4.5 View in relation to Funding

4.5.1 Outlook

This chapter reviews the current status of the food processing industries in North Kazakhstan focusing on funding and production costs. However, the details of the information are not sufficiently available. This is because the financial information and the cost structure are confidential matters. Therefore, the further details of financial matters and the cost structure of the meat processors and milk processors will be reviewed and detailed in the second phase of the study.

This study mainly searched for data and information in relation to financial support systems for agriculture and the food processing industries. The solutions for these issues have been reviewed partially. Further solutions will be finalized as part of the Action Plan of the main output in the second phase of the study. In order to evaluate the financial support systems, the study team will conduct the monitoring to those who had financial support from the Government. The monitoring will focus on the objectives of how the industries are satisfied or dissatisfied and what the business results are with public financial support. If the output is analyzed where they are required to make improvements to the financial support system, the study team will incorporate the required improvements into the Action Plan. According to the DAMU, the monitoring for the industries has generally not been carried out. For instance, the only case where monitoring is carried out, is if the financed industries spend the funds on something different to the proposed purpose for funding. Though the negative response from DAMU was assumed, they seemed to carry out the monitoring together with the study team. The target industries should be specified with reasonable screening at the operational stage.

The following are the results from the first phase of the study. The report reviews how the food processing industries are raising funds and what the status of the financial support system is.

4.5.2 The Financial Support System-Subsidy Scheme provided by the Ministry of Agriculture

The subsidy provided by the Ministry of Agriculture is legalized by the decree which the central Government proclaims every year in the second half of January. The subsidy system is designed to assist weak and small businesses including house farmers in the district. The subsidy program supports the farming in the spring, harvest work, cattle breeding, purchase of seed for cereal crops, dairy goods and meat processing as well as fertilizer. In addition, the application for the subsidy generally requires certificates to be issued by the tax authorities, identification cards, certificates proving bank accounts and certificates for land[32] use .

The administrative status for the subsidy according to the Agriculture Department of North Kazakhstan (Kungurtseva Luydmila Nikolayevna) is as follows:

(1) The Subsidy for the purchase of Breeding Cattle

Those who apply for the subsidy for the purchase of Breeding Cattle are required to present the business authorization showing they are dairy farming. As of 2009, twenty companies have been approved. These companies are obliged to present a business plan (Monthly sales and sales amounts) in respect to the cattle in the following year to December. The authority calculates the subsidy according to the sales plan. The approved dairy farmers are subsidized based on the sales plan which they present.

[32] Government land such as the land for agriculture is not owned by individual owners. Instead they are granted the right to use it for a 49-year paid lease. However, houses, shops and land for factories is allowed to be privately owned.

(2) The subsidy for the seeds of cereal crops etc

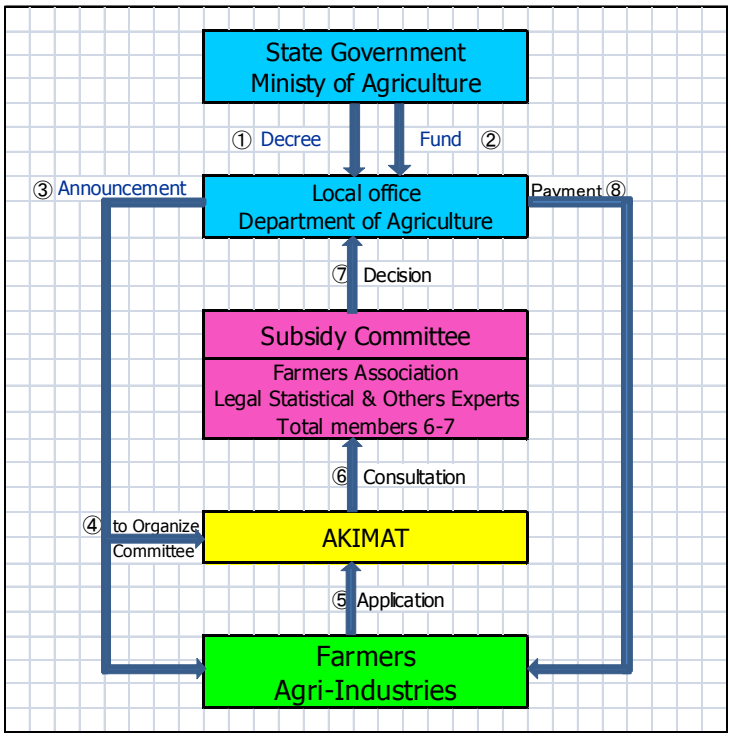
For purchasing of seeds for cereal crops etc are subsidized according to the sales plan of the industries. The industries are obliged to show the authorization for their business.

(3) The subsidy for food processors of dairy products and meat products

The food processors of dairy products and meat products are subsidized according to the business plan in relation to production and their sales. As for the year 2009, forty six industries were subsidized.

(4) The subsidy for the manufacturers of fertilizer

subsidies. The target manufacturers were Kazazot Inc. and Kazphosphat Inc. which are in the southern part of the province. These manufacturers were subsidized from the Government so that they could discount the selling price to the farmers. The fertilizer was sold to the farmers at 40% discount.



Source: The JICA Study Team (based on the interview with the Agriculture Department of North Kazakhstan)

Figure 4-18 The process flow of the subsidy from the Ministry of Agriculture

The figure above illustrates the procedure of the subsidy service. The details of the process flow are as follows:

① The law is proclaimed in the last ten days of January.
② The budget is distributed to the local Government from the central Government in the beginning of February.
③ The official announcement for the subsidy is through the mass media , such as newspapers, TV, radio etc and occurs in the beginning of February
④ The Agriculture Department and the local Government organize a committee for the subsidy service.
⑤ The farmers and the industries present written applications by the beginning of spring farming (within 5 days after seeding in order to request a State Government inspection followed by 2-week inspection).
⑥ The Sate Government requests a committee to deliberate the application.
⑦ The committee reports the result of the deliberation to the State Government during June.
⑧ An official decision is made to subsidize in the last ten days of June or the first ten days of July.

The table below is the budget of the expenditure for agriculture which was allocated for Northern Kazakhstan. Most of the expenditure is from the Central Government. The local Government fund, which was the ratio to account for the whole was 0.91% in 2009 and was 3.20% in 2008.

Table 4-18 The agricultural expenditure for North Kazakhstan (The budget)

Unit : 1,000 TENGE

Programs	2008 Budget	2009 Budget	Outlook of Programs
Seed growing	182,600	257,135	Promotion for stable pricing
Inorganic Fertilizer	-	444,714	Subsidy for purchasing
Pedigree Cattle Breeding	67,412	85,199	Subsidy from Central Gov.
Pedigree Cattle Breeding	148,784	46,502*	Fund from NKO
Fuel for Heating	2,175,835	2,765,000	Greenhouse etc.
Water Supply	488,134	495,998	High quality water
Cattle Breeding products	356,775	1,037,304	Subsidy for Improvements
Urgent Expense	1,398,029	-	Contingency
Total Expenditure	4,817,569	5,131,852	

Source : The Ministry of Budget Planning of Northern Kazakhstan

According to the person in charge of the Agriculture Department of North Kazakhstan, there were 2,800 applicants for subsidies for spring farming work in 2009. The total number of applicants that were subsidized reached 2,765 and those rejected were only 25, i.e. the service percentage was 98.75%. The sum of the subsidy is 500,000 TENGE on the small-scale, 7,000,000 TENGE on the medium-scale and 30,000,000 TENGE on the large-scale.

4.5.3 The Financial Support System in North Kazakhstan - Credit

The financing scheme which used the funds from Northern Kazakhstan started from 2009. The conditions for financing demand the promotion of the regional development, especially, the improvement in the employment creation and the living standard in the region. Financing is available for those industries who are already established and maintain operations. There is no limit for financing from North Kazakhstan but the repayment term is a maximum of 5 years. The interest rate is 9.5% per annum which is more favourable than the commercial banks.

The financing applicant presents a business plan, proof of bank accounts and collateral. The committee is established when determining financing and evaluates applications but when the amount of money becomes large, it needs to receive confirmation from headquarters. It is the business plan and the repayment capacity of the applicants for decision making on the financing. Collateral includes real estate, machinary, a car etc. Through the financing period the authorities hold onto the title deed.

The budget in 2009 was 50,000,000 TENGE. As the financing of 34,000,000 TENGE completed as of November 2009, the remainder being 16,000,000 TENGE was almost committed. The funds were used for three main projects. One of the three was the financing of a bakery, which received large scale financing. The bakery business is to supply high quality products with local raw materials. The business also contributes to employment creation in the region.

4.5.4 The financial Support System by Governmental Corporations

As already mention in "*3.2.2. Public Financial Assistance by the Government of Khazakhstan*", corporations established by the Central Government provide the financial support for the agricultural sectors under holding companies which the Central Government manages. It is KazAgro Holding which the Ministry of Agriculture invested in and controls. The other is Samruk Kazyna which the Ministry of Industry and Trade controls. Holding company Samruk Kazyna incorporated DAMU and TOBOL as the governmental corporations provide financial support which the agricultural sector can benefit from.

There are two Government corporations established under a Government holding company, i.e. KazAgro Holding. One is the establishment of Financial Support of Agriculture providing with Micro-Credit. The other is KazAgro Finance established to carry out leasing of Agricultural machinary and financing. Both have regional offices in Northern Kazakhstan implementing financial support for the agricultural sector. In addition to these two companies, KazAgro Holding incorporated KazAgro Credit, KazAgro Grant and KazAgro Marketing is providing services such as financing, the free fund, marketing and consulting.

(1) JSC Foundation for Financial Support of Agriculture

JSC Foundation for Financial Support of Agriculture was established as a Governmental corporation by KazAgroHolding under the Ministry of Agriculture. The purpose of the business is to supply the district with funds to develop the economy of the district by creating employment. The head office is in Astana. The branch office in North Kazakhstan employs 15 people without any local agency in the province. Instead of appointing a local agency, there are four Micro-Credit Organizations (MCO) invested by 49% from the foundation. Because the representative of MCO owns 51% of the equity, these 4 MCOs are operated by the policy of the foundation even though it is not a 100% subsidiary companies. In the 5 years up until today, the Northern Kazakhstan branch has been operated to provide the total sum of 31,100 TENGE. The result of the financing was 121,000,000 TENGE in 2009.

Micro-Credit is financed to individuals and companies who plan to start their own business. The beneficiaries are mainly small-scale farmers. The upper limit of the loan amount is 400,000 TENGE (2,649 US$). The main uses of the fund are to purchase breeding cattle, crop seeds such as wheat and so on. The loan period differs by purposes and contracts include 12 months, 18 months and 24 months. The interest rate is more favourable than the commercial banks. Applicants for the loan should present the proof of banking, collateral in addition to a business plan. The capacity of the applicants to make repayments is the main condition with the evaluation for financing. The collateral can include real estate, machinary or a car etc. Through the financing period, the authorities keep the title deed. A committee is

established to review the application for financing. The committee consists of 5 members who are all from the foundation. Depending on the size of the amount requested the application will be reffered to headquarter.

The business of MCOs is permitted to operate the financing in the each region of MCOs' location. Once the financing has been finalized between the beneficiary and MCO, MCO will apply to the foundation for a loan between MCO and the foundation. When the application from MCO is approved, MCO will execute financing at between 10.5% ~12% of the interest rate to the beneficiary. At the same time, from the foundation, MCO will borrow the fund which is financed to the end user at 9.5% of interest rate from the foundation. MCO will profit the difference in the interest rates between the two loans. The maximum loan period is 2 years.

(2) KazAgro Finance JSC

KazAgro Finance is a Government corporation established in 1999. The capital in foundation was about 20Billion TENGE. As the government has continued investing every year, the cumulative investment has amounted to 5,200,000,000 TENGE in 2009. Since 2007, KazAgro Finance became a subsidiary company of KazAgro Holding of the Ministry of Agriculture. Therefore, KazAgro Finance is the sister company of Foundation of Financial Support of Agriculture mentioned previously.

The main business of KazAgro Finance is the leasing of farming machinary but also is involved in financing. 90% of the business is in relation to leasing. Financing is only 10%. A customer is limited to the agricultural sector. The scope of business of KazAgro Finance is the financial support in order to establish a business and support to maintain a business after establishment. The target customers are general farmers and private companies. Among the farmers, the main customers are grain farmers, dairy farmers and food processors.

The lease together with the financing, there is not specific limitation of the loan amount. Head office (Astana) reviews the applications and makes decisions for financial support for applications under 40,000,000 TENGE .

Column Leasing Business by KazAgroFinance

The director of KazAgro Finance in the North Kazakhstan branch office emphasizes that the lease business is more simple than financing. The main target equipment of the lease business by KazAgro Finance are the farm machines such as harvesters, sowing machines and farm tractors. There is no risk of non-payment to the suppliers as KazAgro Finance pays for the bulk purchase of the equipment on behalf of the end users who will make a contract for the lease with KazAgro Finance. The end user of the leased equipment does not have to offer collateral because there is no transfer in ownership from KazAgro Finance. That is KazAgro Finance ramains as the owner of the equipment. Also, as for the lease of the above farm machinary, the procedure is simple. For axample a business plan and feasibility study are not required. Even for amounts of over 40,000,000 TENGE the paperwork is not necessary. The merit with the dealer of the lease equipment does not seem to be small. The risk of the dealer is very small, because KazAgro Finance has long term contracts with the dealers which include Rostselmash- Russia for a deal with lumps of the equipments more than one machine as the bulk buyer, for lump sum payment of the large amount and for the sole ownership of the lease equipments. On the other hand, farming machines are available as the business assets for the farmhouses to pay monthly flat rate, which is reasonable amount. KazAgro Fiance doesn't require collateral from the farmhouse. However, even with the cancellation before the expiration of the lease contract, there is no risk for KazAgro Finance because the machine will be contracted to other farmers. The farmer will also have to pay a penalty for the early termination of the lease contract which covers the loss of KazAgro Finance.

