

## **4. ACTION PLAN FOR STRENGTHENING OF AGRICULTURAL COOPERATIVES**

### **4.1 Action Plan**

The Master Plan contains 18 projects: 3 projects on improvement of the marketing system and 15 projects on strengthening of ACs. These projects are co-related and should be executed in an efficient way through proper combination and appropriate scheduling. The implementation of phases and priorities of the projects are proposed in the Action Plan.

#### **4.1.1 Target Year of the Projects**

According to the policy "Platform" of GOM, the economic development in the short term is divided into two phases: The first phase from 1996 to 1998 is for restructuring state administration and economy, and the second phase from 1998 to 2000 is for creating an appropriate economic structure focused on self-sufficiency and expanding export, as well as securing proper state administration.

The projects proposed in the Master Plan cover numerous project components and are distributed over the whole country. Implementation of these projects will require a long period of time. The target year of the implementation of the projects is set at 2010.

A stagewise implementation approach is envisaged, taking into account of the degree of urgency, of implementation, easiness of execution and other aspects. The development stages proposed in this Action Plan are: initial stage of 3 years from 1998 to 2000, Second stage of 5 years from 2001 to 2005 and Third stage of 5 years from 2006 to 2010.

#### **4.1.2 Action Plan for Improvement of the Marketing System**

There are three projects for development of the marketing system: (i) Plan for Urban Support Centers, (ii) Plan for Regional Marketing Centers, and (iii) Plan for Reinforcement of Marketing Conditions. In the implementation of these plans, priority should be given to the reinforcement of marketing conditions to provide the fundamental conditions for management of urban support centers and regional marketing centers, as well as to promote activities of ACs.

Therefore, the initial stage will be devoted to (i) preparation of the Plan for Reinforcement of Marketing Conditions, and (ii) feasibility study of the Plan for Urban

Support Centers. In the second stage, the Plan for Reinforcement of Marketing Conditions will be implemented and feasibility studies on most Urban Support Centers and Regional Support Centers will be conducted. At the same time, construction of these centers will be initiated. In the third stage, all the projects will be completed and commissioned. The action plan for improvement of the marketing system is illustrated in Fig. 4.1.1.

#### **4.1.3 Action Plan for Strengthening of Agricultural Cooperatives**

Strengthening of ACs involves a wider spectrum of projects at various levels and different locations. These projects are classified into two kinds: (1) projects to be implemented at the national and Aimag levels, and (2) projects to be implemented at the AC level.

##### **(1) Action Plan for Projects at National and Aimag Level**

There are 5 projects proposed at the national and Aimag level: (i) Plan for Training and Information Center in Ulaanbaatar, (ii) Plan for Training Center in Aimag, (iii) Sales Information Network Plan, (iv) Plan for Reinforcement of Publicity, and (v) Administrative and Legal Actions. In the implementation of these plans, priority should be given to the Plan for Training and Information Center in Ulaanbaatar, and the Administrative and Legal Actions since these projects provide essential foundation for the implementation of other projects. The projects to be implemented in each stage are shown in Fig. 4.1.1.

##### **(2) Action Plan for Projects at Unit AC Level**

There are 10 projects proposed at AC level as follows: (i) Plan for Reinforcement of Branch Activities of Agricultural Cooperatives, (ii) Seed and Agricultural Machinery Improvement Plan (iii) Wheat Mill and Distribution System Improvement Plan (iv) Vegetables and Potatoes Production Plan, (v) Plan for Pasture and Fodder Crop Production and Its Distribution in Winter Season, (vi) Plan for Production of Improved Varieties of Livestock, (vii) Improvement Plan for Collection, Distribution and Processing of Wool, (viii) Improvement Plan for Collection, Distribution and Processing of Cashmere, (ix) Improvement Plan for Collection, Distribution and Processing of Meat and Skin/Hide, and (x) Social Services Improvement Plan .

There are about 300 existing ACs and new ones will be established in future. Constraints and needs for strengthening of ACs differ according to the specific situation of

the respective ACs. Therefore, project which should be applied to AC also differ by the respective AC.

It is considered necessary as the first step that, some ACs which are able to improve the socio-economic status of farmers and herders and provide services to the people in rural areas under in the market economy, should be strengthened as a pioneer ACs for future development of the country. As mentioned in the next section, the plan for strengthening model ACs, which includes various components of the above proposed projects, is formulated. This plan should be given high priority and be implemented stagewise because of its huge fund requirement , as shown in Fig. 4.1.1.

Based on the results and experience obtained from the Model ACs Plan, the proposed projects for ACs will be executed. Based on their performance, ACs are broadly classified into two groups: (i) Group-1 consisting of ACs with a positive financial status, and (ii) Group-2 of ACs with a negative financial status, and newly established ACs. Feasibility studies on the projects for the Group-1 will be carried out in the initial and second stages and construction of the projects will be finished within the second stage. Regarding the Group-2, all the feasibility studies, construction works and operation of the projects will be carried out within the third stage. The projects to be implemented in each stage is shown in Fig. 4.1.1.

## **4.2 Plan for Model Agricultural Cooperatives**

As mentioned in the previous section, the model ACs will play a catalytic role to strengthen the unit cooperatives efficiently and smoothly within their limited fund and manpower resources.

### **4.2.1 Selection of Model Agricultural Cooperatives**

The model ACs are selected by different ways from cooperatives under NAMAC and MAPH. The NAMAC cooperatives are classified into groups by sales income source, and the model cooperatives are selected from each group based on the evaluation criteria of their activities. For MAPH, the two active ACs are selected as model ACs based on the results of field survey for 4 ACs. An outline of procedures for selection of model cooperatives under NAMAC is shown below;

## (1) Grouping of ACs

Though the number of cooperatives under NAMAC was 252 in total at the end of 1995, only 215 ACs which submitted the 1995 annual report to NAMAC are considered and used for study on grouping of ACs.

The features of cooperatives are prominently reflected by various factors such as ecological condition, access to markets, livestock animal composition, and business activities. Among these, income is the most important factor indicating the features. Income source of ACs could be categorized into (i) income from crop production, (ii) income from livestock production, and (iii) income from agro-processing and other business. Income from livestock production is further divided into (a) income from production of meat, skin and hide and intestine, (b) income from cashmere and goat hard feather, and (c) income from wool, camel hair, hard and soft feather, and other products.

Grouping of ACs is made based on income sources as shown in the following table. Income from agro-processing and other business is excluded from the grouping because it is very small in the total income. Among agricultural cooperatives, 58 ACs which were dissolved in 1996, or had deficit in balance of sales or showed no data on sales and expenses in their annual report are excluded. Accordingly, there remain 157 cooperatives and they are grouped as follows:

Group by Main Income Source	No. of Cooperatives
1) Crop production	20
2) Meat, skin & hide, intestine production	51
3) Cashmere, goat hard feather production	57
4) Wool, camel hair, hard & soft feather, and other production	28
Total	157

## (2) Evaluation Criteria for Activities of ACs

In order to evaluate the 157 ACs and determine their ranking 7 evaluation criteria are used with weighted points as follows:

Evaluation Criteria	Weighted point
(1) Participation rate of members in the Som	10
(2) Participation rate in general meeting	5
(3) Scale of cooperative	5
(4) Usage rate cooperative business	5
(5) Gross profit per member household and B/C	60
(6) Proportion of welfare expense to net profit	5
(7) Income tax per member household	5
Total	100

### (3) Number of Model Cooperatives

The number of model cooperatives is assumed to be 8 in total, allocated according to the proportion of each group to the total of 157 ACs as shown in the following table:

Group by Main Income Source	Model ACs Allocated
1) Crop production	1
2) Meat, skin & hide, intestine production	3
3) Cashmere, goat hard feather production	3
4) Wool, camel hair, hard & soft feather, and other production	1
Total	8

### (4) Selection of Model Cooperatives

For the final selection of the model cooperatives, the following conditions are also taken into account: (i) total score calculated based on cooperative activities, (ii) even allocation to the Economic Development Regions, (iii) minimum amount of cashmere and wool sold by AC, and (iv) other specific factors such as areas contaminated by hybrid of goats. The selected model ACs are shown in the table below, which also includes two model ACs under MAPH (Item 5) selected based on the results of field survey.

Main Source of Sales Income	Name of Cooperative (Som/Aimag)	Economic Develop. Region
1) Crop production	Bayan Berkh (Gorvanbulag/Bulgan)	Khangai-Gobi
2) Meat, skin & hide, intestine production	Yalalt (Sagil/Uvs) Galut (Tsagaan Ovoo/Dornod) Buyant Orgil (Galshar/Khenty)	Western Eastern Eastern
3) Cashmere, goat hard feather production	Hujirt (Dariv/Gobi Altay), Tavan Erdene (Dorvoljin/Zavkhan), Hugjil (Brdenedalay/Dundgobi)	Western Western Central
4) Wool, camel hair, hard & soft feather, and other production	Shene Urnult (Khatanbulag/Dornogobi)	Central
5) Mongolian Association of Private Herders	Altan Tuvth (Bogd/Övörkhangai), Kharuden (Khairkhandulaan/Övörkhangai)	Khangai-Gobi Khangai-Gobi

#### 4.2.2 Present Condition of Model Agricultural Cooperatives

The location of ACs selected as model ACs and related Som are illustrated in Fig. 4.2.1. The present condition of the selected ACs is summarized in Table 4.2.1.

#### 4.2.3 The Project

The plan for strengthening each model AC is outlined in Table 4.2.2. The strengthening of model cooperatives is planned based on the projects proposed in the Master Plan as well as the natural and social conditions peculiar to each model cooperative, taking into account the wishes expressed by AC cadres and members.

The plan for in each model cooperative aims to increase crop and livestock production, reduce costs of inputs, products and daily necessities, and increase value-added of products through introduction of processing, improve the quality of products, expand consignment sales in order to increase the bargaining power, train and educate the staff and members, and provide social service to the members, as detailed below:

##### (1) Bayan Berkh Model AC under NAMAC

The strengthening of Bayan Berkh cooperative, located at Gorvanbulag Som in Bulgan Aimag, is planned for expansion of wheat production and sales, processing of wheat grains, increase of consignment sales from the members, installation of electric power supply system necessary for processing, improvement of communications, and improvement of social services. These involve the following plans proposed in the Master Plan;

- 1) Seed and Agricultural Machinery Improvement Plan
- 2) Wheat Mill and Distribution System Improvement Plan
- 3) Plan for Reinforcement of Branch Activities of Agricultural Cooperatives,
- 4) Sales Information Network Plan
- 5) Improvement Plan for Collection/Distribution and Processing of Wool,
- 6) Improvement Plan for Collection/Distribution and Processing of Cashmere,  
and
- 7) Social Services Improvement Plan

(2) Yalalt Model AC and Galuut Model AC under NAMAC

For the Yalalt cooperative located at Sagil Som in Uvs Aimag, and the Galuut cooperative located at Tsagaan Ovoo Som in Dornod Aimag, the following are planned: (i) expansion of production and sales of meat, skin and hide, and intestines, (ii) processing of meat and other products, (iii) increase of consignment sales by the members, (iv) installation of electric power supply system necessary for processing, (v) introduction of small scale vegetable production and water supply to livestock, (vi) improvement of telecommunications, and (vii) improvement of social services. These involve the following plans proposed in the Master Plan;

- 1) Improvement Plan for Collection/Distribution and Processing of Meat, Skin and Hide,
- 2) Plan for Reinforcement of Branch's Activities of Agricultural Cooperative,
- 3) Sales Information Network Plan
- 4) Vegetables and Potatoes Production Plan,
- 5) Improvement Plan for Collection/Distribution and Processing of Wool,
- 6) Improvement Plan for Collection/Distribution and Processing of Cashmere and
- 7) Social Services Improvement Plan.

(3) Buyant Orgil Model AC under NAMAC

For the Buyant Orgil cooperative, located at Galshar Som in Khenty Aimag, the followings are planned: (i) expansion of production and sales of meat, skin and hide, and intestines, (ii) processing of meat and other products, increase of consignment sales from the members, (iii) installation of electric power supply system necessary for processing, (iv) introduction of small scale vegetable production and water supply to livestock, (v) construction of warehouses for marketing products and daily necessities for Soms nearby,

(vi) improvement of telecommunications, and (vii) improvement of social services. These involve the following plans proposed in the Master Plan:

- 1) Improvement Plan for Collection/Distribution and Processing of Meat, Skin and Hide,
- 2) Plan for Reinforcement of Branch Activities of Agricultural Cooperatives,
- 3) Sales Information Network Plan
- 4) Vegetables and Potatoes Production Plan,
- 5) Improvement Plan for Collection/Distribution and Processing of Wool,
- 6) Improvement Plan for Collection/Distribution and Processing of Cashmere, and
- 7) Social Services Improvement Plan.

(4) Hujirt (currently Boyan Brun) AC under NAMAC

For the Hujirt or Boyan Brun cooperative, located at Dariv Som in Gobi Altay Aimag, the following are planned: (i) expansion of production and sales of cashmere, (ii) processing of animal hair, (iii) increase of consignment sales from the members, (iv) installation of electric power supply system necessary for processing, (v) introduction of small scale vegetable production and water supply to livestock, (vi) improvement of telecommunications, and (vii) improvement of social services. These involve the following plans proposed in the Master Plan;

- 1) Improvement Plan for Collection/Distribution and Processing of Cashmere,
- 2) Plan for Reinforcement of Branch's Activities of Agricultural Cooperative,
- 3) Sales Information Network Plan
- 4) Vegetables and Potatoes Production Plan,
- 5) Improvement Plan for Collection/Distribution and Processing of Wool and
- 6) Social Services Improvement Plan .

(5) Tavan Erdene AC under NAMAC

For the Tavan Erdene cooperative, located at Dorvoljin Som in Zavkhan Aimag, the following are planned: (i) expansion of production and sales of cashmere, (ii) pre-processing of animal hair, (iii) increase of consignment sales from the members, (iv) installation of electric power supply system necessary for processing, (v) introduction of small scale vegetable production and water supply to livestock, (vi) improvement of telecommunication, and (vii) improvement of social services. These involve the following plans proposed in the Master Plan;



- 1) Improvement Plan for Collection/Distribution and Processing of Cashmere,
- 2) Plan for Reinforcement of Branch's Activities of Agricultural Cooperative,
- 3) Sales Information Network Plan
- 4) Vegetables and Potatoes Production Plan,
- 5) Plan for Production of Improved Varieties of Livestock,
- 6) Improvement Plan for Collection/Distribution and Processing of Wool and
- 7) Social Services Improvement Plan .

(6) Hujil AC under NAMAC

For the Hujil cooperative, located at Erdene Dalay Som in Dundgobi Aimag, the following are planned: (i) expansion of production and sales of cashmere and other animal hair as well as meat, skin and hide, and intestines, (ii) processing of meat and other products, (iii) increase of consignment sales from the members, (iv) installation of electric power supply system necessary for processing, (v) improvement of telecommunication, and (vi) improvement of social services. These involve the following plans proposed in the Master Plan;

- 1) Improvement Plan for Collection/Distribution and Processing of Wool,
- 2) Plan for Reinforcement of Branch's Activities of Agricultural Cooperative,
- 3) Sales Information Network Plan
- 4) Vegetables and Potatoes Production Plan,
- 5) Improvement Plan for Collection/Distribution and Processing of Cashmere,
- 6) Improvement Plan for Collection/Distribution and Processing of Meat, Skin and Hide, and
- 7) Social Services Improvement Plan .

(7) Shene Urnult AC under NAMAC

For the Shene Urnult cooperative, located at Khatanbulag Som in Dornogobi Aimag, the following are planned: (i) expansion of production and sales of wool, camel hair and other animal hair as well as meat, skin and hide, and intestines, (ii) processing of meat and other products, (iii) increase of consignment sales from the members, (iv) construction of animal dipping bath, (v) installation of electric power supply system necessary for processing, (vi) improvement of telecommunications, and (vii) improvement of social services. These involve the following plans proposed in the Master Plan;

- 1) Improvement Plan for Collection/distribution and Processing of Wool,
- 2) Plan for Reinforcement of Branch Activities of Agricultural Cooperatives,
- 3) Sales Information Network Plan
- 4) Vegetables and Potatoes Production Plan,
- 5) Improvement Plan for Collection/Distribution and Processing of Cashmere,
- 6) Improvement Plan for Collection/Distribution and Processing of Meat, Skin and Hide, and
- 7) Social Services Improvement Plan .

(8) Altan Tevt ACs and Kharnurdin ACs under MAPH

For the Altan Tevt cooperative located at Bogd Som in Övörkhongai Aimag, and the Kharnurdin cooperative located at Khairkhandulaan Som in Övörkhongai Aimag, the followings are planned: (i) expansion of production and sales of cashmere and other animal hair as well as meat, skin and hide, and intestines, (ii) processing of meat and other products, (iii) increase of consignment sales from the members, and (iv) improvement of social services. These involve the following plans proposed in the Master Plan;

- 1) Plan for Reinforcement of Branch's Activities of Agricultural Cooperative,
- 2) Sales Information Network Plan
- 3) Vegetables and Potatoes Production Plan,
- 4) Improvement Plan for Collection/Distribution and Processing of Wool,
- 5) Improvement Plan for Collection/Distribution and Processing of Cashmere,
- 6) Social Services Improvement Plan .

#### 4.2.4 Cost Estimation

The cost necessary for implementation of the Model ACs plan is estimated on the assumption that (i) the applied exchange rate is US\$1.0 = Tg.800 = ¥120 as of mid 1997, (ii) construction and procurement are done on a contract basis, (iii) cost includes construction of buildings, construction of facilities, and procurement and installation of equipment, (iv) operation and maintenance cost as well as cost for guidance and training are excluded, (v) engineering service fee is not included, (vi) no physical contingency is considered, (vii) no price escalation is considered.

The total cost is estimated at US\$ 32.9 million for strengthening of all the 10 model ACs, as summarized below (Table 4.2.3):

			(US\$1,000)
Main Income Source	Model Cooperative		Cost
1. Wheat	Bayan Berkh (Gorvanbulag in Bulgan)		9,510
2. Meat, skin & hide, and intestine	Yalat (Sagil in Bulgan)		2,140
	Galuu (Tsagaan Ovoo in Dornod)		2,140
	Boyant Orgil (Galshar in Khenty)		2,800
	Sub-total		7,080
3. Cashmere	Hujirt (Dariv in Gobi Altay)		1,800
	Tavan Erdene (Dorvoljin in Zavkhan)		8,970
	Hugjil (Erdene dalai in Dundgobi)		2,370
	Sub-total		13,140
4. Wool and camel hair	Shene Urnult (Khatanbulag, Dornogobi)		2,680
5. Cooperatives registered with MAPH*	Altan Teyht (Bogd, Övörkhangai)		260
	Khaninuridin (Khairkhand., Övörkhangai)		260
	Sub-total		800
6. Grand total			32,930

#### 4.2.5 Impacts and Effect Expected by the Project

Through strengthening of model ACs, the following impacts and effects are expected:

##### (1) Effects on AC Business

- Increase of participation rate of herders in the cooperatives,
- Improvement of production, quality and value added,
- Attainment of stable supply of products and daily necessities,
- Improvement of pasture utilization through rehabilitation and increase of wells,
- Strengthening of bargaining power through increase of consignment sales,
- Increase of hay and feed supply,
- Improvement of efficiency in collection of products, supply of daily necessities and transmission of information through formation of Khot ail and herders' small groups.

##### (2) Impacts on Members, Their Households and Local Inhabitants

- Improvement of income and living condition of cooperative members,
- Attainment of stable supply of daily commodities,
- Reduction of heavy workload,
- Formation of Khot ail and herders' small groups enabling to transfer traditional knowledge between generations as well as to maintain social morality,

**(3) Socio-economic Impacts Within the Som**

- Revitalization of local economy in the Som,
- Creation of employment opportunities in facilities like processing,
- Improvement of local food supply in the Som,

**(4) Effects on Other ACs in Nearby Soms**

- Demonstration effect of the results of strengthening of model cooperatives,
- Collection, processing and sales of products through model cooperatives,
- Supply of daily necessities by model cooperatives,
- Activation of the regional economy in Soms located nearby model cooperatives,
- Propagation of marketing information to nearby Soms .

**4.3 Plan for Training and Information Center in Ulaanbaatar**

Provision of information and training of AC members have not been conducted at any level from ACs to Association at the national level. Accordingly, training and continuous dissemination of information are essential to develop cooperative spirit among members and to promote their active participation in cooperative activities. Particularly, it is important (i) to achieve sound financial condition of cooperatives, (ii) to increase consignment sales from members, (iii) to train young leaders with enough knowledge of accountancy and marketing, and business sense, (iv) to increase the cooperative members through revitalization of cooperative activities, as well as by prioritizing the necessity and importance of cooperatives to many herders.

The training programs in the center will be intended for senior and replaced members of cooperatives.

The training programs will include administration for sound cooperative management, accounting, general technique for agricultural and livestock production, computer operation necessary for accounting, management, control of properties, etc., knowledge of communications, etc. The center will play an important role in exchanging experiences, information and views on cooperatives among trainees and results of revitalization of cooperative activities.

The organization of the Training and Information Center will consist of five departments: (1) training department, (2) information department, (3) demonstration department, (4) accommodations department, and (5) facility management department.

The training department will be responsible for the operation of training programs. As for training facilities, one training room with a capacity of 50 persons, two training rooms with a capacity of 30 persons, and three discussion rooms with a capacity of 15 persons will be constructed. In addition, one computer training room shall be established with 15 units of computers.

The information section will consist of an information collection section, a broadcasting material section, and a printing and publishing section. The major role of the department is the collection and processing of market data and information in Mongolia. A satellite communication system will be introduced in this department in order to enable the department to communicate with nationwide cooperatives.

The demonstration department will be composed of a products demonstration section, an equipment demonstration section, and a video production section. The main activities include collection of cooperative products, display of the production process and new and innovative machinery that can be useful for agricultural development in the country. Video programs for the explanation of machinery operation and high quality products will be produced and presented to trainees and visitors.

The accommodations department will be responsible for providing lodging services to trainees. The proposed facilities include 13 rooms with a capacity of four persons, bath and shower rooms, a laundry room, a drying room, a kitchen, a dining/recreation/common room.

The facility management department will be responsible for the maintenance of buildings and vehicles including a minibus for observation tour and management of a garage and storage rooms for equipment, fuel and oil.

The management of the Training and Information Center will be undertaken by the Association at the national level with the support of Aimag Associations under the supervision of MAI. For the proper management, a management council will be established. The council will have a membership of seven including the Manager of the Center, a representative from the Association at the national level and one representative each from four Economic Development Regions. The major functions of the council are to

set up the training objectives, candidate of trainees, training period, as well as training programs. The Center has to submit annual report to MAI according to the basic policy to be established by the council.

Lecturers will be recruited within the country. However, experts from cooperative institutions in Asian countries and developed countries with the success story of cooperative activities shall be invited as lecturers particularly for the initial year.

The Training and Information Center will have a floor space of about 3,800 m<sup>2</sup>. The total cost necessary for construction of the Center in Ulaanbaatar including the cost for equipment is estimated at US\$ 8.5 million.

## 5. RECOMMENDATIONS

In view of the important role of ACs in the socio-economic development of Mongolia, the Action Plans described above should be implemented as early as possible for effective contribution to the sound development of the country as a whole. It is recommended that, as a first step, the " Plan on 10 Model ACs" be initiated following the time schedule described in the Plan. Detailed studies on the respective projects and programs should be made as required.

It is recommended that the Plan for Training and Information Center in Ulaanbaatar be implemented simultaneously with the Model ACs Plan in order to foster cadres of the model ACs as well as other ACs for strengthening activities of ACs.

It is also recommended that the development projects proposed in the Master Plan be performed based on the results and experience obtained from implementation of the Model gACs Plan for effective development and strengthening ACs all over the country.

