the central level, while various administrative and technical support services are transferred to either local governments or inspection/implementing agencies.

Major roles and functions of the respective departments are as follows:

- 1) Strategic Planning and Unified Policy Department
 - (i) Long and short-term policy guidelines for the agricultural and industrial sectors
 - (ii) Development of programs and projects in the agricultural and industrial sectors

- (iii) International cooperation in the sector.
- 2) Sectoral Policy Implementation and Regulation Department
 - (i) Consolidation and coordination of the policy implementation activities
 - (ii) Coordination in implementation of policy, planning, programs and projects
- 3) Information, Monitoring and Evaluation Department
 - (i) Monitoring and evaluation of implementation of policy, planning, programs, projects, and treaties and contracts on cooperation
 - (ii) Increase in efficiency and effectiveness of the sectoral activities and establishment of a reporting and account system
- 4) Administration and Management Department
 - (i) State administrative leadership
 - (ii) Human resources management leadership

Agencies attached to the Ministry as mentioned are summarized as follows:

(1) State Agriculture Inspection Agency

The Agency, established in June 1997, deals with inspection and certification activities related to the agriculture sector. These include animal and plant quarantine, seed control and testing, and inspection of fertilizers, agricultural chemicals and veterinary drugs.

The Agency consists of 5 departments: Veterinary and Farming Department, Animal and Plant Quarantine Department, Agriculture and Plant Protection Department and Financial Department. Under these departments, there exist a number of divisions, laboratories and inspection offices both at central and local levels. Fig. 2.7.3 shows the organizational structure of the Agency. It should be mentioned that the 5 departments, the Border Quarantine Control Division, and the Internal Control and Certification Division are directly controlled by the Agency, whereas others are mostly independently managed or funded by local governments although technical supervision and direction are provided by the headquarters of the Agency.

(2) State Reserve Agency

The Agency was established in 1996 when the Ministry of Agriculture and Industry was formed. The agency aims at providing necessary relief actions in case of natural calamities such as drought, heavy snowfall, earthquake, forest fire, etc. For these, food (wheat, wheat flour), animal feed (hay and feed concentrates) and crop seeds are reserved for emergency requirement. In addition to the provision of commodities responding to the emergency needs, rescue services for human lives are also to be provided. Food aid commodities from overseas are reserved and controlled by the Agency. Animal feed is provided by the Agency usually in winter to the areas indeed deficit, in place of the former State Emergency Fodder Fund. The total number of staff members including the Director is only 8, therefore actual procurement and delivery activities are entrusted to the existing organizations or local governments, limiting the major function of the Agency to the planning and coordination of the services.

(3) Agricultural Implementing Agency

The Agency, established in June 1997, aims at providing major technical services to the farmers/herders such as veterinary service, animal breeding service, and plant protection service. The present organizational structure is shown in Fig. 2.7.4. The Agency has 4 Divisions (Administration, Veterinary Service; Livestock Breeding and Agriculture; and Plant Protection) at the central level and the 2 Divisions (Veterinary Service and Livestock Breeding) with their respective services at Aimag and Metropolitan areas. Further, there exist Veterinary and Animal Breeding Services at Som and City levels. The total number of staff members is 27 at headquarters level, while that in Aimag and Metropolitan areas is around 20 for veterinary services and 7-8 for animal breeding. In the case of Som, around 10 staff are to be located for veterinary and breeding services, however, practically no enough fund is available in the Som administration budget. Therefore, some agricultural cooperatives provide those services with their own fund.

(4) Agricultural Research and Extension Center

The center was created in 1996 when the new Ministry of Agriculture and Industry was formed, after the merging of 3 ministries in August 1996. The Center succeeded the function of the Extension and Training Division of the former Ministry of Food and Agriculture and expanded its activities. Extension system is rather new one in Mongolia.

At present, the Center consists of 4 Divisions; Crop Division, Livestock Division, Farm Economy and Finance Division, Publication and Information Division, and Administration Division with 13 staff members at the headquarters in Ulaanbaatar. Regional agricultural research centers and a research station are closely knitted to the system of extension services. Extension services provided directly by the Center are technical advice and technical information services through TV and radio. With regard to technical advice, actual involvement of the Center in individual guidance at the field level is naturally limited due to a scarce specialists and being made mostly upon the request basis. Major part of field extension carried out by consultants at Aimag and Som levels. Therefore, extension workers, who are so popular in other Asian countries, do not exist in Mongolia. Consultants provide technical advice upon request to individual farmers, herders, companies and cooperatives on a contract basis. Regional agricultural research centers/stations are expected to play an important role by providing expertise to consultants and also obtaining information on the needs and constraints faced at the field level from the consultants. Current information on technology and market is diffused under a program of radio broadcasting 3 times a week, and TV broadcasting 3 times par month, each for 30 minutes.

2.7.3 Agricultural Support Services

The shift to the market economy and subsequent reorganization of governmental structure, especially of the Ministry in charge of the agriculture sector, affected heavily the system of agricultural support services. A simplified government structure and orientation to the market economy induced the principle of either privatization or cost recovery on the part of agricultural support services. The level and magnitude of service delivery declined substantively, the main reason of which being financial constraint.

(1) Agricultural Input Supply

In the former days, imports of major agricultural inputs, agricultural machinery, equipment, fertilizers and others were monopolized by the Agricultural Input Import Supply Corporation (AIISC). After renovation, the import of these commodities which had mostly depended on the Soviet Union, declined drastically due, on the one hand, to the political and economic changes in Russia and, on the other hand, to the economic constraint in the country. Tractors, combines and spare parts essential to crop production were not imported for several years and most machinery is aged, requiring supply of spare parts. Fertilizer import also declined sharply, forcing most wheat producers to stop fertilizer application,

which resulted in yield and output deterioration. ASIICs activities declined substantially, due to the depletion of working capital caused by inflation and the devaluation of the local currency during the renovation process, and have been focused on privatization scheme, leaving the function of supply to the private sector. A certain development is expected in this approach, but no visible solution has so far been identified.

In the case of private herders, their agricultural input requirements are comparatively limited, as the nomadic livestock production practice is common, except feed requirement in case of emergencies caused by natural calamities. Therefore, most hardly hit by the structural changes are the crop sector and intensive mechanized dairy farms depending on imported agricultural inputs. These are clearly shown by the sharply negative production trend of wheat and milk in recent years.

(2) Agricultural Extension

In the days of centrally planned economy, agricultural production was managed almost entirely by two sectors, the state farm sector and cooperatives sector. Those farming units had agricultural specialists of their own, and improvement and introduction of technologies were usually done through regular meetings and conferences of these specialists. After dissolution of state farms and Negdels, most of those agricultural specialists were forced to leave those farms, some of them finding jobs as managers of newly established companies or other private sectors. Since private farmers, especially herders had been a sort of wage earners under the previous system, they are not well acquainted to the total system of farming. Therefore, extension services became an urgent issue to be focused. The present system requires further verification of its adaptability to the specific condition surrounding Mongolian agriculture, as the extension itself is quite new exercise in the country. Limited human resources at the headquarters, with widely and sparsely spread beneficiaries, make the introduction of the system usually adopted in other Asian countries very difficult, especially from the viewpoint of cost effectiveness. Linkages among the center and research institutes and private experts (consultants) are rather arbitrary which may limit the effective and timely delivery of the extension services.

(3) Research

Agricultural research, including education is comprehensively dealt by the Mongolian National Agricultural University (MNAU) under the Ministry of Enlightenment,

the former Ministry of Science and Technology. In 1993, MNAU was established through merging of the Agricultural University, agricultural research institutes, agricultural vocational schools, and secondary schools.

Among 19 research institutes, six are national and the others are regional institutions. Major research institutes include the Plant Science and Agriculture Research Institute, Research Institute of Animal Husbandry, Veterinary Research Institute, and Agricultural Economics Institute. Research institution networks are comparatively well developed in Mongolia, with more than 2,000 staff members in total of which more than 1,000 are professional and technical staffs.

The Plant Science and Agricultural Research Institute was originally established in 1948 as a crop experiment station and in 1963 it was renamed as research institute. Major activities include research, education and crop farm operation. The Research Department consists of 6 Divisions (Administration, Agricultural land Management, Selection and Seed Multiplication, Cereals, Vegetables, Potatoes and Fruits) and 3 laboratories (Biotechnology, Bio-chemistry, and Soil Science) with 100 staff (15 are Ph.D. degree holders) and 200 ha. of experimental field. The Education Department consist of 5 disciplines, Agronomy, Crop Farming, Land Management Engineering, Ecology, and Meteorology. This is an agricultural college with a 3.5-year education program. A teaching staff of 40 trains around 300 students. The Crop Farm Operation Department, with its 2,000 ha. of cultivated land, produces mainly seeds of wheat, vegetables; and potatoes and raises 4000 heads of livestock. Wheat is mostly sold as seeds to the companies specialized in wheat production, and the amount of wheat seeds sold annually reaches 300-350 tons. As attached institutions of MNAU which is budgeted by the Central Government, the Research and Education Departments receive annual budget allocation from the Government, but the Crop Farm Operation Department is not subsidized because it operates on an independent, self supporting basis. Actually, the Crop Farm Operation Department makes substantial profit which is transferred to the budget-deficit research department annually.

In general, almost all research institutions are facing severe financial difficulties, which limit the renovation and introduction of research equipment and facilities, fund for research activities and human resource development efforts.