The dealer guarantees the warranty of the farm machine to KazAgro Fiance as well.
On the other hand, regarding food processing facilities, business plans and economic evaluations are required with the application. This is because the standard of the business formation of the food processing machines are different to those of farming machines. The scale merit of the business with the food processing machines is rather small because of the less lot and big amount of the cost. In case of financing, if the application is within the capacity to be approved by the North Kazakhstan branch office, the committee is prepared to provide a detailed examination and evaluation.

The table below is the comparative chart for leasing and the condition of financing.

Table 4-19 The comparison between the lease and the financing by KazAgro Finance

Item	Lease	Credit
Collateral	15% of the advance payment serves as collateral	At least 15% of advance payments plus collateral on the balance
Interest rate	Depending on the source of finance ・Government budget: 4%+0.5%(operational expenses) ・Others: 12.5%+1%(for approval)+0.25% (operational expenses)	
Frequency of payment	Monthly	
Repayment time	Minimum 3 years, Maximum 5 to 8 years	5 to 8 years
Grace period	12 months	
Others	Advance payment of 15% The first year payment should not exceed 50% of the debt	

Source: The JICA Study Team (based on the interview with KazAgro Finance)

As for the controllership over the corporate fund of KazAgro Finance, the head quarter owns the exclusive capacity both business for the lease and the financing. The corporate fund has the source from the own fund, the state budget and the financing from international banks[33]. Because the cost of funds from foreign banks is high, the margin of KazAgroFinance is put a cap less than 2%.

Table 4-20 The Government budget for KazAgroFinance

Unit : 10BillionTENGE

Year	Kazakhstan Total	NKO
2007	KZT7	KZT1.1
2008	KZT15.3[34]	KZT3,5
2009	Agri. Machine: KZT1.3 Other Agri. : KZT120	[35]

Source : Prepared by JICA Study Team (based on the interview with KazAgro Finance)

Because the special budget promoting agriculture support is fixed and approved from 2009, the budget for KazAgro Finance exceeds 120 Billion TENGE with detailed as follows:

① Dairy products processing industry

[33] Eurasia GmbH (DirCredit program), ABN Amro Bank, Societe General, HSBC, Germes group
[34] Including financing
[35] To be confirmed in the 2nd field survey

② Poultry farming
③ Greenhouse
④ Vegetable storage
⑤ Manufacturing of farming machinary
⑥ Vegetable cultivation by drip-irrigation

Those who run businesses related to the above can apply for financial support, i.e. leasing and financing through KazAgro Finance. In case of financing, the borrowing rate is 6% and the payback period is between 2~12years, which are not unfavourable condition as for financing. A grace period of 24 months is available. The conditions in relation to the lease is also favourable to the beneficiaries.

Regarding the regional distribution of the state budget, Kostanaiskaya and Akmolinskaya are provided with a sufficient portion following the amount provided to North Kazakstan. This is because aggressive activities are expected in the agricultural sector in these areas. Incidentally, immediately after KazAgro Finance put emphasis on food processing after 2005, Greenhouse business in South Kazakhstan and meat processing in East Kazakhstan is developing steadily.

The head office of KazAgro Finance is in Astana and every province has a branch office except for Mangistausskaya which closed in 2008. The actual number of the employees in the North Kazakhstan office was not provided.

The ratio of approved applicants in North Kazakhstan branch is very high. Among those who applied correctly for both of the lease and the financing, the approved percentage reaches 90% (only one case of financing was approved). In the case that the applied amount is below 40 Million TENGE, as the evaluation and selection is conducted in the branch office, an announcement is made 5 days after the application is received. In the case that the amount applied for is over 40 Million TENGE, as the evaluation and selection is conducted in the head office, and as such takes 3 weeks for an announcement to be made upon receipt of the application.

In the case of a lease, it takes 3 years[36] to transfer the ownership from KazAgroFinance to the end users. The most the customers will pay is 50%[37] of the contracted amount in the first fiscal year, because they are wanting to receive ownership within three years. The remaining balance will be paid in the second and the third years to complete the payment for the ownership transfer.

(3) DAMU

The main business target of the fund of DAMU is to service low interest loans than the commercial banks and supporting entrepreneurs. At first, financing was carried out between the customer directly and DAMU. Since 2008, the private banks were involved between the end users and DAMU, i.e. to implement of a two step loan via private banks. It was explained that the reason for the collaboration with the private banks was to utilize the branch network of the private banks for effective banking services.

We should not forget the negative aspects. The severe evaluation on the assets for collateral is applied by the private banking. For example, evaluation on land and house within a 60 km radius from the centre of Petropavlovsk is supposed to be highest. Outside the centre, where the ordinary sectors own and live, the evaluation applied to normal properties is less. Since 2008, the financial support program of DAMU has been changed little by little as follows.

[36] Lease contract is for three years.
[37] According to the rule, maximum case is up to 50%.

DAMU as the institution of financial promoter of the government fund, under the JSC Samruk Kazyna Holding owned by the Ministry of Trade and Industry, provides soft loans to assist and promote the business of entrepreneurs. The following are DAMU's activities in relation to financial support.

1) Outlook of the financial service

i) The 1st Stage (2008-I)

The seven private banks were selected as DAMU banks, who borrows funds from DAMU to refinance in non-governmental enterprises and individuals. There was not competition such as the bid in the selection of those 7 banks.

The financial conditions between DAMU and the 7 banks

- Grace period : 24 months
- Interest rate : 11. 2~ 11,5 %
- Repayment period : 7 years (repayments every 6 months).
- Collateral : No conditions

The financial conditions between the banks and the entrepreneurs

- Grace period : 12 months
- Interest rate : 18.0~ 19.0 %
- Payback period : 5 years (repayments every month).
- Collateral : No conditions
- The financing limit was 120 million TENGE and the average of the actual loan amount was 25 million TENGE.

ii) The 2nd Stage (2008-II)

At the 2nd stage, the top 10 private banks were appointed without bidding. 2 banks were rejected later and other 3 banks were appointed, i.e.a total of 11 banks.

The financial conditions between DAMU and the banks

- Grace period : 24 months
- Interest rate : 8.0 %
- Repayment period : 7 years (repayments every 6 months)
- Collateral : No conditions

The financial conditions between the banks and the entrepreneurs

- Grace period : 12 months
- Interest rate : 17.8 %
- DAMU-banks: 8% + 4.5% (bank interest) + 0.8% (bank charge)
- Repayment period : 5 years (repayments every month)
- Collateral : No conditions
- The financing limit was 120 million TENGE. This was later increased up to 500 million TENGE. The average of the actual loans was 42 million TENGE.

iii) The 3rd Stage (2009-I)

A special committee was organized. The members included a Government representative, the corporate society representative38and the representative from ATMEKEN[39]. At the 3rd stage, 12 banks were selected. 4 from the Government sector, i.e. BTA Bank, Alliance bank, Kazcombank and Halyk bank. 2 foreign banks, i.e. ATF Bank- Unicredit and CenterCredit bank from Korea. 6 other banks were selected which had a useful branch network, but no financing executed with DAMU.

The financial conditions between DAMU and the banks

- Grace period : 24 months
- Interest rate : 8.0 %
- Repayment period : 7 years (repayments every 6 months).
- Collateral : No conditions

The conditions between the bank and the entrepreneurs

- Payment postponement period : 12 months
- Interest rate : 12.58% (4.5% of the interest rate is the bank and 0.8% of the bank charge were cancelled)
- Repayment period : 5 (repayments every month)
- Collateral : No conditions
- The financing limit was 750 million TENGE. The average of the actual loan amount was 33 million TENGE.

iv) The 4th stage (2009 II, The 4th Tranche: Program for Manufacturers)

The objective of the program of the 4th Stage is to provide financial support for small and medium entrepreneurs under the government policy of the industrial development for entrepreneurship.

The national treasury is the funding source for the 4th Stage. The Commercial Banks contracted as the partner for the program promotion are to pool the program funds. The role of the partner banks is a mediator between entrepreneurs and DAMU, who is operating the program fund. Under the program regulation, the partner banks do not receive any profit from the program operation except for the accountable expense borne by the banks. The banks do not expect financial advantage, but the benefit of the opportunities to see new potential customers.

The program is considered as the useful instrument to realize the government's goal under the government policy of the industrial development for entrepreneurship. The scheme is implemented under the principles of Public and Private Partnership (PPP). The program guideline is as per Appendix 2. The practical contents of the program are as follows:

○The program purpose

- Loss remedies and financial support for small and medium enterprises of manufacturing industry.

[38] Entrepreneurs' Association
[39] National Economy Chamber

○The detailed program

- Reduction of the financial expense for small and medium entrepreneurs;
- To identify small and medium enterprises which are funded by the commercial banks;
- Reduction of the financial cost through refinance of the existing debt; and
- Quick and timely funding by commercial banks for small and medium enterprises.

○Commercial banks participated in the program (Partners Banks)

- JSC Narodny Bank of Kazakhstan (Halyk Bank);
- JSC Kazkommerc Bank;
- JSC BTA Bank (former Bank Turan Alem);
- JSC Aliance Bank; and
- JSC Temir Bank.

○Requirement for Project Evaluation

- Production of the previous year (in terms of money);
- Profit;
- Track record of the payment to the national treasury including Tax; and
- Number of employees.

○The financial conditions

- The payback period: 84 months;
- The interest rate : 8.0 %;
- The currency: Kazakhstan Tenge;
- The grace period : 24 months (Principal);
- Loan conditions:
- after signing the loan agreement, fund must be drawn within 2 months;
- Individual discussion required for the detailed conditions;
- Credit line : Maximum 750,000, 000 Tenge per enterprise; and
- Balance of borrowing: Less than 750,000, 000 Tenge per Partner Bank.

○Special Provisions

- In a case if a small and medium enterprise or its representative does not pay Tax for 10 months, application will be rejected;
- Loan must be repaid within one year;
- Fund transfer to overseas by the intention of the borrower is prohibited; and
- Partner Banks are prohibited to receive any commission from the loan operation.

2) Establishment of DAMA's Regional Program

The purchasing power in Almaty and Astana is extremely strong. The market size is extremely large. As the large numbers of the industries stimulate the activities of the business and the market, which provide with the profitability towards the society. Therefore, the demand for business capital for industries is very high. On the other hand, the profitability within the agribusiness is smaller than that of the commercial and the industrial. As the value of the assets owned by the agriculture sectors is low, the evaluation by private banks for the collateral of the agriculture sectors is very low causing a difficulty in financing from private

banks. For the agriculture sectors in the area where the economic scale is unfavourable, such as North Kazakhstan, it is difficult to gain financing from private financial organizations. The table below shows the financing results of DAMU. Financial support is executed throughout the entire country of Kazakhstan. During the 1st and 2nd stages, as the fund for North Kazakhstan amounted to only 5,137.7 million TENGE, which is only 3.1% compared to the total of Kazakhstan, DAMU focuses financing towards the regions where social and economic development is delayed. This is called the "DAMU Region Program".

Table 4-21 The national financing results of DAMU (All types of industry)

Unit : Million TENGE

Tranche and Program	NKO	Non-NKO	Total
1st + 2nd Tranche	5,137.7	160,987.3	166,125.0
Share (%)	3.1%	96.9%	100.0%
DAMU Region	1,173.4	7,569.0	8,742.4
Share (%)	13.4%	86.6%	100.0%
Total	6,311.1	168,556.3	174,867.4
Share (%)	3.6%	96.4%	100.0%

Source : Prepared by JICA Study Team (based on the interview with DAMU)

It is difficult for the agriculture industry to be financed from private financial institutions, because there are many concentrated in the rural areas where is behind in economic development and the profitability with business itself is very bad because of the long production cycle. Reviewing this point, DAMU established the "DAMU Regional Program" as the financial support plan which focuses on providing financing to rural areas. The budget of the state Government is provided for funding aimed at low interest loan. As shown in the table above, the loan to North Kazakhstan by " DAMU Regional Program" amounted to1.173.4 million TENGE with a ratio of 13.4%, which reflects a successful result from the "DAMU Regional Program".

A special Government committee was composed of the State Government members, the Ministry of Industry and Trade, the Ministry of Agriculture, the Ministry of Entrepreneur etc, ATMEKEN, DAMU to discuss the appointment of CenterCredit bank, Eurasian bank and the BTA bank as cooperation banks. These banks were selected because of their effective branch networks and the strong connection with the agricultural sectors.

In this financing program, DAMU and the state Government contributed 50% each. In addition to the share of 50% by the state government with DAMU, the interest rate fixed by the state is 6.72%~7.12%, DOMU has still room for additional interest rate of 1.5% to finance the selected banks. Therefore, the applied interest rate for the banks to borrow is 8.22%~8.62%. The banks add 5% as their interest, therefore the borrowing interest rate by the end users are between 13.22%~13.62%. The direct fund from DAMU is free from the cost of 6.72%~7.12% for 50% of the fund. The comprehensive interest rate is finally 9.86%~10.06%, which is considered as a low level. The grace period is 18 months for the maximum case. The payback period is 7 years. The actual loan amount is 120 million TENGE as of May 2008. From November 2008, the fund is 750 million TENGE. The actual average loan amount is 31 million TENGE.

The table below shows the financed amount in North Kazakhstan by DAMU dividing into agriculture and non-agriculture sectors.