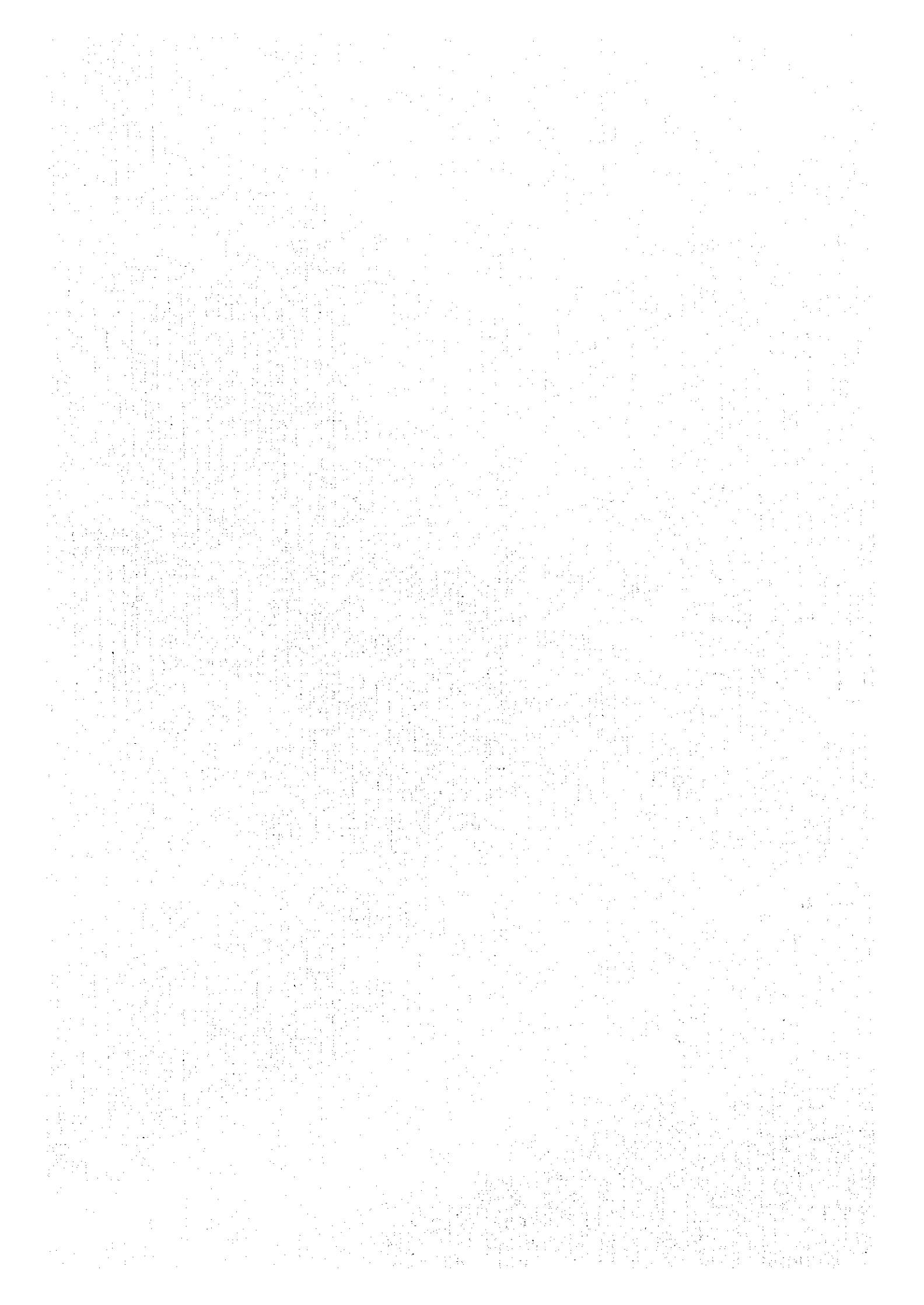
To visualize the development process of ACs as stated in this Project, it is strongly recommended that the following measures should be taken to solve administrative and legal constraints for strengthening of ACs.

- 1) The responsible department/division for effective guidance, supervision and support to ACs should be decided in the Ministry of Agriculture and Industry.
- 2) 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 ACs.
- 3) Article 30 of the Cooperative Law of Mongolia should be modified, giving the Associations of ACs at Aimag and the national levels opportunities of active involvement in economic activities .
- 4) The investment of ACs is limited within the amount of their own capital by Article 9-3 of the Cooperative Law of Mongolia. To expand the economic activities of ACs through mobilizing external fund resources, this Article should be modified.
- 5) Application of preferential measures on credit access and taxation for ACs should be considered.

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



## Tables



**Table 1.3.1 List of Counterparts and Experts of the JICA Study Team**

Name	Position
<b>(1) First Stage Field Survey (April to June, 1996)</b>	
<b>Counterpart Team</b>	
Mr. I. Hanimhan	Chief counterpart: Deputy chairman Policy and Project Department, MoFA
Mr. N. Batjargal	Administration/institution: Deputy chairman, Production and Marketing Department, MoFA
Ms. S. Enkhbayar	Processing/marketing: Specialist, Production and Marketing Dept., MoFA
Mr. C. Puntsangsuren	Agronomist, Specialist, Production and Marketing Department, MoFA
Mr. R. Namibia	Marketing, Specialist, Production and Marketing Department, MoFA
Mr. S. Lubsandorj	Cooperative Business, Officer of NAMAC
Mr. B. Gochoodorj	Cooperative Organization, Executive Secretary, NAMAC
Ms. J. Narantsatsralt	Sociologist, Officer of NAMAC
Ms. C. Tungalag	Macro-economy, Specialist, Policy and Project Department, MoFA
Mr. G. Hishgee	Marketing expert, Specialist, Production and Marketing Department, MoFA
Mr. T. Chuluunbaatar	Livestock, Specialist, Production and Marketing Department, MoFA
Mr. Battomor	Administration/institution, Specialist, Production and Marketing Department, MoFA
<b>JICA Study Team</b>	
Mr. K. Onaka	Team Leader
Mr. K. Baba	Economist (macro-economy)
Mr. H. Tsuchiya	Institutional Expert (administration/institution)
Mr. T. Nagaya	Marketing Expert (marketing)
Mr. M. Shono	Expert of cooperative business
Mr. T. Yamazaki	Expert of cooperative organization
Mr. N. Morioka	Sociologist (agricultural nomadic society)
Mr. H. Yasuda	Marketing Expert (processing/marketing of livestock products)
Mr. Ba Baolidao	Interpreter
Ms. C. Yamamoto	Interpreter
<b>(2) Second Stage Field Survey (April to December, 1996)</b>	
<b>Counterpart Team</b>	
Mr. C. Puntsangsuren	Chief counterpart: Officer of Irrigation Division, Agricultural Department Ministry of Agriculture and Industry (MAI)
Mr. H. Ochirhuyag	Administration: Officer of Cooperation and Justice Division, Cooperation, Legislation and Information Department, MAI
Ms. S. Enkhbayar	Processing/marketing of livestock products: Officer of the Food and Manufacturing Div., MAI
Ms. Sh. Enkhbayar	Marketing: Officer of the Basic and Consumer Goods Division, Industrial Department, MAI
Mr. Z. Enebish	Marketing: Officer of Market Policy and Regulation Division, Cooperation, Legislation and Information Department, MAI
Mr. S. Lubsandorj	Cooperative Business: Officer of NAMAC
Mr. B. Gochoodorj	Cooperative Organization: Executive Secretary, NAMAC
Ms. J. Narantsatsralt	Sociologist: Officer of NAMAC
Ms. C. Tungalag	Macro-economy: Officer of Economy and Information Division, Cooperation, Legislation and Information Department, MAI
Mr. B. Binie	Livestock: Chief of Livestock Division, Agricultural Department, MAI
<b>JICA Study Team</b>	
Mr. K. Onaka	Team Leader
Mr. T. Nagaya	Marketing Expert
Mr. M. Shono	Expert of cooperative business
Mr. T. Yamazaki	Expert of cooperative organization
Mr. N. Morioka	Sociologist
Mr. H. Yasuda	Marketing Expert for processing/marketing of livestock products
Ms. M. Ueno	Livestock Expert
Mr. Ba Baolidao	Interpreter
Ms. C. Yamamoto	Interpreter
<b>(2) Third Stage Field Survey (June to August, 1997)</b>	
<b>Counterpart Team</b>	
Mr. I. Hanimhan	Chief counterpart: Deputy chairman General Policy Regulation Department, MAI
Mr. C. Puntsangsuren	Agronomist, Specialist, Strategic Planning and Unified Policy Department, MAI
Ms. C. Tungalag	Macro-economy, Specialist, Strategic Planning and Unified Policy Department, MAI
Mr. S. Lubsandorj	Cooperative Business, Officer of NAMAC
Mr. B. Gochoodorj	Cooperative Organization, Executive Secretary, NAMAC
Ms. J. Narantsatsralt	Sociologist, Officer of NAMAC
Mr. Battomor	Livestock Expert, Strategic Planning and Unified Policy Department, MAI
Ms. S. Enkhbayar	Processing/marketing: Specialist, Strategic Planning and Unified Policy Department, MAI
<b>JICA Study Team</b>	
Mr. K. Onaka	Team Leader
Mr. T. Nagaya	Marketing Expert
Mr. M. Shono	Expert of cooperative business
Mr. T. Yamazaki	Expert of cooperative organization
Mr. N. Morioka	Sociologist
Mr. H. Yasuda	Marketing Expert for processing/marketing of livestock products
Mr. A. Morioka	Construction expert
Mr. Ba Baolidao	Interpreter

Table 2.1.1 Output of Main Industrial Products

Items	unit	1980	1985	1989	1990	1991	1992	1993	1994	1995	1995/1994	1995/1990
Electricity	mill.kWh	1566.3	2843.2	3,568.3	3,347.9	3,228.6	2,928.7	2,131.7	2,122.7	2,052.8	0.967	0.613
Coal	1,000tons	4376.1	6523.2	8,044.5	7,157.0	7,037.0	6,247.3	5,608.5	5,012.4	4,871.2	0.972	0.681
Copper concentrate	1,000tons	44	342.7	352.8	354.0	257.4	300.2	334.3	343.4	346.3	1.008	0.978
Molybdenum concentrate	tons	640.4	3040	3,361.0	4,208.0	3,718.0	3,500.0	4,367.0	4,396.0	3,906.0	0.889	0.928
Bricks	mill.pieces	110.1	143	172.8	151.1	108.2	54.0	33.4	33.6	21.5	0.640	0.142
Cement	1,000tons	177.9	150.5	512.6	440.8	226.8	132.5	82.3	85.8	108.8	1.268	0.247
Lime	1,000tons	63.8	102.6	95.0	103.0	76.3	67.8	51.2	66.4	51.4	0.774	0.499
Installed metal construction	1,000cu.meters	60.9	133.7	165.1	166.8	72.3	42.0	17.1	14.8	13.7	0.926	0.082
Sawn wood	1,000cu.meters	-	-	553.1	509.0	270.4	124.5	84.5	50.3	61.2	1.217	0.120
Scoured wool	1,000tons	-	-	10.1	9.7	7.2	7.1	3.5	2.1	1.2	0.571	0.124
Carpet	1,000sq.meters	-	-	2,128.1	1,971.2	1,400.2	1,037.0	1,000.1	681.5	595.7	0.874	0.302
Knitwear	1,000pieces	-	-	4,110.5	4,248.6	2,808.7	1,411.7	990.7	513.8	522.7	1.017	0.123
Woolen fabrics	1,000meters	-	-	1,978.2	1,111.3	786.4	705.8	289.9	76.7	71.1	0.927	0.064
Overcoats	1,000pieces	-	-	89.7	108.7	51.5	8.6	0.6	0.5	0.3	0.600	0.003
Suits	1,000pieces	-	-	182.6	201.8	30.2	11.8	2.7	2.5	1.2	0.480	0.006
Hides	1,000tons	-	-	1.0	1.0	0.8	0.5	0.2	0.0	0.0	-	0.000
Leather footwear	1,000pairs	-	-	4,140.0	4,222.5	3,994.1	2,244.7	1,030.8	406.6	245.5	0.604	0.058
Leather coat	1,000pieces	-	-	41.6	35.7	29.9	40.1	9.4	35.0	12.7	0.363	0.356
Sheepskin coat	1,000pieces	-	-	180.2	138.1	111.5	99.4	86.6	57.1	16.8	0.294	0.122
Meat & meat production	1,000tons	-	-	61.7	57.8	49.6	25.1	17.3	11.3	11.3	1.000	0.196
Flour	1,000tons	-	-	199.7	189.8	174.4	181.9	138.8	127.0	231.1	1.820	1.218
Milk & dairy products	mill.liters	-	-	62.0	59.6	50.6	27.7	12.9	4.9	5.2	1.061	0.087
Household soap	1,000tons	-	-	3.3	2.6	0.7	0.4	0.2	0.5	0.3	0.600	0.115
Mixed fodder	1,000tons	-	-	212.2	119.1	102.1	82.7	77.0	33.7	59.2	1.757	0.497

Sources: Mongolian Economy and Society in 1995

Table 2.1.2 Basic Indicators of Economic and Social Development

Items	unit	1980	1985	1989	1990	1991	1992	1993	1994	1995
Population	1,000	1,682	1,901	2,096	2,149	2,187	2,215	2,250	2,280	2,318 at the end of year
Labour force	1,000	696	779	903	947	1,004	1,060	1,081	1,089	1,110 annual average
Number of employees	1,000	516	590	764	784	796	806	773	787	802 at the end of year
Unemployment	1,000					55.4	54.0	71.9	74.9	45.1
GDP at constant price 1993	bill.Tg		172.7	214.0	208.6	189.3	171.4	166.2	170.0	180.7
GNP at constant price 1993	bill.Tg		149.2	191.5	186.8	180.9	166.9	154.6	159.4	169.8
Investment	bill.Tg	3.1	4.6	4.8	3.4	4.0	5.3	45.2	62.2	87.8
Exports	mill.US\$	402.8	689.1	721.5	660.7	348.0	388.4	382.6	367.8	511.6
Imports	mill.US\$	547.8	1,096.0	963.0	924.0	360.9	418.3	379.0	258.4	388.7
Exchange rate*	Tg/US\$			3.00	4.60	25.86	40.00	396.51	414.09	473.62
Inflation rate	%					52.7	325.5	183.0	66.3	53.1
Money in circulation	mill.Tg			581	743	2,003	2,896	10,786	21,804	29,756
- M1	mill.Tg			3,505	4,750	7,314	7,640	18,548	32,871	42,637
- M2	mill.Tg			5,083	5,633	9,915	13,052	42,764	76,777	102,045
Mongolian government budget										
- Revenue	mill.Tg		5,741	6,902	5,495	6,497	11,916	54,843	86,131	136,274 including loan
- Expenditure	mill.Tg		5,701	7,062	6,812	8,929	12,361	61,662	101,326	147,731
Gross industrial product	bill.Tg	157.8	240.2		285.7	228.3	194.1	168.8	175.1	211.3 at constant prices 1993
Gross agricultural output	bill.Tg	74.8	105.5	113.5	109.3	101.2	95.2	91.1	96.3	102.1 at constant prices 1993
- Livestock	bill.Tg	61.1	66.8	79.1	79.3	78.9	77.1	69.9	80	87.5 at constant prices 1993
- Crops	bill.Tg	13.7	38.7	34.4	29.9	22.3	18.1	21.3	16.3	14.6 at constant prices 1993
Livestock	mill.head		22.5	24.7	25.9	25.5	25.7	25.2	26.8	28.6
Sawn area	1,000 ha	704.0	789.6	837.9	787.7	708.1	657.4	584.8	470.6	372.6

Sources: Mongolian Economy and Society in 1995

Monthly Statistical Bulletin April 1996

\* from 1989 to 1992 are quoted from JALDA

Table 2.1.3 Consumer Price Index (1991-1-16=100)

	'91-12	'92-12	'93-12	'94-12	'95-12	1995/94
<u>Urban Area</u>						
Food bevarage & tabacco	131	755	2,247	3,565	5,561	1.560
Clothing & footwear	192	679	1,304	2,363	3,454	1.462
Rent & utilities	115	246	1,068	1,596	1,692	1.060
Household goods	210	796	2,087	3,247	5,932	1.827
Medical care	100	197	1,934	1,934	1,934	1.000
Transport & Communicatio	137	535	1,673	3,221	4,326	1.343
Education & recreation	277	581	2,155	4,428	8,389	1.894
Other goods & services	152	430	1,484	2,905	4,182	1.440
Overall index	153	650	1,839	3,058	4,682	1.531
<u>Rural areas</u>						
Food bevarage & tabacco	109	1,162	4,357	4,216	7,378	1.750
Clothing & footwear	111	1,430	3,352	5,286	7,377	1.396
Rent & utilities	244	1,502	2,900	3,765	5,650	1.501
Household goods	213	874	1,696	2,940	4,757	1.618
Medical care	100	204	2,198	2,500	7,188	2.875
Goods & services	300	1,315	4,035	7,333	24,444	3.333
Overall index	133	1,245	3,566	4,487	7,271	1.621

Table 2.1.4 Basic Data of Aimag

Aimag (Prefecture)	Population		Breeders		Unem- Local		Live- Stock		Sales of		Distribution of GDP		
	1990	1995	1995/90	1995	B/A	1,000	Revenue	1,000	Industrial	Production	(C)	(D)	C/(C+D)
	1,000	1,000	%	1,000	%	mill.Tg	mill.Tg	mill.Tg	mill.Tg	mill.Tg	mill.Tg	mill.Tg	%
Arkhangai	89.2	103.0	1.155	34.3	33.3	370	370	1,630	627	627	8,197	240	97.2
Bayan-Olgii	99.2	90.1	0.908	19.8	22.0	460	460	1,350	1,429	1,429	6,789	547	92.5
Bayankhongor	78.6	89.5	1.139	27.5	30.8	490	490	2,230	1,596	1,596	11,215	611	94.8
Bulgan	56.7	63.3	1.116	15.6	24.6	920	920	1,140	1,971	1,971	5,733	754	88.4
Govi-Altai	65.1	74.1	1.138	22.8	30.8	360	360	2,100	728	728	10,561	278	97.4
Dornogovi	57.6	48.2	0.837	8.6	17.9	310	310	890	393	393	4,476	150	96.8
Dornod	76.6	84.6	1.104	8.6	10.2	980	980	590	2,264	2,264	2,967	866	77.4
Dundgovi	51.9	52.7	1.015	16.9	32.1	250	250	1,710	320	320	8,600	122	98.6
Zavkhan	93.5	105.8	1.132	30.1	28.4	470	470	2,400	1,289	1,289	12,070	493	96.1
Ovorkhangai	100.3	112.9	1.126	35.0	31.0	850	850	2,600	3,787	3,787	13,076	1,449	90.0
Omnogovi	43.6	44.8	1.028	13.5	30.2	310	310	1,200	827	827	6,035	316	95.0
Sukhbaatar	53.5	59.1	1.105	15.3	25.8	390	390	1,020	1,593	1,593	5,130	609	89.4
Selenge	91.2	102.9	1.128	6.2	6.0	2,310	2,310	500	10,321	10,321	2,515	3,949	38.9
Tov	105.8	110.9	1.048	20.4	18.4	1,990	1,990	1,770	8,930	8,930	8,901	3,417	72.3
Uvs	91.5	101.9	1.114	25.1	24.6	470	470	1,750	1,628	1,628	8,801	623	93.4
Khovd	80.8	90.4	1.119	23.9	26.4	360	360	2,070	531	531	10,410	203	98.1
Khovsgol	106.6	120.1	1.127	37.9	31.6	700	700	1,860	2,755	2,755	9,354	1,054	89.9
Khenti	74.2	75.2	1.013	17.6	23.4	590	590	1,100	1,584	1,584	5,532	606	90.1
Darhan	82.2	89.4	1.088	1.6	1.8	1,430	1,430	140	15,368	15,368	704	5,881	10.7
Ulaanbaatar	555.2	616.9	1.111	6.2	1.0	15,130	15,130	290	111,688	111,688	1,458	42,740	3.3
Orkhon	50.0	64.6	1.292	3.2	5.0	1,340	1,340	130	124,412	124,412	654	47,610	1.4
Govisumber		12.4		0.4	3.2	420	420	100	573	573	503	219	69.6
Total/Average	2103.3	2312.8	1.100	390.5	16.9	30,900	30,900	28,570	294,613	294,613	143,681	112,742	56.0

Table 2.2.1 Resources of Surface Water and Ground Water in Mongolia

Name of Aimags	Surface water		Ground water		Available resources (million m <sup>3</sup> /year)
	Area (1,000 km <sup>2</sup> )	Water resources (million m <sup>3</sup> /year)	Total recharge (million m <sup>3</sup> /year)	Discharge to river (million m <sup>3</sup> /year)	
Arhangai	55	2,650	1,060	530	530
Bayan Olgii	46	2,900	1,050	520	530
Bayan hongor	116	1,510	620	310	310
Bulgan	49	1,160	690	340	350
Govi Altai	142	810	400	200	200
Dornogovi	111	110	140	70	70
Dornod	124	700	690	340	390
Dundgovi	78	100	120	60	60
Zavhan	82	2,980	940	470	470
Overhangai	63	1,060	640	320	320
Omnogovi	165	140	140	70	70
Suhbaatar	82	120	170	80	90
Selenge	43	2,880	770	380	390
Tov	83	3,400	990	500	490
Uvs	69	1,210	230	120	110
Hovd	76	1,630	250	130	120
Hovsgol	101	7,100	1,950	980	970
Hentii	82	2,270	1,200	600	600
Total	1,567	32,730	12,050	5,980	6,070

Data source: Irrigation rehabilitation project, phase 1 preparation report, FAO, 1993

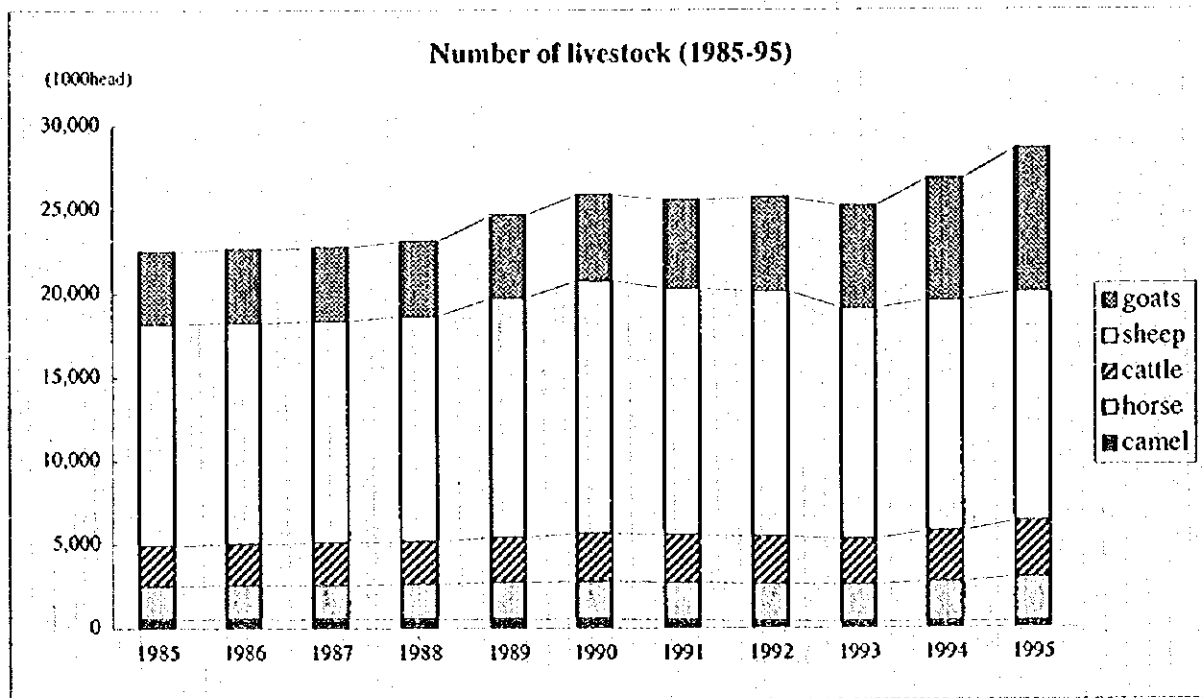


**Table 2.3.1 Number of Livestock(1985-1995)**

(1000 head)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	(%)
camel	559	551	547	553	558	538	476	415	368	366	368	(1)
horse	1,971	2,018	2,047	2,103	2,200	2,262	2,259	2,200	2,190	2,409	2,648	(9)
cattle	2,408	2,480	2,526	2,541	2,693	2,849	2,822	2,819	2,731	3,005	3,316	(12)
sheep	13,249	13,194	13,234	13,451	14,265	15,083	14,721	14,657	13,779	13,787	13,718	(48)
goats	4,299	4,401	4,388	4,474	4,959	5,126	5,250	5,603	6,107	7,241	8,520	(30)
total	22,486	22,644	22,741	23,122	24,675	25,857	25,528	25,694	25,175	26,808	28,570	(100)