(4) Credit and Insurance

Agricultural credit: In Mongolia, the credit requirement differs widely between the sub-sectors of agriculture and animal husbandry. In the crop production sub-sector, a capital intensive production system had been established in many former state farms, introducing large mechanized systems from the former Soviet Union. Most of the wheat producing farms are the successors of these state farms, being now in the form of companies, cooperatives or private farms. These farms inherited part of physical assets of state farms, most of which were worn out machinery imported from USSR several years ago and require repair and spare parts. Financial difficulty prohibited the import of machinery, such as tractors and combines for replenishment and at present machinery is imported mostly under the Japanese Grant Aid program. The credit requirement is relatively small in the extensive livestock sub-sector, where most of the livestock has now been privatized, due to the nature of the nomadic system with limited inputs compared to the crop sub-sector. Major provider of formal credit is the Agricultural Bank of Mongolia which was established in March 1991, under the initial named of Agricultural Cooperative Bank, based on the resolution of the General Conference of Cooperatives Federation. In 1992, following the evolution of the banking activities, the Bank was renamed as it is now. At its establishment, the Agricultural Bank took over a number of branch offices and accounts from the Central Bank of Mongolia. With a capital of Tg 480 million, the Bank finances around Tg. 12 billion. The outstanding finance amounted to Tg. 3.4 billion and total deposit to 4.4 billion as of the middle of 1997. In addition to its head office in Ulaanbaatar, 23 regional offices and 300 branches are located all over the country. The Bank has a staff of more than 1500 in total. Current interest rates on credit are 4% - 6% per month, and interests on deposits are 1.0% for current accounts and 2.5% - 3% for fixed accounts (3 months and over). Specific characteristics of the Bank's performances are that, more than 90% of the loans are extended to the crop and agro-processing subsectors, most by composed of state farms or related companies, with limited shares of cooperatives and private farms. Another should be noted is that at the moment, loans are extended mostly for the short term of less than one year and this practically limits long term investment. As the Arydin Bank (People's Bank), which was the second largest supplier of rural credit, has now been dissolved, the Agricultural Bank remains the sole supplier of formal credit in the country. Due to the limited fund resources available, the loan supply capacity seems to be far from meeting actual demand, and the balance financial requirement is made up by borrowing from relatives or often from money lenders at very high interest rates. Though external inputs are small for extensive stock farming, long term loans are also required for

development of water resources (wells), stable feed resources, and for minor processing.

Agricultural insurance: The insurance system was monopolized by the Mongolian Insurance Company under the Ministry of Finance. This company did not deal with agricultural insurance, therefore in 1990, the Mongolian Agricultural Insurance Company was established with a capital share of 70% by the Mongolian Insurance Company and 30% by Negdels and their federation. Agricultural insurance covers, a) natural calamity and diseases of livestock, b) crop failure, c) real estate damage by disasters, e) machinery and vehicles, and f) damage of vehicles and machinery caused by the insured. In the days just after the establishment of the Mongolian Agricultural Insurance Company, the insured are mostly state farms and Negdels with a ratio of participation of more than 80%, but after the dissolution of state farms and Negdels, the ratio of participation in agricultural insurance declined to a level as low as 10% - 15% at present. As a state enterprise, the Mongolian Agricultural Insurance Company is listed on the planned Privatization Program of the State Enterprises and is now under supervision of the State Property Committee. The legal system of insurance business needs to be consolidated, because fundamental law and regulation on insurance are lacking.

(5) Agricultural Enterprises

There were so many enterprises related to agriculture, established under the centrally planned regime. Many of them have been privatized and most of the remaining are now on the process of privatization. These include meat processing, flour mills, the Agricultural Commodity Exchange and Agricultural Insurance Company as mentioned above.

3. FORMULATION OF THE MASTER PLAN

3.1 Necessity of Strengthening of Agricultural Cooperatives

3.1.1 Socio-economic Environment Surrounding Agricultural Cooperatives

The transition to the market economy caused decisive changes in agriculture and livestock industry, especially in the structure of agriculture and livestock production and rural society. Negdels, under various forms of state farms, functioned as a major player in agricultural production under the centrally planned economy. After the dissolution of Negdels and state farms followed by their privatization, new cooperatives have been emerging. To strengthen and promote ACs under the new situation, it is essential to clarify the socio-economic environment surrounding ACs. Major points to be mentioned are summarized below.

(1) Agriculture-Crop Sector

The cultivated area occupies around 1 % of the country's total area and is scattered mostly in the central region. Major crops are cereals headed by wheat, followed by vegetables such as potato, carrot and onion. The ratio of self-sufficiency is estimated at 70 % for cereals and 80 % for vegetables in 1995.

Major producers of these commodities are private enterprises which replaced former state farms and cooperatives which succeeded former Negdels. However, the share of the latter in the total production is extremely low; 8 % in the case of wheat, and 1 % vegetables. The number of individual farms is very limited. The farming operations of enterprises are carried out by those who were farm laborers in state farms, and farming operations of ACs by a members of cooperatives under a fixed remuneration. In addition to the severe climatic condition of Steppe, financial constraint caused a sharp decrease in the import of necessary inputs such as farm machinery, spare parts and fertilizers in recent years. These resulted in decline of yields and output of these commodities.

(2) Livestock Production

Following by the dissolution of Negdels, almost all of the livestock was privatized and it is now owned by farmers, herders, cooperatives, and private enterprises. The size of

herds is small and mostly private enterprises only own more than 1000 heads. However, the size of herds shows an increasing trend in general after privatization and the total number of livestock is also increasing. This may be attributed to the fact that, after privatization, most of the herders are eager to increase their flock, limiting their sales of livestock to the minimum level in order to sustain their daily life for the moment.

More than 80% of herders own less than 150 animals, which is the minimum size to sustain an ordinary family. These herders also raise livestock of cooperatives on a contract basis. Reflecting the current favorable market situation of cashmere, the number of goats is increasing, clearly showing a strong response of herders to the market situation.

Regarding marketing of products, most of the herders opt to retain livestock, limiting the sales to meet their minimum requirement only, and sales are mostly made by barter trade with private traders running around the rural areas. Arbitrary quality assessment and price fixing seem to be associated with this trade method, which may become a serious constraint in near future.

Deterioration of production infrastructure is serious in such aspects as water supply, bases for winter camps and emergency feed supply in addition to the rather weakened veterinary and breeding services. These seriously affected herders especially those who newly entered these businesses.

(3) Constraints in Rural Areas

With a total area 4 times that of Japan, Mongolia has a 2.3 million population, of which 1.1 million are living in rural areas. The remaining 1.2 million are living in 4 big cities headed by Ulaanbaatar and Aimag Centers. The local government unit consists of Aimag, Som, and Bag. In vertical order Bag is the lowest administrative unit consisting of around 50 - 100 households who are mostly nomads. During the days of command economy, a substantive number of state operated kiosks were located in Aimags and Soms, providing daily necessities to the inhabitants. These kiosks were privatized and due to financial constraints their function deteriorated seriously, causing difficulties to the rural people.

Regarding marketing of products, poorly established road network, overage transportation vehicles and inappropriate location of processing factories make the

transportation cost extremely high. The specific characteristics of extremely low population density in a broad national territory exacerbate the problem of transportation cost for products and daily necessities of the rural people.

(4) Constraints in the ACs

Following the dissolution of Negdels, their assets were privatized and most of them re-started as ACs under NAMAC. However, the number of cooperatives decreased from 315 in 1993 to 252 in 1995 with a total number of 51,100 households. This figure is only 33% of the total number of farmers/herders. The sharp decrease could be attributed to (i) the distrust of the members toward bureaucratic managers, (ii) decline of business of ACs, (iii) lack of understanding among members on cooperatives under the new legal system, (iv) herders orientation to be independent and reluctance to pay contribution for membership and (v) perception of herders against investment to ACs. Although many people left the cooperatives, two thirds of them wish to reorganize the cooperatives.

Major activities of cooperatives include (i) marketing, (ii) purchasing, (iii) processing, (iv) cooperative usage of equipment /facilities, (v) education information and extension, (vi) social welfare services, and (vii) transportation services, but do not include credit and insurance the moment. In marketing of products, the share of ACs under NAMAC is very limited, as seen in the case of cashmere (12%), wool (15%) and of others (almost negligible). Limited fund of cooperatives for collecting products, herders preference of private traders due to easy access and barter trade, and lack of recognition that the cooperatives are their own, are the major factors contributing to the poor performance of the activities. The orientation of herders to increase their flock and to restrain the sales of livestock is another factor to be counted.

Conspicuous characteristics observed in the result of interview survey are the strong needs and expectation on the function of social welfare to be played by cooperatives. Regarding financial situation of cooperatives, 85% of the 215 cooperative achieved profit, most of which are from production activities. This indicates that, without production activities, cooperatives management is difficult and other activities remain dormant for the moment.

In addition to NAMAC, about 60 ACs under MAPHI have been established on the basis of Khot Ail at Bag level and performed sales business on a small scale.

(5) Marketing

In meat marketing, about 30% of the total consumption in urban area is through meat factories and the remaining 70% is directly brought into market by herders or private traders. No serious shortage is observed at present, however the problem is that the operation level of the meat factories remains far below their capacities. In the case of wheat, increased dependence on import due to declined production is observed. An important point to be addressed is that the traditional food supply pattern in the year tends to differ from the changing demand pattern of urban area, particularly of fresh meat in summer and dairy milk in winter.

Weak competitive power is observed in world market of wool, hide and skin, particularly in quality. Due to the loss of East European market, together with limited domestic market, the demand for these commodities as materials is rather limited. Therefore the processing factories of these commodities are now facing difficulty of far below operation level compared to their capacities.

On the other hand, in the case of cashmere, due to the lift of export ban, domestic factories are facing difficulty in procurement of materials.

4) Most of the fresh milk supplied to urban areas is directly brought in and sold by dairy farmers/producers, causing difficulty to large scale dairy factories to procure the milk from producers. Around 90% of the total milk production is said to be consumed in rural areas, therefore the portion delivered to the cities is very limited. A new trend is emerging where a number of small dairy factories are being established, focusing market in the urban area.

The privatization of the state enterprises which monopolized import and sales of agricultural inputs and the lack of fund for import of these inputs resulted in a sharp decline in import of farm machinery and fertilizers. Wheat cultivation and intensive stock farming with high dependence on imported inputs were seriously affected and witnessed production decrease.

3.1.2 Necessity to Strengthen Cooperatives from the Viewpoint of Producers

Based on the observation and analysis of the agriculture and livestock industry, the necessity to strengthen cooperatives is imperative to materialize the following objectives:

- 1) To contribute to the income and employment opportunities of farmers/herders who are the core of the rural society.
- 2) To play a supplementary role in extending social welfare service.
- 3) To contribute to farmers/herders by stable supply of agricultural input and daily necessities.
- 4) To meet the needs for strengthening bargaining power of the producers through organized and expanded marketing activities
- 5) To respond to the needs for strengthening and expanding cooperative usage of production and processing facilities

In addition to the above, veterinary and animal breeding services traditionally managed by the state are going to be privatized at Som level. In this regard, cooperatives are expected to play a vital role in executing these services.

3.1.3 Roles of Agricultural Cooperatives in Production and Marketing

The role of cooperatives in agricultural and livestock production as well as in distribution of herders' and farmers' products can be considered in the following context.