Table 4-22 The financing results of North Kazakhstan

by DAMU (All types of industry)

Unit : Million TENGE

Tranche and Program	Agriculture	Non-Agriculture	Total
1st + 2nd Tranche	120.0	5,017.7	5,137.7
Share (%)	2.3%	97.7%	100.0%
DAMU Region	252.0	921.4	1,173.4
Share (%)	21.5%	78.5%	100.0%
Total	372.0	5,939.1	6,311.1
Share (%)	5.9%	94.1%	100.0%

Source : Prepared by JICA Study Team (based on the interview with DAMU)

The loan to the agriculture sector amounted to 120 million TENGE with the ratio of 2.3% during the 1st and 2nd Tranche. After establishing the "DAMU Regional Program", as shown in the table above, the loan to the agriculture sector in North Kazakhstan amounted to 252 million TENGE with the ratio of 13.4%, which reflects the successful result made by the "DAMU Regional Program".

3) The Micro-Credit

The law for Micro-Credit was enacted in 2004 and Micro-Credit started in Kazakhstan.

The 1st Stage (2004)

One MCO was incorporated with 100% by the local government. Three MCOs were also incorporated with 49% ownership by the local government. The financing was carried out via banks from DAMU under the two step loan scheme.

The financial conditions between DAMU and MCO

- Grace period: 24 months
- Interest rate : 6.0~9.0%
- Repayment period : 5 Years
- Collateral : Valuable assets such as real estate.
- Guarantee : Guaranteed by DAMU and supporting MCO to promote the business of Micro-Credit

The 2nd Stage (2005~2007)

9 MCOs participated in DAMU's program. DAMU financed 9 MCOs. There was no biding for the selection. The financial conditions are the same as the 1st stage. The maximum financing amount for MCO from DAMU was 60 million TENGE. The average loan amount to MCO was 15 million TENGE. The fund to the entrepreneurs was 1 million TENGE at first. Later, the amount increased to 10 million TENGE from MCO to the entrepreneurs. The loan amount was an average of 3 million TENGE.

The 3rd Stage (2007end ~ 2009mid)

Competitive bidding was carried out for participation and cooperation from MCOs. The guideline was set up, i.e. MCO who proposed lower interest for the end users were selected. Other than the lower rates, the status of the financial credit, the track record in the rural areas, a

reliable network of branch offices and the availability of IT were the potential conditions to be selected. Among the 2 MCOs applied, "Sator" was selected and got financing from DAMO. A 3rd stage new financing flow was formulated from DAMU to banks, banks to MCO and MCO to entrepreneur. The financial conditions are as below:

○The financial conditions

- The interest rate :
  a) Financing for DAMU : 6%
  b) Financing from DAMU to the banks : 7% (additional 1% from DAMU)
  c) Financing from the bank to the entrepreneurs : 14% (additional 7% from the bank)
- Grace period : 6 months
- Repayment period : 3 years
- Collateral : Valuable assets such as real estate.
- The maximum financing limit was 260 million TENGE.

4.5.5 Financial Support Program by the Commercial Banks

In North Kazakhstan, Commercial Banks are the general source of the finance for private industries. Therefore, Commercial Banks are indispensable and their role is very important for the promotion and development of cluster development. There are 15 Commercial Banks in the province of North Kazakhstan. The names of those banks are listed in Appendix 4. The funding activities of the two banks, which the JICA Team had interviews with are as follows:

(1) Aliance Bank

Aliance Bank, high ranked among commercial banks, is one of the best banks. Aliance Bank participates in the programs of DAMU from the beginning stage, keeping good relations with DAMU.

The funding activities of Aliance Bank are reviewed as below. After the world credit crunch, the loan applications from blue chip companies had decreased.

○Financial conditions

- There is no condition for loan limit (usually minimum US$5,000-10,000)
- Repayment Term: 3 years
- Grace Period: 12 months
- Interest Rate: 15 %
- Collateral: 70 % are land and/or houses and 30 % are movables assets such as cars.

○Conditions for Loan Application

- Purpose of money use
- Credit History (delayed repayment makes lower evaluation)
- Collateral
- Business Plan not required. Reasonable repayment plan is necessary (self made plan)

It takes 10 days both for evaluation and selection of applications. The procedure of evaluation and selection are to be improved to reduce the time required for evaluation and selection. As mentioned earlier, the Aliance Bank operates the Program for Manufacture (the 4th Tranche) of DAMU as the partner bank since December 2009. The first funding

arrangement was implemented in December 2009. The second funding arrangement is planned to commence in June 2010. The loan conditions are as follows:

○Loan Conditions

- Applicants : Manufacturers
- Amount: Maximum 750 Million Tenge
- Repayment Term: 7 years
- Grace Period: 2 years (only for Principal)
- Interest Rate: DAMU to bank 8 %.

The Aliance Bank does not increase the interest rate but adds on a mimimal bank commission that only covers the Banks expenses where this is repaid from the borrowers. The increased opportunities to attract new potential customers are an incentive and attractive for the Bank's future business instead of the profit making through their financial operations. The availability of a normal bank loan is rather difficult for ordinary entrepreneurs. Additionally, the interest rate of a Commercial Bank loan is not suitable and attractive for small and medium enterprises because of the higher interest rate. There are some limits in developing new customers through the daily business of Banks by themselves due to the recent business environment. Especially, it is not easy to gain access to or attract new entrepreneurs of small and medium enterprises. Experiencing the DAMU programs, Commercial Banks consider the participation into the program of DAMU as the opportunity to see and discuss with new potential customers.

The Aliance Bank is interested in the group loan program, which is not organized yet. This concept is where the group members are doing the different business but where these are mutually related to each other. In general the financial demand is low and the individual bank loan does not have the potential to generate a big profit because of the size of loan amount and its risk is also relatively small. Therefore, if each member needs business funding from Commercial Banks, the bank loan should be applied for by the group. For pursuing each of these goals, the members will have to cooperate together. Such cooperative business activities will lead to demonstrating the potential new business opportunities under the Bank's new trial, i.e. group loans from the Commercial Banks will contribute to promoting the cluster development as well.

(2) Tsesna Bank

Because of the financial loss, small and medium producers are accordingly not able to repay the Bank Loan. The Bank will usually be accommodating and reschedule the loan agreement with the producers to reduce the monthly repayment.

The Tsesna Bank has therefore been identified as one of the most suitable organizations for servicing the agricultural sector, where there is no other competitor identified in the rural areas for the provision of financial services. Potential competition such as that from other Micro Credit Organizations (MCO) whose aim is to provide short term finance only do not come to the rural areas. Because of the long term cycle business of farmers, the funding of these are not attractive for MCO's. MCO's are therefore not interested in the rural customers.

There is a "Credit Partnership" in the rural areas operating as a special financial instrument for farmers. As the individual economic size of farmers and agriculture companies are rather small, more than one farmer and agriculture company make up a financial group pooling the fund from each other for the members' financial requirements. One of the Central Government entities, i.e. Agriculture Credit Cooperation, assists to promote such private financial organization for funding any shortage by self financing. However, the Manager of Tsesna Bank commented that the activities of Credit Partnership are not competitive because of

the self financing, which has some limitation and difficulties with the fund size even when supported by Agriculture Credit Cooperation. Not all farmers can offer their own funding for the group pooling arrangement and will come to Tsesna Bank for funding when they need money. The establishment of banking business by Tsesna Bank in the rural areas, therefore, is considered as the complementary function to the role of Agriculture Credit Cooperation.

The Manager of the Tsesna Bank revealed that it will take time to complete the cluster development. However, organizing the commercial banking system into the institutional financial scheme lead by the Government will contribute towards the private sectors being financed. Tsesna Bank is one of the potential supporters to the cluster development initiative.

4.5.6 Funding and Cost Management the Food Processing Industries

The JICA Team interviewed two of the medium-sized food processors in North Kazakhstan. The interviews were conducted with the Meat Processor and the Diary Processor in North Kazakhstan.

After the Lehman Shock, finance from the Commercial Banks is not available because of the shortage of the liquidity. The private sectors gave up the Commercial Bank loan because of the high interest rate, the short repayment term and the rigid evaluation of the collateral. Under such criteria finance from the Commercial Banks is not a realistic option. On the other hand, the public finance provides the lower interest rate from which food processing industries may benefit. In general, the funding provided by the governmental sectors, i.e. the Central Government, the Local Government and the Government Corporations , is not enough to meet the demand from the industry. Accordingly, the number of the companies, who are able to be financed by the public institutions are limited.

Regarding the cost management, the reduction of the production cost is one of the core problems. The reduction of the production cost may lead to increasing the retained earnings, which may result in an increase in equity that will enable funding through a Commercial Bank loan. For the food prosessors, such effort is necessary. The following are the example of the funding of the Meat Procesor, from which JICA Team tries to identify the issues to be resolved.

(1) Fund Raising and the Cost Management of The Meay Processing Industry

1) The Overview of the Meat Processor

The company was established in the second half of the 1990s. At first, the company was trading meat between North Kazakhstan and Russia. In addition to the butchering industry, the company started processing their meat to producing ham and sausage since 2001. In December 2009 the company employed more than 60. The company organization chart is presented on Appendix 6.

For the raw meat supply, the meat processor has contracts with 5 companies of who have large farms located within the 250 km. The company imported the processing machines from Germany where the supply firm constructed these and assumed responsibility for their commissioning. Because there is no reliable transporter in North Kazakhstan, the company have their own vehicles to transport the raw meat and the products. Incidentally, the company has acquired ISO9001. In addition to the head office and the factory in the industrial part of the suburbs of Petropavlovsk, the company own two buildings in downtown for retailing their meat products as well as provision for other retail shops for the tenants to sell food and the fashion clothes.

The company indicated that it required funding not only for replacement and refurbishment of their manufacturing facilities but also for working capital. The specific details of the interview will be to referred later. The management of the company complained about the difficulty of securing the funding from Commercial Banks because of the shortage of the liquidity through

Lehman Shock. Even though funding from Commercial Banks is offered, the management seemed to stop borrowing because of the high interest rate and the short repayment term. [One of the reasons for his decision is his dismay on the sale of the company against the competition among the industry .]

Recently, the company had received finance through governmental support, which was one year soft loan. The purpose of the loan was considered as the refinance to pay back the previous loan, which was more costly because of the higher interest rate. The industry does not seem to be confident enough to invest for fundamental purposes, which should improve the business profitability.

2) The Fund Raising of the Meat Processor

The Meet Processing Company has track record of using the soft loan provided by the Ministry of Agriculture as follows:

○Finance program : The government finance for the food processing industry

- Grace Period : 6 months
- Interest Rate : 4.5%
- Repayment Term : 1year
- Purpose : Working Capital

The company had received finance from the DAMU fund as well.

○DAMU finance : The government finance for the food processing industry

- Grace Period : 3 months (Recently, it is extended to 6 months).
- Interest Rate : 12.5% (the bank) + 1.5%(DAMU)
- Repayment Term : 1year
- Purpose : Working capital

Even the interest rate is 14% which is lower than the rate offer from the Commercial Banks, the management of the company is not satisfied with the DAMU financing arrangement because of the high interest rate. Regarding the repayment term, he also complained that one year is too short.

He knows the financial support by KazAgro as the same category of DAMU as the governmental corporation. He has never applied for KazAgro finance, because it takes a long time to prepare the applications. He has the impression that the evaluation time is also very long. Regarding TOBOL of the Government Corporation, he does not feel comfortable with the investment type offered by TOBOL.

Reviewing the following financial support programs he decided not to apply them, because he is not confident that a profit can be generated by using these finance options, i.e. high rates of interest and short repayment term.

Commercial Banks introduced the rigid evaluation for assessing collateral. The devaluation of the value by banks reduces the loan amount down to 70~80% of the valuation value. Regarding the business plan, it was 20,000 Tenge for the consultation fee five years ago. Currently, there is no requirement for a business plan. The corporate staff can manage the necessary paper work.

○Direct finance from the commercial banks

- Interest Rate : 16%
- Repayment Term : 1 year
- Purpose : Working Capital

Because the economic condition are not favourable at the present, therefore the condition mentioned above is not acceptable. Regarding the interest rate, it is currently rising to 18%, which is too high. He seems to give up the option of pursuing direct finance from the commercial banks.

○The required papers for the public financing and the subsidy

- The certificate as a food-processor;
- The use of the funding (disclosure of accounting data as the evidence);
- The annual report to the Ministry of Agriculture for the fund use;
- The quarterly report to banks for the financial statement:
  a) Balance Sheet;
  b) Profit and Loss Statements;
  c) Cash Flow Statement; and
  d) Statement of Changes in Net Assets.

The interest rate set by Micro-Credit is regarded as high as the one offered through direct financing by the commercial banks. The management of the Meat Processing Company disclosed the following as the preferable conditions for bank loans:

- Interest Rate: Less than 5%
- Repayment Term: More than 3 years
- Grace Period: More than 1 year

The management wants equal to or less than 5% of borrowing interest rate, equal to or more than 3 years of payback period as the desirable conditions and a grace period of equal to or more than 1 year. There is also the need for the office work associated with the preparation for the application/s to be simplified. Incidentally, there are examples where financing was obtained with the borrowing interest rate being subsidized. Hence there seems to be on going interest in the public financing from the positive experience which was blessed with the low interest.

3) Cost Management

As a result, the funding source is limited in general to the industry, i.e. funding is not available. Even if funding is available with one year repayment, this is not feasible where the investment is required for the replacement of the processing plant for the company where the investment cost is 200,000 Euro for the new machine. On the other hand, the average sale price of their products is 500 Tenge per kg, which is not enough to allow the loan to be paid back within one year. It is understandable that the management complains about the payback time to being unfeasible. Under such circumstances, improvement against the financial disadvantage should be realized through the effort of the management. The management, for instance, should enhance the profitability by cost reduction especially in the production process.