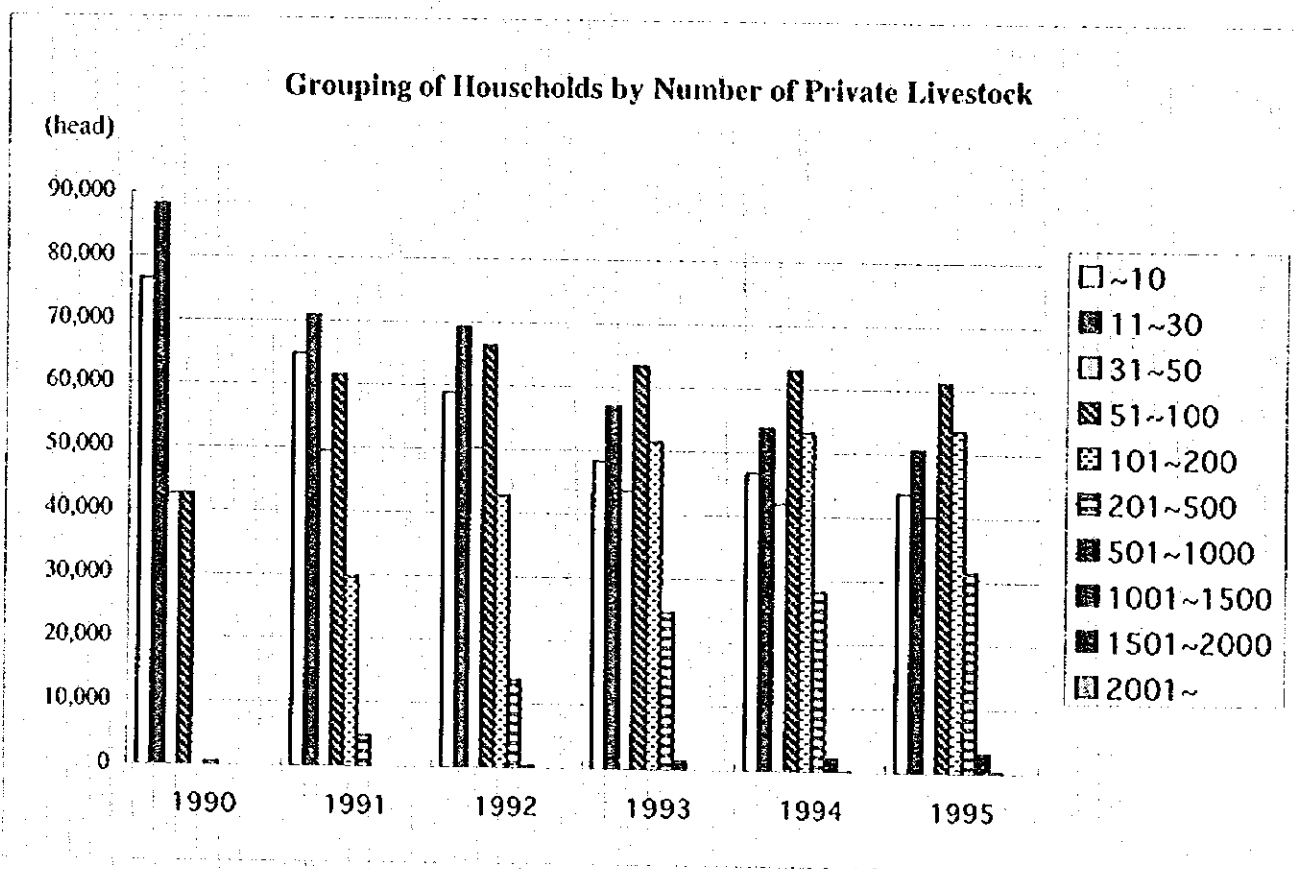
source: Mongolian Economy and society in 1995, Statistical Yearbook



**Table 2.3.2 Grouping of Households by Number of Private Livestock**

no. of livestock	1990	1991	1992	1993	1994	1995
~10	76,400	64,800	58,900	48,300	46,800	43,700
11~30	88,100	70,800	69,200	57,000	53,800	50,600
31~50	42,600	49,500	50,200	43,700	42,000	40,200
51~100	42,600	61,500	66,300	63,400	62,900	61,100
101~200		29,600	42,800	51,400	53,200	53,600
201~500	500	4,800	13,700	24,600	28,200	31,400
501~1000			400	1,300	2,100	3,100
1001~1500			7	47	100	300
1501~2000						17
2001~						8

source: Mongolian Economy and Society 1995; Statistical Yearbook 1996



**Table 2.3.3 Number of Slaughtered Livestock**

	1986-1990 (average)		1991		1992		1993		1994		1995	
	1000head	%*	1000head	%	1000head	%	1000head	%	1000head	%	1000head	%
camel	38.9	7.1	93.6	17.4	84.1	17.7	59.3	14.3	28.6	7.8	31.6	8.6
horse	201.7	9.5	273.8	12.1	293.4	13.0	159.4	7.2	127.5	5.8	163.5	6.8
cattle	544.3	20.8	684.6	24.0	609.9	21.6	479.1	17.0	459.9	16.8	523.9	17.4
sheep	5,311.3	38.4	6,174.6	40.9	5,258.6	35.7	4,845.2	33.1	4,645.0	33.7	4,627.1	33.6
goats	1,463.6	31.3	1,703.9	33.2	1,437.5	27.4	1,074.8	19.2	1,036.6	17.0	1,221.2	16.9
total	7,559.8	31.8	8,930.5	34.5	7,683.5	30.1	6,617.8	25.8	6,297.6	25.0	6,567.3	25.5

note: (\*) Percentage of slaughtered livestock in total no. at the beginning year

source: State statistical office of Mongolia 1995

**Table 2.3.4 Production of Livestock Products in the Whole Country(1989-1995)**

	1989	1990	1991	1992	1993	1994	1995
meat(dressed weight)							
total (1000ton)	239.6	248.9	281.2	251.2	216.1	203.9	215.8
beef (1000ton)	72.8	66.2	83.8	75.7	64.5	64.4	71.4
mutton&goat (1000ton)	121.9	132.3	135.9	116.3	112.5	111.9	111.9
pork (1000ton)	5.5	7.9	3.8	1.8	0.7	0.7	0.5
wool(sheep) (1000ton)	19.4	21.1	21.5	21.0	20.8	19.6	19.6
milk (1000litter)	319.3	315.7	311.3	308.1	292.9	312.5	343.1
butter (1000ton)	4.8	4.4	3.1	1.3	0.7	0.5	1.2
egg (millions pieces)	35.8	38.0	25.5	18.6	10.0	3.6	3.6

note: Figures do not coincide with table 4.3.2.8 due to difference in sources.

source: Mongolian economy and society in 1995, Ulaanbaatar 1996

**Table 2.3.5 Grass Resources and Grazing Capacity in Mongolia**

Aimags	Research & Teaching Institute of Animal Husbandry										Institute of Agricultural Economics														
	total pasture area					yield of grass					grazing capacity					actual no. of livestock					balance				
	1000ha	kg/ha	1000ton	total 1000SU	SU/100ha	(d=c0.56ton)	(e=d/a)	(f)	(g)	(h=g-e)	1000ha	kg/ha	1000ton	total 1000SU	SU/100ha	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p=q-m)		
Arhangay	4,099	390	1,599	2,855	70	4,620	113	43	360	4,424	360	1,620	2,804	67	4,062	92	25								
Bayan Olgii	3,644	260	947	1,692	46	2,421	66	20	260	4,167	260	1,083	1,935	47	2,022	53	7								
Bayanzhongor	8,826	220	1,942	3,467	39	3,927	44	5	260	8,937	260	1,975	3,673	46	3,118	37	-10								
Bulgan	2,827	430	1,216	2,171	77	3,143	111	34	410	3,061	410	1,259	2,126	69	2,669	89	20								
Gobi-Altay	9,471	250	2,368	4,228	45	3,266	34	-10	178	8,509	178	1,517	3,229	38	2,782	35	-3								
Dornod	8,898	350	3,114	5,561	63	1,701	19	-43	420	8,242	420	3,431	5,485	63	1,966	25	-38								
Dornogobi	10,110	180	1,820	3,250	32	1,945	19	-13	150	10,585	150	1,459	2,982	30	1,877	18	-12								
Dundgobi	6,780	290	1,966	3,511	52	3,278	48	-3	180	7,353	180	1,237	2,371	33	2,957	45	12								
Zavhan	6,791	330	2,241	4,002	59	4,814	71	12	330	6,794	330	2,213	4,206	62	3,991	68	6								
Ovorkhangay	5,957	310	1,847	3,298	55	5,485	92	37	310	5,968	310	1,627	2,910	54	4,327	84	30								
Omnogobi	14,596	140	2,043	3,649	25	2,128	15	-10	120	14,598	120	1,589	3,380	24	1,857	14	-10								
Subbantar	6,440	380	2,447	4,370	68	2,663	41	-27	340	6,380	340	2,383	4,014	52	2,531	35	-18								
Setenge	1,679	480	806	1,439	86	1,234	73	-12	450	1,658	450	728	1,213	75	1,161	65	-9								
Tov	5,293	380	2,011	3,592	68	4,310	81	14	430	5,371	430	2,141	3,660	78	3,822	96	18								
Uvs	5,656	210	1,188	2,121	38	3,436	61	23	220	5,602	220	1,191	2,169	39	3,104	63	24								
Hovd	5,953	170	1,012	1,807	30	3,702	62	32	190	5,946	190	1,020	2,088	39	3,086	56	17								
Hovsgol	5,169	400	2,068	3,692	71	5,012	97	26	390	5,573	390	2,084	3,681	68	4,414	87	20								
Hentiy	5,742	470	2,699	4,819	84	2,918	51	-33	420	6,108	420	2,859	4,690	147	3,024	108	-40								
Darhan	164	510	84	149	91	355	217	125	400	184	400	74	107	107	277	142	35								
Erdenet	46	290	13	24	52	777	1684	1633	390	60	390	24	39	65	297	293	228								
Ulaanbaatar	36	430	15	27	77	317	889	813	460	184	460	85	141	77	567	282	206								
Gobi-sumber	452	180	81	145	207																				
total/average	118,629	33,527	59,870	50	61,656	52	2	119,704	31,597	56,903	47	54,034	43	-5											

note: 1) SU: Sheep Unit, sheep=1, camel=5, horse=7, cattle=6.0, goat=0.9

2) SU: Sheep Unit, sheep=1, camel=5.7, horse=6.6, cattle=6.0, goat=0.9

(a) figures on total area in column (a) do not coincide with column (i), because of a difference of data resource.

(d) feed requirement for 1SU/year=0.56ton.

(j)-(o) figures in column (j)-(o) are calculated by data of sums.

(-) data is not available.

Institute of Agricultural Economics, Mongolian National Agricultural University  
Research & Teaching Institute of Animal Husbandry, Mongolian National Agricultural University

source:

Table 2.3.6 Number of Water Point

Aimags	1992					1993				
	total	type of well				total	type of well			
		with mechanical pump	pumped by simple mine	animal power constructed by concrete	simple mine well		with mechanical pump	pumped by simple mine	animal power constructed by concrete	simple mine well
Arhangay	1,252	395	385	448	24	1,008	307	340	336	25
Bayan Olgii	428	235	108	4	81	439	236	112	8	83
Bayanhongor	2,907	260	538	442	1,667	2,930	224	527	435	1,744
Bulgan	668	253	188	186	41	610	236	202	130	42
Gobi-Altay	2,226	289	567	446	924	2,218	284	565	440	929
Dornogobi	3,397	329	77	1,079	1,912	3,394	322	77	1,074	1,921
Dornod	2,437	245	935	334	923	2,334	220	854	301	959
Dundgobi	3,797	299	265	1,071	2,162	3,890	284	281	889	2,436
Zavhan	820	373	96	94	257	807	367	92	93	255
Ovorhangay	1,981	342	592	357	690	2,063	289	584	360	830
Omnogobi	4,882	376	421	990	3,095	4,807	332	397	958	3,120
Suhbaatar	2,053	296	178	594	985	1,895	233	168	561	933
Selenge	1,260	273	313	88	586	1,986	188	268	47	1,483
Tov	2,579	661	189	1,021	708	2,440	631	175	942	692
Uvs	942	271	229	211	231	857	230	202	191	234
Hovd	1,454	291	465	166	532	1,393	266	456	176	495
Hovsgol	887	337	300	11	239	937	336	300	5	296
Hentiy	1,698	321	858	109	410	1,773	253	847	98	575
Darhan	117	80	24	7	6	175	132	30	7	6
Ulaanbaatar	324	281	37	1	5	206	203	0	1	2
Orhon	28	23	5	0	0	25	21	3	0	1
Gobisumber	199	20	8	88	83	145	13	3	67	62
total	36,336	6,250	6,778	7,747	15,561	36,332	5,607	6,483	7,119	17,123

Aimags	1994					1995						
	total	type of well				total (a)	type of well			number of broken (c)	% of broken well (c)/(a)	% of broken well (c)/(b)
		with mechanical pump	pumped by simple mine	animal power constructed by concrete	simple mine well		with mechanical pump	pumped by simple mine	animal power			
Arhangay	925	276	305	329	13	874	854	20	338	39	40	
Bayan Olgii	364	163	110	8	83	390	265	125	195	50	74	
Bayanhongor	2,818	191	486	431	1,710	2,806	1,039	1,767	340	12	33	
Bulgan	512	198	184	96	34	445	245	200	215	48	88	
Gobi-Altay	2,031	238	525	401	867	1,956	956	1,000	385	20	40	
Dornogobi	3,582	313	95	1,215	1,959	3,597	1,623	1,974	581	16	36	
Dornod	2,112	157	680	223	1,052	1,988	686	1,302	479	24	70	
Dundgobi	3,897	236	291	902	2,468	3,697	1,059	2,638	594	16	56	
Zavhan	745	300	91	85	269	660	374	286	211	32	56	
Ovorhangay	2,033	275	436	383	939	1,970	925	1,045	323	16	35	
Omnogobi	4,678	256	414	929	3,079	4,781	1,547	3,234	363	8	23	
Suhbaatar	1,594	156	146	348	944	1,634	536	1,098	237	15	44	
Selenge	2,254	192	258	49	1,755	2,520	516	2,004	58	2	11	
Tov	2,516	648	173	1,003	692	1,830	1,181	649	558	30	47	
Uvs	891	212	164	181	334	798	421	377	160	20	38	
Hovd	1,214	195	380	163	476	1,292	669	623	232	18	35	
Hovsgol	948	332	298	4	314	977	636	341	413	42	65	
Hentiy	1,519	180	770	72	497	1,380	685	695	456	33	67	
Darhan	552	50	17	3	482	557	65	492	45	8	69	
Ulaanbaatar	208	205	-	1	2	213	182	31	6	3	3	
Orhon	25	21	3	-	1	46	23	23	5	11	22	
Gobisumber	152	13	3	67	69	185	95	90	6	3	6	
total	35,570	4,807	5,829	6,893	18,041	34,596	14,582	20,014	6,200	18	43	

source: Ministry of Agriculture and Industry

Table 2.3.7 Production of Agricultural Products(1986-1996)

unit	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>Agricultural area</b>											
total	1000 ha	124,531	124,889	125,234	125,532	125,656	126,130	123,590	119,124	118,469	118,469
arable land	1000 ha	1,307	1,335	1,366	1,375	1,371	1,369	1,363	1,353	1,322	1,322
pasture	1000 ha	123,224	123,554	123,868	124,157	124,285	124,761	122,227	117,771	117,147	117,147
<b>Sown area</b>											
total	1000 ha	804	800	828	838	788	708	657	585	471	373
grain	1000 ha	630	623	642	673	654	615	593	546	449	357
of which wheat	1000 ha	467	468	490	530	533	533	526	498	430	348
potato	1000 ha	11	12	13	13	12	10	9	9	8	6
vegetable*	1000 ha	4	4	4	4	4	3	2	3	3	3
fodder crop	1000 ha	159	161	169	148	118	80	53	26	11	6
<b>Production</b>											
grain	1000ton	869	689	810	839	718	595	494	480	331	261
of which wheat	1000ton	664	543	672	687	596	538	453	450	322	257
potato	1000ton	133	148	103	155	131	97	79	60	54	52
vegetable	1000ton	46	48	56	59	42	23	16	23	23	27
fodder crop	1000ton	586	608	529	551	527	213	138	112	29	19
<b>Yield</b>											
grain	ton/ha	1.4	1.1	1.3	1.2	1.1	1.0	0.8	0.9	0.7	0.7
wheat	ton/ha	1.4	1.2	1.4	1.3	1.1	1.0	0.9	0.9	0.7	0.7
potato	ton/ha	11.9	11.9	7.8	12.3	10.8	9.7	9.0	6.8	6.9	8.3
vegetable*	ton/ha	12.2	12.0	13.7	14.1	11.4	8.5	7.3	7.3	8.5	8.4
fodder crop	ton/ha	3.7	3.8	3.1	3.7	4.5	2.7	2.6	4.4	2.7	3.1

note: (\*)figures do not equal table 4.2.3.4 due to difference in sources.

source: MONGOLIAN ECONOMY AND SOCIETY IN 1995; STATISTICAL YEARBOOK 1996, Ministry of Food and Agriculture:1996

**Table 2.5.1 Number of Unit Agricultural Cooperative Belonged to NAMAC**

Name of Aimag	1993	1994	1995			
			Total	Number of agr. coop. reported	Numbers not reported	Number of soums
<b>(A) Eastern area</b>						
1. Dornod	23	13	6	6	-	16
2. Sukhbaatar	15	12	11	11	-	14
3. Hentiy	18	17	10	10	-	23
sub-total	56	42	27	27	0	53
<b>(B) Central area</b>						
4. Selenge	-	-	-	-	-	21
5. Tov	15	12	12	10	2	28
6. Bulgan	12	13	9	9	-	16
7. Arhangay	29	29	30	13	17	20
8. Ovorhangay	34	29	28	27	1	22
sub-total	90	83	79	59	20	107
<b>(C) Gobi Desert area</b>						
9. Dornogobi	13	14	14	14	-	17
10. Dundgobi	16	16	12	12	-	16
11. Omnogobi	9	13	10	10	-	15
12. Bayanhongor	26	25	17	10	7	20
13. Gobi-altay	12	21	19	19	-	19
sub-total	76	89	72	65	7	87
<b>(D) Western Mountain area</b>						
14. Khubogul	27	20	24	14	10	24
15. Dzauhan	27	19	21	21	-	26
16. Urs	26	28	23	23	-	20
17. Hovd	4	12	6	6	-	17
18. Bayan-olgiy	9	8	-	-	-	14
sub-total	93	87	74	64	10	101
<b>Total</b>	<b>315</b>	<b>301</b>	<b>252</b>	<b>215</b>	<b>37</b>	<b>348</b>
(1) Total number of households	66,465	72,240	60,228	51,140		
(2) The number of household/agr. cooperative	211	240	239	238		
(3) soums in cities						10
(4) total number of soums						358

Data source: NAMAC office file

**Table 2.5.2 Form of Agricultural Cooperatives  
Belonged to NAMAC as of end of 1995**

Name of Aimag	Cooperatives		Limited company		Share-holder company		Total	
	number	number of member	number	number of member	number	number of member	number	number of member
<b>(A) Eastern area</b>								
1. Dornod	0	0	3	202	3	133	6	335
2. Sukhbaatar	1	21	10	1,719	0	0	11	1,740
3. Hentiy	1	402	7	1,339	2	360	10	2,101
sub-total	2	423	20	3,260	5	493	27	4,176
<b>(B) Central area</b>								
4. Selenge	0	0	0	0	0	0	0	0
5. Tov	0	0	7	890	3	808	10	1,698
6. Bulgan	0	0	7	1,326	2	366	9	1,692
7. Arhangay	0	0	13	2,782	0	0	13	2,782
8. Ovorhangay	0	0	27	11,863	0	0	27	11,863
sub-total	0	0	54	16,861	5	1,174	59	18,035
<b>(C) Gobi Desert area</b>								
9. Dornogobi	1	10	8	1,339	5	1,232	14	2,581
10. Dundgobi	0	0	12	3,988	0	0	12	3,988
11. Omnogobi	2	19	8	1,665	0	0	10	1,684
12. Bayanhongor	0	0	10	2,070	0	0	10	2,070
13. Gobialtay	0	0	13	2,625	6	1,025	19	3,650
sub-total	3	29	51	11,687	11	2,257	65	13,973
<b>(D) Western Mountain area</b>								
14. Khubogul	0	0	14	4,375	0	0	14	4,375
15. Dzauhan	0	0	13	2,752	8	2,499	21	5,251
16. Urs	1	142	22	3,101	0	0	23	3,243
17. Hovd	0	0	2	570	4	1,517	6	2,087
18. Bayanolgii	0	0	0	0	0	0	0	0
sub-total	1	142	51	10,798	12	4,016	64	14,956
<b>Total</b>	<b>6</b>	<b>594</b>	<b>176</b>	<b>42,606</b>	<b>33</b>	<b>7,940</b>	<b>215</b>	<b>51,140</b>

Data source: This table was prepared on the basis of data of 215 agricultural cooperatives. All data are from NAMAC



**Table 2.5.3 Scale of Agricultural Cooperatives**

Name of Aimag	Scale of agricultural cooperatives										Number of agri. cooperative	Total number of household	An average number of household/agri. coop.
	>50	50-100	100-200	200-300	300-400	400-500	500-600	>600	Unit: number of members				
<b>(A) Eastern Area</b>													
1. Dornod	4	1	1	-	-	-	-	-	-	6	335	56	
2. Sukhbaatar	4	-	4	-	2	1	-	-	-	11	1,740	158	
3. Hentiy	3	1	3	-	-	2	-	1	-	10	2,101	210	
sub-total	11	2	8	-	2	3	-	1	-	27	4,176	155	
<b>(B) Central Area</b>													
4. Selenge	-	-	-	-	-	-	-	-	-	-	-	-	
5. Tov	4	-	3	1	1	-	1	-	-	10	1,698	170	
6. Bulgan	-	-	7	2	-	-	-	-	-	9	1,692	188	
7. Arhangay	3	1	4	1	1	2	1	-	-	13	2,782	214	
8. Ovorhangay	-	3	2	5	4	2	4	7	-	27	11,863	439	
sub-total	7	4	16	9	6	4	5	8	-	59	18,035	306	
<b>(C) Gobi Desert Area</b>													
9. Dornogobi	3	1	3	4	2	-	1	-	-	14	2,581	184	
10. Dundgobi	1	-	3	2	3	2	-	1	-	12	3,988	363	
11. Omnogobi	5	1	-	1	1	2	-	-	-	10	1,684	168	
12. Bayanhongor	-	4	2	1	2	-	-	1	-	10	2,070	207	
13. GobiAltay	4	2	6	2	1	3	1	-	-	19	3,650	192	
sub-total	13	8	14	10	9	7	2	2	-	65	13,973	215	
<b>(D) Western Mountainous Area</b>													
14. Khubs gul	-	1	2	6	1	1	2	1	-	14	4,375	313	
15. Dzauhan	3	1	4	5	4	3	1	-	-	21	5,251	250	
16. Uvs	4	3	10	4	2	-	-	-	-	23	3,243	141	
17. Hovd	1	1	-	1	-	1	-	2	-	6	2,087	348	
18. Bayanogiy	-	-	-	-	-	-	-	-	-	-	-	-	
sub-total	8	6	16	16	7	5	3	3	-	64	14,956	234	
<b>Total</b>	<b>38</b>	<b>20</b>	<b>54</b>	<b>35</b>	<b>24</b>	<b>19</b>	<b>10</b>	<b>14</b>	<b>14</b>	<b>215</b>	<b>51140</b>	<b>238</b>	
(%)	18.1	9.3	25.1	16.3	11.2	8.8	4.7	6.5					

Remarks: This table was prepared on the basis of data of 215 agricultural cooperatives among the total number of 252. All data are from NAMAC.