(i) Agricultural and Livestock Production

ACs are directly engaged in production by themselves, in addition to the various support services to their members. This is one of the unique characteristics of Mongolian ACs. The direct involvement of cooperatives in production activities may be a little different from the general concept of cooperatives. However there exists the historical background that most of the existing cooperatives in Mongolia are being established succeeding former

Negdels. Almost all cooperatives have production branches which earn most of their profit, and a substantive portion of the profit is put into other activities, notably to social welfare. In this context, the contribution of cooperatives to the rural community through these practices cannot be neglected. Therefore, the importance of production activities of cooperatives will remain unchanged and cooperatives will play an important role on the development of agriculture and livestock in the country.

(2) Marketing

ACs are expected to play a significant role as stable and reliable suppliers of food and materials to urban dwellers and industries. At the same time, efficient procurement of agricultural inputs and daily necessities of the cooperatives and members is the important function expected from cooperatives.

3.2 Formulation of the Master Plan

3.2.1 Basic Development Concept

(1) Government Policy for Development of ACs

In May 1995, the Law of Mongolia on Cooperatives was enacted, giving the basic ground for the establishment of cooperatives under the market oriented system of economy in the country. However, no specific measures had been taken since then to encourage and promote the cooperative movement either financially or technically. In November 1996, after the general election, the Great Khural (National Assembly) adopted the resolution No. 61 (Platform of the Mongolian Government), on major policy direction during its term of office. The resolution aims at restructuring the state administration and economic structure of the country in the first phase of 1996 to 1998, and creating an appropriate economic structure with self-sufficiency in basic food and energy, while expanding export in the second phase of 1998 to 2000. Small and efficient structure of state administration with expanded autonomy of local administration and strengthening the private sector through an enhanced privatization program are emphasized in the resolution.

In the agriculture sector, in addition to increase of number of livestock with a proper structure of flock, attainment of self-sufficiency in wheat flour and vegetables in the year 2000 is targeted. While the increased support to crop and livestock producers is advocated,

privatization of state enterprises and government shareholding companies is scheduled. Further, government support services, such as veterinary and animal breeding services at Som level are to be privatized, encouraging the participation of the private sector under the supervision of the central government. Collective efforts among producers for marketing and processing of their products and procurement of agricultural inputs are strongly urged in the resolution. In this regard, cooperatives have increased opportunities to play in the development process of the rural economy although various challenges may remain.

Further in the resolution, the cooperatives, as their mission requires, are expected to play a vital role in poverty alleviation and in creation of employment opportunities in rural areas. To this end, developing a Social Program for Cooperative Development to maximize the benefit and contribution of cooperatives to poverty alleviation and creation of employment is also requested in the resolution.

Responding this call, the preparatory work is being carried out by a Working Group organized by the Minister of Agriculture and Industry and headed by the Director of Strategic Planning and Unified Policy Department of MAI, and consisting of 14 other members from the Ministries of Agriculture and Industry, Finance, Health and Social Protection, 4 cooperative associations including NAMAC, MAPH, and the Mongolian Women's Federation.

The draft proposal of the Social Program for Cooperative Development is in its initial stage of preparation and remains to be clearly defined for formulation of an effective action plan. Major points being discussed include i) Review of the past performance and present situation of cooperatives and cooperative movement in Mongolia; ii) Socio-economic implication of cooperatives on poverty alleviation and job creation in rural areas; iii) Experience and trend of cooperative movement in the world; iv) Constraints to the cooperatives development in the country v) Government policy objectives and goals on cooperatives promotion, based on non-interference but strong support and coordination with socio-economic development plan of the country; vi) Organizational structure of the program, including support, implementation, supervision, and funding; vii) Implementation schemes, including those by various ministries at central and local government levels and participation of non-governmental organizations; and viii) Expected benefit of the social program. The draft ideas clearly identify the necessity and importance of the government support, including the legal, technical and financial ones. Human resources development and information network are taken up as urgent issues to be tackled. Increased access to

credit and insurance system are also identified as priority areas to be focused. The program urgently needs to be defined and be put into operation, with strong government support but without affecting negatively the initiatives and potentials of the cooperatives and their members.

(2) Basic Strategy of Marketing System

There are two problems in the marketing, one being vulnerability of food supply to urban areas and the other being shortage in supply of daily necessities to rural areas. Main objectives of the marketing system are to challenge these problems. Therefore, the improvement of the marketing system should be considered in the framework of long term development.

In the current the marketing system, major channels to urban areas are operated by the following four players.

- 1) Large processing factories in urban areas
- 2) ACs
- 3) Private traders, and
- 4) Herders themselves

Private traders play an important role in the present marketing network. Wholesalers are not developed in this country. The present state is a coexistence of various private traders operating both as wholesalers and retailers. Inconveniences and problems of these private traders in marketing are considered to be the following:

- 1) Quality and safety of goods are not guaranteed.
- 2) Supply and prices of goods are unstable. Private traders tend to pursue profit rather than constant supply of goods. This tendency becomes crucial when the supply shortage happens, and such shortage is likely to happen because agricultural products are quite seasonal.
- 3) There might be a possibility of unfair trading. Experience and knowledge about market economy are not widely shared by people in Mongolia. Among other things disbelief toward private traders interrupts the development of marketing activities.

The supply shortage of daily necessities to rural areas is a result of vastness of the country and sparse nomadic habitations of herders.

In the current distribution system, daily necessities from Ulaanbaatar are carried by returning trucks which brought agricultural products from rural areas. Commodities are supplied and stored at Aimag centers. Forwarding depends on private traders and visit of herders, which seldom guarantee the sufficient supply to herders.

In order to overcome these difficulties, long term strategic projects should be structured. For the supply of agricultural and livestock product to urban areas, Urban Support Centers should be established, and for the marketing of daily necessities, Regional Marketing Centers should be established. ACs may play a substantive role in managing these centers. They may take opportunities of making economic benefit as well as accomplishing duties of supplying agricultural products to urban areas.

Information on price, amount of stock and quality should be made available in detail. Information on Ulaanbaatar market is widely broadcast but exchange of regional information with each other is not efficiently operated. There might be a possibility to utilize the media as a means of educating market economy to rural people, so that they will have better understanding of commodity trade in the cities.

(3) Basic Development Concept of ACs

Based on the recognition discussed, the Master Plan for the improvement of ACs has been prepared, placing special emphasis on improvement of the socio-economic status of farmers and herders and on increase and stabilization of the supply of food throughout Mongolia. The development concept is shown below:

- 1) The proposed main activities of ACs in the Master Plan are 1) agricultural and livestock production, 2) procurement of inputs and daily commodities, 3) marketing of primary and processed products, 4) processing agricultural and livestock products, and 5) other services.
- 2) ACs aim at creating a low cost, stable and efficient production system. Processing of agricultural and livestock products should be promoted in order to increase the value added of such products.

- 3) In the sale and purchasing business, Associations at Aimag and national levels should also undertake activities of sale and purchase through a three-tier system. ACs should perform efficient cooperative sale and cooperative purchase in order to increase bargaining power. With regard to cooperative sales, ACs should extend market routes to the end-users of the produce as well as reliable supply of inputs for the end-users.
- 4) In rural communities, ACs are expected to play an important role to improve the living standards of the members and people in each region, and thus to contribute to the development of their region.
- 5) In addition to economic activities, enhanced education and guidance are important aspects for expansion of membership and vitalization of ACs' activities. It is particularly important to encourage active participation of the younger generation and women by responding to their real needs and to be attractive to the rural communities.
- 6) Activities of ACs should be undertaken based on the principles of the International Cooperative Alliance as much as possible. The principles are 1) Freedom of membership; 2) Democratic management; 3) Restriction on dividend to share capital; 4) Distribution of profit based on the participation performance of the members to ACs' activities; 5) Education of ACs management staff, members, as well as the general public; and 6) Cooperation and collaboration among cooperatives at local, national and international levels.
- 7) For institutional strengthening of ACs, it is targeted, in principle, that at least one AC should be set up in each Som in the country. The rate of participation of herders in ACs should be increased as much as possible and it is important for the members of ACs to actively participate in the business of the cooperatives.

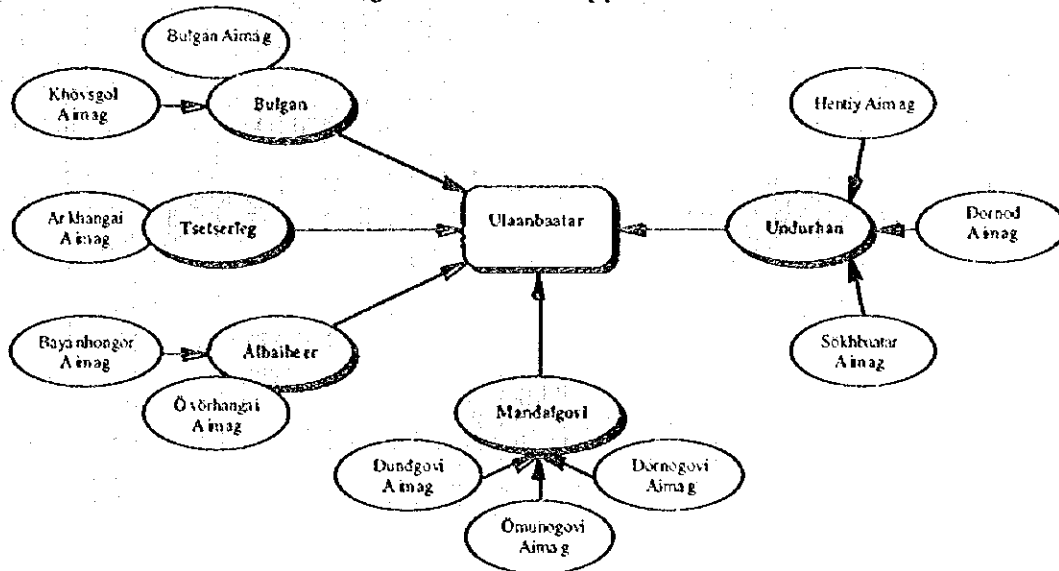
3.2.2 Plan for Marketing System

(1) Plan for Urban Support Centers

The Plan for Urban Support Centers aims to establish collection centers for agricultural/livestock products at 5 sites; Bulgan, Tsetserleg, Albaiheer, Mandalgovi, and Undurhan. In order to secure stable supply of food to Ulaanbaatar, satellite cities will become important distribution centers. Daily commodities from Ulaanbaatar are stored at these centers with varieties similar to those found in Ulaanbaatar market places.