As mentioning above, the average selling price of the meat processor is 500 Tenge per kg. Raw meat amounts to 60~70% of the total cost. The personnel expenses were revealed to be 2%, with 10% attributed to the energy cost. The transportation cost and the heating fuel

expenses are under the control of the company, because the company owns the transportation vehicles and heating equipment. In the present situation, it will be difficult to have any control on the cost of the raw meat even it is the main part of the total cost, because the raw meat price is decided by external factors. Therefore, it is only possible to for the company to control directly the personnel expenses, the cost of equipment, the cost of transport and the partial fuel expense.

The management plans to continue using the existing old facilities until there are positive indicators in the form of economic recovery which may result in favourable financing conditions. At that time it is proposed that the old facilities will be replaced with new facilities. However, because it is realised that the maintenance costs tend to increase each year, the facilities which exceed their normal economic life will result in increased maintenance cost as well as leading to a fall in production efficiency, where the manufacturing costs increase. Hence this is an important aspect that should be worried about. It is question about whether or not it is a scenario which the present facilities can hold out against until the financial situation recovers.

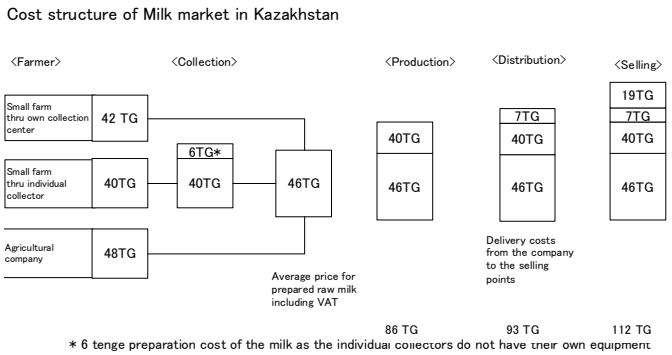
(2) The analysis of the cost structure (Diary Products There is no Russian translation.)

From the Meat Processor, the detailed comments on the cost structure were not available. On the other hand, the Dairy Company in Petropavlovsk disclosed some data. The cost of the each process, i.e. purchase and process of milk, distribution and sales, are as shown below:
A breakdown for the cost of the milk with a selling price of 112 Tenge is as follows:

- Production cost is 46 Tenge by the average;
- Production cost in the factory is 40 Tenge'
- Distribution cost is 7 Tenge; and
- Sales cost is 19 Tenge.

The production cost at the factory includes the personnel expenses. the administrative and maintenance expenses for the processing plants, the lighting, water and heating expenses at the factory and so on. As referred earlier, raw milk is purchased from three different sources. As above-mentioned the price from the small-scale farmhouse is lower. As for the purchase from the agricultural company, the quality is good but the price is expensive. Therefore, it is difficult to change the supplier of the raw milk to the agricultural company from the small-scale farmhouse.

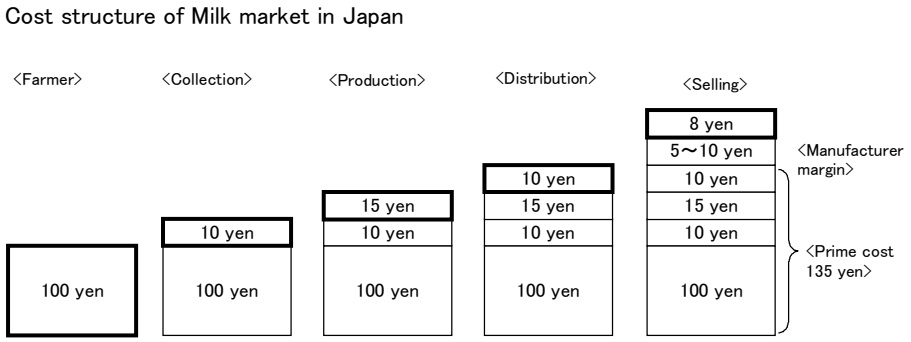
As for the distribution cost, in the explanation this time, only own cost are included but the cost of the wholesaler is excluded. The more detailed information on the cost will be reviewed in the second phase of the field study.



Source: The JICA Study Team (based on the interview with the dairy company in Petropavlovsk)

Figure 4-19 The Cost Structure of Milk in Kazakhstan

In Japan, there is a report that referred to a cost for milk collection, the production, the distribution and the sales as below. At the major supermarket in Japan, in case of the milk of the private brand, the general price is 188 Yen per litre and the bargain-price is from 158 Yen to 178 Yen. As for the breakdown of the cost, 100 Yen for the producer price is, 10 Yen for the raw milk collection cost, 15 Yen for production cost in the factory and 10 Yen for the distribution cost.



Source: The JICA Study Team (based on "The value and the price of the milk in case of the retail distribution" by Dairy information centre of Japan, March, 2003)

Figure 4-20 The Cost Structure of Milk in Japan

Major part of the total cost is the raw material cost both for the meat processing and the dairy factory. Regarding the ratio with the raw material cost to the selling price, the case of the meat processing and the case of the dairy factory in Petropavlovsk are 60% and 41% respectively. As for the dairy factory in Japan, the ratio is 53%.

(3) Funding of the Food Processors

It is obvious that Global Recession in 2008 damaged the economy of Kazakhstan, which was identified from the conversation of the interviews in Petropavrovsk. Focusing especially on Meat Processors and Dairy Products Processors, most of them complained that external funding is really difficult to utilize for financing as an optimal arrangement.

There is no funding available meeting to the conditions expected by the private sectors. Some are reluctant to apply the bank loan, because they worry about losing the collateral by their default. One Dairy Product Processor studied the bank loan for installation of the processing plant. His decision was to invest by using his own funding instead of using the loan, because borrowing money was too risky for the management of this company. His decision was based on the rigid evaluation on collateral by the commercial banks. There should be same situation, i.e. fund is not easily available, identified with commercial banks . The financial market is really tight. However, the Dairy Product Processor wondered if he will still be able to invest his own funds again for the second and larger expenditure for positive investment, i.e. business development to expand the production capacity. Finally it was realized that a financial scheme would be necessary utilizing public and/or private funding.

There is another example for consideration of financial assistance with the Farm Company, who planned to build cow sheds. The owner planned to borrow money from public loan instead of commercial bank loan. Although the application was delivered to KazAgro Finance, even after three years, there is no announcement from the authority. Finally, the owner gave up the loan application and invested his own funds. He decided not borrow any money from the government. The owner has several potential businesses other than dairy farming, such as

recreation business, i.e. hunting yard, and power distribution, by which the business capacity is more than the average enterprises. Without any fund from outside, he plans to expand his farm company to Dairy Products Processor in the near future.

There is middle sized Dairy Products Processor, who purchases raw milk from the farm company reviewed above. The President plans to build the factory building and the depot facility for collection of raw materials and delivery of the products. The President applied for 65 Million Tenge credit from KazAgro Finance two years ago. Only 3 Million was approved. He withdrew the application to apply for a bank loan from the Commercial Bank. The response from the Commercial Bank was quick and positive. Although the loan condition, i.e. interest rate, repayment term and etc, were not satisfied, the President decided to apply because of the quick procedure and decision by the bank. The President knows about DAMU program, but does not know about newest and most attractive loan program, i.e. the 4th stage.

The JICA Team had several interviews with management from private companies, Directors of the Commercial Banks and Directors of the Governmental Organizations. Most of the management from the private sector did not have sufficient information on the financial affairs. The Governmental Organization explained there is financial information delivered through the internet. However, on the other hand, the private sector are not confident enough to watch and catch the important information only by internet. As DAMU and TOBOL, as the public organization usually do not visit customers to promote the business, the important information is not available for the passive management. In the DAMU case, there are Commercial Banks between DAMU and the end customer. DAMU is frustrated with the lack of communication with the private sector.

The public funding may need to improve the communication for exchange of mutual information between supplier and recipient of the fund.

4.5.7 Issues and Tasks in relation to Funding

Issues and tasks will be reviewed in relation to funding to Agricultural industries involved in the processing of dairy and meat products in North Kazakhstan.

(1) Funding Issues with Industries

The owner of a processing factory for ham and sausages was visited and interviewed by the study team and is willing to replace the processing plant because it is more than ten years since its establishment. Most probably, the owner will import an expensive facility from overseas. Considering the profitability of the current business, funding from the commercial banks will be eliminated because of high interest rates. Funding from public financial organizations will not be realized if the repayment scheme is not confirmed as viable enough with the provided repayment terms and the interest rate level.

The food processer received funding from DAMU. As DAMU does not provide finance for operational losses for current businesses, the funding seemed to have been aimed at refinancing with the aim to reduce the interest payment for the previous loan. The finance is not aimed at replacing and renewing the processing facility to improve the productivity for further business development. Therefore, through the finance received from DAMU, there is no business improvements which will increase the added value.

(2) Problems with the Institutional Fund

Until 2007, DAMU carried out the direct funding to private industries who welcomed lower interest rates. In 2008 direct credit from DAMU to private industries was abolished. Instead of direct loans, a two step loan was introduced through commercial banks and MCO. The

change in the system is to support and assist the commercial banks, which suffered financial losses through the economic crisis in 2008.

It was considered that the interest rate was increased because of the operation by the commercial banks. As a result, Institutional Funds might loose customers (private industry) as they look for lower interest rates.

Instead of direct funding from DAMU, commercial banks between DAMU and industries are active. However, direct financing from DAMU should be promoted to deliver lower interest rates for industries. The existing funding mechanism of DAMU with commercial banks and MCO is to be reconsidered as a tentative solution.

(3) "Lack of Information" in relation to Tasks in Funding

After reviewing "Funding Issues with Industries" and "Problems with the Institutional Fund", some issues and tasks have been identified. Focusing on the demand and supply of the Institutional Fund in order to structure the Master Plan, two tasks and issues have been found. Both are related to the lack of information.

One is the financial information for industries. Sufficient information on the financial programs are not delivered to industries. Even if the information is available, they do not seem to understand such information fully. This is because the knowledge of industries in relation to finance is not adequate.

The other is the information for the financial organizations. DAMU does not have the opportunity to obtain and evaluate the business intention of entrepreneurs directly. From financial organizations, the strong demand is expressed for the opportunity to exchange views with entrepreneurs.

In the following chapters, the solution and action plans are to be reviewed in order to deliver necessary and sufficient information to each sector.

4.6 The current situation in relation to cluster promotion

4.6.1 An overview of the cluster policy

(1) The government's cluster policy

1) The Federal Government's cluster promotion policy

Words and phrases including "Cluster economic development" and "Regional promotion of clusters" started to appear in industrial policy of the Kazakhstan Government after the President emphasized the necessity to implement the (Cluster initiative) which was included in his annual state of the nation address in 2003.

Currently, the nations master policy known as "Kazakhstan 2030" is being pursued as the policy for national development, and supplementing that is the "Social economic development plan" and the "Industrial・technology innovation development strategy" which are being spoken of as propelling the industrial promotion of clusters. However, compared to 2003 the Kazakhstan Governments financial situation has worsened and there is a tendency for delays in budgetary allocation for large projects. For example, the Bioethanol project that was being carried out in the North Kazakhstan oblast as part of the grain cluster which the government regarded as a major project. However, the budget allocation relating to the expansion works after autumn 2008 were delayed.

In May of 2006 the Kazakhstan Government, for the purpose of implementing the social economic development plan from 2006 to 2008, divided the country into 7 regions, and a

structure called the (Social entrepreneurial Corporation) for promoting social economic development (Name is СПК/Esupeka) <Abbreviated to Esupeka from here on> was decided to be set up. Esupeka was set up not only in various regions with an industrial base for providing capital to development of the regional economy but is an organization which carries out financial assistance in the form of investment in small to medium size companies which are viewed to have a potential. Esupeka is an organization which receives 100% investment from the government and is attached to the department of industry and trade.

In the Presidential ordinance No. 627 passed down on the 7th of February 2008, a speech about the general overview and the challenges for the future in relation to "Industry・technical innovation growth strategy (2003～2015)" was made. The final purpose of the cluster structure is defined as "The participation of all businesses in the cluster, or some playing a central role, forming a coherent network".

Considering that、the industrial cluster is reconfirmed as the policy fundamental to the development of small to medium sized companies. In relation to the development of the cluster, emphasis is placed on the necessity for cooperation between "Private enterprise", "Esupeka" and "Regional Government". Below are the points that are important in relation to the role that "Esupeka" has that is required for cluster development. In order for that, over and above determining the features of the coverage area, unique regional project implementation is the role imposed on Esupeka.

- The implementation of joint projects which have a cluster at its core
- Regional economic development due to the cooperation between the Government and the private sector.
- The development of export markets with the cooperation of small to medium sized companies that have potential competitive strength.

As for the activities of "Esupeka", it has been pointed out that it is inevitable for the cooperation and collaborative work between the existing private sector and the regional government. In relation to cluster promotion, "Esupeka" will be responsible for providing support of information and techniques regarding clusterization for related organizations, marketing surveys and analysis as well as investigating the appraisal and measures of projects that have stagnated.

Also, included in the same Presidential ordinance, the future goals in relation to the agriculture sector were also mentioned. After evaluating the comment, "Having a vast land resource and with Kazakhstan being a large producer of cereal crops on the world stage, there is a possibility that it can be the worlds largest supplier of agricultural products and food products" the future points for consideration that have been cited include the progress of cereal crop processing technology, the development of Bio energy as well as the increase in production of milk and dairy products and with emphasis being placed on the expectations in relation to bioenergy. Also, as for related sectors, it has been described that it is necessary for agricultural promotion that includes upgrading of cereal crop elevators, the development of agricultural machinery and fertilizer complex, as well as the development of medical items and biomass products.