**Table 2.5.4 Production Directly Produced by AC and Consignment Amount in Total Sale of Agricultural and Livestock Produce**

Name of Aimag	Meat		Ingineer		Wool		Cashmere		Skin and hides						
	Production (t)	Consignment amount (t)	Total (t)	Production (t)	Consignment amount (t)	Total (t)	Production (t)	Consignment amount	Production (sheet)	Consignment amount(sheet)	Total (sheet)				
<b>(A) Eastern area</b>															
1. Dornod	74	54	128	3,970	0	3,970	22.4	15.3	37.7	0.6	0.4	1.0	5,037	160	5,197
2. Sukhbaatar	310	15	325	2,200	0	2,200	41.5	15.2	56.7	1.7	2.5	4.2	3,677	37	3,714
3. Hentiy	146	0	146	1,000	0	1,000	6.5	12.2	18.7	2.4	1.9	4.3	1,752	67	1,819
sub-total	530	70	599	7,170	0	7,170	70.4	42.7	113.1	4.7	4.8	9.5	10,466	264	10,730
<b>(B) Central area</b>															
4. Selenge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Tov	98	1	99	0	0	0	20.7	0.4	21.1	0.2	0.1	0.4	304	180	484
6. Bulgan	64	18	82	5,552	0	5,552	22.3	6.2	28.5	1.1	0.0	1.1	1,200	500	1,700
7. Arhangay	19	7	27	0	1,200	1,200	13.6	18.3	31.9	1.2	0.4	1.6	61	1,810	1,871
8. Ovorkhangay	108	14	122	6,178	465	6,643	237.3	67.3	304.6	16.9	2.1	19.0	10,007	1,391	11,398
sub-total	289	41	330	11,730	1,665	13,395	293.9	92.2	386.1	19.4	2.6	22.0	11,572	3,881	15,453
<b>(C) Gobi Desert area</b>															
9. Dornogobi	546	583	1,129	0	0	0	67.7	147.4	215.1	1.2	5.1	6.3	2,235	5,005	7,240
10. Dundgobi	132	313	445	2,222	9,409	11,631	53.3	118.1	171.4	4.5	14.9	19.4	3,273	5,210	8,483
11. Omnogobi	0	41	41	55	1,440	1,495	0.7	38.0	38.7	0.5	14.0	14.5	55	6,182	6,237
12. Bayanhongor	0	31	31	0	2,100	2,100	0.0	81.7	81.7	0.0	7.8	7.8	0	2,020	2,020
13. Gobi-altay	175	182	357	6,178	8,537	14,715	91.5	138.3	229.8	4.1	15.1	19.2	11,122	7,344	18,466
sub-total	852	1,150	2,002	8,455	21,486	29,941	213.2	523.5	736.7	10.3	56.9	67.2	16,685	25,761	42,446
<b>(D) Western Mountain area</b>															
14. Khubogul	159	20	179	0	1,084	1,084	71.2	24.5	95.7	4.3	7.2	11.5	8,517	376	8,893
15. Dzauhan	48	3	51	2,758	200	2,958	191.5	148.6	340.1	26.0	14.0	40.0	6,551	2,770	9,321
16. Uvs	86	13	99	2,240	3,431	5,671	29.7	105.8	135.5	0.7	8.5	9.2	2,796	4,832	7,628
17. Hovd	148	3	151	464	500	964	93.6	69.9	163.5	9.6	0.6	10.2	16,350	6,200	22,550
18. Bayanolgij	-	-	0	-	-	0	-	-	0.0	-	-	0.0	-	-	0
sub-total	441	39	480	5,462	5,215	10,677	386.0	348.8	734.8	40.6	30.3	70.9	34,214	14,178	48,392
Total	2,112	1,298	3,411	32,817	28,366	61,183	963.5	1,007.2	1,970.7	75.0	94.6	169.6	72,937	44,084	117,021
<b>Ratio of direct production amount and consignment amount</b>															
1. Whole	61.9	38.1	100.0	57.1	42.9	100.0	46.9	53.1	100.0	20.1	79.9	100.0	55.6	44.4	100.0
2. Eastern area	88.4	11.6	100.0	100.0	0.0	100.0	63.4	36.6	100.0	50.5	49.5	100.0	70.1	29.9	100.0
3. Central area	87.7	12.3	100.0	92.8	7.2	100.0	74.8	25.2	100.0	74.9	25.1	100.0	72.6	27.4	100.0
4. Gobi desert area	42.6	57.4	100.0	26.3	73.7	100.0	27.0	73.0	100.0	35.4	64.6	100.0	25.7	74.3	100.0
5. Western mountain area	92.0	8.0	100.0	50.0	50.0	100.0	54.9	45.1	100.0	8.4	91.6	100.0	67.6	32.4	100.0

Data source: NAMAC office file

Remarks: This table was prepared on the basis of data of 214 agricultural cooperatives among the total number of 252.

Table 2.5.5 Statistical Data of Herder's Cooperatives under Mongolian Association of Private Herders (1/2)

No.	Name of Cooperatives	Aimags	Som	Location	No. of household	Total number of livestock owned by herders						No. of livestock household	Main activity of herders cooperatives
						Horse	Cow	Camel	Sheep	Goat	Total		
Ovo-1	Taast	Ovorkhangai	Uyanga	1st bag Taast river	36	292	637	0	367	258	1,554	43	Sale and purchasing business, butter cream production
Ovo-2	Kharmuden Tsog javkhiant		Khairkhan-dulaan	Murun river, Khujirt valley	25	195	420	0	1,340	925	2,780	111	Sale and purchasing business, butter cream production
Ovo-3	Artsmandal		Narintee	Narintee som 3rd bag	9	59	104	2	348	388	901	100	Sale and purchasing business, vegetables production
Ovo-4	Ondorshil		Khairkhan-dulaan	Bag of Guchintav	25	347	681	8	2,649	498	4,183	167	Sale and purchasing business
Ovo-5	Bayab-Uul		Bat-Olzii	Bag of Ulaan valley	42	650	1,000	0	2,600	650	4,900	117	Sale and purchasing business, butter cream production
Ovo-6	Bayabdavaa		Uyanga	6th bag of Zaun ulaan	29	287	507	0	335	365	1,394	48	Sale and purchasing business, wooden work
Ovo-7	Altan tsvkh		Bogd	Bayantokhom	25	290	270	210	602	798	2,170	87	Sale and purchasing business, vegetable production
Ovo-8	Dulaan		Khairkhan-dulaan	Teel bag	23	298	373	0	1,678	978	3,327	145	Sale and purchasing business
Ovo-9	Andai		Barun bayan Ulaan	3d bag Andai well	21	308	495	34	2,761	216	3,814	182	Sale and purchasing business
Ovo-10	Evr shazgai		Rogd	north of Tsvkh	26	390	564	261	1,022	960	3,197	123	Sale and purchasing business
				total	253	3,116	5,051	575	13,602	5,936	28,220	108	
Tov-1	Nalzar	Tov	Bavanchandmani	Chandmani	30	173	261	0	452	129	965	32	Sale and purchasing business
RH-1	Bayansukhait	Bayankhonor	Bayanlij	Ulaan-Och	32	387	461	592	462	619	2,511	78	Sale and purchasing business, wooden work
KHS-1	Khairkhan Uul	Khovgo	Burentogtokh	Bag of Sangin dalai	14	212	374	0	1,583	238	2,427	173	Sale and purchasing business
KHS-2	Elkht		Burentogtokh	Ikh Uul	15	125	168	0	412	925	1,630	109	Sale and purchasing business
KHS-3	Tsog javkhiant		Tomorbulag	Jargalant	60	561	452	0	2,531	1,132	4,676	78	Sale and purchasing business
KHS-4	Ilgei		Jargalant	3d bag	45	412	529	8	1,542	597	3,088	69	Sale and purchasing business
KHS-5	Badral		Jargalant	Tsagaan burgas	24	421	519	7	1,375	650	2,972	124	Sale and purchasing business
KHS-6	Kharsagat		Galt	Kharsain river	29	287	513	5	497	351	1,653	57	Sale and purchasing business
KHS-7	Mandakh		Galt	4th bag	45	467	624	11	628	789	2,519	56	Sale and purchasing business, butter cream production
KHS-8	Erkhel		Alag-Erdene	Erkhel lake	56	396	564	0	1,723	893	3,576	64	Sale and purchasing business, salt production
				total	283	2,361	3,745	31	10,291	5,595	22,241	78	
DU-1	Ruleen	Dundrobi	Khuld	Khuld	45	491	267	576	860	588	2,886	64	Sale and purchasing business
KHE-1	Turagikhaan	Khentiy	Bashirec	Onon	13	56	493	0	216	231	996	77	Sale and purchasing business, butter cream production
ZA-1	Bayanzurkh	Zavkhan	Erdene-khairkhan	Moson	20	330	320	60	3,991	1,585	6,286	314	Sale and purchasing business
ZA-2	Baraa kgadgalait		Erdene-khaikhan	Moson	26	404	285	10	2,374	830	3,903	150	Sale and purchasing business
ZA-3	Bayab-Uul		Santmargaz	Santmargaz	24	289	296	30	2,318	1,330	4,263	178	Sale and purchasing business, salt production
ZA-4	Margaz		Santmargaz	Santmargaz	25	359	251	25	2,100	732	3,467	139	Sale and purchasing business, salt production
ZA-5	Enkh yulait		Santmargaz	Santmargaz	24	630	780	36	1,933	1,073	4,452	186	Sale and purchasing business
ZA-6	Buyandelger		Santmargaz	Santmargaz	18	125	150	13	3,250	800	4,338	241	Sale and purchasing business
ZA-7	Khunt		Santmargaz	Santmargaz	30	599	467	30	2,540	930	4,566	152	Sale and purchasing business
ZA-8	Bayabdaws		Santmargaz	Santmargaz	22	354	291	42	2,864	951	4,502	205	Sale and purchasing business
ZA-9	Devshil		Santmargaz	Santmargaz	27	488	241	34	2,800	774	4,364	162	Sale and purchasing business
ZA-10	Olzirimandal		Zavkhan-mandal	Zavkhan-mandal	31	620	483	67	4,513	2,845	8,528	275	Sale and purchasing business
ZA-11	Olon bulag		Tes	Tes	23	226	255	47	1,826	1,826	4,461	194	Sale and purchasing business
ZA-12	Bayan-Uul		Tes	Tes	20	249	256	6	1,670	1,112	3,293	165	Sale and purchasing business
ZA-13	Tsagaan burkhan		Urgamal	Urgamal	24	364	399	64	3,341	1,987	6,655	277	Sale and purchasing business
ZA-14	Undrakh		Tsersen-Uul	Tsersen-Uul	23	245	264		2,860	570	3,939	171	Sale and purchasing business
ZA-15	Ekhelel		Tsersen-Uul	Tsersen-Uul	20	356	281	30	3,564	845	5,076	254	Sale and purchasing business

Table 2.5.5 Statistical Data of Herder's Cooperatives under Mongolian Association of Private Herders (2/2)

No.	Name of Cooperatives	Aimag	Som	Location	No. of household	Total number of livestock owned by herders							Date of establishment	No. of livestock/household	Main activity of herders cooperatives
						Horse	Cow	Camel	Sheep	Goat	Total				
ZA-18	Bugat		Yaruu	Yaruu	21	238	384	10	1,800	340	2,772	Oct.1996	132	Sale and purchasing business	
ZA-19	Over khujir		Yaruu	Yaruu	40	374	801		2,092	725	3,992	Oct.1996	100	Sale and purchasing business	
ZA-20	Khets Ulan		Yaruu	Yaruu	17	431	482	14	2,799	963	4,689	Apr.1997	276	Sale and purchasing business	
ZA-21	Uran mandal		Yaruu	Yaruu	30	321	791		3,010	530	4,652	May.1996	155	Sale and purchasing business	
ZA-22	Taikh		Dorvoljin	Dorvoljin	21	308	212	63	1,420	2,240	4,243	Oct.1996	202	Sale and purchasing business, felt shoes production	
ZA-23	Olgii		Tsagaankhairkhan	Tsagaankhairkhan	25	251	315	27	2,641	589	3,823	Jun.1995	153	Sale and purchasing business	
ZA-24	Olgii		Bayankhairkhan	Bayankhairkhan	23	240	206	3	2,013	607	3,066	May.1997	133	Sale and purchasing business	
ZA-25	Altantevsh		Bayankhairkhan	Bayankhairkhan	16	168	179	3	671	300	1,321	Oct.1995	83	Sale and purchasing business	
ZA-26	Ikhe-Uul		Bayankhairkhan	Bayankhairkhan	19	176	231	12	1,023	345	1,787	May.1996	94	Sale and purchasing business	
ZA-27	Minj		Bayankhairkhan	Bayankhairkhan	17	262	254	16	2,430	664	3,626	Nov.1996	213	Sale and purchasing business	
ZA-28	Naran		Songino	Songino	15	164	405		1,724	386	2,679	Jun.1995	179	Sale and purchasing business	
ZA-29	Ur		Songino	Songino	19	464	412	13	2,541	942	4,372	Mar.1997	230	Sale and purchasing business	
ZA-30	Sant		Songino	Songino	16	442	268		1,899	474	3,083	Oct.1995	193	Sale and purchasing business	
ZA-31	Bayangol		Songino	Songino	21	474	336	25	2,748	1,023	4,606	Aug.1996	219	Sale and purchasing business	
ZA-32	Zuluu		Orgon	Orgon	56	705	810	67	3,792	1,848	7,222	Aug.1995	129	Sale and purchasing business, salt production	
ZA-33	Soyol		Orgon	Orgon	15	300	360	26	1,652	952	3,290	Apr.1997	219	Sale and purchasing business	
ZA-34	Arvijikh		Orgon	Orgon	37	450	900	40	1,110	890	3,390	Oct.1996	92	Sale and purchasing business, wooden work	
ZA-35	Davan-Uul		Aldarkhaan	Aldarkhaan	25	492	399		2,156	561	3,608	Sep.1996	144	Sale and purchasing business	
Total					790	11,898	12,764	873	80,246	32,569	138,334		175		
Grand total					1,459	18,952	23,135	2,527	106,128	45,667	196,433		613		

Table 3.2.1 Plans on Strengthening of Agricultural Cooperatives and Proposals of Support (1/2)

	1	2	3	4	5	6	7	8	9
	Plan on Reinforcement of Branch's Activities of Agricultural Cooperatives	Sales Information Network Plan	Improvement Plan on Seed and Agricultural Machinery	Improvement Plan of Mill and Distribution System of Wheat Flour	Vegetables and Potatoes Production Plan	Plant of Pasture & Fodder Crop Production and its Distribution in Winter Season	Plan on Improved Livestock Varieties	Improvement Plan on Collection, Distribution and Processing of Wool	Improvement Plan on Collection, Distribution and Processing of Cashmere
Development Concept	For effective collection/distribution of livestock Products from members, it is necessary to first activate sales and purchasing business in Kiosk located in branches in Bag as cores as well as to exchange information about livestock product and its marketing between agricultural cooperative's offices at Som and Bag.	In order to improve distribution of the consignment sales, it is necessary to develop the marketing route between agricultural cooperatives, major supplier of livestock raw materials, and livestock processing industries, major consumers of that, through creation of information exchange system in order to improve distribution of the consignment sales.	Following the wheat self sufficiency policy of the government, the development concept aims to increase wheat production by (i) proper management of the existing planed areas of 21 cooperatives, (ii) keeping improved seeds, (iii) replacement of agricultural machinery and (iv) improvement of farming method, and to provide larger profit to agricultural cooperatives.	To improve the quality and milling rate of wheat through replacement and /or improvement of the existing mill facilities.  The target of the total wheat production to be dealt with is about 3,6000 tons/year (1.5 tons x 24,000 ha)	The production of potatoes and vegetables has drastically declines and mainly cultivated in central and northern part of Mongolia. In the remote Aimags, the production is low and supply such production from the outside is limited because of the present constrains in marketing system. Then per capita consumption in these areas is seriously limited.  The concept of this project is; to increase production of potatoes and vegetables by irrigation farming with rehabilitation, and construction of wells, to increase rate of self sufficiency and safe supply of food for people in the remote Aimags.	The production of fodder/hay and available pasture land have declined. Owing to shortage of fodder/hay and no-function of emergency supply system, serious damages against livestock often are broken out when heavy snow and other climatic serious condition occur.  The concept of this project is; effective collection of grass and an increase of production of fodder crop by mechanical farming, effective distribution of livestock feed to the shortage area.	After privatization of improved livestock, the quality and production of livestock were declined.  The concept of this project is; to increase the number of improved varieties of livestock along with promotion of technical support and to distribute them to herders, to increase the herder's income through the quality improvement and strengthening of livestock production, to supply the veterinary services for remote place.	To increase the income of cooperatives and their members, rational collection/distribution system, to minimize the transportation cost and creation of primary processing facilities are required.  The strategy focused to this issue is as follows; - Strengthening collection /distribution facilities - Strengthening primary processing facilities.  Target: - existing agricultural cooperatives (about 300) - 70% of the total wool production (about 4,000 ton)	For the efficient collection and distribution of the product and strengthening the bargaining power of the cooperatives, upgrading the product quality, decreasing of the transportation cost, improvement of collection /distribution system and establishment of primary processing facilities are required.  The strategy focused to this issue is as follows; - Strengthening collection /distribution facilities. - Strengthening primary processing facilities.  Target: - existing cooperatives (about 300) - 70% of the total cashmere production (about 500 ton)
Plan	<ul style="list-style-type: none"> <li>- Strengthening of equipment for collection/distribution of livestock products.</li> <li>- Improvement and construction of Kiosk with storehouse on Bag level.</li> <li>- Installation of wireless telecommunication between Kiosk at Bag and the office at Som.</li> <li>- Installation of satellite communication facilities in the office in Som which connects with Associations at Aimag and Ulaanbaatar.</li> </ul>	<ul style="list-style-type: none"> <li>- To organize the information committee among Associations of Agricultural Cooperatives on Aimag and national level, livestock processing industries, Association of Consumer's Cooperative and the Ministry of Agriculture and Industry.</li> <li>- To establish a computer information network among the committee.</li> </ul>	<ul style="list-style-type: none"> <li>- Production of 6,000 tons improved wheat seed for 21 agricultural cooperatives.</li> <li>- Replacement of agricultural machinery required.</li> <li>- Construction of a store house for seed in each agricultural cooperatives.</li> <li>- Rehabilitation and new construction of irrigation facilities.</li> <li>- Improvement of farming practices.</li> </ul>	<ul style="list-style-type: none"> <li>- Improvement or replacement of existing 18 mill factories.</li> <li>- Construction of concrete store house for flour mill and installation of ancillary facilities.</li> <li>- Reinforcement of transportation facilities.</li> </ul>	<ul style="list-style-type: none"> <li>- Construction of 2 ha crop field for each 300 existing agricultural cooperatives. The total area is about 600 ha.</li> <li>- Installation of irrigation facilities in each agricultural cooperatives, e.g. gravity irrigation system, rehabilitation of well and introduction of new pumping system (wind energy, solar energy, diesel oil and its combination)</li> <li>- Improvement of farming practice.</li> </ul>	<ul style="list-style-type: none"> <li>- Plan for rental service center of agricultural machinery: The rental service center will be constructed at each Aimag Association to provide rental service of agricultural cooperatives. Aimag Association will manage such rental service center.</li> <li>- Plan for construction of system on supply and distribution of livestock feed within the agricultural cooperatives: In order to exchange information, a committee be set up among unit agricultural cooperatives, associations of agricultural cooperatives at Aimag and National level, wheat mill industries, the State reserve Agency and the MOAI.</li> <li>- Plan for Construction of Farms to Produce Grass and Fodder Crops</li> </ul>	<ul style="list-style-type: none"> <li>- Plan of increasing and distribution of improved varieties of livestock. This project is formulated to 4 existing agricultural cooperatives. (i) Dorvoljin - cashmere (ii) Ardyn Jargalan - meat (iii) Bayan Mendal - meat &amp; wool (iv) Bayanjargalant - meat</li> <li>- Plan of establishment of revolving -fund in each agricultural cooperatives.</li> <li>- Program for breeding and management of improved livestock to member.</li> </ul>	<ul style="list-style-type: none"> <li>- Plan for strengthening of collection/distribution facilities; mobile pressing machine, electric sharing machine, weighing machine, inspection equipment, transportation vehicle.</li> <li>- To organize a sharing term equipped with electric sharing machine to provide sharing service on request to members at Bag level in season.</li> <li>- Strengthening primary processing facilities; scouring, felt making and their processing.</li> </ul>	<ul style="list-style-type: none"> <li>- Plan of strengthening collection/distribution facilities of cashmere mobile press machine, equipment transportation vehicle.</li> <li>- Mobile pressing machine should be equipped at each cooperatives, where cooperative organizes to go around Bags by transportation vehicle with machine and collect cashmere from member herders.</li> <li>- Plan of strengthening scouring facilities should be located at 5 major cashmere producing Aimags, such as Govi-Altay, Bayankhongor, Omnogovi, Dornogovi and Ovorkhangai.</li> </ul>



Table 3.2.1 Plans on Strengthening of Agricultural Cooperatives and Proposals of Support (2/2)

	10	11	12	13	14	15	16	17	18
	Improvement Plan on Collection, Distribution and Processing of Meat and Skin/Hide	Plan on Training and Information Center in Ulaanbaatar	Plan on Training center in Aimags	Plan on strengthening Information and Public Relation Activities	Improvement Plan on Social Services	Administrative and Legal Actions	Plan on Urban Support Centers	Plan on Regional Marketing Centers	Reinforcement of Marketing Conditions
Development Concept	<p>For increasing of herder's income and cooperatives benefit, improvement of quality of meat and hide/skin through the establishment of simplified slaughter houses and primary processing facilities, and rational collection/distribution of livestock and decreasing transportation cost are required.</p> <p>The strategy focused to this issue is as follows;</p> <ul style="list-style-type: none"> <li>- Strengthening of collection facilities.</li> <li>- Strengthening simplified slaughter house and primary processing facilities.</li> </ul> <p>Target:</p> <ul style="list-style-type: none"> <li>- existing cooperatives (about 300)</li> <li>- 70% of the total production</li> </ul>	<p>To establish Training and Information Center on Cooperatives, for the purpose of education and training of senior staff of cooperatives, aiming at sound development of cooperatives in Mongolia.</p>	<p>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 cooperatives. Training will focus on the short term On-the Job Training.</p>	<p>To be better understood of cooperatives business and activities by not only cooperative members and management, but also by general public including rural and urban dwellers, Public Relation activities are to be organized under the leadership of national federations.</p>	<p>Basic welfare services such as health, education and kinder garden are excluding in this plan. Social service should be done to support and improve the herder's life in the rural area.</p>	<p>To strengthen agricultural cooperatives 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.</p>	<p>In order to cope with price rise of commodities caused by increasing fuel cost and shortage of pasture around urban areas, distribution centers should be located in satellite cities which are 300 to 350 kilometers away from Ulaanbaatar and Darkhan. These centers will become effective because difference of price in Ulaanbaatar and satellite cities is becoming small, and the sales merit will be the same in Ulaanbaatar and in satellite cities. These distribution centers should become Urban Support Centers which secures the supply of food to Ulaanbaatar.</p>	<p>In rural areas far away from Ulaanbaatar there are some movements of regional development with core cities. Distribution of commodities and collection of livestock products are concentrated to these cities whereby develop regional marketing centers. Based on these centers, wholesale trade will be encouraged with merchants in Ulaanbaatar or with Chinese merchants directly.</p>	<p>Marketing system consists of both physical distribution and business trade. For the development of marketing system, improvement of business trade is important, especially financial system, control of inflation, price information and trade conditions. Improvement will be realized together with structural change in lifestyle of people. The education of people on market economy and liberalization is indispensable to establish well designed marketing conditions. The program for the development of commerce should be focused on urgent need and high realization potentiality.</p>
Plan	<ul style="list-style-type: none"> <li>- Collection/distribution facilities</li> <li>- Simplified slaughter house</li> <li>- Raw hide processing facilities</li> <li>- Primary processing facilities: Sheep intestine to be used as casing are salted. For this, cleansing facilities and equipment are to be introduced.</li> <li>- Meat processing facilities: Small scale processing factories are to be established, aimed at producing sausage and jerky using the dress carcass produced at simplified slaughter house.</li> </ul>	<ul style="list-style-type: none"> <li>- Planned number of trainees are 1500, covering existing 300 cooperatives. Total 1,500 trainees shall be covered by 3 years, followed by refresher courses by 3 year cycle.</li> <li>- Curriculum of training includes, History and present situation of cooperatives, Low 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 on successful Cooperatives, etc.</li> <li>- Training and information center will be established in Ulaanbaatar with necessary equipment.</li> </ul>	<ul style="list-style-type: none"> <li>- Trainees are to be staff of cooperatives and cooperative members</li> <li>- Curriculum includes practical knowledge and information on, Cooperatives, Farming/Livestock Production. Training courses consist of Cooperative Leaders Course, Newly Recruited Staff, Study Tour on Successful Cooperatives, Agricultural Fair, etc.</li> <li>- Each Aimags should have one Training facilities with necessary equipment</li> </ul>	<ul style="list-style-type: none"> <li>- Contents of information on Crop/Livestock production, daily life, management principle and major policy of agricultural cooperatives, agricultural policy in general, market situation.</li> <li>- Radio Program: Expansion and enrichment of Radio Program on Cooperatives Undertaken partly by Independent Herders Association, through National Radio Network of Mongolia.</li> <li>- 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.</li> </ul>	<ul style="list-style-type: none"> <li>- Provision of service for ger moving.</li> <li>- Provision of cultural facilities for local community.</li> <li>- Sales and rental services of small scaled power generation by means of solar batteries and wind mills.</li> <li>- Use of transportation of emergency case.</li> <li>- Provision of veterinary services.</li> <li>- Provision of scholarship and subsidy to member's children who live in dormitory.</li> </ul>	<ul style="list-style-type: none"> <li>- Responsible Dept. or Division to be decided in the MOAI.</li> <li>- Social Program on Cooperatives to be finalized and be put into operation.</li> <li>- The article 30 of Cooperative Law to be modified, giving the opportunities of active involvement to economic activities of these organizations.</li> <li>- To expand the economic activities of cooperatives through modification of article 9-3, Cooperative Law</li> <li>- Preferential measures on credit access and taxation to agricultural cooperative</li> <li>- Consignment of functions of local government, agri. bank, etc. to agricultural cooperatives under contract basis</li> </ul>	<ul style="list-style-type: none"> <li>- Urban Support Centers as distribution centers should be constructed in satellite cities such as Bulgan, Tsetserleg, Arbaikheer, Mandalgovi, Undurkhan.</li> <li>- Urban Support Centers deal with meat and other foodstuff, and for all facilities including warehouses, trading space and vehicle space, total site area will be estimated at 10,000 square meters.</li> </ul>	<ul style="list-style-type: none"> <li>- Regional Marketing Centers should be constructed at the following 5 cities such as Uliastay, Hovd, Govialtay, Choibalsan and Saynshand.</li> <li>- Wholesale organization should be strengthened in order to operate the wholesale market in the Marketing Centers.</li> </ul>	<ul style="list-style-type: none"> <li>- Establishment of commercial supporting fund and action programming for implementation of the fund</li> <li>- Education and development of commercial expert</li> <li>- Registration system of private traders</li> </ul>