Aimags centers such as Bulgan, Tsetserleg, Arbaikheer, Mandalgovi and Undurkhaan are the promising ones.

Diagram of Urban Support Centers



There exist a number of factors contributing to the efficiency of this idea. However the socio-economic development trend seems to be favorable to this idea. This framework is to strengthen the distribution system against the future risk and the following points should be considered to sustain efficiency of the Urban Support Centers.

- 1) Fuel cost, which is in the rising trend, directly pushes transportation cost higher. In such case the Urban Support Centers will become effective marketplaces where commodities are stored and consolidated for shipment to Ulaanbaatar, reducing the cost of transportation in total.

- 2) If market information, especially of prices, is well acknowledged, cost factors including fuel, depreciation and drivers will be recognized and hence the effective role of the Urban Support Centers will be appreciated.
- 3) The trekking system of animals from rural areas to Ulaanbaatar is no longer effective around Ulaanbaatar because of the pasture shortage. The system as a whole works between 800 km and 300 km from Ulaanbaatar, where animals are fattened as they trek. It is considered that animal slaughtering at the Urban Support Centers and transport to Ulaanbaatar by truck are more economical and effective in fattening and pasture conservation.

The size of each Urban Support Center can be estimated based on the amount of livestock expected to be collected. The following chart indicates the amount of surplus carcass meat which will be brought in for trade at the Centers. The surplus of meat is calculated from production of meat, assumed by the number of livestock and average slaughtering rate of 25%, minus consumption in each area calculated by multiplying the population and per capita consumption. The amount of meat to be marketed is estimated at 30% of the surplus of meat of which value should be checked in the feasibility study in future. The two columns on the right show the number of sheep and cow which is equivalent to the surplus meat. It is estimated that at each center, 100,000 to 300,000 sheep equivalent will be traded every year.

Meat production is mostly done in 100 days between September and December, and the rate of turn-over in meat warehouse, is approximately one day. Therefore, annual sheep head equivalent described in the chart requires a stock area of 200 m² to accommodate approximately 2,000 sheep carcass meat. The total stock space is assumed to be 1,000 m² because stock of wheat, vegetable, wool, skin, daily commodities and clothes needs to be considered. The total floor space including trading space will be 3,000 m². The total area of one Urban Support Center is assumed to be 10,000 to 15,000 m² including space for trucks and trailers.

Basic Figures for Urban Support Centers

Urban support center	Surplus meat (ton)	Total	Rate of collection	Collection carcass meat ton	Sheep head equivalent (36kg*0.48) 17	Cattle head equivalent (266kg*0.52) 138
Hovd Aimag						
Bulgan		12,644	30%	3,793	223,129	27,487
Bulgan	5,264					
Hovsgol	7,380					
Tsetserleg		6,935	30%	2,081	122,382	15,076
Arhangai	6,935					
Arbaikheer		16,922	30%	5,077	298,624	36,787
Ovohangai	6,911					
Bayanhongor	10,011					
Mandal-govi		13,954	30%	4,186	246,247	30,335
Dund-govi	7,187					
Omno-govi	3,993					
Dorno-govi	2,774					
Ondorkhan		7,280	30%	2,184	128,471	15,826
Hentiy	3,235					
Sukhbaatar	4,045					

(2) Plan for Regional Marketing Centers

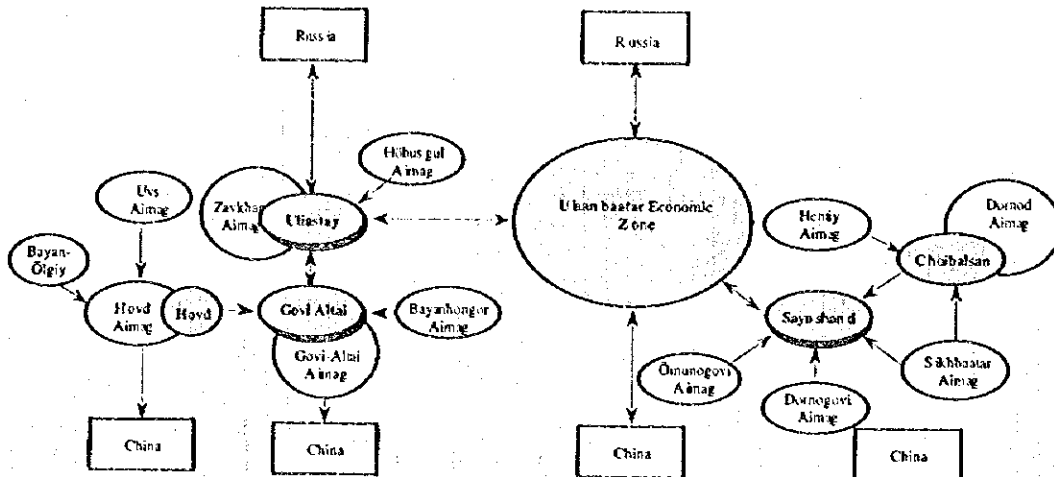
This plan aims to establish a Regional Marketing Center as a core center of wholesale market in the related Aimag and its surrounding area at 5 sites: Hovd, Ulyastat, Govi-Altay, Saynshand, and Choibalsan. Apart from the Ulaanbaatar economic zone, there is some movement of regional development with core cities located 600 km away from Ulaanbaatar. These basically provide merits to herders in rural areas. Distribution of commodities and collection of livestock products are concentrated in regional marketing centers and the areas surrounding those cities depend on the centers. Saynshand in Dornogovi is growing as a center of the southeast area, while Choibalsan is traditionally a center of three Aimags in the east area. Govi-Altay and Ulyastat in Zavhan Aimag are growing as a collection center and marketing center of livestock products in the west region these days. In addition, Hovd is traditional center in the west. These cities, both traditional and new, become active as crossroad towns in the commerce in rural areas.

These local center cities will develop in relation with neighboring areas and become centers for international trading with China and Russia as well as intermediary cities to Ulaanbaatar. In each center, an operating organization such as wholesalers' union should be established by ACs and private firms.

Marketing facilities such as storage and trading space will be necessary. Quality of transaction of commodities in rural areas will be improved through the development of storage facilities and trade conditions. Facilities and regulations are both important for

improvement of trading and guarantee of safety of consumers.

Diagram of Newly Emerging Regional Marketing Centers



The Regional Marketing Centers work as commercial centers in their regions and as distribution centers for international trade. The size of the Regional Marketing Centers, therefore, is assumed to be approximately the same as that of the Urban Support Centers.

(3) Plan for Reinforcement of Marketing Conditions

Development of a marketing system requires improvement of both physical distribution and business trade. Especially in the financial aspect, control of inflation, price information and trade conditions are key items for improvement of business trade. These improvements will be realized along with structural changes in people's lifestyle. Education of people on market economy and liberalization is indispensable to establish well designed marketing conditions.

Among other things, leadership by the administration is most important because it will guide financial policy and social change. In December 1994, GOM made a resolution for the development of commerce and stabilization of domestic market. The resolution gives guidelines for the development of wholesale industry and necessary financial measures. But such measures have not so far been implemented because of the lack of financial support.

The Government proposes the establishment of an investment fund at Som, and assistance and support for wholesale market in the "Platform" issued in November 1997. In this platform there is no program concerning the development of commerce and stabilization of domestic market which will be urgently required.

The program for the development of commerce induces structural change in the society, because it is related to many different fields from production, storage, physical distribution to consumer market. Therefore the development should be focused on a few points rather than listing up many items.

There are two types of development items, one consisting of those of urgent necessity and the other with long-term considerations. Items of urgent necessity cope with problems in the near future and items with long-term considerations attempt to change the social framework. With these considerations in mind, a program for commercial development will be worked out as follows.

1) Urgent implementation items

i) Establishment of the commercial supporting fund and implementation of commercial supporting loans:

This is a fund supply for the wholesalers who are facing shortage of business fund, and the pump-priming effect on delinquent loans of rural traders is expected. The fund source will be found in some revolving funds of grant aid from foreign countries. After commerce is fully developed, the fund from sales tax will become promising.

Following the establishment of the fund, commercial supporting loans will be provided to domestic wholesalers. With the help of this loan, marketing of agricultural products and daily commodities will be improved.

ii) Education and development of commercial experts:

Early acquaintance with knowledge concerned with international conditions and manner of transaction under the open market system is urgently required for merchants. For this purpose education should not be limited to the

classroom but should also be provided on site by experienced merchandisers. Even after the implementation of extended education, its effect on the actual business will be seen after 10 years, so the training program should be immediately prepared and implemented.

Special attention should be paid to the following matters to foster commercial experts' capabilities.

The first is an ability to discern the quality of commodities. Price differentiation according to quality becomes possible especially for the major livestock products such as cashmere and meat.

The second is knowledge and technique to handle perishables and fragiles. Food stuff is expected to be handled with high quality control during the whole process of marketing from purchasing, transportation, to sales.

The third is an ability of financial management. Profit making becomes possible by cash control over the activities of purchasing, sales, and interest payment.

The fourth is an ability of sales planing and inventory control. Good balance between sales and purchase together with stock control will lead to a high turn-over ratio of goods and funds. The effective management is especially important in leather and fur industry, because the listed prices are often too high for ordinary customers and, as a result, the stock stays more than one year. Effort of cashing those stocks by discounting the sale prices is important for reducing the liabilities.

2) Long-term effort

i) The private traders registration system:

Registration system makes it possible to supervise fair trade and to help private traders develop in accordance with rural development directions. All private traders should be registered to either Aimag or Government, and the administrative office is privileged to collect trade tax from all traders in return for trade sanction and support by trade facilities and financial services.

Financial support will be provided to selected eligible traders, and the administration office will consider the benefit for the traders as well as control them.

ii) **Grading by quality:**

Current price information has a wide range covering items of various qualities. As a result, the credibility is declined when herders try to use them.

Broadcasting of price information should reflect the system of pricing by grade. Herders will understand the importance of quality, and the overall level of livestock products is expected to increase.