However, it is necessary to keep in mind that the soaring oil based energy prices have supported the country financially and this was announced early in 2008 prior to the world recession.

(2) The cluster promotion policy of North Kazakhstan Oblast

In order to implement the government mandated "*Industry and technology Innovation Development Strategy (2003 - 2015)*" the program was settled upon by the Governors of the various states. The summary of the program established in North Kazakhstan is as follows. According to the report issued by the North Kazakhstan department of Business and Industry the results from the period from 2003 to 2006 include the implementation of the bioethanol industry, the diversification of the machine industry and the nurturing of energy related businesses. It was viewed that the program was effective.

The bioethanol enterprise, a symbol of cluster enterprise in North Kazakhstan Oblast, will find a way out of the international energy crisis and it is expected that it can contribute to the effective use of inferior products, as well as the over supply policy even in times of plentiful production for wheat cultivation which is a key industry. Energy prices have soared and business was been promoted positively during the period of Kazakhstan's prosperity but after the world recession it seems there has been a slowing of business development.

However, on the other side, at the time of the survey team's visit, the North Kazakhstan oblast and related institutions emphasized the need to nurture small and medium size companies as well as increasing productivity from small and medium sized companies, not only large projects similar to the ones mentioned above but the progression of industrial promotion with small and medium size companies at its core. Also, in North Kazakhstan oblast, programs such as the Agricultural regional development program which supports the lifestyle base of the residents of the area as well as the implementation (results have not been achieved yet) of an Agro-Commercial complex stability development concept to improve the agricultural productivity of the region. It is desirable to link in order to generate a synergetic effect between the agricultural policy and the cluster promotion policy, and in order for that to happen it is important to iron out differences in awareness and information exchange with related parties in the area.Also, at the time of participation in cluster promotion by the regional government, the challenge will be the level of funding. Most of the regional budget is uniform throughout the country and the amount that can be used is a prescribed amount with the difficulty being the use reflecting the strategy and conditions of the various areas. In particular, regional finance has tightened up since the world depression, and it is not the environment for implementing necessary government support during the start up phase of the cluster.

Name	From 2007－2010. North Kazakhstan oblast Industry & Technology reform development program
Legal basis	Republic of Kazakhstan Presidential Ordinance Dated the 17th of May 2003 No. 1096 for drawing up the plans for *Ratification of the Industry and technology Innovation Development Strategy (2003 - 2015)*
Draft	North Kazakhstan Department of Business and Industry
Purpose	Achieve stable development of the region through diversification of the processing industry sector according to the strengthening and development of competitiveness strength for business products.
Issues	Modernization of basic capital for the processing industry; Increase in labor productivity, Establish a desirable corporate environment, Secure cooperation between Business Managers with the purpose of attaching competitiveness with export products and the system of National development.
Attainment period	From 2007 － 2010
Budget	Funds for investment projects for business from the Kazakhstan development program and finance for business and organizations respectively have been formed. In relation to finance measures, business (Government development fund "Kajina") capital will be used for the program. The investment amounts for the various items of the policy plans from both the Republic and region have been determined from the budget in the current financial year.
Expected Results	According to the implementation of the Industrial technology innovation development program, the following is possible. ・Increase in support for innovation activities of science and technology for private business. ・The development of markets for new products. ・Secure a stable pace of development of between 6 to 10% annually in the processing industry sector.

(2) The actual structure of North Kazakhstan

It is envisaged that the four organizations below will make up the main structure which will assume the responsibility of the implementation of the cluster in the state of North Kazakhstan. Espeka Co. Ltd "Tobul" will support private business financially, Techno Centre will aim at technology transfer. With private business at the centre, the Chamber of commerce will promote cooperation between business, and it is thought that it will contribute to the actualization of effective corporate management. Kaz Agro Marketing will be central to the transferring of agricultural technology. At the time of thinking of the formation of the cluster feasibility, it is important for the construction of a structure where there is effective cooperation within this organization.

1) Espeka Co. Ltd "Tobol"

Belonging to a group in the North of North Kazakhstan, Espeka "Tobol" has jurisdiction even though its head office is located in the city of Kostanai in the neighboring state of Konstanai. Apart from the state of Kostanai state and the state of North Kazakhstan, Esupeka "Tobol", has responsibility for the state of Acomora and the state of Astana. As for its main activities, under the initiative of private business, it provides a structure under where necessary capital is provided to businesses. Esupeka is a joint stock company and is required to obligate social

capital upgrades from collected capital and interest received from income. As for actual results obtained in 2008, the main actual results of Esupeka "Tobol" were centered in the state of Kostanai where the head office is located but the office in North Kazakhstan carried out investment in businesses that were carrying out upgrading of livestock production facilities and the upgrading of greenhouses. In particular, recommending financing of Agricultural groups that carry out group activities. After April, 2010, system of Tobol was mainly organaized by regional government, and it is expected that their activities will works along the regional needs. In addition, please refer to "*3.2.2 Public Financial Assistance by the Government of Khazakhstan*" where the system of capital assistance provided by Esupeka "Tobol" is explained.

2) Techno Park

Techno Park was established as a result of the decision by the Governor of North Kazakhstan dated the 20th of August 2008（No.161）and comes under the control of North Kazakhstan business start-up department. Even though this organization was established as an initiative of the state government, there is a possibility that it will become a base for industry cluster which takes hold in the region.

Techno Park, not only providing production facilities (about 5,000 ㎡) for small businesses and sole proprietors, but it also provides legal consultation for businesses located in the state, consulting and participation and cooperation with business discussions and trade shows. Currently, there are 13 businesses that have moved into the incubation space at the Techno Park, but there are only two companies that are related to food processing and they are a bread plant and a Pelmeni factory with the other businesses being involved with building materials, sewn product manufacturing and design etc.

3) Chamber of Commerce

The Kazakhstan Chamber of Commerce was established in 1994, and is a private organization that is active in each state of Kazakhstan. Overall administration is carried out in the head office located in the capital of Astana. 118 businesses belong to the North Kazakhstan Chamber of Commerce with three of these being livestock related food processing companies. The organization's activities are mainly funded by membership fees, with some income being gained from consulting and participation at trade shows etc is paid at cost. The main administration work includes political activities for the purpose of securing profit for business, information exchange, acting as an administrative office for various trade shows and business matching with foreign companies, as well as being the contact point for staff training. Also, from 2009 the issuing of certificate of origin documents, previously performed by the government, for the export carried out by private business will be taken over by the Chamber and a charge of about USD$20 will be levied on the exporter. In recent years, cooperation with the chamber of commerce both domestically and internationally has been increasing and conducts activities including mutual exchanges and business matching opportunities.

4) Kaz Agro Marketting Co. Ltd

Kaz Agro Marketing is a subsidiary of Kaz Agro which received 100% funding from the Government, and conducts education for farmers, management analyses and the production of databases in relation to management. In particular, the administrative function involves the maintenance of statistics in relation to agricultural produce and recently has started providing cooperation with fund procurement. Another function is providing micro credit to small to medium size farming companies. The North Kazakhstan head office is located in Petropavlovsk and has a staff of five, with specialists located in each region of the state and it conducts the

provision of information to farmers and farming companies. They do not conduct technical training but play a role as being an information hub in each of the regions and is well suited as a contact point for the technical transfer in the agricultural sector.

4.6.2 The cluster image in North Kazakhstan

(1) The Bio cluster according to the Central Government

As for the North Kazakhstan cluster promotion, an image that comes to mind quickly is the "Biochim" project with the Bio Ethanol facilities at its centre. This is a large project which was constructed in the Taiynshy region of North Kazakhstan, and on the 5th of September 2006 the President turned on the switch to the plant. This has a symbolic existence as a grain cluster, and has gained attention domestically as an enterprise which has national pride attached to it which has been led by the President. Cereal, a main product of North Kazakhstan is used effectively, and is a new energy supply for European countries and America. Also, the use of by-products, from livestock to food processing businesses includes a complex business structure. That scheme is outlined below, but not only in North Kazakhstan, but in Kazakhstan this type of business structure is thought of as a cluster.

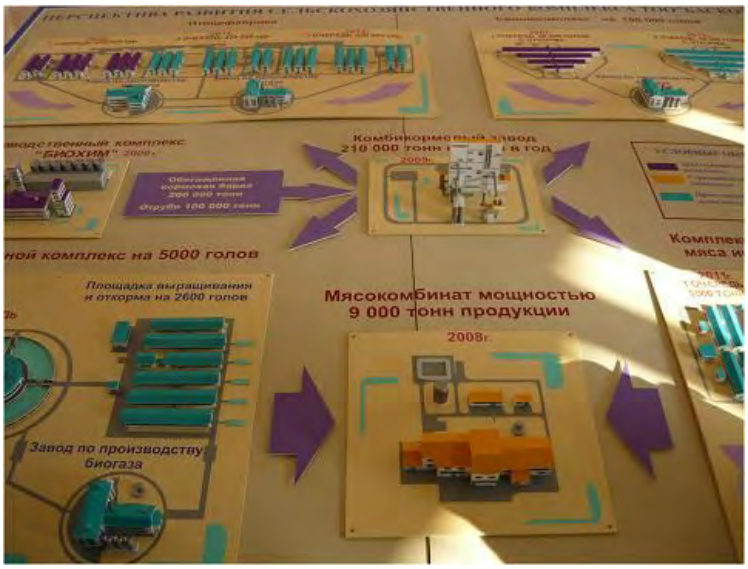


Figure 4-21 A cluster image model with the Bioethanol plant at it's core.

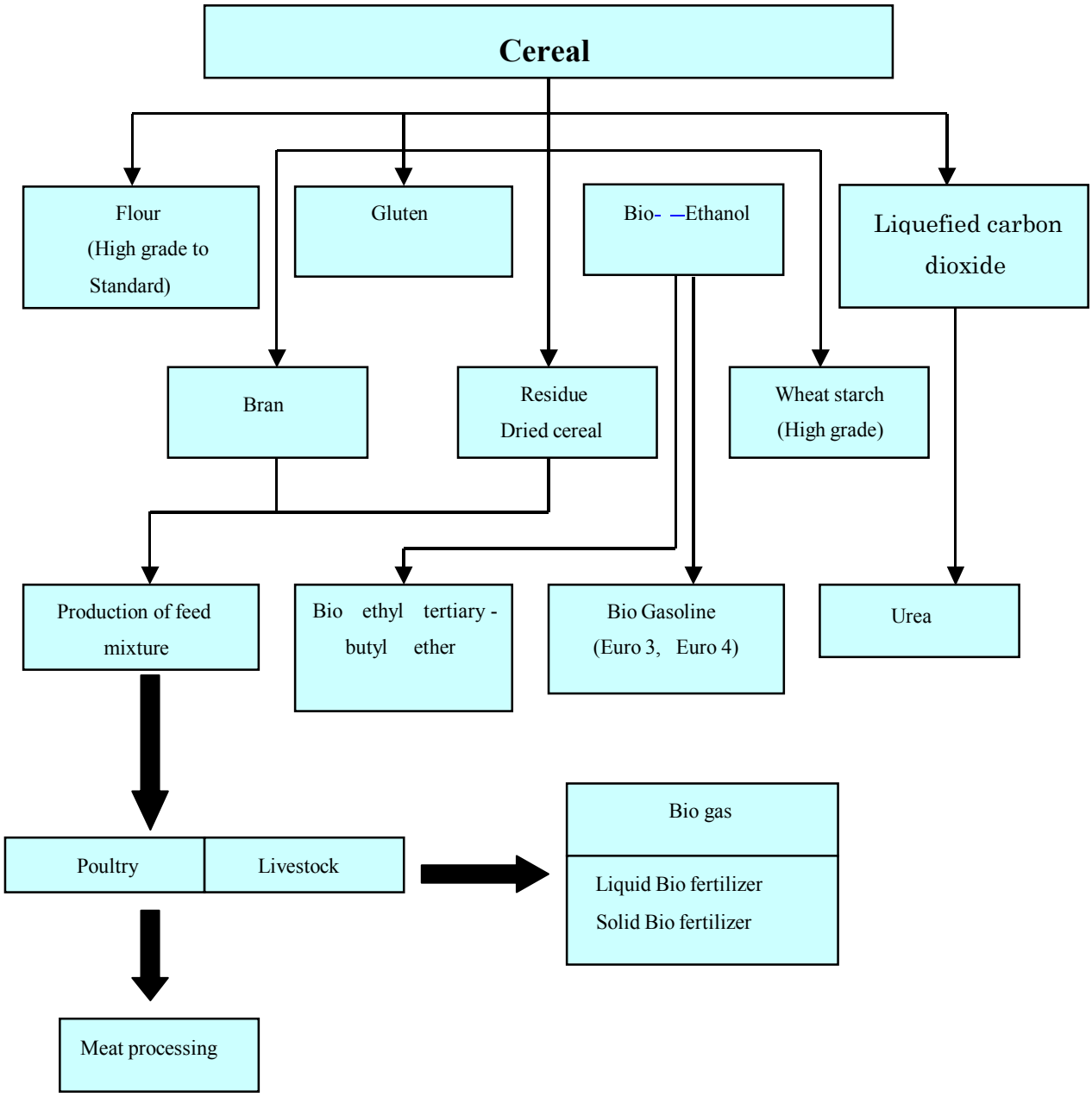


Figure 4-22 Bioethanol Plant "Biochim" Cluster image

(2) A cluster development image according to local private Businesses

The industrial cluster image that Business, Organizations and the Government of North Kazakhstan have is similar to the Bioethanol cluster mentioned above. That is, set up one company at the centre and have related companies take responsibility for the raw product procurement, processing and distribution etc. With the two models below, the cluster images were graphically displayed by participants in the C/P training program, speaking with other related people about this information, a similar image was presented. However, it is thought that the general image of the cluster would be specific to an area.