Table 4.2.1 Present Condition of Model Agricultural Cooperatives as of 1996

	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
NAME OF COOPERATIVE	Bayan Bekh	Yahh	Galuit	Buyant Ogid	Hujirt (Buyan Barun)	Tavan Fakoe	Hugilt	Shene Umoh	Ahan Terih	Kharuden
YEAR OF ESTABLISHMENT	1992	nd	nd	1991	1991	1990	nd	1991	1997	1995
CURRENT STATUS	Limited company	Limited company	Limited company	Horcho (1997)	Limited company	Limited company	Horcho	Limited company	Member of MAFH	Member of MAFH
LOCATION										
Economic Development Region	Khargai Gobi	Western	Fackm	Eastern	Western	Western	Central	Central	Khargai Gobi	Khargai Gobi
Aimag	Bulgan	Uva	Dornod	Khent	Gobi Alay	Zavkhan	Dundgovi	Dornogovi	Ovorkhangai	Ovorkhangai
Som	Gevanbulag	Sagil	Tsagan Ovoo	Galhar	Dariv	Doroljin	Frd nedalay	Khatanbulag	Bogd	Khankhandulain
Distance from Ulaanbaatar	280km to the west	1,200km to the east	660km to the east	460km to the east	1,030km to the west	1,300km to the west	250km to the west	650km to the west	870km to the west	720km to the west
PRESENT CONDITION OF SOM										
Total area of Som	2,680 km <sup>2</sup>	3,800 km <sup>2</sup>	6,500 km <sup>2</sup>	6,680 km <sup>2</sup>	3,520 km <sup>2</sup>	7,260 km <sup>2</sup>	7,350 km <sup>2</sup>	18,670 km <sup>2</sup>	10,160 km <sup>2</sup>	4,140 km <sup>2</sup>
Total households	870	650	750	610	500	700	1,630	700	1,230	1,230
Total population	3,600	2,900	3,370	2,650	2,110	2,940	7,000	2,900	5,210	4,620
Proportion of herder households	95%	58%	61%	69%	75%	83%	83%	80%	85%	78%
Total livestock population	134,800	80,200	50,800	112,300	111,800	157,200	292,900	125,000	247,200	132,700
Livestock density / (Grazing capacity) (Sheep Unit per sq. km)	130 SU / (58 SU)	43 SU / (31 SU)	27 SU / (57 SU)	38 SU / (71 SU)	51 SU / (36 SU)	44 SU / (40 SU)	76 SU / (36 SU)	17 SU / (32 SU)	36 SU / (32 SU)	70 SU / (52 SU)
PRESENT CONDITION OF AC										
No. of member households	680	104	80	125	410	400	980	230	26	25
% of AC member HHs to total HHs	78%	16%	11%	20%	82%	64%	60%	33%	nd	nd
No. of cooperative staff	66	13	6	52	14	11	106	13	nd	nd
Livestock possession by AC	1,000 (goat and sheep)	15,000 (sheep)	7,500 (sheep)	7,800 (sheep, goat)	0	650	6,500	1,670	192	0
Main income source *	Crop (wheat)	Meat	Meat	Meat	Cashmere	Cashmere	Cashmere	Wool	Crop production (potato)	Butter production
Main business (products for sale)	Crop production (wheat) Animal hair Meat/skin/hide/intestine Daily necessities Social services	Meat/skin/hide/intestine Cashmere Wool Crop production (wheat) Daily necessities Social services Hay production	Meat/skin/hide/intestine Cashmere Wool Crop production (wheat) Daily necessities Social services	Meat/skin/hide/intestine Cashmere Wool Hay production Daily necessities Social services	Cashmere Wool Meat/skin/hide/intestine Daily necessities Social services	Cashmere Wool Meat/skin/hide/intestine Daily necessities Social services	Cashmere Wool Meat/skin/hide/intestine Daily necessities Processing (wood/craft, felt) Social services	Wool Meat/skin/hide/intestine Daily necessities Transportation services Social services	Crop production (potato) Raw livestock products Production and repair of shoes Butter production Wooden processing Sowing industry	Butter production Raw livestock products Wooden processing Sowing industry
Total sales of products & supply	Tg. 103.0 million	Tg. 65.6 million	Tg. 47.4 million	Tg. 43.5 million	Tg. 138.6 million	Tg. 234.5 million	Tg. 314.1 million	Tg. 81.7 million	nd	nd
• Sales of products	Tg. 81.2 million	Tg. 54.4 million	-	Tg. 31.2 million	Tg. 69.5 million	Tg. 160.8 million	Tg. 74.4 million	Tg. 63.2 million	nd	nd
• Supply of daily necessities	Tg. 21.8 million	Tg. 11.1 million	-	Tg. 12.3 million	Tg. 69.1 million	Tg. 73.7 million	Tg. 39.7 million	Tg. 18.5 million	nd	nd
Total Expenditure	Tg. 92.4 million	Tg. 48.6 million	Tg. 22.4 million	Tg. 37.2 million	Tg. 118.0 million	Tg. 216.9 million	Tg. 76.7 million	Tg. 78.1 million	nd	nd
Business profit (before tax deduction)	Tg. 10.7 million	Tg. 17.0 million	Tg. 5.0 million	Tg. 6.3 million	Tg. 20.6 million	Tg. 17.6 million	Tg. 37.4 million	Tg. 3.6 million	nd	nd
Use of net surplus	-	60% for welfare and investment 30% for Dividend	80% for welfare, investment and emergency fund 20% for dividend	55% for dividend 45% for welfare, investment and emergency fund	40% for dividend 40% for reinvestment 5% for welfare expense	nd	40% for dividend 30% for reinvestment 12% for welfare expense 18% for emergency fund	60% for dividend 15% for reinvestment 15% for welfare expense 10% for emergency fund	nd	nd
INTENTION FOR DEVELOPMENT BY GENERAL MANAGER OF AC	<ul style="list-style-type: none"> <li>Expansion the livestock sales through consignment sale increase</li> <li>Improvement of warehouse</li> <li>Improvement of tele-communication between Som center and Bagh branches.</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of wheat production</li> <li>Wheat flour milling</li> <li>Felt processing</li> <li>Inland fishery</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of wheat production</li> <li>Dairy processing</li> <li>Improvement of tele-communication between Som center and Bagh branches.</li> <li>Small scale manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of scouring facilities for animal hair</li> <li>Supply of breeding male goat improvement of sheep variety</li> <li>Felt processing</li> <li>Wood crafting</li> <li>Manufacturing sun-dry brick</li> <li>Renewal of machinery for hay production</li> <li>Improvement of facilities for slaughtering and hide / skin processing</li> <li>Whole sale business in collaboration with neighboring Soms</li> <li>Improvement of shop and</li> <li>Establishment of service center for tenant</li> <li>Milk processing and production of dairy products</li> <li>Improvement of telecommunication</li> <li>Grouping of herders (formation of Khot Air)</li> <li>Improvement of wells and promotion of small scale crop production</li> <li>Production and sales of horse milk wine</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of scouring facilities for animal hair</li> <li>Processing of skin and hide</li> <li>Felt processing</li> <li>Improvement of telecommunication</li> <li>Rehabilitation of irrigation facility</li> <li>Improvement of slaughtering, hide &amp; skin processing</li> <li>Improvement of collection equipment for animal hair</li> <li>Improvement of power supply (power generation)</li> </ul>	<ul style="list-style-type: none"> <li>Supply of breeding male goat</li> <li>Establishment of scouring facilities for animal hair</li> <li>Improvement of wells for livestock</li> <li>Hay production by irrigated pasture</li> <li>Tree fruit processing</li> <li>Expansion of meat sales</li> <li>Introduction of hide/skin processing facilities</li> <li>Felt processing</li> <li>Improvement of telecommunication</li> <li>Electrification of herder households by solar panel and wind mill</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of scouring facilities for animal hair</li> <li>Felt processing</li> <li>Meat processing like sausage production</li> <li>Improvement of soap facility</li> <li>Improvement of intestine processing facility</li> <li>Introduction of small scale industry (juice, ice cream)</li> <li>Increase of transportation equipment</li> <li>Improvement of telecommunication system</li> <li>Reinforcement of organization at Bagh level</li> <li>Training of staff and members</li> <li>Introduction of well drilling equipment</li> <li>Supplemental school lecture and scholarship to members' children</li> </ul>	<ul style="list-style-type: none"> <li>Mechanization of wool and water pumping from wells</li> <li>Introduction of scouring wool and camel hair</li> <li>Felt processing</li> <li>Processing of skin and hide</li> <li>Electrification of herder's households</li> <li>Improvement of telecommunication</li> <li>Milk and dairy processing</li> <li>Manufacturing of camel cart</li> <li>Shower and bath facilities for Khot Air</li> <li>Utilization of natural pasture and promotion of small scale vegetable production by well development</li> </ul>	<ul style="list-style-type: none"> <li>Increase of the number of members</li> <li>Increase of the capital fund</li> <li>Development of small scale industry (carpenter, felt and shoes making)</li> <li>Improvement of veterinary service</li> <li>Introduction of processing equipment for skin / hide</li> <li>Improvement of communication</li> <li>Introduction of processing equipment for skin / hide</li> <li>Electric power supply</li> </ul>	<ul style="list-style-type: none"> <li>Development of small scale industry (carpenter and sowing industry)</li> <li>Improvement of veterinary service</li> <li>Introduction of processing equipment for skin / hide</li> <li>Improvement of communication</li> <li>Development of roads</li> <li>Increasing the number of shelter</li> <li>Electric power supply</li> </ul>
PRESENT CONSTRAINTS AND POTENTIAL	<ul style="list-style-type: none"> <li>Low yield and production due to shortage of farm inputs/seed, fertilizer, agricultural equipment</li> <li>Low quality of food and low milking rate due to deteriorated stall facilities</li> <li>Low consignment of livestock produce from the members</li> <li>Severe competition of sales</li> </ul>	<ul style="list-style-type: none"> <li>Sales of products are fully dependent on the production that the cooperative produce</li> <li>Low consignment sales due to low participation rate of the members to the cooperative</li> <li>Marketing access to Russia is advantageous. At present market in Ulaanbaatar</li> </ul>	<ul style="list-style-type: none"> <li>Sales of products are fully dependent on the production that the cooperative produce</li> <li>Low consignment sales due to low participation rate of the members to the cooperative</li> </ul>	<ul style="list-style-type: none"> <li>High competition on collection of livestock - Products of the members between private traders and the cooperative</li> <li>Shortage of warehouses/marketing center near Ulaanbaatar for sales of meat</li> <li>To sale cashmere without primary processing</li> <li>Shortage of agril. equipment for goat feed collection</li> </ul>	<ul style="list-style-type: none"> <li>Main economic business is sale of cashmere which reaches the maximum of production</li> <li>It is necessary to improve quality of cashmere with of primary processing</li> <li>In addition to cashmere, sales of meat production should be increased as consignment sales for increasing profit of the cooperative</li> <li>Access to the market of Ulaanbaatar is rather difficult due to long distance</li> </ul>	<ul style="list-style-type: none"> <li>Access to the market of Ulaanbaatar is rather difficult in terms of high transportation cost and poor information data</li> <li>It is necessary to improve quality of cashmere and expand meat products for increasing profit of the cooperative</li> <li>Collection of consignment sales amount from members in the remote area is rather difficult</li> </ul>	<ul style="list-style-type: none"> <li>Access to the market of Ulaanbaatar is rather difficult in terms of severe competition in sales against private traders</li> <li>Small scale agro-processing facilities are available, but equipment and facilities necessary for the processing are insufficient</li> </ul>	<ul style="list-style-type: none"> <li>Quality of cashmere is not good because there is a large number of hybrid of goats</li> <li>Sales amount of wool and camel wool are large, prices are low because these are sold without processing</li> <li>Access to Ulaanbaatar is difficult due to long distance. The cooperative faces Sales of meat because of high transportation cost</li> </ul>	<ul style="list-style-type: none"> <li>It is necessary to improve and Air well</li> <li>Small scale of agricultural cooperative owing to small number of the member and rather difficult for creating large scale of business at this moment</li> </ul>	<ul style="list-style-type: none"> <li>It is necessary to improve and Air well</li> <li>Small scale of agricultural cooperative owing to small number of the member and rather difficult for creating large scale of business at this moment</li> </ul>



Table 4.2.2 Features of Development Plan for Model Agricultural Cooperatives

	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10		
Aimags	Bulgan	Uvs	Dornod	Khenty	Gobi Altay	Zavkhan	Dundgobi	Demegobi	Ovorkhangai	Ovorkhangai		
Soms	Gorvanbulag	Sagil	Tsagaan Ovoo	Galshar	Dariv	Dorvoljin	Erdenedalay	Khatanbulag	Bogd	Khairkhanduhan		
Cooperatives	Bayan Berkh	Yalait	Galuit	Buyant Orgil	Hujirt (Boyan Burun)	Tavan Erdene	Hugjil	Shene Urmult	Altan Tsvth	Khamuden		
Eco. Dev. Region	Khangai-Gobi	Western	Eastern	Eastern	Western	Western	Central	Central	Khangai-Gobi	Khangai-Gobi		
Form of Cooperative Management (Main Income Source)	The main income source is wheat production. 97% of the total sales in 1995 (Tg. 80 mil) was derived from wheat and potato production. The sales in 1996 was Tg. 85 mil. Most of the member are nomadic herders.	The sales of meat is the main income source. The total sales of Tg. 44 mil. in 1995 consisted of the sales of meat (47%) and cashmere (45%). The sales in 1996 was Tg. 54 mil.	The sales of meat is the main income source. The total sales in 1995 was Tg. 26 mil, of which the sales of meat covered 69%. The total sales in 1996 was Tg. 47 mil.	The sales of meat is the main income source. The total sales of Tg. 32 mil. in 1995 consisted of the sales of meat (53%) and cashmere (45%). The sales in 1996 was Tg. 63 mil.	The sales of cashmere is the main income source. The total sales of Tg. 21 mil. in 1995 consisted of the sales of cashmere (46%), meat (28%) and wool (27%). The total sales in 1996 was Tg. 130 mil.	The sales of cashmere is the main income source. 97% of the total sales of Tg. 134 mil. in 1995 derived from the sales of cashmere. The total sales in 1996 was Tg. 330 mil.	The sales of cashmere is the main income source. The total sales of Tg. 76 mil. in 1995 solely derived from the sales of livestock-related products. The sales of cashmere covered 61%. The total sales in 1996 was Tg. 108 mil.	The sales of wool is the main income source. The total sales of Tg. 20 mil. in 1995 derived from the sales of wool (50%) and meat (45%). The total sales in 1996 was Tg. 87 mil.	The cooperative belongs to Private Herders Association. The sales of cashmere and wool-related products are the main activity. Vegetable production is also undertaken to meet the local demand.	The cooperative belongs to Private Herders Association. The sales of butter and cashmere are the main activity. Vegetable production is also undertaken to meet the local demand.		
Development Concept	<ul style="list-style-type: none"> <li>Strengthening of wheat production</li> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of consignment sale</li> <li>Primary processing of products</li> <li>Strengthening of livestock production</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of consignment sale</li> <li>Primary processing of products</li> <li>Strengthening of livestock production</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> </ul>	<ul style="list-style-type: none"> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Strengthening of livestock production</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> <li>Coordination with ACs nearby</li> <li>Organizing livestock production</li> </ul>	<ul style="list-style-type: none"> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> <li>Coordination with ACs nearby</li> </ul>	<ul style="list-style-type: none"> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> <li>Coordination with ACs nearby</li> </ul>	<ul style="list-style-type: none"> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Strengthening of livestock production</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> <li>Coordination with ACs nearby</li> </ul>	<ul style="list-style-type: none"> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Strengthening of livestock production</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> <li>Coordination with ACs nearby</li> </ul>	<ul style="list-style-type: none"> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> <li>Coordination with ACs nearby</li> </ul>	<ul style="list-style-type: none"> <li>Primary processing of products</li> <li>Expansion of consignment sale</li> <li>Processing of dairy products being demanded around the area</li> <li>Expansion of storage and supply of daily commodities</li> <li>Coordination with ACs nearby</li> </ul>		
Proposed Improvement of Facilities and Equipment	Crop Production	Provision of wheat seed processing plant/storage, flour mill, and replacement of agri. machinery	None	None	None	None	None	None	None	None		
	Meat, Hide, and Skin	None	Primary processing facilities for meat, skin, hide, and intestine	Primary processing facilities for meat, skin, hide, and intestine	Primary processing facilities for meat and intestine	None	None	Primary processing facilities for meat and intestine	Primary processing facilities for meat and intestine	None		
	Cashmere	Mobile collection equipment	Mobile collection equipment	Mobile collection equipment	Mobile collection equipment	Mobile collection equipment	Mobile collection equipment	Mobile collection equipment	Mobile collection equipment	Mobile collection equipment		
	Wool and others	Mobile collection equipment Electric wool clipping units	Mobile collection equipment Electric wool clipping units	Mobile collection equipment Electric wool clipping units	Mobile collection equipment Electric wool clipping units	Mobile collection equipment Electric wool clipping units Felt processing facility	Mobile collection equipment Electric wool clipping units Pre-processing facility	Mobile collection equipment Electric wool clipping units Felt processing facility	Mobile collection equipment Electric wool clipping units Felt processing facility	Mobile collection equipment Electric wool clipping units Felt processing facility	Mobile collection equipment Electric wool clipping units Felt processing facility	
	Veterinary Center & Animal Health	None	None	None	None	None	None	None	Animal dipping bath	None		
	Milk Processing	None	None	None	None	None	None	None	None	None		
	Marketing & Transportation	None	None	None	Warehouses & transportation equipment	Transportation equipment	Transportation equipment	Transportation equipment	Transportation equipment	None		
	Well	None	None	None	Well for livestock and vegetable cultivation (solar panel/wind mill)	Well for livestock and vegetable cultivation (solar panel/wind mill)	Well for livestock and vegetable cultivation (solar panel/wind mill)	Well for livestock and vegetable cultivation (solar panel/wind mill)	Well for livestock and vegetable cultivation (solar panel/wind mill)	Well for livestock and vegetable cultivation (solar panel/wind mill)	Well for livestock and vegetable cultivation (solar panel/wind mill)	
Telecommunication	Satellite and wireless communication system	Satellite and wireless communication system	Satellite and wireless communication system	Satellite and wireless communication system	Satellite and wireless communication system	Satellite and wireless communication system	Satellite and wireless communication system	Satellite and wireless communication system	Wireless communication system	Wireless communication system		
Power Supply	Transmission from central power grid network	Power generation by diesel, wind mill and solar panel	Power generation by diesel, wind mill and solar panel	Power generation by diesel, wind mill and solar panel	Power generation by diesel, wind mill and solar panel	Power generation by diesel, wind mill and solar panel	Power generation by diesel, wind mill and solar panel	Power generation by diesel, wind mill and solar panel	None	None		
Others	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households	Lodging facility for trainees, electrification of herders' households		
Proposed Technical and Management Support	<ul style="list-style-type: none"> <li>Guidance on operation and management of plants and equipment</li> <li>Large scale mechanization of wheat production</li> <li>Trial irrigated cultivation of potato, vegetables and fodder in dry areas</li> <li>Study and guidance on the supply of goat breeding male and extension of improved goats</li> <li>Trial experimentation on operation of wells by the electric power from solar panel and wind mills and its collective management</li> <li>Study and experiment on electrification of herder households by the use of solar panel and wind mills</li> <li>Improvement of productivity of natural and improved pasture and experiment on the management</li> </ul>				<ul style="list-style-type: none"> <li>Study and experiment on the facility improvement in wintering sites</li> <li>Study and experiment on electric wool clipping unit</li> <li>Adaptability tests of hybrid power generation (on the aspects of operation and maintenance and economic viability)</li> <li>Guidance on the collection of raw products and the marketing of commodities</li> <li>Guidance on the management of cooperatives</li> <li>Study, examination and guidance on the improvement of herders' life and production environment through organization of Khot Air</li> <li>Study and guidance on the promotion of herders' participation in cooperatives and the establishment of new cooperatives</li> </ul>				the same as (1/2)			
Coordination with private companies and government agencies	<ul style="list-style-type: none"> <li>Strengthening of the coordination with processing factories in urban area in order to secure the market of raw materials (meat, cashmere, wool, and hide)</li> <li>Implementation of insurance, medical and education activities on contract basis</li> <li>Expansion of credit and insurance activities by the coordination with agricultural banks and agricultural insurance company</li> </ul>				<ul style="list-style-type: none"> <li>Active participation in veterinary, breeding and extension activities for the effective provision of the services to cooperative members</li> </ul>				the same as (1/2)			
Expected effects	<b>Effects within targeted Soms</b> <ul style="list-style-type: none"> <li>Facilitating the organization of herders</li> <li>Improvement of production, quality and added-value</li> <li>Stable supply of products</li> <li>Improvement of income and living condition of AC members</li> <li>Stable supply of daily commodities</li> <li>Increased use of pasture by the provision and rehabilitation of wells</li> <li>Revitalization of area economy</li> <li>Expansion of employment opportunity</li> </ul>				<ul style="list-style-type: none"> <li>Lessening of work load</li> <li>Strengthening of bargaining power through the increase of consignment sale</li> <li>Regional food security</li> <li>Increase of hay supply</li> <li>Year-round supply of processed meat (dry meat)</li> <li>Efficiency improvement on product collection / sales of daily necessities / communication and the transmission of traditional knowledge, skills and culture through the formulation of Khot Air</li> <li>Secure provision of sales and procurement opportunity to herders</li> </ul>				<b>Effects on ACs and Soms nearby</b> <ul style="list-style-type: none"> <li>Demonstration effects</li> <li>Collection, processing and marketing of products</li> <li>Supply of daily necessities</li> <li>Revitalization of regional economy</li> <li>Transmission of market information</li> </ul>		the same as (1/2)	