3.2.3 Plan for Strengthening Business of Agricultural Cooperatives

(I) **Basic Plan**

The development of ACs is planned with an emphasis on improvement of the marketing system under the market economy. This plan contains the business of sales, purchase, production, processing, and services of education/publicity and social matters. Though the credit and insurance business is to be performed by the ACs, early implementation of the credit and insurance business would be rather difficult considering the present capability the respective ACs and the present financial and economic situation. Taking into account of the importance of the credit and insurance business, it is not appropriate to exclude it from the activities of ACs in this plan. However, this business should be performed when conditions for its implementation become matured.

- 1) **Sales and Purchasing Business:** The objective agricultural/livestock products for sale are mainly 5 major animals and wheat: Sales business aims to reduce marketing costs and manage appropriate prices of materials by means of cooperative and deliberate shipping and sale of materials on a large scale to markets.

Though the number of livestock raised by members of ACs considerably differs between Soms and Aimags, it is roughly estimated that the number of livestock of members is about 44% of the total number of livestock in Soms.

On the other hand, with respect to meat, 3,340 tons of meat are distributed through ACs at the national level. This distributed amount shares only 2% of the total marketed meat in the country, and 13% for cashmere, 10% for wool, and 2% for skin and hide. This fact suggests that there is a big potential to increase consignment sales of ACs.

The present low rate of consignment sales of ACs seems to result from the two following constraints: (i) Since herders who participate to ACs represent only about 30% of all herders in the country, consignment sales amount itself is small, (ii) the members of ACs do not always want to sell their livestock products through ACs.

It is a focal point for strengthening ACs to increase the rate of consignment sales. Until at least the year 2010, it is targeted that more than 70% of the total livestock production of members of ACs should be sold through ACs.

In order to increase consignment sales, special emphasis should be put on (i) improvement of the collection and distribution system for agricultural and livestock products, (ii) development of new market routes of products and (iii) expansion of consignment sales by strengthening economic activities of Associations at Aimag level and national level.

The purchasing business of ACs aims at providing necessary high quality farm input and consumer commodities at low prices and in a safe manner to the members of ACs. At present Agrotech-Impex company mostly deals with import of agricultural inputs and materials such as agricultural machinery including tractors, harvesters, and their attachments, fertilizer, agrochemical, medicines for animals, and seeds. Its scale of business and function has been reduced drastically. Consumers' cooperatives have played an important role in distributing consumer commodities to the people in both rural and urban areas. However, at present, the supply of most consumer commodities to the people in rural areas is managed by private traders. It is planned that Associations both at Aimag and national levels will be able to purchase farm inputs and consumer commodities and steadily distribute them at low costs to the members of ACs.

- 2) Production and Processing Business: ACs are directly involved in agricultural and livestock production by themselves and/or by commission on production to the members, in addition to an important role as basic suppliers of foodstuff and commodities. It is expected that in the future the role of ACs will become more important with respect to the creation of job opportunities and alleviation of poverty in rural areas, giving positive economic impacts to the local society.

The objective livestock and crops in this plan are livestock, feed for winter season, wheat and potato/vegetables.

Many ACs raise livestock by commission through members of small scale herds. ACs should continue production under such system in order to increase their profit from livestock and to relieve poverty of the members. For increasing profit of ACs and improving quality of products, in the first place, 4 ACs which maintain improved varieties of livestock are encouraged to increase the number of herds of breeders and to distribute them to cooperatives members. ACs should assess qualified livestock animals, for producing and distributing such animals to the members. Though it was ruled that the local government should perform such assessment work, it has not been effectively carried out in reality, due to shortage of trained staff and necessary materials and equipment. To improve such situation, technical breeding guidance should be provided to the members through assignment of trained breeders. Also supply of fundamental equipment should be made to improve livestock and its products.

Though purchasing and distributing of medicines for animals, except for infectious diseases, are principally undertaken by the local government, there are many remote places where herders are not able to obtain such medicines timely. Therefore, it is planned that ACs should reserve basic animal medicines for supply to these members by means of creating a revolving fund.

Owing to shortage of fodder crop/hay for emergency feed reserve in winter and deterioration of the emergency supply system, serious damage of livestock often occurred due to heavy snowfall and other serious climatic

hazards.

Production increase of feed for livestock in winter and its distribution are made through (i) establishment of a rental service center of agricultural machinery such as hay and fodder crops harvester in each Aimag Association; (ii) establishment of a feed supply/distribution system; and (iii) establishment of farms to produce hay and fodder crops in the feed surplus areas such as Henti and Dornod Aimags.

Increase of wheat production will be promoted mainly through introduction of improved farming, replacement of agricultural machinery, and production/distribution of improved varieties in the 21 ACs in the central, eastern and western areas where wheat production is more suitable. It is planned that the present 18 wheat mills in ACs should be improved or replaced to improve flour quality in terms of mixture of stones and other foreign matters as well as milling rate. Production of potatoes/vegetables in remote Aimag areas should be increased by introducing irrigation farming in order to improve food self-sufficiency.

Since the market economy started, government subsidy for petroleum was abolished. Transportation cost has substantially increased especially in remote areas. It is required that ACs increase the value added of products, reduce marketing costs, and improve quality of products. Then, ACs are recommended to perform the following primary processing works: (i) cleansing and selection of raw materials such as wool and cashmere and their compression for reducing transportation cost; (ii) treatment of raw materials such as hide and skin with salt; (iii) slaughtering animals on the spot in the local areas and producing meat in the form of carcass; and (iv) primary processing of felt and tanning of hide. Supply of equipment and facilities necessary for the above primary processing work is planned.

Cooperative use of equipment and facilities aims at increasing productivity, reducing cost and relieving women from heavy workload. Introduction of such production equipment and facilities is also planned.

- 3) Education and Publicity: Though about 8 years passed since the transition to the market economy started, some vestiges of the command economy still remain. A considerable number of cadres and members of ACs do not always understand fully the principles of cooperatives and their management under the market economy. Though scholarship service to members of ACs is provided in some ACs, activities on education and publicity, on the whole, have not been carried out effectively. For strengthening ACs it is a prerequisite that the members of ACs should have the spirit of co-existence, voluntarily participate in cooperative movement, and conduct actual activities of ACs. The following are also specifically important issues to be addressed: (i) to make each AC's financial condition healthy; (ii) to foster adequate leaders, especially young leaders who know the principles of cooperation, are well acquainted with accounting and marketing, have a sense of businessmanship, and have strong faith to serve the people; and (iii) to activate the existing ACs, to make cooperative principles understood by the members and to promote enrollment of new members.

It is planned that educational training be performed to improve ability: (i) members of ACs, and (ii) cadres and staff of ACs. For this educational training, a training and information center in Ulaanbaatar and a training center in each Aimag are planned to be established.

In order to make members of cooperatives, local people as well as urban consumers understand activities of ACs, publicity is necessary. Such publicity activities are planned to be performed by Associations of ACs at Aimag and national levels and provision of equipment and facilities necessary for activities is also planned.

- 4) Social services: In the days of the command economy, Negdels provided basic welfare services such as health, education, and kinder garden, on behalf of the Government. Under the present situation, it is assured in principle that these services be provided by the local government administration. Therefore, most of such welfare services will be excluded from the plan. In order to support the herders' life in rural areas, ACs will provide other services such as small scale power generation by means of solar batteries and windmills, cultural facilities for the local community,

ambulance services, veterinary services which will be privatized in the near future, service of ger moving especially in the Godi Desert in which the herders have to move many times in a year over a long distance due to poor resources of pasture grass.

(2) Development Projects

Based on the basic plan mentioned above, 15 development projects involving administrative and legal actions are formulated to strengthen activities of ACs. In addition to these development projects, there are 3 projects under the Marketing System Improvement Plan related to strengthening activities of ACs. Then, 18 projects are the objective ones for strengthening activities of ACs as shown below. An outline of these projects is shown in Table 3.2.1.

Name of Project	Kind of Business	Executing Organization
1. Plan for Reinforcement of Branch Activities of ACs	Sales and purchasing	ACs
2. Sales Information Network Plan	Sales and purchasing	Associations of agricultural cooperatives, enterprises, Government, others
3. Seed and Agricultural Machinery Improvement Plan	Production, sales	ACs
4. Mill and Distribution System Improvement Plan Wheat	Production, sales, processing	ACs
5. Vegetables and Potatoes Production Plan	Production, sales cooperative use	ACs
6. Plan for Pasture/Fodder Crop Production and Its Distribution in Winter Season	Production, sales, cooperative use	ACs, Associations of agricultural cooperatives, enterprises, Government
7. Plan for Production of Improved Varieties of Livestock	Production, sales, cooperative use	ACs
8. Improvement Plan for Collection/Distribution and Processing of Wool	Sale, processing, cooperative use	ACs
9. Improvement Plan for Collection/Distribution and Processing of Cashmere	Sale, processing, cooperative use	ACs
10. Improvement Plan for Collection/Distribution and Processing of Meat and Skin/Hide	Sale, processing, cooperative use	ACs ACs
11. Plan for Training and Information in Ulaanbaatar	Education/publicity	Association of agricultural cooperative at national level and Government
12. Plan for Training Center in Aimag	Education/publicity	Associations of agricultural cooperatives at Aimag level
13. Plan on Strengthening Information and Public Relation Activities	Publicity	Associations of agricultural cooperatives at national level
14. Improvement Plan for Social Services	Social services	ACs
15. Administrative and Legal Actions	Promotion of sales, purchasing, production, cooperative use, social services	All ACs at national, Aimag and unit ACs level
16. Plan for Urban Support Centers	Promotion of sales and purchasing	All ACs at national, Aimag and unit ACs levels
17. Plan for Regional Marketing Centers	Promotion of sales, and purchasing	All ACs at national, Aimag and unit ACs levels
18. Plan for Reinforcement of Marketing Conditions	Promotion of collection/distribution of agricultural and livestock products	All ACs at national, Aimag and unit ACs levels

1) Plan for Reinforcement of Branch Activities of Agricultural Cooperatives

(a) Present Constraints and Development Concept

Consignment sales of livestock products through ACs are very small and their collection/distribution are not properly performed due to lack of information exchange between members and ACs, lack of facilities for collection of livestock products, shortage of operation fund of cooperatives, etc. At present, cooperatives having kiosks in Soms are very limited in number. For effective collection/distribution of livestock from members, it is necessary to first activate sales and purchasing business in kiosks located in branches in Bag as cores, as well as to exchange information about livestock products and their marketing between AC's offices at Soms and Bags. Therefore, (i) increasing the number of kiosk in Bag branches and (ii) construction of facilities with necessary equipment at kiosks in Bags for collection/distribution are considered necessary.