However, differ with the Bioethanol Project would be a lack of capital, and the end point would be of no practical use. This kind of configuration would be very effective with overwhelming guidance by the President and sufficient capital, however, there are difficulties putting into operation a combined effort with regional business and farmers in relation to the process from capital procurement to recovery at the private business level in North Kazakhstan.

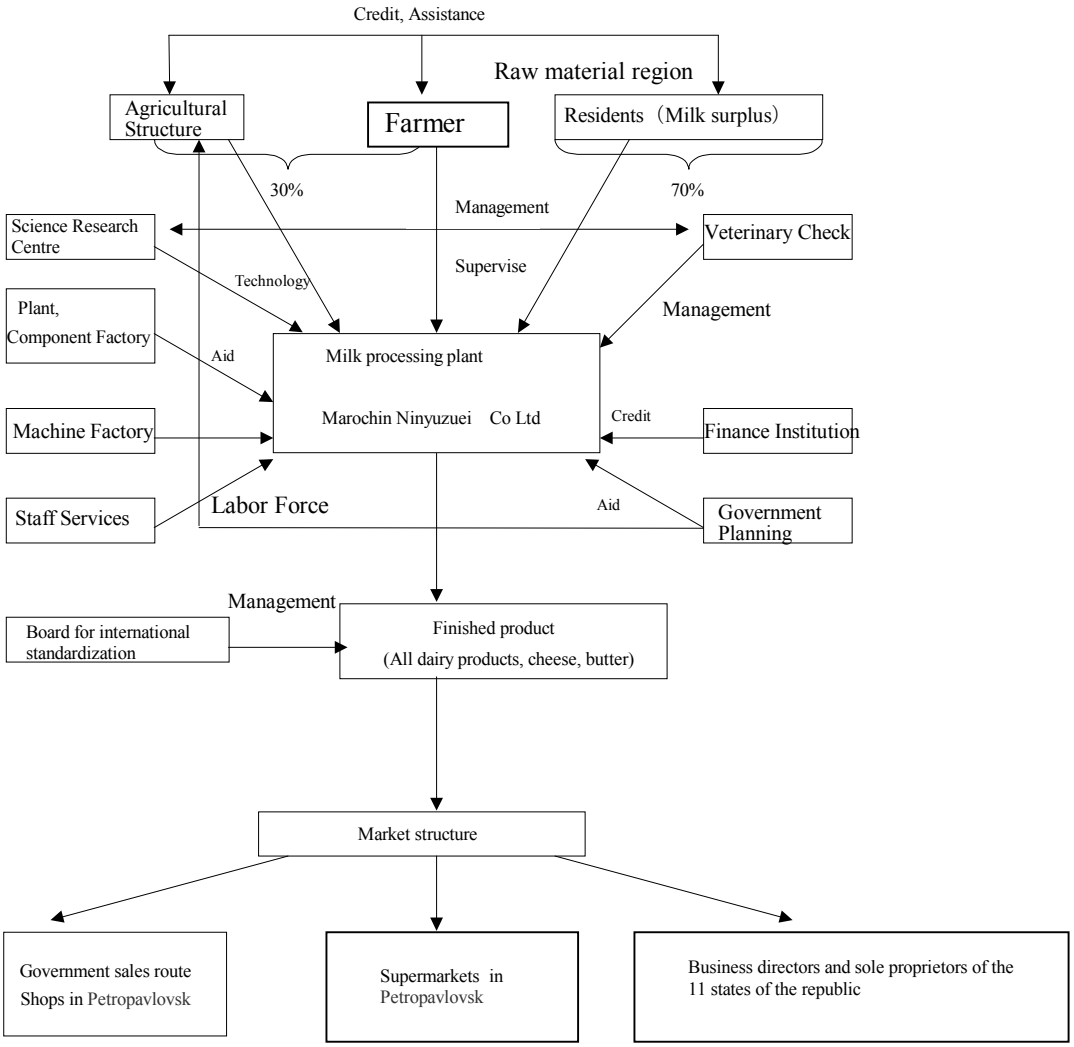


Figure 4-23 "Marochi Ninyuzu Co. Ltd" at the centre of this cluster image

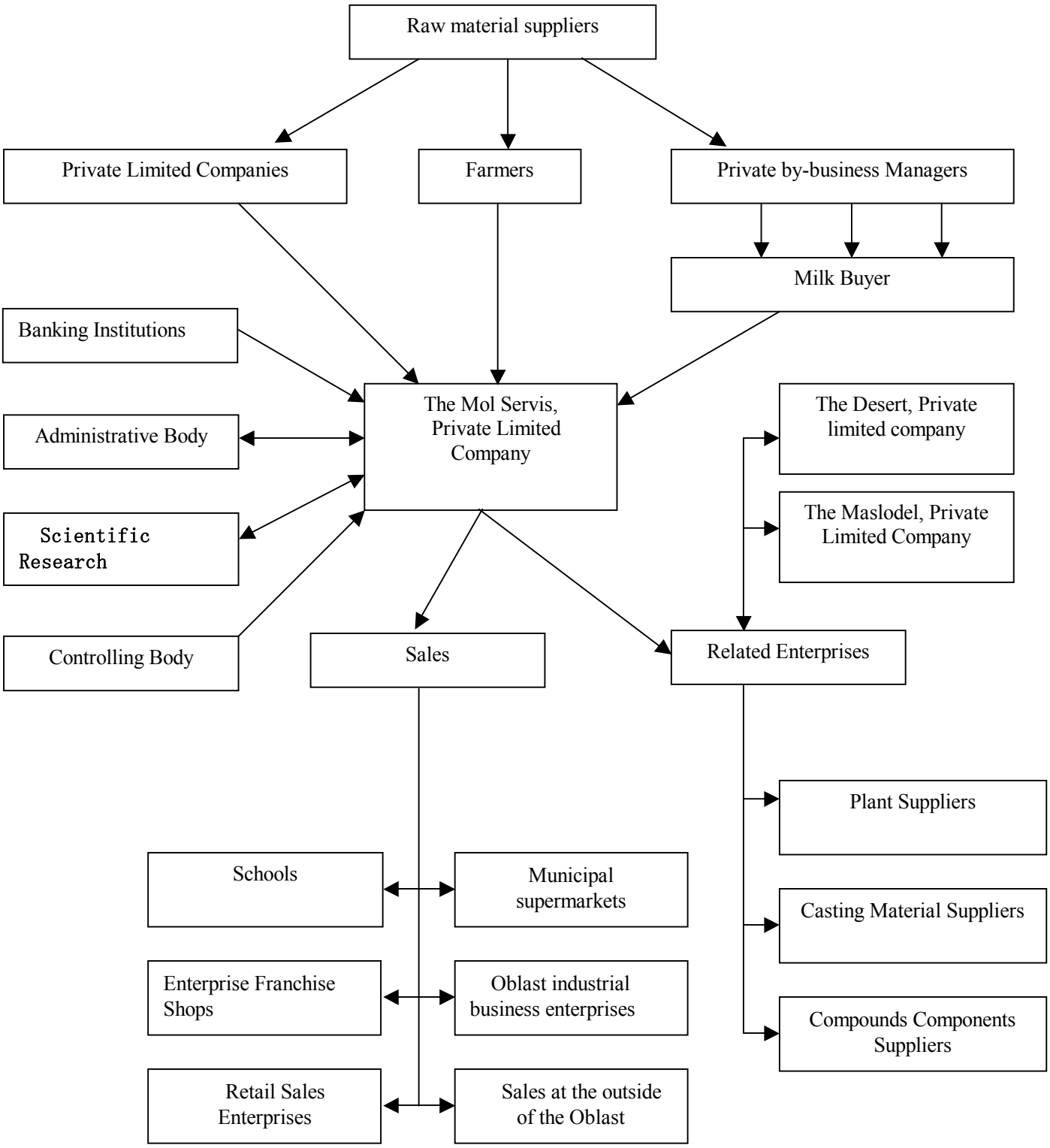


Figure 4-24 A cluster image with "Moru Service" at the centre

Source: The above two diagrams were produced by a counterpart research participant who visited Japan in September of 2009

(3) A consolidated cluster image

An explanation in relation to the cluster as imaged by the survey personnel was carried out. Understanding was expressed in relation to both the merits and demerits of the survey teams' plan by a central person who had previously participant in the C/P training program carried out in Japan.

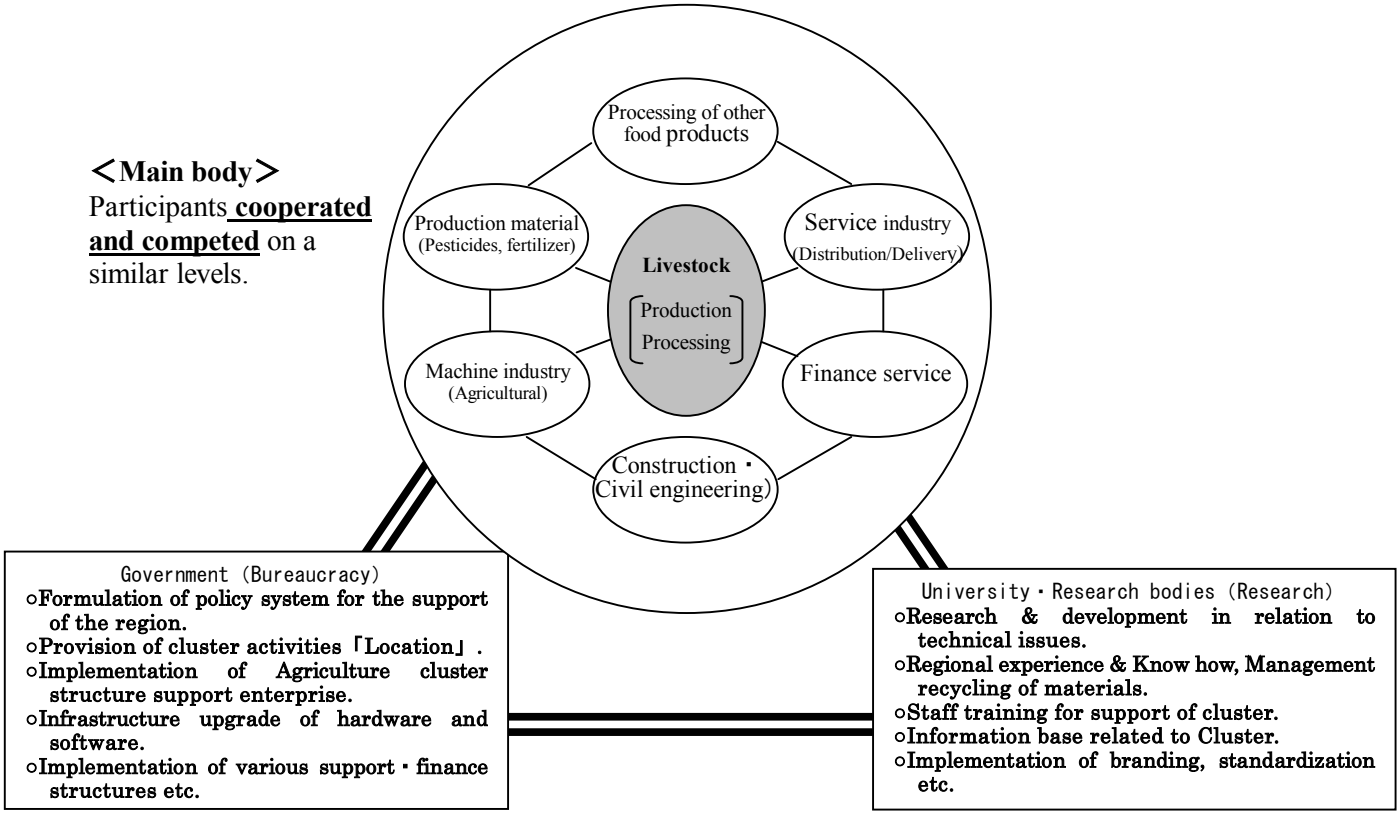


Figure 4-25 Cluster image as proposed by the survey team

Table 4-23 Comparison of the cluster image

Comparative items	The image envisaged by the main survey	The current image in Kazakhstan
Main body	A group consisting mainly of private enterprise.	Government, integrator and other large businesses.
Relationship	The relationship between cooperation and competitition on an even level.	Top down decision making.
Profit	It is posible to have value creation at each level.	Distribution according to the wish of senior personell.
Stakeholder	Cluster members and increasing it to include businesses in the area / region.	Government & overseas companies limited to middle size companies.
Merit	・There is little effect as a result of management for some companies. ・Diversification of the industrial structure, benifits of synergy. ・Possibility to add value at each level.	・Possible to create a new business over a short period of time. ・Simplicity to decision making.
Demerit	・A multi year is necessary when starting up a business. ・Base for long term regional confidence building.	・The management of core companies has an overall effect. ・Stagnant wages at producer level / widening of gap. ・Difficult to accumulate manpower, technology and capital in the region.（Becomes the property of core companies）

Source:Prepared by JICA Study Team

In particular, due to the appearance of the cessation due to a lack of capital for the Bioethanol Cluster, there is even a sense of risk at the time of a cluster development using the same method. Without overwhelming capital and government support there is fear with the development of a similar cluster. However, it is difficult to cast aside from the residents and business the image of cluster built projects supported by the President which has received overwhelming support from the citizens, as for the survey team the image from the Kazakhstan side is not being denied, in order for their final goal to be efficiently realized, cooperation from the side, emphasizing the point of the necessity for cooperation through cross industry communication within the region, and wanting to proceed with technology transfer in relation to cluster develoment.
Even the C/P members understand the effectiveness of regional cooperation, however considering the historical background and the national identity it seems very difficult for cooperation / promotion with outsiders. This problem is occurring with cluster promotion in North Kazakhstan and is the largest bottleneck facing the development of the food processing industry.