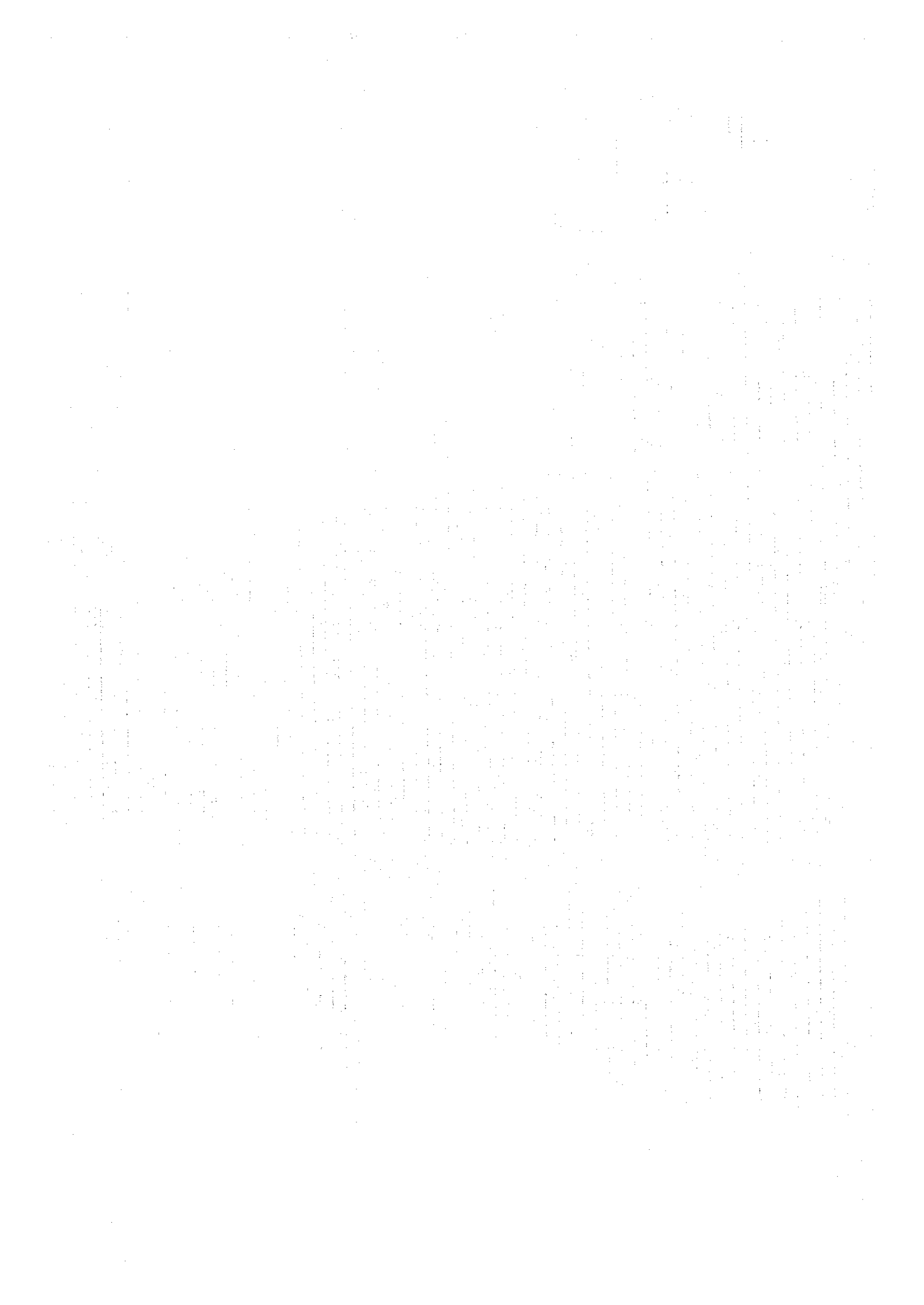


Table 4.2.3 Cost for Strengthening of Model Cooperatives and Training & Information Center in Ulaanbaatar

(Unit: US\$ thousand)

Name of Cooperative	No. 1		No. 2		No. 3		No. 4		No. 5		No. 6		No. 7		No. 8		No. 9		No. 10		No. 11		Total	
	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities	Cost	Facilities		
Seed Processing Plant	II	3,330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,330	
Wheat Flour Mill	II	2,990	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,990	
Wheat Drying Floor	II	600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	
Agricultural Machinery (Wear Production)	II	1,350	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,350	
Machinery Workshop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Machinery Parking Space	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Machinery Garage and Hungers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fuel Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wheat Production Site Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Slaughter House	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Meat Processing Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Raw Hide Processing Facility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Guus Pre-Processing Facility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dairy Processing Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Animal Hair Collection Facility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mobile Animal Hair Collection Equipment	II	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
Animal Hair Pre-Processing Facility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pelt Processing Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veterinary Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grouping Pen for Male Breeding Goat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Animal Dipping Bath	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Animal Dipping Bath	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Agricultural Machinery for Hay Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Electric Power Supply	II	900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	900
Well Improvement	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Agricultural Machinery for Crop Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Warehouse for Marking	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Vehicle and Motor Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wireless Telecommunication	II	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satellite Telecommunication	II	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Som Center Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bath Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Som Training Center	II	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Electrification of Herders' Household	II	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Small Scale Manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Service Center in Som Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Training & Information Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total (I)	II	9,510	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,510
Total (II)	II	2,140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,140
Total (III)	II	2,140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,140
Grand Total	II	9,510	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,790

Remarks: I: 1st Phase of 4 Model Cooperatives, II: 2nd Phase of 6 Model Cooperatives, III: Training and Information Center in Ulaanbaatar

## *Figures*

Fig 2.2.1 Climate

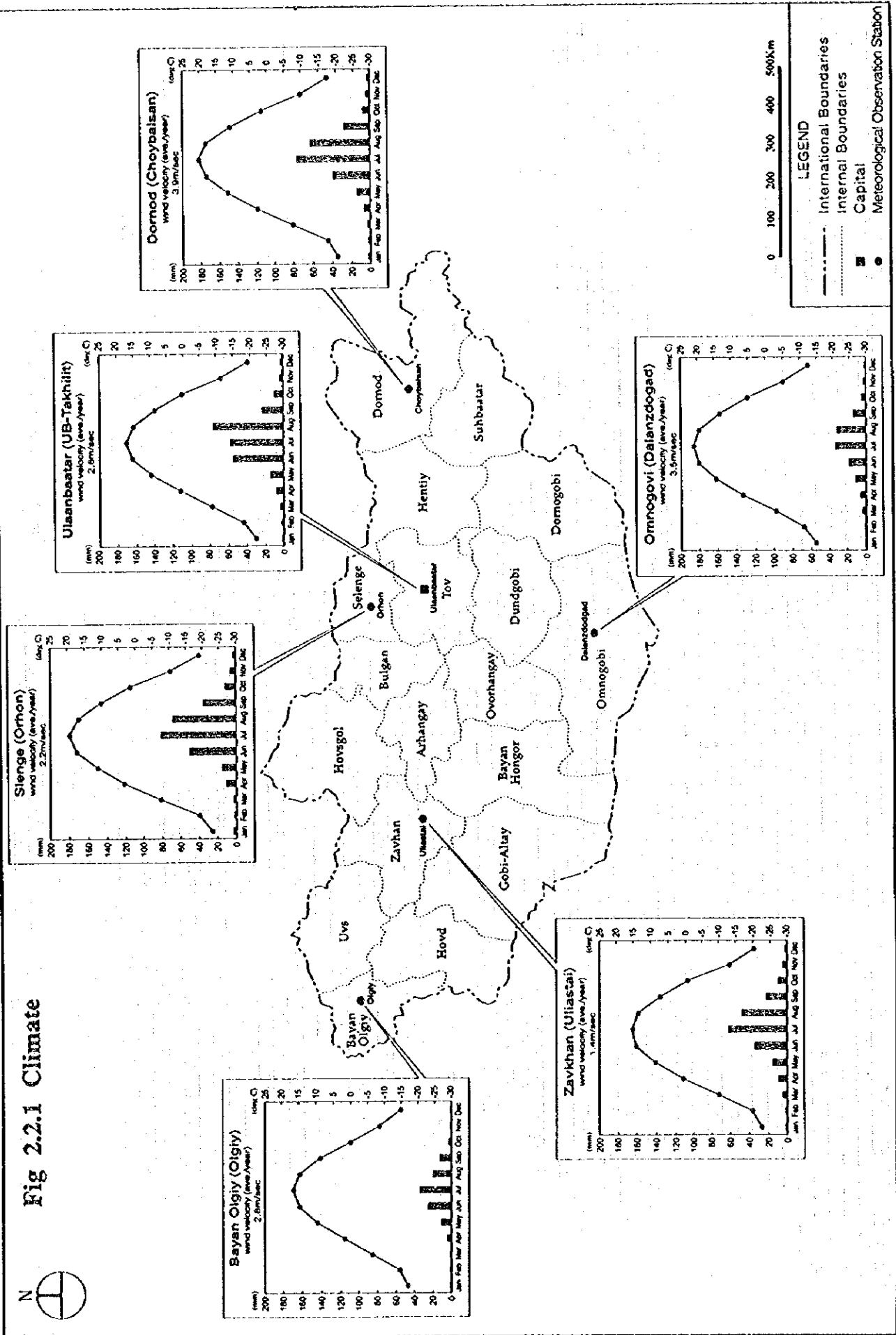
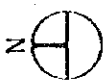
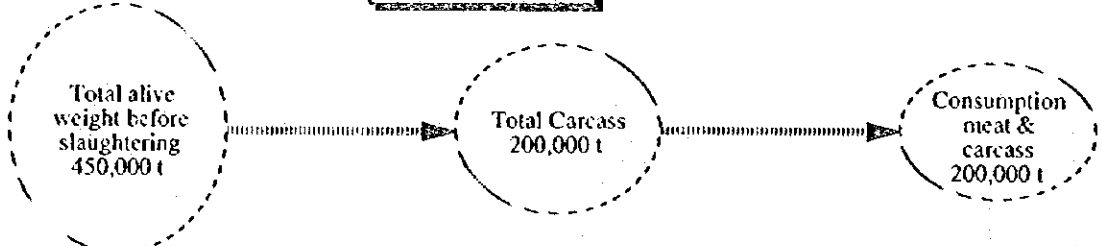
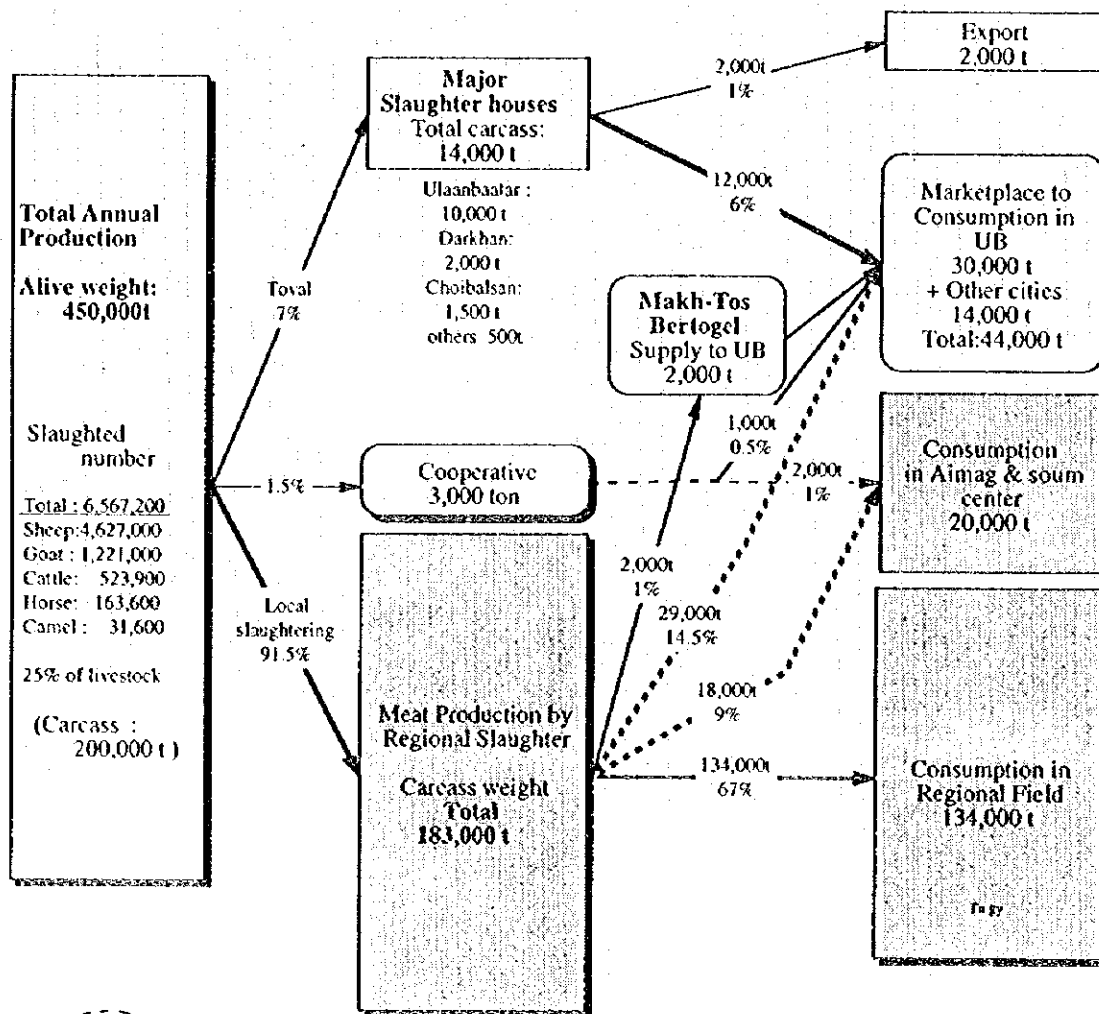


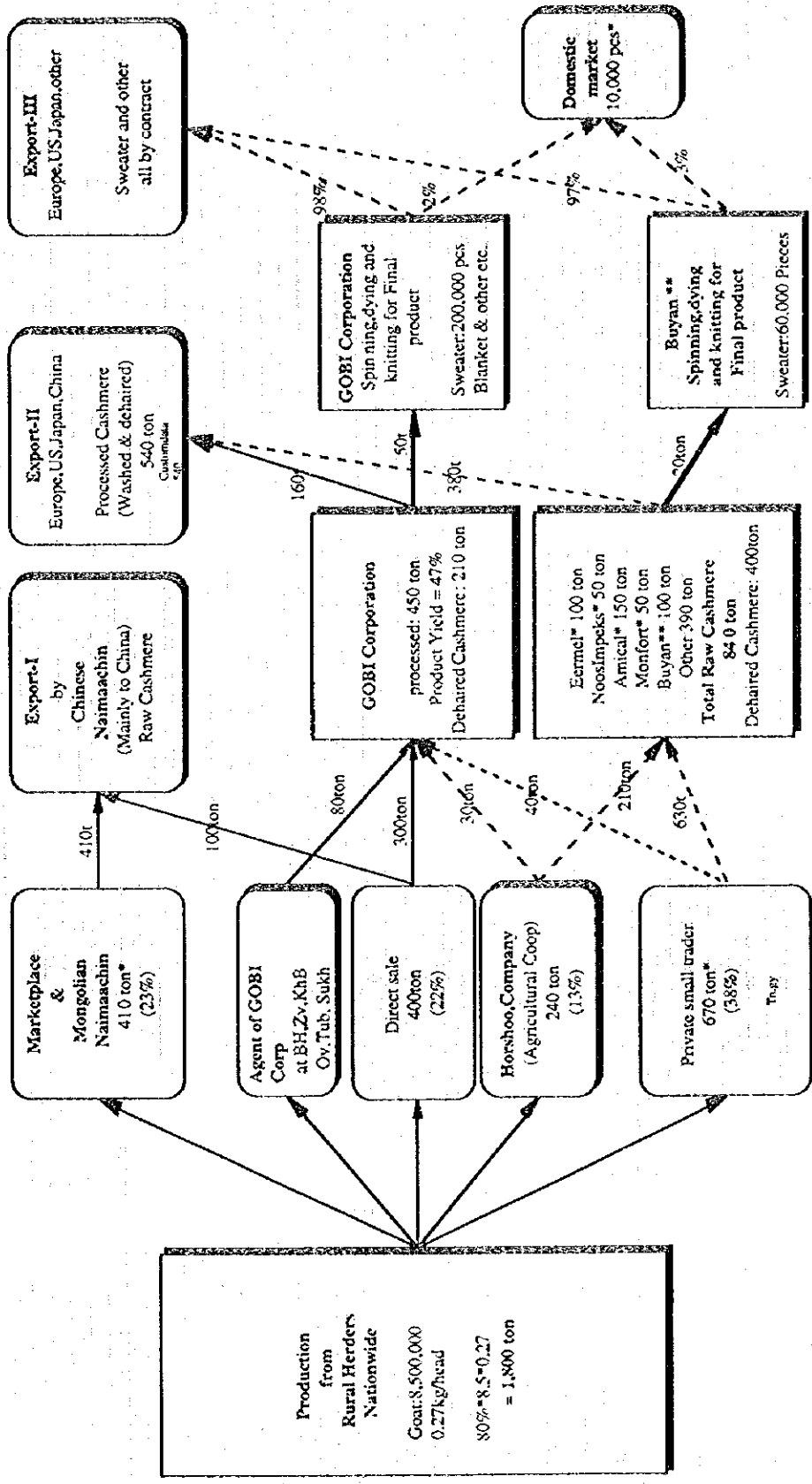
Fig. 2.4.1 Meat Flow (1994, 1995)



Note: 1. Shaded boxes indicate informal activities which cannot be measured accurately.  
 2. Weights are indicated by alive weight, which is weight before slaughtering, carcass (slaughter) weight which is weight of meat and bone without head nor intestine. There is no clear demarcation between block meat and carcass meat although the consumption of livestock.



Fig. 2.4.2 Cashmere Flow (1995)



- Note: 1. Boxes with round corners indicate marketing channels.
- 2. Boxes with right corners indicate production and processing activities.
- 3. Boxes with shades and broken arrow-lines indicate activities which cannot be traced with accuracy.
- 4. Asterisk "\*" indicate that there are no concrete data but interview research suggests this amount.
- 5. Asterisk "\*\*" indicate that Buyan is expanding its facility to 800 tons of processing capacity in 1997.

Fig. 2.4.3 Wool Flow (1995)

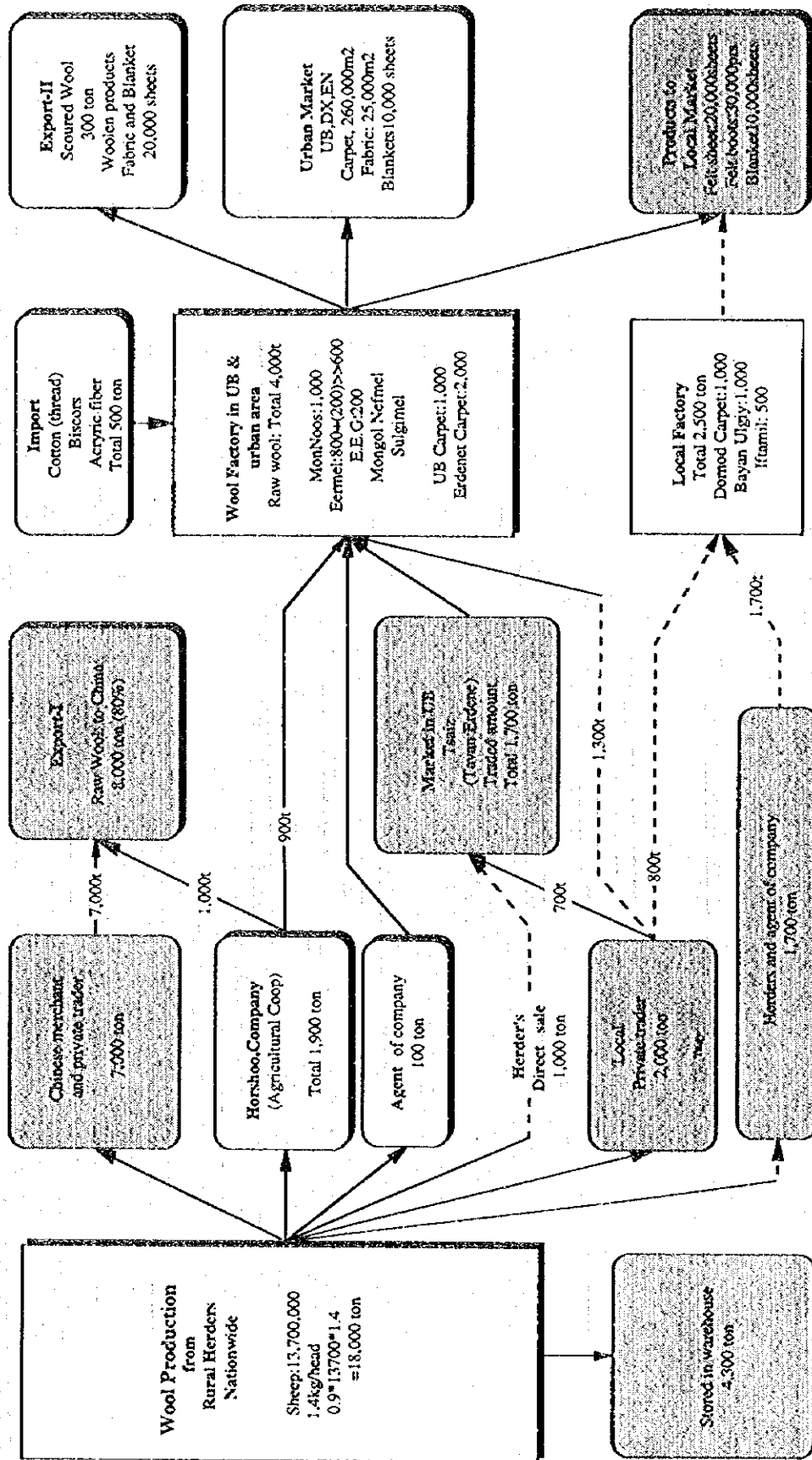


Fig. 2.4.3 Wool Flow (1995)