(b) Plan

- Strengthening of equipment for collection/distribution of livestock products, of which details are explained in the Plans (8), (9) and (10) mentioned later;
- Improvement and construction of kiosks with storehouse at Bag level;
- Installation of wireless telecommunication system between kiosks at Bag and the Cooperatives Headquarters at Som;
- Installation of satellite communication facilities in the office in Som, connecting Cooperatives in Som with Associations at Aimag and Ulaanbaatar.

2) Sales Information Network Plan

(a) Present Constraints and Development Concept

Though some information about prices of livestock products is broadcast through radio and TV at present, information about demand and supply movement of livestock products is very limited due to the lack of information network between producers and consumers. At present, such information is provided on a private basis within a limited range. There is also no information system between ACs, major suppliers of livestock raw

materials and livestock processing industries (meat, skin/hide, cashmere, wool, etc.), and major consumers. It is considered that the marketing route between ACs and processing industries could be developed only through the creation of an information exchange system in order to improve distribution of consignment sales.

(b) Plan

- A computer information network is planned to be established among (i) Associations of ACs at Aimag and national levels, livestock processing industries, Association of Consumers Cooperatives, and the Ministry of Agriculture and Industry, along with the creation of a forum for information exchange among parties concerned.

3) Seed and Agricultural Machinery Improvement Plan

(a) Present Constraints and Development Concept

Production of wheat has declined. Production of wheat in 1995 was only about 40% of that in 1989 in the country. The main causes of such decline are decreasing yield and planted areas. Regarding ACs, only 21 ACs under NAMAC cultivate wheat. The total planted area is about 24,000 ha, ranging from 4,000 ha in maximum to 10 ha in minimum. These are mainly distributed in Bulugan (48.9%), Tov (26.7%), and Arkhangai (11.4%). Low yield and decline of planted area are also major constraints in the 21 cooperatives. The concrete constraints encountered in these cooperatives are: (i) deterioration of seeds; (ii) deterioration of agricultural machinery and lack of spare parts; (iii) lack of fuel; and (iv) lack of fertilizers and chemicals. Moreover, quality of wheat is very low because harvested wheat contains a lot of damaged grains, immature grains, and foreign matters.

The development concept aims to increase wheat production by (i) proper management of the existing planted areas in 21 ACs; (ii) keeping improved seeds; (iii) replacement of agricultural machinery; and (iv) improvement of farming method, for increase of profit of ACs.

(b) Plan

- The production of improved wheat seeds is targeted at 6,000 tons necessary

for the total planted area of 24,000 ha in 21 ACs (200 kg/ha x 24,000 ha). The area necessary for seed production is about 4,000 ha (6,000 tons/1.5 tons per ha)

- Seeds necessary for ACs will be produced in each AC.
- Agricultural machinery required will be replaced by the respective cooperatives.
- A concrete storehouse for seeds will be constructed in each AC along with installation of ancillary facilities necessary for weighing, conveying, gravity grading, thickness grading, ventilation, etc..
- Rehabilitation and new construction of irrigation facilities will be carried out if well and surface water sources are available.
- Farming practices will be improved.

4) Wheat Flour Mill and Distribution System Improvement Plan

(a) Present Constraints and Development Concept

There are 18 wheat mills in ACs under NAMAC. Most of the facilities are deteriorated. The main constraints of the existing mills are a low sorting capacity and a low milling rate. These constraints should be solved by replacement and/or improvement of the existing mill facilities.

(b) Plan

The total quantity of wheat to be dealt with is targeted at about 36,000 tons/year (1.5 tons x 24,000 ha).

- Plant of the 18 existing mills is planned to be improved or replaced. A concrete storehouse for flour will be constructed in each AC along with installation of ancillary facilities necessary for weighing, conveying, gravity grading, thickness grading, mills, packing, ventilation, etc.,

- Reinforcement of transportation facilities

5) Vegetables and Potatoes Production Plan

(a) Present Constraints and Development Concept

The production of potatoes and vegetables has drastically declined. The production in 1995 is only 30% of that in 1989. These crops are mainly cultivated in Bulgan Aimag, Selenge Aimag, Tov Aimag, Darhan-Uul, and Ulaanbaatar city. The production of these crops in other areas, especially remote Aimag areas, is low and supply from outside is limited due to the present constraints in marketing system. Therefore, per capita consumption in these areas is seriously limited

Vegetables and potatoes of ACs are produced mostly by ACs under NAMAC. Only 2 herders' AC under MAPH cultivated about 2 ha. In 1995, ACs under NAMAC cultivated about 200 ha in total, consisting 146 ha for potatoes by 34 ACs and 50 ha for vegetables by 22 ACs. Potatoes are mainly grown in Bulgan (49%) and Tov (27%) Aimags, vegetables are in Dornod (36%), Bulgan (22%), Overkhangai (12%).

The development concept of this project is to increase production of potatoes and vegetables by irrigated farming and to increase the rate of self-sufficiency and stable supply of foods for people in the remote Aimags.

(b) Plan

- It is planned that the objective area is about 600 ha under the assumption that the 300 existing ACs (about 250 ACs under NAMAC and about 50 under MAPH) operate a crop field of 2 ha each.

- Irrigation facilities are installed in each AC. Firstly gravity irrigation system will be provided if surface water is available. Secondly, the 45,700 existing wells, consisting of 7,700 wells with mechanical pumps, 18,000 with animal power and 20,000 by manpower, will be checked in terms of water sources and capability of facilities. The rehabilitation plan will be formulated in the case water is available. Thirdly, a new pumping system will be introduced if water is not available. In the case of wells with mechanical

pumps, power supply will be planned, using wind energy, solar energy, diesel oil and/or their combination.

- Improvement of farming practice

6) Plan for Pasture/Fodder Crop Production and Its Distribution in Winter

(a) Present Constraints and Development Concept

The available pasture land in Mongolia is apt to decline due to devastation of water supply facilities for livestock, increase in cultivated land, land devastation due to soil erosion, mining development, etc. Production of hay and fodder crop for emergency feed reserve in winter in 1995 was small, corresponding to about 50% and 3% of production in 1989, respectively. Based on the report on grazing capacity of livestock prepared by the Institute of Agricultural Economics, production and demand of feed are almost balanced at the national level. However, feed supply at Aimag level is in deficit in over 60% of Aimag areas. Only two Aimags, Hentiy and Dornod, have a considerable surplus of feed. Owing to shortage of fodder/hay and deterioration of emergency supply system, serious damage to livestock by heavy snowfall and other natural calamities occurs often.

The Hangai areas (mountainous areas: and Amigos) have a shorter grass growing period of grass compared to other areas due to their severe climatic conditions. Moreover, labor force per household in these areas is small, showing 1.71 persons in Arkhangai Aimag, 1.88 persons in Bayankhongor Aimag and 1.69 persons in Overkhangai Aimag. Cutting and collection of grass for preparation of hay are women's work and done by hand. Such operations have to be completed in a short period, making the workload of women heavier and feed reservation in winter difficult. Only 10 ACs under NAMAC produce hay and fodder crops in an area of about 800 ha in total and at a small scale in Uvs (55%) and Overkhangai (38%) Aimag.

In order to solve shortage of emergency feed reserve in winter, effective collection of hay as well as increase of production of fodder crops should be carried out by mechanized farming in a short period. Simultaneously it is necessary to reduce seriously heavy workload of women. It is also essential that surplus livestock feed be effectively provided to the shortage areas. The strategy for solving shortage of emergency feed in

winter is: (i) to establish a rental service center of agricultural machinery such as hay harvester; (ii) to establish a system of supply and distribution of livestock feed among the ACs; and (iii) to establish farms to produce grass and fodder crops in the feed surplus areas.

(b) Plan

- Plan for Agricultural Machinery Rental Service Center: The rental service center will be established in each Aimag Association to provide agricultural machinery rental services to 300 existing ACs for collection of grass feed. In the first place, this plan should be started in 3 Aimags of Arkhangai, Bayankhongor and Overkhangai in the mountainous area covering 90 unit cooperatives consisting of 75 ACs under NAMAC and 11 ACs under MAPH, for rental service of machinery. The Aimag Association will manage such rental service center.

- Plan for Construction of System of Supply and Distribution of Livestock Feed within ACs: A committee should be set up among ACs and associations of ACs at Aimag and national levels, wheat mill industries, the State Reserve Agency and the Ministry of Agriculture and Industry in order to exchange information about supply and demand of livestock feed. Also a computer network will be introduced to promote quick exchange of information among these organizations.

- Plan for Construction of Farms to Produce Hay and Fodder Crops: The eastern and northern areas, especially Hentiy and Dornod Aimag, are the livestock feed surplus areas. In these areas, farms are constructed to produce hay and fodder crops for supply to the deficit areas such as desert areas and areas around Ulaanbaatar city.

7) Plan on for Improved Livestock Varieties

(a) Present Constraints and Development Concept

Improved varieties of livestock which had been bred in Mongolia, were mostly distributed to private herders after privatization. The herders have not properly managed them and disordered cross-breeding with improved

varieties of livestock occurred. The quality of livestock thus declined. Moreover, poor supply of veterinary services became one of the factors contributing to such decline.

It is necessary for ACs to increase the number of improved varieties of livestock, and to distribute them to herders. For this purpose, ACs should assess qualified livestock animals for producing and distributing such animals to the members. However, there are many remote places in which herders are not able to obtain medicines for animals except for infectious diseases.