In order to resolve this, i) to understand that cooperation is the only way for the small to medium size businesses to survive by pin pointing the actual overseas rivals, ii) the input of information in the form of experience of similar businesses from Japan or other countries, iii) cooperation between the survey team and local businesses, the progression of business models as the next step in order to enforce an action plan or similar test within the structure of a trade show and regional brand structure etc.

4.6.3 The issues of cluster promotion

Past examples of the implementation of food processing cluster promotion in regional Japan are presented below and it is desirable to follow these 9 conditions.

Requirements for Cluster Promotion in a Regional Area

①Not top down, rather the maintainance of the environemnt which respects the initiative of private business.
②Mainatin a seamless support structure between Agricultural department and the industrial sector.
③Upgrading the finance system that is in line with industrial charachteristics from raw materials to distribution.
④**Confidence building beetwen businesses in the region**⑤Permiate a business model which complies with contracts
⑥**The securing of staff that can support long term business in the region**
⑦**Ensuring cluster participants are able to consult easily with regular government and securing a contact point for consultiation with academics.**
⑧Operate enlightenment programs and events that sustain motivation of participants
⑨Build a Cooperative structure with areas of the region and overseas which help educate staff within the state

With an understanding of the above the current situation in North Kazakhstan is described as follows.

In relation to ① the environment that respects the opinions of private business, policies of recent Central Governments such as "Business road map 2020" and its implementation have been written about and it is recognized that it is something that is necessary for the country. However with this study, even now, top-down behavioral patterns are often seen where instead private business should be expressing their own opinion.

Also in relation to ② and ③, without the elimination of sectionalism within the Administative institutions there will be no improvements.

Also in relation to ④, companies have little experience of having lateral type relationships. The most common type of relationship is a pyramid type relationship where the Government is at the top. Expereince and customs from the former Soviet period can not be changed is a brief space of time, however it is important to introduce systems and reform consciousness in relation to everyday activities. At the time of developing a master plan and an action plan it is desirable to have an objective which includes the urging of the elimination of sectionalism and build regional confidence.

In relation to the business model of ⑤, conditions have improved through the increase in companies carrying out trade with foreign countries in recent years. However, the issues that should be improved by local companies in order for business to expand include lack of responsibility in relation to commercial activities, delivery date and product quality issues which are not currently covered by contracts.

In relation to ⑥ which is staff training, this is not just from the point of view of technology but also includes issues of management and education in relation to ideas of regional promotion. Academic and Technical education is currently carried out at High Schools and Universities in North Kazakhstan, but the issue is that there is no body that undertakes practical training or the transfer of managerial know-how.

Apart from those mentioned above, it is essential to ⑦ secure a contact point for consultations, ⑧ establish an event education program and ⑨ form cooperative programs and cluster formations with both internal and external institutions, however this hasn't been confirmed with this study. Proper leaders such as Techno Park and TOBOL should be the structure but、as there is a lack of staff, budget and experience it seems that the implementation will not be possible.

Hereafter, the issues are cluster promotion where consolidating the environment in relation to the development of ⑦ securing of a contact point for Academic consultations and a constant Government, ⑧ the establishment of events and education programs and ⑨ the development of a cooperative structure with institutions outside of the region and overseas. These issues have already been discussed and have something in common with food processing, finance and distribution.

<Colum> Reference of Cluster Models in Japan

Through the Study, interest has increased from the North Kazakhstan side in relation to the actual examples of success stories from Japan and other advanced countries. It is thought that there is the possibility of increasing motivation for the promotion of clusters by providing information to the people concerned

The introduction of an example for reference in relation to the issues of development of an industrial cluster in North Kazakhstan

The first example is a project model which is developed centered on local demand. Currently, there are 3 conceivable markets for food producers in North Kazakhstan which are domestic and the surrounding regions, domestic metropolitain regions including Astana and finally the Russian region which surrounds the border with Kazakhstan. Even with those, considering the expansion of sales routes, distribution and the features of products the local market is very important. Even with clusters in Japan, the region is the producer and from the activities of ［produced locally and consumed locally］ which the consumer is part of, products of high quality will be produced and gradually the market will expand. The activities of 「North plain farm」 in Okoppe-cho, Hokkaido is such an example. With the results of the study, local products from North Kazakhstan and very reliable and there seems to be a movement to use local produce for school lunches and as a supplement for children's nutrition and it is conceivable to refer to this as an example. The points to remember when using this as an example for North Kazakhstan include the development of a cooperative structure with the service industry for drinks and other commodities. The issue is how to gain a relationship of trust while maintaining a sense of independence with related companies. ＜Refer to example ①＞

The next example is a cluster model which utilized excellent local materials. It is acknowledged locally and domestically that the quality of ingredients in processed meat products and dairy products produced in North Kazakhstan is high. However, having some quality raw materials has not yet lead to the creation of value added products and the creation of jobs. Below is an introduction of [Iganosato MokuMoku handmade farm] located in Mie prefecture, where the development of value added products that use brand-name meat sourced from local farms along with an attempt to increase long term customers through tourism and mail-orders has been tried. According to this, not only in the local processing industry, but employment in the tourism industry was stimulated and it stopped the outflow of young people from the area. With this example, there are points in common with the consensus of 7 themes from raw material production to the service industry that includes processing and tourism. By indicating a clear course of action, it is possible to differentiate products and have consistant activity strategies. On the other hand, in the case of North Kazakhstan, it is often the case that stratergy and policy are determined according to policy of the central Government and people are not used to activities where they need to establish policy themselves that fits their own region. In order to make reference of this example, it is important to accumulate experience by self motivated activities, members that are participating in the cluster need to shed the notion of top-down and be able to express their own opinions. ＜Refer to example ②＞

The last example is one where the cluster development marked the development of new products. 「Yuzu」, which is a local specialty product grown in the Umaji village in the prefercture of Kochi rejuvenated the village with the development of new products using this raw material. Just as an Agricultural product, the sale of 「Yuzu」 has a big effect on the farmers income due to the harvet conditions and would not lead to a stable local economy. As such, the aim was to increase employment and maintain profit throughout the year by making processed items. At first, the local Agricultural Cooperative was the central point with the development of new products, but the expansion of sales routes became an issue. As for a solution to this, the spot light was put on this scenic region which has a good landscape and climate and the implementation of a sales strategy that meant the brand was the 「village」 itself and as a result 「Yuzu juice」 was produced and it gained attention from all corners of

Japan. New products were developed one after the other but as the brand was the village itself the troubles with sales routes in the initial stages never eventuated. Even in North Kazakhstan, materials such as grains, dairy products and meat products which are similar to the final products play a key role in the local industry, which are easily effected by weather, harvest conditions, disease etc. Accordingly, it is thought that it is beneficial to try and stabilize the local economy and progress with the development of new products that use these raw materials. However, as small companies are central to the food processing industry in North Kazakhstan, the lack of finance and staff for new developments is the issue. ＜Refer to example ③＞

Arrangement of issues and appropriate conditions for various cluster examples in North Kazakhstan

	Model classification	Applicable conditions	Issue
①	A model developed focused on regional demand	・High reliability in relation to local products. ・Undertake an approach to increase local consumption.	・Maintain a cooperative structure between cross-industry businesses of the region
②	A model that uses materials of a high quality	・High quality materials . ・The attractiveness of special local produce as acknowledged by consumers.	・Change from top-down to self motivated activities.
③	A model taking the opportunity to develop new materials	・Availability of abundant raw materials. ・Acknowledge the large impact on the economy that harvet crops and natural disasters have.	・Secure staff and finance for product development. ・Development of regional brand.

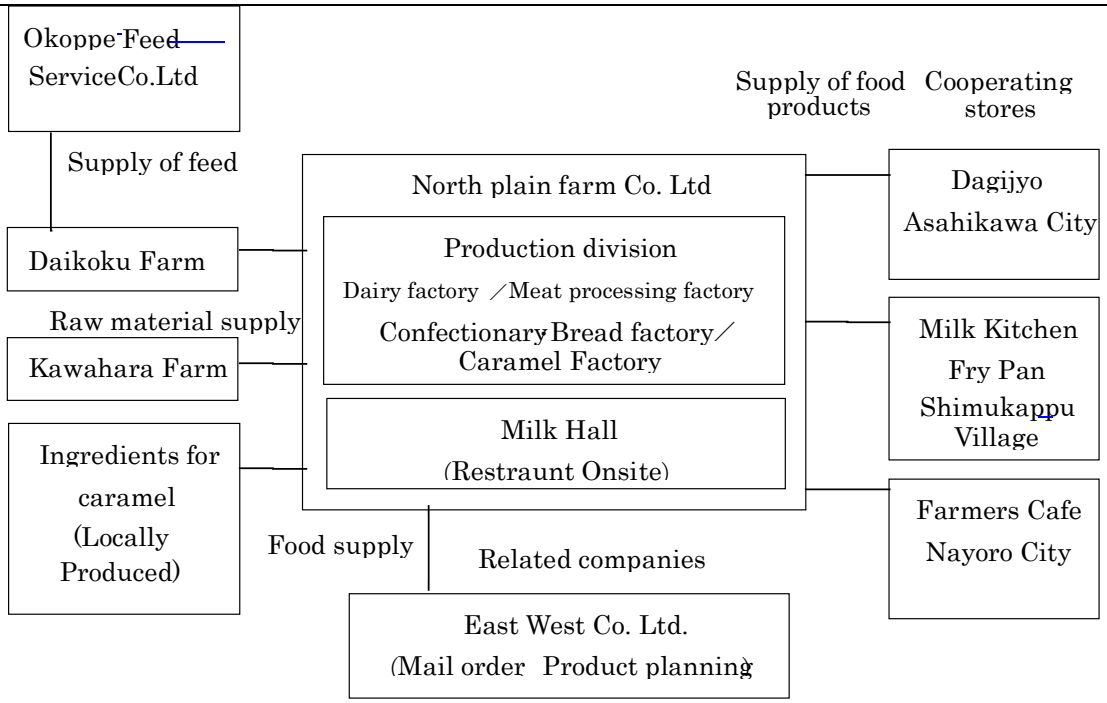
<A cluster example for reference (1)>
A business model developed with local demand at its core

In spite of the caramel being priced at 777 yen for 10 pieces, about 5 grams per piece, he is North Plain Farm Co. Ltd is located in Okoppe Town which has a population of about 4,500 people. Okoppe town is about 300 km from Sapporo which is the largest city in the island of Hokkaido, and it can be said that it is one of the locations in Japan that does not have good access. In addition, 80% of the town is mountain forest and wilderness, and the agriculture land accounts for about 20% which would be about 7,000 hectares at the most.Even with such an environment, the production and sale of milk, dairy products, meat processing, confectionary and bread occurs as well as the running of a restaurant and the annual turnover of North Plain Farm is about 440,000,000 yen and employs about 65 people.

Originally, Hiroshi Daikoku from a private dairy farm, “wanted the local residents to drink the milk that was produced on his farm”, in 1988 it was deemed very difficult to acquire the permission to process milk so he had to newly acquire this permission. The business started with the delivery of 27 bottles of milk to areas within the town.

In 1991 he commenced the production of cheese and butter and opened an onsite restaurant called 「Milk Hall」. In 1994 the constructed and started running a meat processing plant. In 1995 he started supplying milk for school lunches in Okoppe. From 2001 the production of confectionary and bread commenced.

In relation to school lunches, usually the milk that appears in schools is transported from the large producers in Sapporo which may not always be the most delicious. As a result of his plead “for the children to drink local milk” and his passion, he was able to convince the local council and the Prefectural Government and he was able to start the supply of milk. Currently he provides milk for school lunches at Kindergartens, Child Care Centers and Primary Schools.



Caramel is also produced by using local fresh cream, sugar, candy starch syrup, and honey. In inundated with orders.In relation to all the ingredients for the fresh milk, not only from his own farm but they are sourced from surrounding dairy farms, and as such this has an increased economic benefit to the area. In order to maintain the quality, the milk sourced from the farms need to ensure that the feed that is used is produced from non genetically modified items. And as such the fresh milk obtains a premium value of an extra 5 yen per kg.

Also, in response to increasing the scale of the dairy farms, in order to produce feed that is safe and efficient, a dairy farmers cooperative was created, and Okoppe Feed Service Co. Ltd was established and as such there has been benefit to the local area wide and far.

The problem with this type of business is sales routes. At the beginning, sales were made via a foot hold obtained on a nationwide basis with distributors and food producers that produced 'that particular product', however, in 1993 that finished. Considering the above, the aim was the development of a restaurant business that provided food that used plenty of the produce made on site and increasing the profile of the products which lead to an increase in sales. North Plain farm Co. Ltd. has the advantage of being able to secure with it's own hands the demand of the items it produces and sells.

Also, in relation to sales, a system of "Cooperative shops" is used. "Cooperative shops" are shops that share a common concept and way of thinking to that of North Plain Farm Co. Ltd. Food is supplied to restaurants etc. but there are no capital ties and as such each of the shops carry out their own independent accounting.

Due to such a system, 30% of the produce from North Plain Farm ends up outside of Hokkaido.

North Plain Farm is not aiming at increasing the land area of the farm nor is it looking at increasing the number of stock, it practiced anincrease in the scale of management. While gradually limiting the numbers of stock, an increase in scale was as a result of the direction taken by management where there was a diversification which included the penetration into the related fields such as restaurant, direct sales and processing. Also, the results included the added effect of being a company which created a lot of employment to a region that was feeling the effects of depopulation.