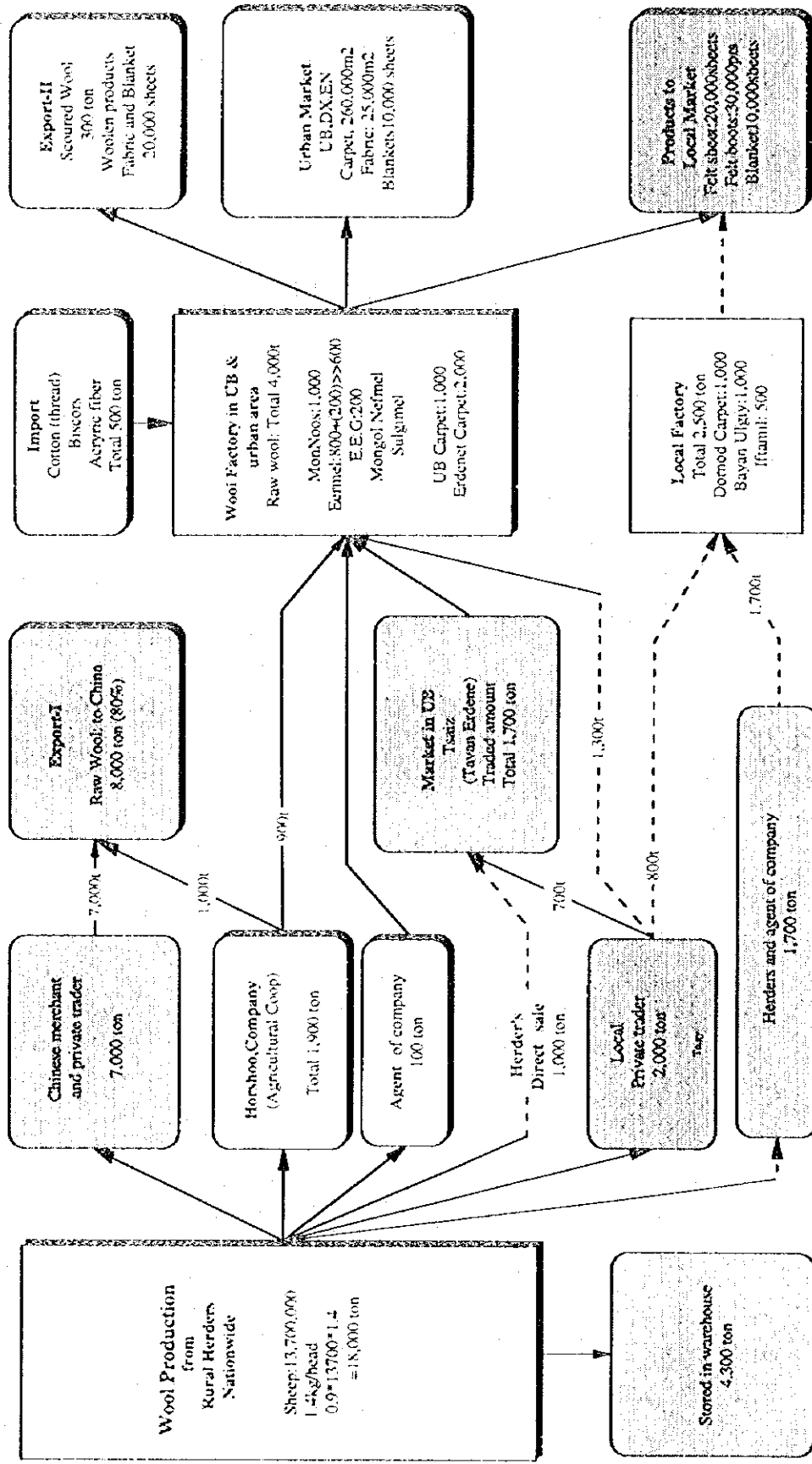
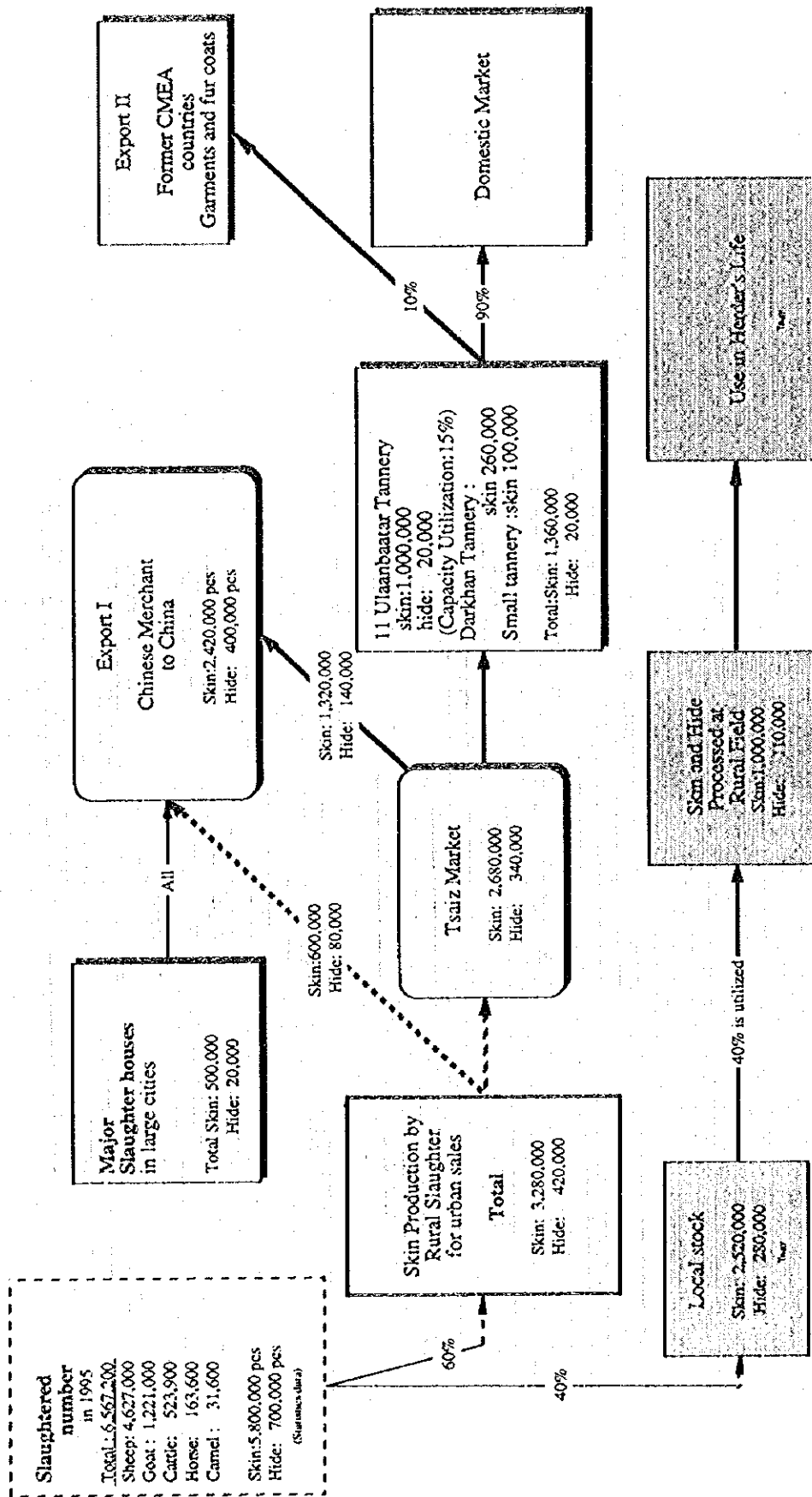
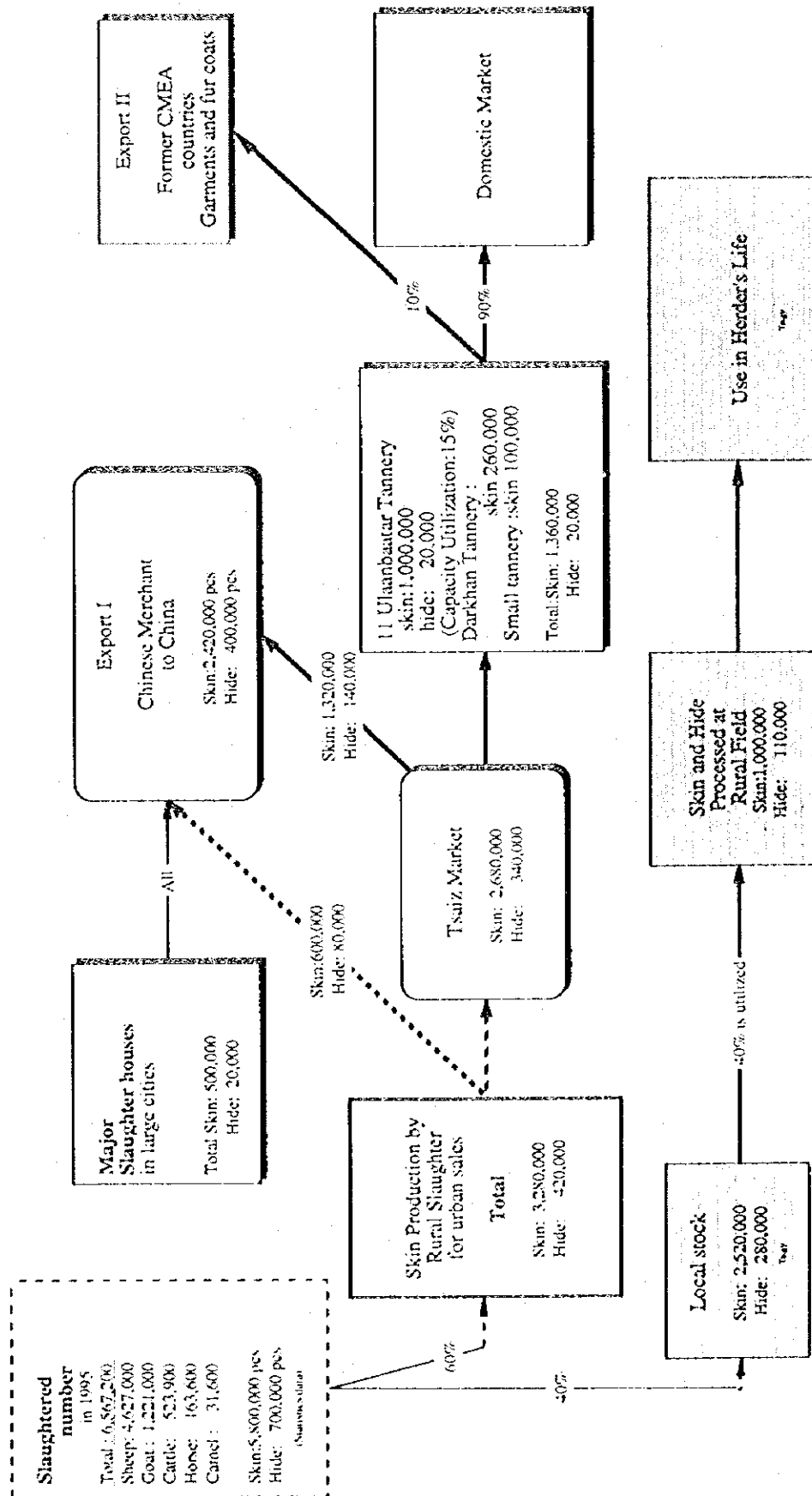


Fig. 2.4.4 Skin and Hide Flow (1995)



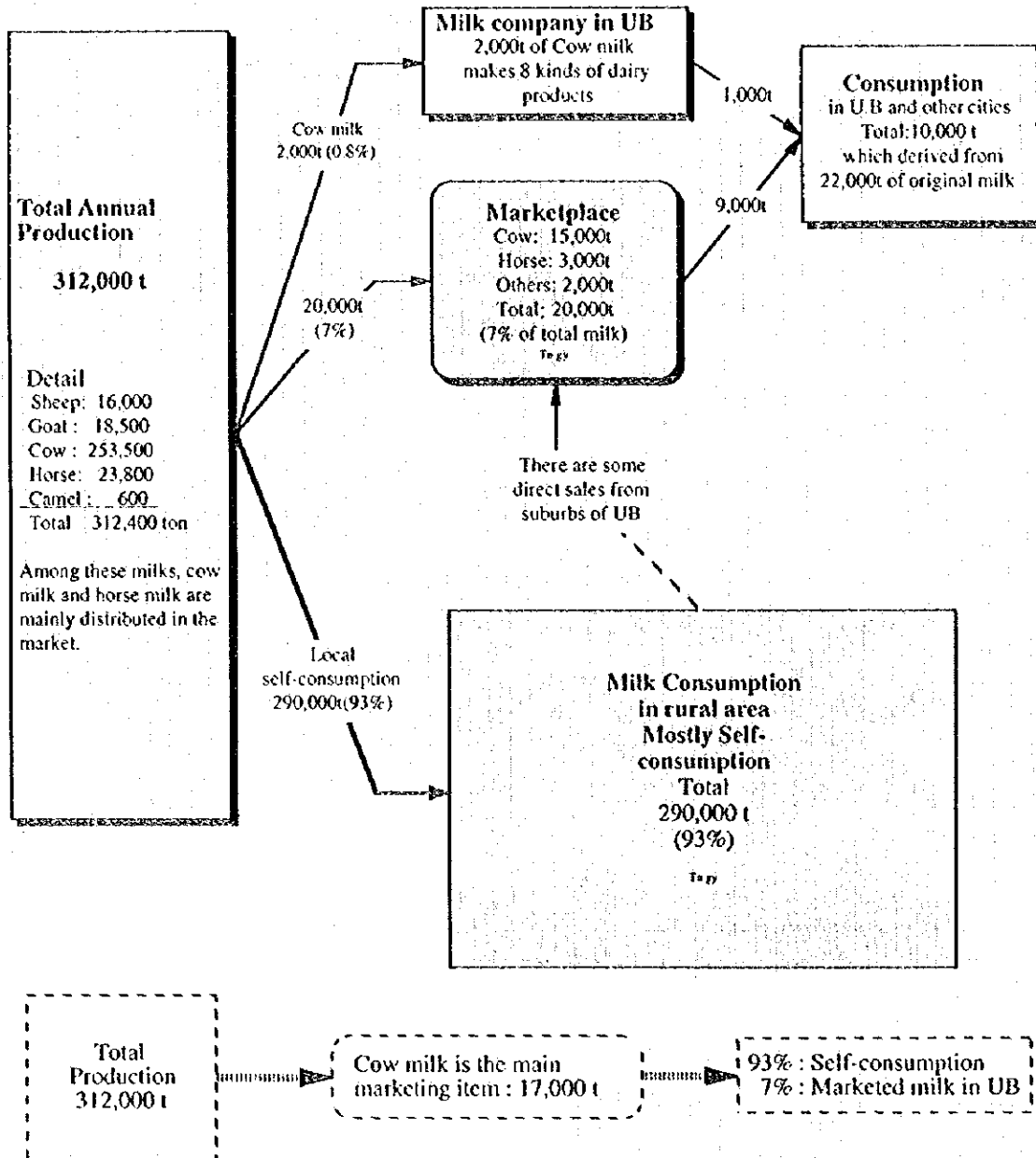
Note : There are some irregularities in the operation of tannery because of accident or expansion work.

Fig. 2.4.4 Skin and Hide Flow (1995)



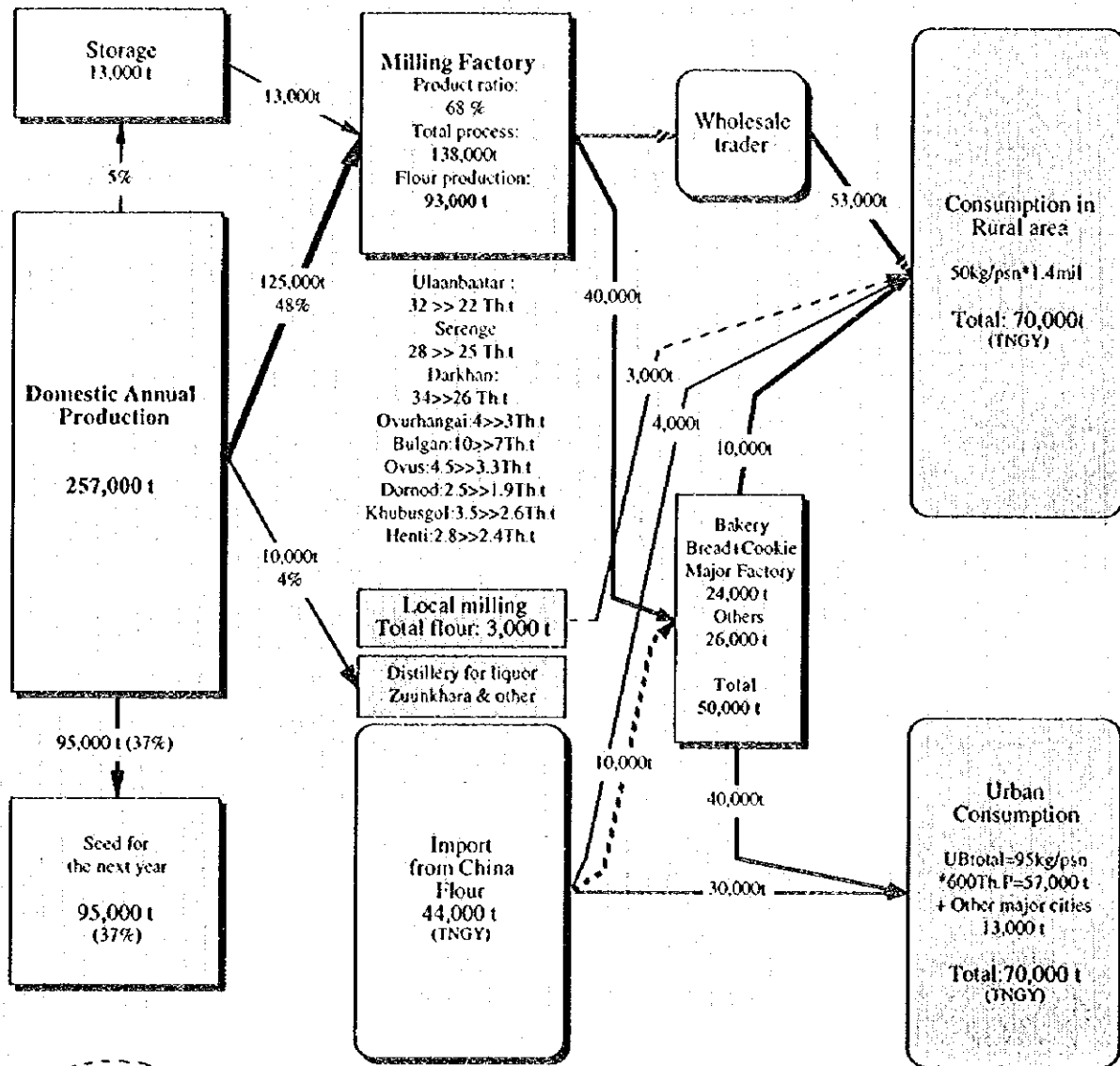
Note : There are some irregularities in the operation of tannery because of accident or expansion work.

**Fig. 2.4.5 Milk Flow (1994)**



Note: 1. Shaded boxes indicate informal activities which cannot be measured accurately.  
 2. Boxes with round corners indicate distribution activities.  
 3. Boxes with rigid corners indicate production, processing and consumption activities.

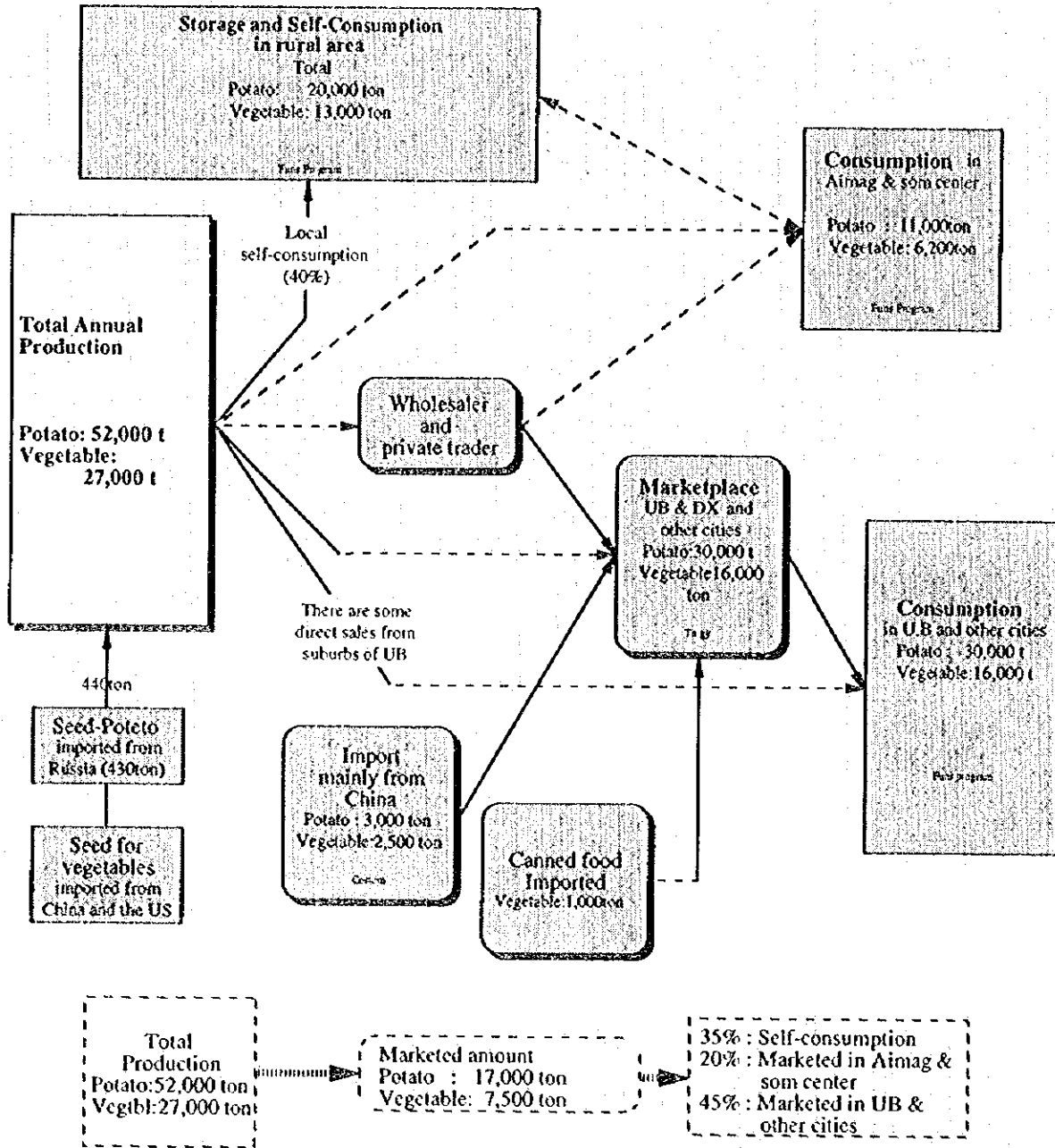
Fig. 2.4.6 Wheat Flow (1995)



Note: Numbers in this chart reflect data in 1995.

The supply of wheat in 1996 decreased to 213,000 ton, and the seed preserve is 70,000 ton. Milling factories receive 121,000 tons of wheat in total and produce 70,000 tons of flour. Local milling increases and the number of small milling firms reaches 400 and produces 40,000 tons of flour in total. This may cause the increase in import, more than 60,000 tons plus grant aid from Japan 5,200 tons & US 8,800 tons, and decrease in consumption. Production of alcohol will also decrease.