(b) Plan

- Plan for Increase and Distribution of Improved Varieties of Livestock: This project is formulated for 4 existing ACs to which improved varieties of livestock were provided and have been properly managed even after privatization. The objective ACs are: (i) Dorvoljin AC located in Zavhan Aimag, with goat as objective livestock for cashmere production; (ii) Ardyn Jargalan AC located in Dundgobi Aimag, with cattle as objective livestock for meat production; (iii) Bayan Mandeal AC located in Uvs Aimag, with sheep as objective livestock for meat and wool production; and (iv) Bayanjargalant AC located in Dundgovi Aimag, with cattle as objective livestock for meat production. For increasing improved varieties of livestock, supply of fundamental equipment such as computer for management of records on pedigree of livestock, measuring device, and manometer is planned to be introduced to strengthen the related activities.
- Plan for Establishment of Revolving-Fund in Each AC: A revolving-fund for animal drugs will be instituted in each AC.
- Program for Recruitment of Animal Breeding Specialists and Veterinarians of ACs: This program consists of (i) establishment of a system of part-time employment of veterinarians and breeders; (ii) provision of services to foster veterinarian and breeders, including scholarship; and (iii) technical training of herders in management of improved varieties of livestock

8) Improvement Plan on Collection/Distribution and Processing of Wool

(a) Present Constraints and Development Concept

At present, most of the wool collected is of inferior quality due to stains and mixture of hair and sand. Therefore spinning of this wool with fine thread is difficult. Due to the bulkiness of wool, transportation cost per unit value increases. After transition to the market economy, government subsidies for fuel oil were abolished and transportation cost has been a critical issue in marketing, especially to the remote areas from Ulaanbaatar or Choibalsan. To minimize the transportation cost and to increase the added value of the product in these remote areas, improvement of collection/distribution system and primary processing are urgently required. At the moment, the total volume of wool handled by cooperatives remain around 15% of the total production of the cooperative members and this needs to be increased through efficient collection/distribution and primary processing. Shearing of wool is done mostly by females during a limited season in spring. Some countermeasures to overcome this problem should be considered.

To increase the income of cooperatives and their members, a rational collection/distribution system to minimize the transportation cost and creation of primary processing facilities are required. The strategy focused on this issue is as follows:

- Strengthening collection/ distribution facilities.
- Strengthening primary processing facilities.

(b) Plan

- Around 300 existing ACs are targeted.
- The target volume of wool is 4,000 tons, or 70% of the total production of cooperatives members, which is 5,530 tons consisting of 5,400 tons from NAMAC and 130 tons from MAPII.
- Strengthening collection/distribution facilities (mobile pressing machine, electric shearing machine, weighing machine, inspection equipment, transportation vehicle).

- Each cooperative shall organize a shearing team equipped with electric shearing machines to provide shearing service on request to members at Bag level. This will reduce the heavy workload of wool shearing by females. A number of pressing machines shall also be equipped at each cooperative for smooth and effective packing, well synchronized to shearing.
- Strengthening primary processing facilities (scouring, felt making and their processing). Scouring facilities would better be established at Aimag center, possibly by AAC at Aimag level. Felt making and processing facilities shall be established in each cooperative, aiming at supplying the product to meet the local needs. Due attention should be paid to the selection of the sites of the facilities as these require stable electricity and water supply.

9) Improvement Plan for Collection/Distribution and Processing of Cashmere

(a) Present Constraints and Development Concept

Traditional varieties of goat in Mongolia produce high quality cashmere. However, due to undesirable handling, mixture of foreign matters and stains in wool, the market value of the product is significantly reduced. To upgrade the product quality and also to reduce the transportation cost, improvement of the collection/distribution system and establishment of primary processing facilities are required. As already mentioned, the total volume of cashmere handled by cooperatives is around 12% of the total production of members. To strengthen the bargaining power of the cooperatives, the volume of cashmere dealt by cooperatives is needs to be increased. For this purpose, efficient collection and distribution of the product are required.

To increase the income of cooperatives and their members, rational collection/distribution and primary processing for increased value added should be considered. The strategy to materialize the above goals includes;

- Strengthening collection /distribution facilities
- Strengthening primary processing facilities

(b) Plan

- Around 300 existing cooperatives are targeted.
- The target volume of cashmere to be dealt by cooperatives is set at 70% of the total production of the cooperatives members. This means around 500 tons of cashmere from a total of 690 tons from ACs under NAMAC and 10 tons from those under MAPH
- Strengthening cashmere collection/distribution facilities (mobile press machine, equipment, transportation vehicle).
- Mobile press machine should be provided to each cooperative; the cooperatives staff goes from Bag to Bag by transportation vehicle with the machine and collect cashmere from member herders.
- Strengthening scouring facilities: Scouring facilities should be provided at 5 major cashmere producing Aimags, namely Govi-Altay, Bayankhongor, Omnogovi, Dornogovi, and Overkhangai, and possibly at AAAC at Aimag level.

10) Improvement Plan for Collection/Distribution and Processing of Meat and Skin/Hide.

(a) Present Constraints and Development Concept

The total number of livestock slaughtered by cooperative members is estimated at around 2,270,000 heads per year, of which about 70 % are sheep. As mentioned, the amount dealt with by cooperatives as consignment sales is very limited: around 1% in the case of meat, and 2% hide and skin. Slaughtering is done mostly in local areas in traditional ways without using solid slaughter facilities. The present slaughtering system may have hygienic problems and also hinders effective utilization of intestines and hide. In response to the expected increase of consignment sales of meat by cooperatives, an effective slaughtering system is required. Regarding hide and skin, though potential quality is high, damage by parasite and inappropriate treatment of raw hide result in low market value of the product. After slaughtering, most of raw hide is tentatively stored under by snow or

sometimes salted. Effective collection and improvement of quality are important issues to be addressed for expanding the sales activities and increasing the bargaining power of cooperatives.

With the rational collection /distribution of livestock and decreasing transportation cost, simplified slaughter houses and primary processing facilities are to be constructed. This will lead to the improved quality of meat, hide/skin and enable to attain higher utilization of intestines. The strategy to achieve this consists of:

- Strengthening collection/distribution facilities.
- Construction of simplified slaughter houses and primary processing facilities

(b) Plan

- Around 300 existing ACs are targeted.
- The planned processing volume under consignment is 70 % of the total production of member herders
Meat: 107,000 tons = (ACs-NAMAC 140,000, ACs-MAPH 13,000), total 53,000 x 70%)
Hide/Skin: 1,600,000 sheets = (ACs-NAMAC 2,220,000, ACs-MAPH 50,000), total 2,270,000 x 70%
Intestine: use of intestines of 1,500,000 sheep
- Collection /distribution facilities and simplified slaughter houses: Simplified slaughter houses shall be constructed in each AC headquarters and these will be connected to Bag branches by wireless communication so as to secure orderly collection and slaughtering. The facilities aim at producing dressed carcass, improving hygienic condition of treatment, and handling of hide and intestine by manual method. In the case of cattle, dressed carcass after halving, and for sheep, separation of hide, head and legs are made. Major equipment include meat hanging rail, knocking facilities, halving and cleansing facilities. As slaughtering is executed exclusively in the coldest season of November to December, refrigerators are not required.

- Raw hide processing facilities: Raw hide will be cured by salt just after slaughtering. Primary processing includes splitting, shaving, pressing and tanning. Necessary equipment will be introduced so as to improve the quality and increase value added.
- Primary processing facilities of intestines: Sheep intestines to be used as casing are salted. For this, cleansing facilities and equipment are to be introduced.
- Meat processing facilities: Small scale processing factories are to be established, aimed at producing sausage and jerky using the dressed carcass produced at simplified slaughter houses.

11) Plan for Training and Information Center in Ulaanbaatar

(a) Development Concept

A training and Information Center will be established for the purpose of education and training of senior staff of cooperatives, aiming at sound development of cooperatives in Mongolia.

(b) Plan

- The planned number of trainees is 1500, covering the existing 300 cooperatives with 5 members each. The total of 1500 trainees shall be trained in a period of 3 years, followed by refresher courses in a 3-year cycle.
- Training curriculum for staff of ACs includes history and present situation of cooperatives, Law on Cooperatives of Mongolia and international comparison, measures to promote cooperatives activities, operation and management of cooperatives, organizational activities of cooperatives and planning of cooperatives activities, study tour to successful cooperatives, and others. The duration of a training course will be 4 weeks. For members of ACs, lectures on improvement of farm/livestock economic management will be carried out based on principles of AC and its movement. Also lectures to enlighten the members will be performed.

- The training and Information Center will be established in Ulaanbaatar, with equipment and facilities necessary for training and information services. Details of the proposed facilities are presented in Sub-section 4.3.2

12) Plan on Training Center in Aimag

(a) Development concept

There shall be one education and training facility in each Aimag for the training of cooperatives staff and member farmers/herders. One advanced cooperative in each Aimag will be selected and the training facilities will be attached to this cooperative. Training will focus on the short-term On-the-Job Training.

(b) Plan

- Trainees are to be staff of cooperatives and cooperative members.
- Curriculum includes practical knowledge and information on cooperatives, farming/livestock production. Training courses consist of cooperative leaders course, newly recruited staff course, study tour to successful cooperatives, agricultural fair, and others.
- Each Aimag should have one training facility with necessary equipment.

13) Plan for Strengthening Information and Public Relation Activities

(a) Development Concept

In order that the of cooperatives' business and activities are better understood by not only cooperative members and management, but also by the general public including rural and urban dwellers, public relation activities are to be organized under the leadership of national federations.

(b) Plan

- Contents of information: Information to be provided to cooperative members and management includes information on crop/livestock production, daily life, management principle and major policy of ACs, agricultural policy in general, market situation, and others. For the general public, information to be provided includes information on food and agricultural situation, business and activities of cooperatives, interchange between producers and consumers, and cooperatives fairs, for deeper understanding and trust on cooperatives.
- Radio Program; Expansion and enrichment of the radio program on cooperatives being undertaken partly by MAPH, through the National Radio Network of Mongolia.
- Equipment for PR tour: PR activities by Tour Vehicle, including movie show, video show, distribution of pamphlet, calendar. Vehicles, printing machine, projectors, video and other necessary equipment are to be introduced.

14) Social Services Improvement Plan

(a) Development Concept:

Basic welfare services such as health, education and kinder garden are excluded in this plan. Social services should be provided to support and improve the herders' life in rural areas.

(b) Plan

- Provision of service for ger moving
- Provision of cultural facilities for local communities.
- Sales and rental of small scale power generators such as solar batteries and

windmills.

- Transportation of emergency needs.
- Provision of veterinary services.
- Provision of scholarship and subsidy to members' children who live in dormitories.

15) Administrative and Legal Actions

As stated in Sub-sections 3.2.5 and 3.2.6, to strengthen ACs activities, a number of administrative and legal problems faced now by cooperatives should be solved. In this regard, a certain modification of the Law on Cooperatives and the reinforcement of administrative support to cooperatives are proposed.