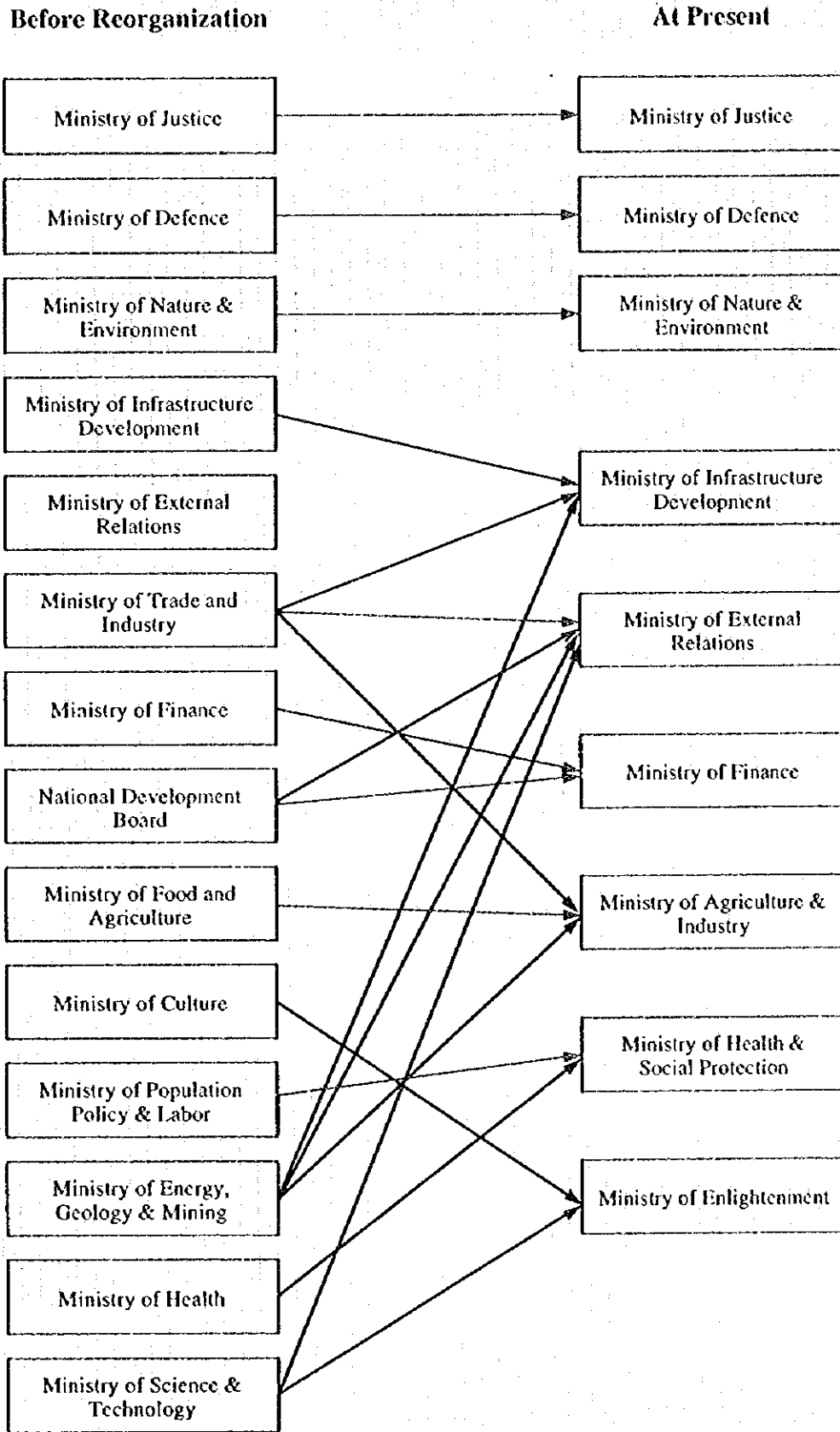
Fig. 2.4.7 Vegetables and Potato Flow (1995)



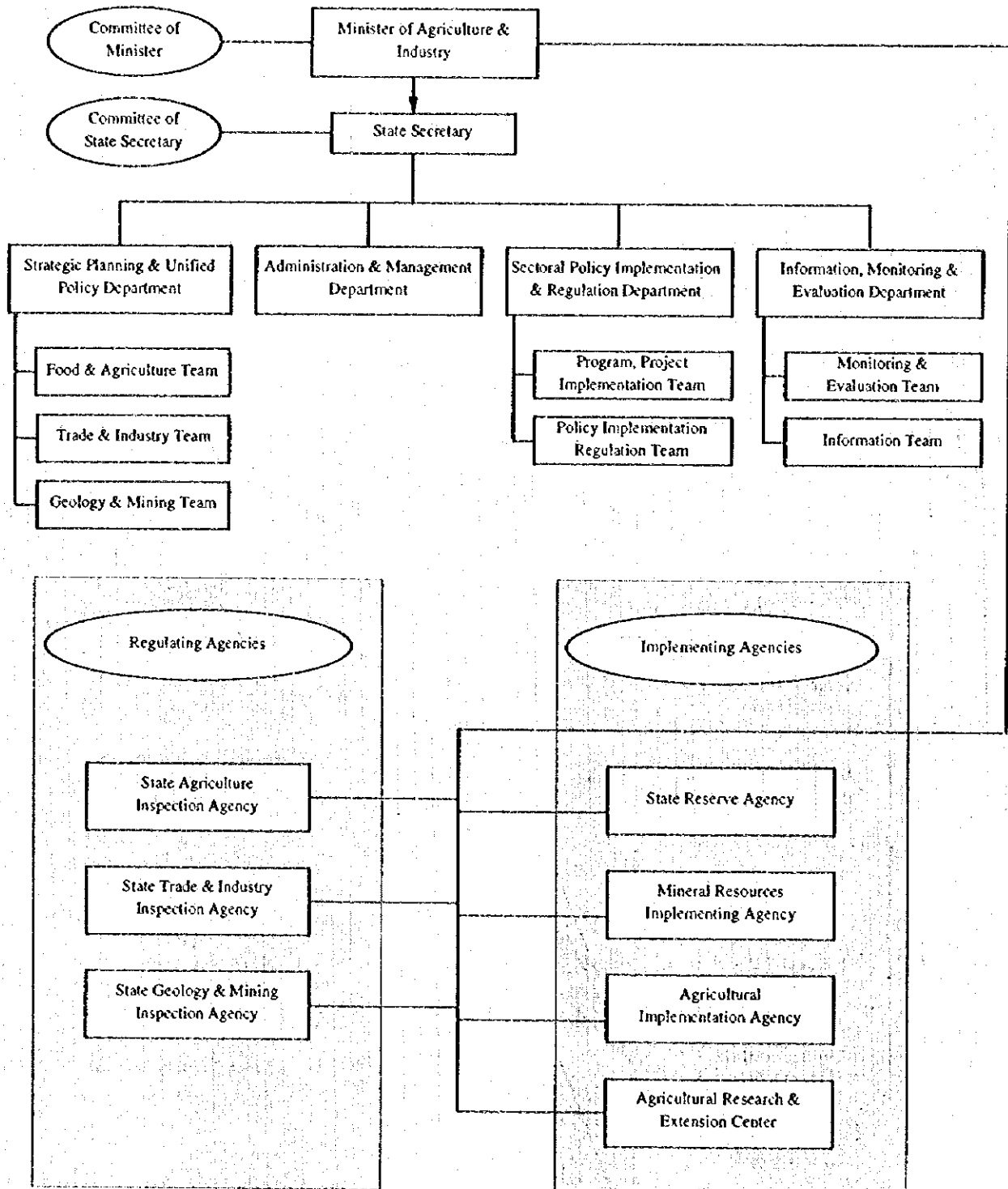
Note: 1. Shaded boxes indicate informal activities which cannot be measured accurately.  
 2. Boxes with round corners indicate distribution activities.  
 3. Boxes with rigid corners indicate production, processing and consumption activities.



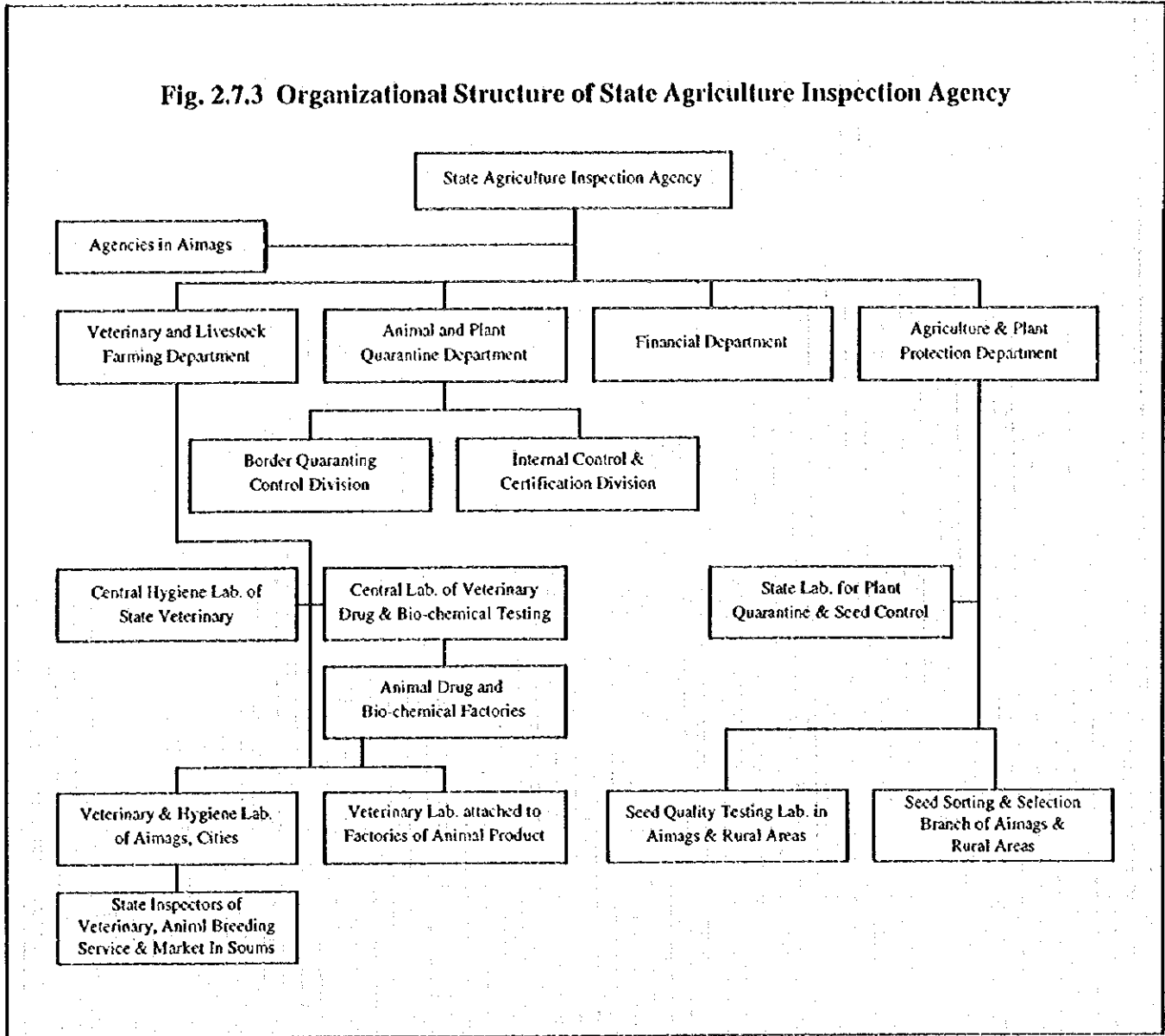
**Fig. 2.7.1 Government Structure of Mongolla**



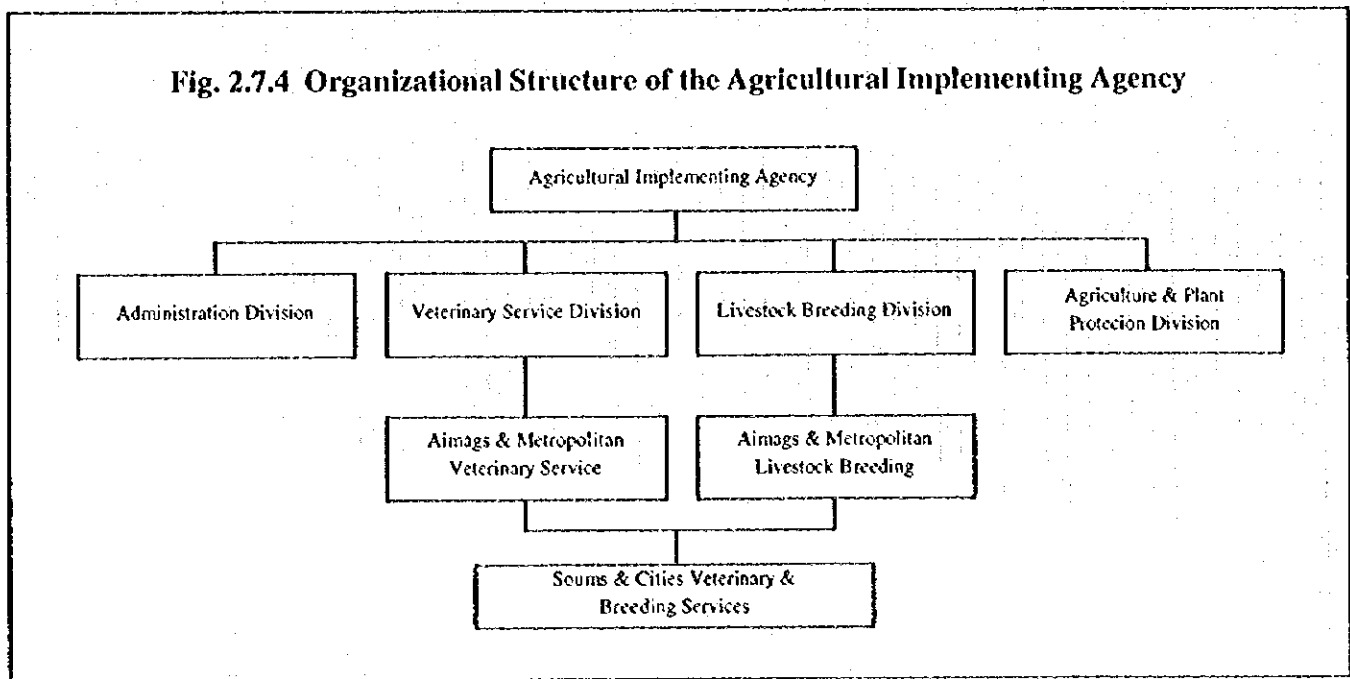
**Fig. 2.7.2 Organizational Structure of the Ministry of Agriculture and Industry**



**Fig. 2.7.3 Organizational Structure of State Agriculture Inspection Agency**



**Fig. 2.7.4 Organizational Structure of the Agricultural Implementing Agency**



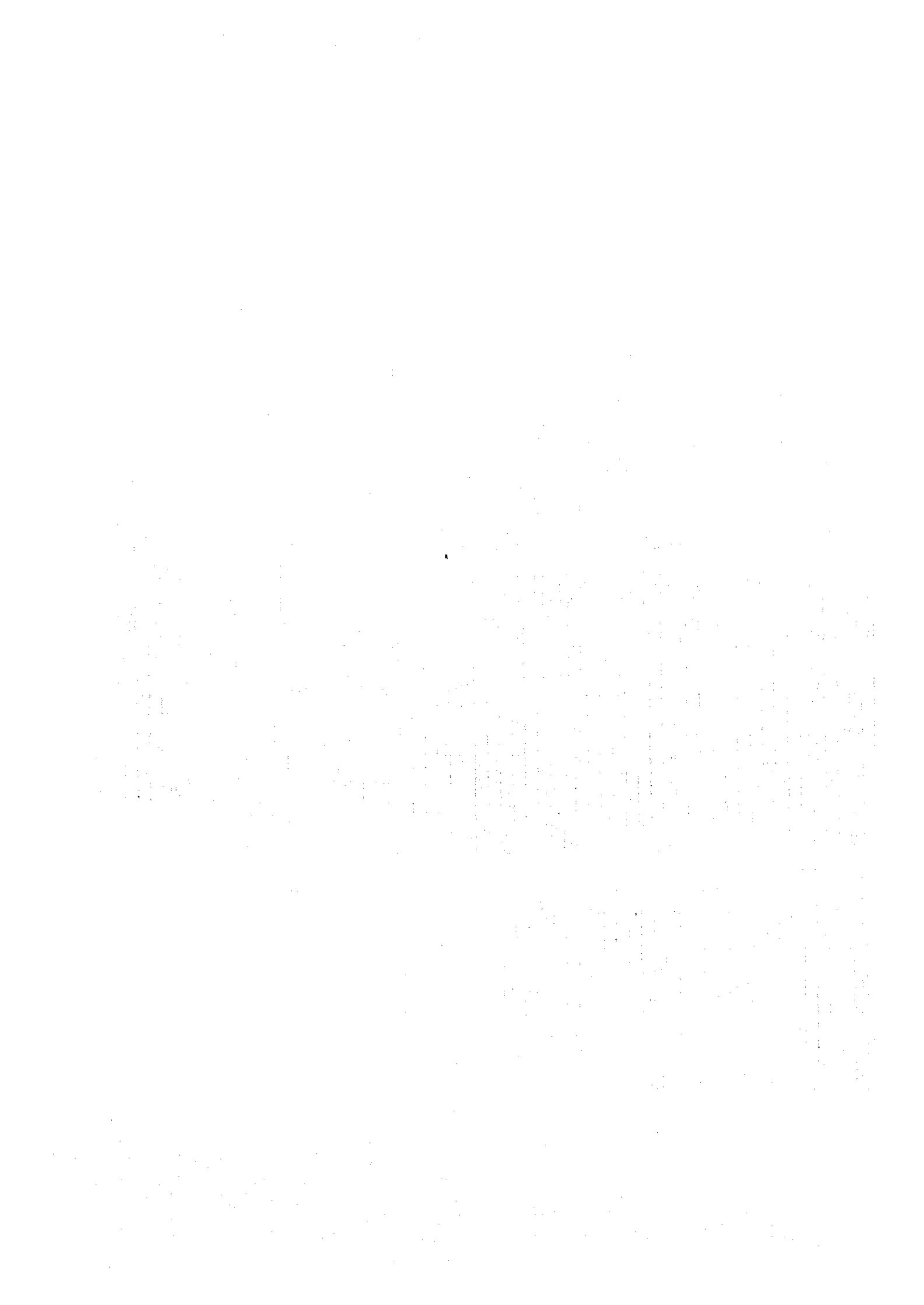


Fig. 4.1.1 Overall Action Plan

1. Projects on Marketing System  
 □ : Feasibility Study & Detailed Design or Preparation of Program    ■ : Construction of Facilities    ■ : Operation or Execution

Projects on Marketing System	Initial Stage (1998 - 2000)	Second Stage (2001 - 2005)	Third Stage (2006 - 2010)
1. Plan on Urban Support Centers (5 Sites)			
1.1 Feasibility Study, Detailed Design or Preparation of Program			
1.2 Construction			
1.3 Operation			
2. Plan on Regional Marketing Center (5 Sites)			
2.1 Feasibility Study, Detailed Design or Preparation of Program			
2.2 Construction			
2.3 Operation			
3. Reinforcement of Marketing Condition			
3.1 Commercial Supporting Fund/Commercial Experts			
3.2 Registration System of Private Traders/Quality Standard			

2. Projects for Strengthening of Agricultural Cooperatives at National and Regional Level

□ : Feasibility Study, Basic Design & Detailed Design or Preparation of Program    ■ : Construction of Facilities    ■ : Operation or Execution

Projects at National and Regional Level	Initial Stage (1998 - 2000)	Second Stage (2001 - 2005)	Third Stage (2006 - 2010)
1. Plan on Training and Information Center in Ulaanbaatar			
2. Sales Information Network Plan			
2.1 Information Committee among Agencies Concerned			
2.2 Computer Network			
3. Plan on Training Center in Aimag			
4. Plan on reinforcement of Publicity Activities			
4.1 Broadcasting by public media like radio and TV			
4.2 Supply of mobile equipment for publicity			
5. Administrative and Legal Actions Program			
5.1 Support by Government/Social Program on Cooperative Develop.			
5.2 Abolition of Legal Barrier/Taxation & Credit Access			
5.3 Execution of administrative and public functions on contract basis			

3. Projects for Strengthening of Model Agricultural Cooperative

□ : Basic Design & Detailed Design    ■ : Construction and Establishment of Facilities    ■ : Operation or Execution

Model Agricultural Cooperatives	Initial Stage (1998 - 2000)	Second Stage (2001 - 2005)	Third Stage (2006 - 2010)
1. Bayan Berh Model Cooperative for Wheat Production and Sales			
2. Yalalt Model Cooperative for Meat Sales			
3. Galuut Model Cooperative for Meat Sales			
4. Buyant Orgil Model Cooperative for Meat Sales			
5. Hujirt (currently Boyan Burn) Model Cooperative for Cashmere Sales			
6. Tavan Erdene Model Cooperative for Cashmere Sales			
7. Hujil Model Cooperative for Cashmere Sales			
8. Shene Urmut Model Cooperative for Wool and Camel Hair Sales			
9. Altan Teyv Model Cooperative for Mongolian Association of Private Herder			
10. Khamurdin Model Cooperative for Mongolian Association of Private Herders			

4. Projects for Strengthening of Agricultural Cooperatives at Unit Agricultural Cooperative Level

□ : Cooperatives with Positive Financial Status  
 □ : Cooperatives with Negative Financial Status and New Establishment of Cooperatives  
 F/S or P: Feasibility Study or Planning    Cons.: Construction    Op.: Operation

Projects at Unit Agricultural Cooperatives	Initial Stage (1998 - 2000)	Second Stage (2001 - 2005)	Third Stage (2006 - 2010)
1. Plan on Reinforcement of Branch's Activities of Agricultural Cooperatives			
2. Improvement Plans on Seed and Agricultural Machinery			
3. Improvement Plan on Mill and Distribution System of Wheat Flour			
4. Vegetables and Potatoes Production Plan			
5. Plan on Pasture & Fodder crop Production and its Distribution			
6. Plan on Improved Livestock Varieties			
7. Improvement Plan on Collection/Distribution and Processing of Wool			
8. Improvement Plan on Collection/Distribution and Processing of Cashmere			
9. Improvement Plan on Collection/Distribution and Processing for Meat/Skin/Hide			
10. Improvement Plan on Social Services			



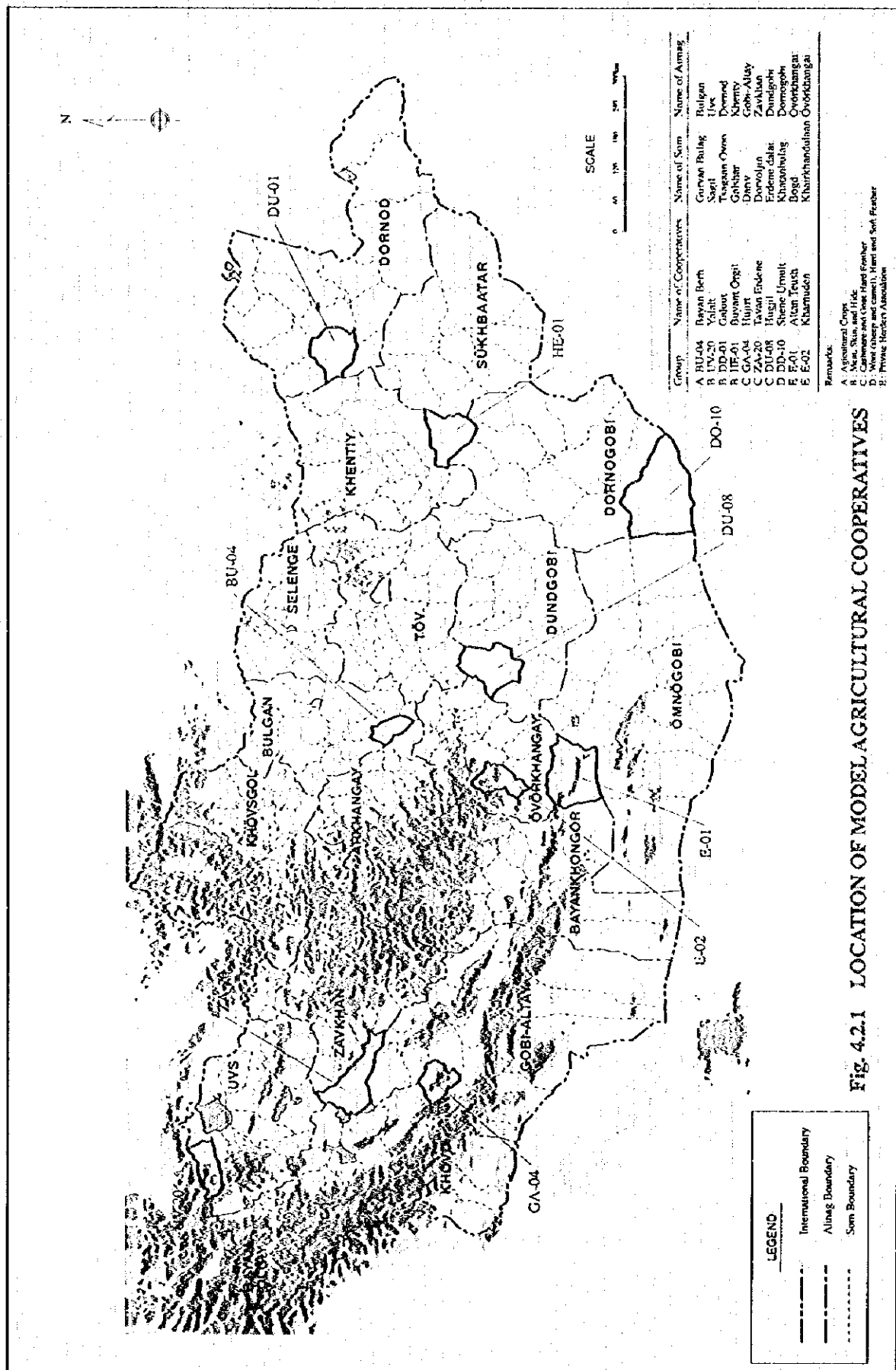


Fig. 4.2.1 LOCATION OF MODEL AGRICULTURAL COOPERATIVES