- The responsible Department /Division for effective guidance, supervision and support to cooperatives should be decided by the Ministry of Agriculture and Industry.
- The Social Program for Development of Cooperatives now under preparation should be finalized as early as possible and be put into operation, clarifying the development policy on cooperatives.
- Cooperative Federations at Aimag level and national level are prescribed as non-profit organizations, effectively limiting the involvement of these organizations in economic activities. To increase the bargaining power of cooperatives, Article 30 should be modified, giving these organizations the opportunities of active involvement in economic activities.
- The investment by cooperatives is limited within the amount of their own capital by Article 9-3. To expand the economic activities of cooperatives through mobilizing external fund resources, this article should be modified.
- Preferential measures on credit access and taxation should be considered.

- Execution of certain part of the functions of local government, agricultural bank, agricultural insurance company by cooperatives under a contract basis should be considered.

3.2.4 Approach to Setting Up New Agricultural Cooperatives

The number of herders households participating in ACs at the end of 1995 was about 51,000, which was only one third of the total number of herders households in Mongolia. About 30% of Soms have no ACs since there was a total number of 360 Soms in the country at the end of 1995.

It is essential and crucial for the sound development of Mongolian ACs both to increase the participation rate of existing ACs and to establish a new cooperative in a Som where no cooperatives exist. Under the circumstances mentioned above, the proposed approach for setting up new ACs is as follows:

The target is to set up at least one AC in each Som by the end of 2010. An AC should be established basically based on the general international concepts and principles of AC and herders' voluntary will. The establishment of ACs in Mongolia will be promoted taking into consideration the historical experience in other countries and also the specific characteristics of Mongolian society.

Khot-ail, the traditional group formed by family relation and/or territorial relation, will be effectively organized as small societies among herders. This will form a type of pre-cooperative with two basic purposes: 1) to help facilitate economic and production activities for agricultural and livestock production; and 2) to serve as educational bases for leadership and membership development of the AC. To encourage the formation of these pre-cooperatives, strong support from outside is indispensable. Without the full recognition of the needs and effectiveness of ACs by herders themselves, it would be quite difficult to achieve the target. Education and other incentives both in technical and financial aspects need to be provided to herders and Khot-ails. The governments at central and local levels, together with existing ACs and Associations should focus this issue so as to encourage the establishment of pre-cooperatives and their development to full-fledged ACs.

Therefore, the Government and authorities concerned should concentrate their efforts on the following measures necessary for development of herders' cooperatives:

(1) Establishing a Clear Policy for ACs

In Mongolia, agricultural policies as well as agricultural administrative system under the market oriented economy have not been consolidated yet. However, as one of the economic development guidelines, the Government aims to vitalize local economic activities by setting up a development plan for each economic zone. In this context, ACs are expected as one of the major players of economic development.

GOM has faced various constraints for setting up a concrete policy on ACs. These constraints include weak administrative structure, severe shortage of governmental budget, insufficient experience of authorities concerned on planning under the market economy, and difficulty of long term economic forecast under the market oriented economy. In view of the important role of ACs in Mongolian economy, however, the Government should establish a concrete policy on ACs, and encourage herders to organize more democratic and sound ACs in conformity with the policy direction.

In addition, for implementing and monitoring the policy of ACs, the Government should establish a solid administrative structure from the national level through the smallest unit level.

(2) Enlightening and Training of Herders on ACs

The Negdels were the form of collective farms established in the days of planned economy. It had been compulsory to join Negdels, and at the later stage many of the member herders had distrust to the management of Negdels. Most of the herders who did not join new cooperatives, which succeeded Negdels, are those who had distrust towards former Negdels. Furthermore, they don't have any information and experience of ACs, and don't clearly understand the democratic ACs with the general concepts and principles on cooperatives. This situation may be, more or less, true for government officers and concerned ACs management and staff.

In order to facilitate the establishment of ACs, fundamental information including the significance of cooperatives, the international concepts and principles of cooperatives, procedures for establishing cooperatives, and rules for their operation, etc., should always be given to herders and concerned ACs management and staff. In this regard, the Government should take the following necessary measures: (i) Strengthening the

information services for the AC movement, using mass-media, etc.; and (ii) Strengthening the enlightening and training of AC management and progressive herders who are expected to be nucleus members of ACs

(3) Support for Establishing ACs

In addition to enlightenment and training, substantial support in the initial stage of establishment is necessary for encouraging ACs establishment.

Judging from the analysis and assessment of the present condition of Mongolia, the Government should consider strengthening ACs as follows: (i) providing guidance in establishing and operating cooperatives in the initial stage; (ii) arranging financial support (subsidy and/or loan) for necessary investment of cooperatives, particularly for initial investment; and (iii) extending preferential measures to ACs under the Mongolian tax system.

3.2.5 Necessary Administrative and Legal Actions for Strengthening Agricultural Cooperatives

Taking into account the specific characters and roles to be played by cooperatives for the socio-economic development of the country as a whole, a number of measures should be taken by the Government for strengthening cooperatives, in respect of administrative and legal issues.

- (1) A responsible organization should be decided by the central administration, either by law or regulation, for effective guidance, supervision and support of cooperatives. For this, a specific ministry/department/division should be nominated among the central administration, which, in full cooperation and support of the relevant government agencies, coordinates government action on support, supervision and monitoring of the cooperative movement. The Ministry of Agriculture and Industry is well placed to take this responsibility, with effective cooperation and support from other ministries concerned. A simplified structure of organization should be considered so as to avoid delay and complexity of the government service delivery and to increase the access from the cooperatives and their unions or federations.

- (2) The Social Program for Development of Cooperatives, now under preparatory stage as mentioned above, should be finalized as early as possible and be put into operation, so as to maximize the benefit of cooperatives to the members and society as a whole. In this regard, it is hoped that the roles and functions of cooperatives in the socio-economic development be clarified so as to justify the preferential measures on financial and technical aspects to be taken by the Government.
- (3) The existing Law on Cooperatives limits the cooperatives' investment within the amount of its own capital (see Article 9-3, chapter 3, Cooperative Law of Mongolia). However, due to the limited capital contributed by members, many of the cooperatives face the difficulty to expand their economic activities through new and additional investment. To encourage active involvement of cooperatives in economic and other activities, this provision would better be removed, giving the opportunity to cooperatives to mobilize the external resources.
- (4) Similarly, the existing Law on Cooperatives prescribes the cooperative associations or federations to be non-profit organizations, effectively limiting the involvement of associations or federations of cooperatives in the economic activities covering broad areas and member cooperatives. Due to the situation, a number of associations are registered at present as non-governmental organizations under the Law on Non-governmental Organization. However, to encourage and support the horizontal and vertical integration of economic activities among cooperatives for the effective and expanded cooperatives activities, there exists a huge scope of operations to be handled by joint efforts among cooperatives, especially in marketing of products, agro-processing, procurement of inputs and daily necessities of the respective cooperatives and their members. For this, the associations and federations could play an active role. At the same time, unified support and supervision of cooperatives and their associations/ federations would better be undertaken by the Government under the Law on Cooperatives. Therefore, the provision of Article 30, Chapter 7 of the Law on Cooperatives should be modified so as to allow the associations and federations to be actively involved in economic activities.

- (5) Access to the formal credit for cooperatives and their members should be improved, as most of them lack the fund for investment and running capital for their operation. The Agricultural Bank's loans are mostly extended to companies in the crop sub-sector and processing firms. Formal credit institutions, such as the Agricultural Bank, should be encouraged to provide cooperatives and their members a certain portion of total loan disbursement on mandatory basis.
- (6) Agricultural insurance, notably crop and livestock insurance, should be clearly defined legally so as to protect producers from natural calamities and also to ensure stable supply of food and other agricultural products. The insurance coverage of strategic commodities such as cereal crops and livestock should be considered as mandatory with legal and financial support by the Government. This will encourage active participation of the cooperatives and their members, and cooperatives may play an active role in the agricultural insurance scheme as a whole.
- (7) Among functions /duties of the central and local administration, a number of them could effectively be entrusted to cooperatives on a contractual basis. Under the centrally planned economy, various social services, such as health, education and social amenities managed by Negdels, were transferred to the local government. However, services provided are in many cases, not sufficient to meet the requirement, and there exists a possibility to entrust the management of these services to the cooperatives on a contractual basis. Basic terms and modality of this contract should be developed, for better guidance of this partnership.
- (8) Human resources development is the most urgent and critical issue to be addressed. This refers to the training of not only the management and staff of cooperatives but also the cooperative members on various aspects of cooperatives activities. Strong support by the Government on this endeavor is indispensable.

3.2.6 Cooperation with the Existing Enterprises and Other Institutions

For the effective management of cooperative activities and strengthening the financial bases of the cooperatives, following cooperation and collaboration are to be established.

- (1) To strengthen the linkage of cooperatives and agro-processing industries related to meat, wool, cashmere, hide and skin, wheat and other crops, a strong cooperative relationship should be established, for securing stable market for the products of cooperatives and their members, on one hand, and providing stable supply of materials to these enterprises, on the other hand. For this, an information network should be developed to provide information on detailed interest and concern of both cooperatives and concerned enterprises on the transaction of commodities, including agricultural products, inputs and daily necessities, for better approach to negotiations between the two parties. Federations or associations will facilitate these functions, but government support will be helpful.
- (2) Active participation of cooperatives in technical support services, such as veterinary, animal breeding, extension and others, should be initiated by cooperatives, in close cooperation with responsible organizations. Veterinary and breeding services at Som level are scheduled to be privatized based on the Resolution No. 61, however, there might exist a possibility of service vacuum due to the rather weak private sector. Cooperatives could be reliable suppliers of these services with support of the central and local administrations.
- (3) Agricultural credits provided by the Agricultural Bank to cooperatives and their members at present are very limited in amount and need to be expanded. In addition to the loan requirement of the cooperatives of their own, requirement of individual cooperative members should be addressed, where cooperatives may play an intermediate function. This will lead to the reduction of the cost of management of small loan amounts on the part of the Bank and increase the access of the members to the formal loans. Cooperatives could also be guarantors for members who are so often in deficit of collaterals.

- (4) Agricultural insurance should be paid due attention for the risk management of natural calamities for the cooperatives and their members. Under due financial support by the Government, cooperatives could be the local agents of the Agricultural Insurance Company which is scheduled to be privatized in the near future.

- (5) Solid linkage and collaboration between ACs and consumers' cooperatives should be established for smooth and effective supply of food and daily necessities to each other. This will be made through dialogue and negotiation between apex organizations of both cooperatives.