<A cluster example for reference (2)>
A model of high quality ingredients have been used

In 1987Agricultural Cooperative Corporation Iganosato Moku Moku Hand Made Farm（Referred to as Moku Moku Farm below）began as an Agricultural Cooperative Corporation in Ayama Town in Mie Prefecture which produced ham made from locally raised pigs. In relation to the establishment, 19 local pig farmers provided capital.

At the time of establishment, there was pressure from large domestic ham producers but they established their own distribution routes, established a members club (Nature Club) in order to have a way of communicating with their members, and as a result sales steadily increased due to consumers aspiration for natural goods.

In 1995 support was received from the federal, prefectural and local governments and an agricultural park known as "Moku Moku Hand Made Farm" was opened which was the integration of an agricultural processing workshop and Agricultural experience activities. Currently within the farm, there are 8 buildings where agricultural items are produced, including Ham, Sausages, Local Beer, Soy bean Tofu, Jersey milk, bread, Japanese confectionary and Western confectionary as well as hands on activity classroom where sausages and bread etc are made, an activity farm, outdoor natural spring, accommodation facilities, restaurant/café and a farmers market where fresh vegetables produced by locally contracted farmers etc are sold, and the total number of annual visitors to the farm is about 340,000 people.

All the ingredients used in the Agricultural processing workshop on Moku Moku farm are produced locally. Moku Moku Farm itself owns about 100 hectares of farm land, orchards and pasture and only uses 'safe' food items which are produced from the surrounding piggeries and the 100 contracted farmers with the whole process from production to processing to sales being carried out within the region.

The sales for the year ending 2006 for the farm was 1.5 billion yen, the restaurant was 1 billion yen and the sales from mail-order and departments stores was 1 billion yen resulting in a total of 3.5 billion yen.

The company president spoke of "having a belief in mutual cooperation, and achieved an ideal farming village as a result of everyone's help", and as such Moku Moku Farm has seven basic beliefs that the Corporation is based on.

The 7 beliefs of Moku Moku are:
1. Moku Moku conducts it business linking the activation of the region through Agricultural promotion.
2. Moku Moku has the responsibility to protect the local environment and the culture of the Agricultural community.
3. In order to protect the natural environment Moku Moku actively tackles environmental problems.
4. Moku Moku carries out the production of goods with the theme which combines a great taste with reassurance to the consumer.
5. Moku Moku learns with the consumer about "Knowing" and "Thinking" and conducts a sympathetic business with inspiration.
6. Moku Moku thinks a great deal about the richness of the heart and the creation of a work environment which has energy and where the smile never disappears.
7.Moku Moku places the highest priority on spiritual cooperation, carrying out business based on the rules of democracy.

<A cluster example (3)>

Actual examples which has utilized the strength of new product development capability

Umaji is a small village with a population of about 1,200 people. 96% of the village is mountain forest and forestry was the backbone industry. However, as there has been stagnation of timber prices over the long term there is a gradual decrease within the timber industry. With such a situation, Yuzu was seen as an agricultural product which had stable income and from the 1960's full scale cultivation commenced.

At the beginning, Yuzu was sold as a fruit, but as the age of farmers were increasing, the caring for the crops became harder to do. As a result, the visual quality of the Yuzu decreased, and as a fruit the price dropped, and the Farming Cooperatives that were responsible for selling the produce were facing heavy debts.

In order to find answers to the above situation, the Agriculture cooperative decided rather than using the actual Yuzu fruit, they started to research the possibility of selling processed items made from the Yuzu. In 1979, "Yuzu Tsukudani (simmered in soy sauce and mirin)" and then in 1986 "Ponzu Soy Sauce" were developed.

In 1987, the price of Yuzu fell dramatically due to on oversupply. The Agriculture Cooperative in response to the need to create stable management for the farmers, sought the development of other new product, and as a result a soft drink called "Gokkun Umaji Village" （Yuzu juice with honey） was developed. Currently, this juice is sold nationwide, the good taste and the simple package design gained attention and became a big hit.

The background to this success were the facts that "The main product from an unknown village won't sell. No one will visit a village which is not known. First the village must be made known." so the concept of "selling the entire village of Umaji" became the sales strategy. The product design was outsourced to a company from outside the area, the design of "The countryside" was integrated, and the local features were brought to the front by using the children and the elderly of the village in the product label and poster models.

As a result, this small village which had the timber industry as its backbone became famous all over Japan and the annual sales of Yuzu exceeded 3 billion yen. Over 80 people were employed at the Agriculture Cooperative processing plant and most of the 170 farmers within the village became Yuzu farmers. Also, over 60,000 tourists annually visited and products made from Yuzu were mainly responsible for rejuvenating the entire village.

In 1999, the Umaji Council, Umaji Agriculture Cooperative, Umaji Forestry Cooperative, Eco Earth Umaji Village（timber product production plant）, chamber of commerce and the Tourist Association

established a committee. Moving towards rejuvenating the region each of the organizations cooperated and introduced a system where tourists could take part in hands on participation activities. Also, the progression of measures to implement a concept of joint development and sales of new products was undertaken.

At the Agriculture Cooperative, new product development continued, the parts of the Yuzu that couldn't be eaten were not thrown away as product development of non food items such as "Yuzu cosmetics", "Yuzu shampoo" occurred.

Delicacy

Drinking water

Spices

Yuzu cosmetics etc

5. Strategy Review for Enforcement of Competitiveness

5.1 Review of strategic framework for enforcement of competitiveness

5.1.1 Present situation analysis in North Kazakhstan Oblast

There are generally three strategic frameworks for enforcement of competitiveness as follows;

Framework	Features	Main method
Parallelization	To enumeration parallely and exhaustively after resolving into elements	i. PEST analysis of macro-environment ii. Five competition factor iii. VRIO analysis
Time series	To resolve into elements by time series	iv. Value chain analysis
Two dimension	To locate elements in two dimensional matrix	v. SWOT analysis vi. Commodity character positioning

The strategy for enforcement of competitiveness is analyzed by using above mentioned six methods in the framework, based on the present situation and issues of food processing industry in North Kazakhstan Oblast.

(1) PEST analysis of macro environment

PEST analysis is a framework to analyze the macro-environment as the trends of company surrounding from four aspects, **P**olitical, **E**conomic, **S**ocial, and **T**echnological.

Aspect	Related issues
Political environment	Free Trade Zone with Russia and Belarus, Business Road Map 2020
Economic environment	Domestic market expansion、Difficulty in financing
Sociological environment	Domestic market penetration of hyper market chain
Technological environment	Enforcement of food safety regulation in accordance with trade expansion

The macro-environment may infect food processing industry such as the President statement on the Promotion of Small and Medium-sized enterprise and Fostering export oriented industry in Business Road Map2020, Some effects on the export and import of dairy and processed meat products by Free Trade Zone, therefore some measures should be taken.

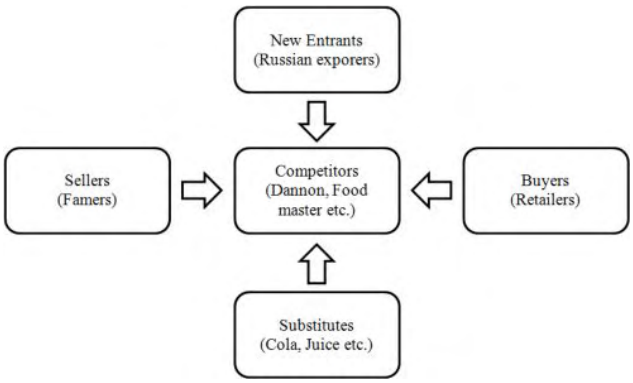
(2) Five Competitive Element

Five Force Analysis is a tool of analyzing industrial structure from the five (5) points of competitive forces, such as competitors, new entrants, substitutes, sellers, and buyers.

Five force analysis of dairy products in North Kazakhstan Oblast is explained as right figure.

The following points should be considered;

- Competitors with foreign countries and other oblasts
- Farmers as seller directly sell milk in the markets
- Private Brand products from hyper market chain
- Competition with other drinks such as fruit juice



Source: Prepared by JICA Study Team

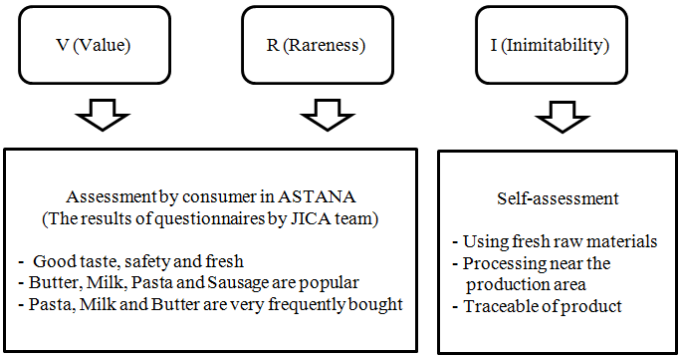
Figure 5-1 Figure Five Force in dairy products

(3) VRIO Analysis

VRIO analysis is a tool to analyze the resource or capability to determine its competitive potential from four elements: Value, Rareness, Inimitability (Ease/Difficulty to imitate) , and Organization (ability to exploit the resource or capability).

From the questionnaire survey by JICA Study Team in Astana, the dairy and meat products in North Kazakhstan Oblast receives high evaluation in the area of taste, freshness, and safety. But the evaluation from consumers in Astana is low in terms of the price and the packaging design.

It is necessary to develop the strategies to take advantage of competitive superiority.



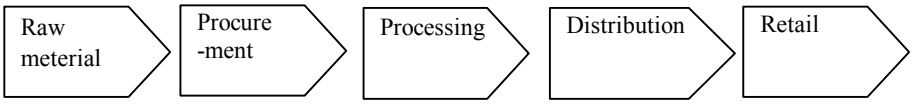
Source: Prepared by JICA Study Team

Figure 5-2 VRIO analysis for the processed food in NKO

(4)Value Chain Analysis

Value chain is a chain of added-value activities in the product stages from raw material production and its procurement to processing, distribution, sales, and consumption, and it is a framework to analyze that what role and function the activities undertake and where are the source of value and bottle neck in the product stage.

It is most important for the value chain analysis to find what processes produce high value, to enforce the processes, to eliminate the unnecessary processes, and to restructure the activity chain by reducing costs with outsourcing the activities.



North Kazakhstan Oblast Products	Strength	◎ Near to Production area	◎Trace-able	○	△Self transport	◎ highly recognized
	Weakness	△Small scale farmers	△Poor hygiene	△Old machine	△Not equipped	△A few new products
Other Oblast Products	Strength	○Large scale farmers	◎Good hygiene	◎New machine	◎Existing Distribution system	◎Long shelf life
	Weakness					
Products From Overseas	Strength	○Large scale farmers	◎Good hygiene	◎New machine	◎Existing Distribution system	◎Long shelf life
	Weakness					△Food additive

Need to supports for primary producers to utilize fresh and safety raw material

Need to supports for processing companies to improve quality and to develop new

Need to supports for processing companies to enforce sales channel strategy for big

Need to supports for processing companies to develop marketing strategy

(5) SWOT analysis

SWOT analysis is a method for integration of both external factor analysis and internal factor analysis, and to analyze four items such as Strength, Weakness, Opportunity and Threat.

Table 5-1 SWOT analysis for enforcement of food processing industry

	Opportunity（O） Domestic market is expanding Potential markets in overseas	Threat（T） Competition with imported good Market penetration of big retailers
Strength（S） Strong in local market Major production area	<To pursue the opportunities> ・Market expansion of local competitive products by branding ・Development of marketable specialty good	<To change threat to chance> ・Product diversification with low cost such as cream cheese ・Marketing to big retailer in Astana
Weakness（W） Problems in quality and sanitary condition Seasonal fluctuation of raw milk	<To identify the way to use its strength> ・improvement training for small farmers to increase milk production ・Raw milk production control by artificial insemination	<To establish defensive plan> ・Introducing new packaging technology and design ・Quality development and new product development

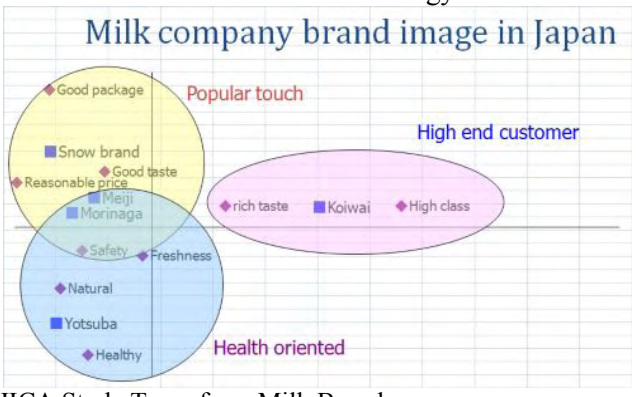
Source: Prepared by JICA Study Team

(6) Commodity character positioning

The Commodity character positioning is a tool for analysis of the product positioning in the market, and its purposes are to analyze the competition with other company products, competition with own products, and target area of the new products.

In Japan, the milk company brand image is analyzed as below figure, and it is considered as follows to make replacement with the market of dairy products in North Kazakhstan Oblast;

- Russian and other oblasts producers are popular people oriented, and selling their products in super markets with low price and good packaging appearance.
- EU manufacturers are high end customer oriented, and selling expensive cheese.
- Local small and medium size enterprise of dairy products are health oriented, and occupied the local market using the image of fresh taste. And the challenge is how to appeal the health image to the consumer as differentiation strategy.



Resource: Prepared by JICA Study Team from Milk Brand Ranking by Japan Brand Strategy Institute

Figure 5-3 Milk brand image in Japan

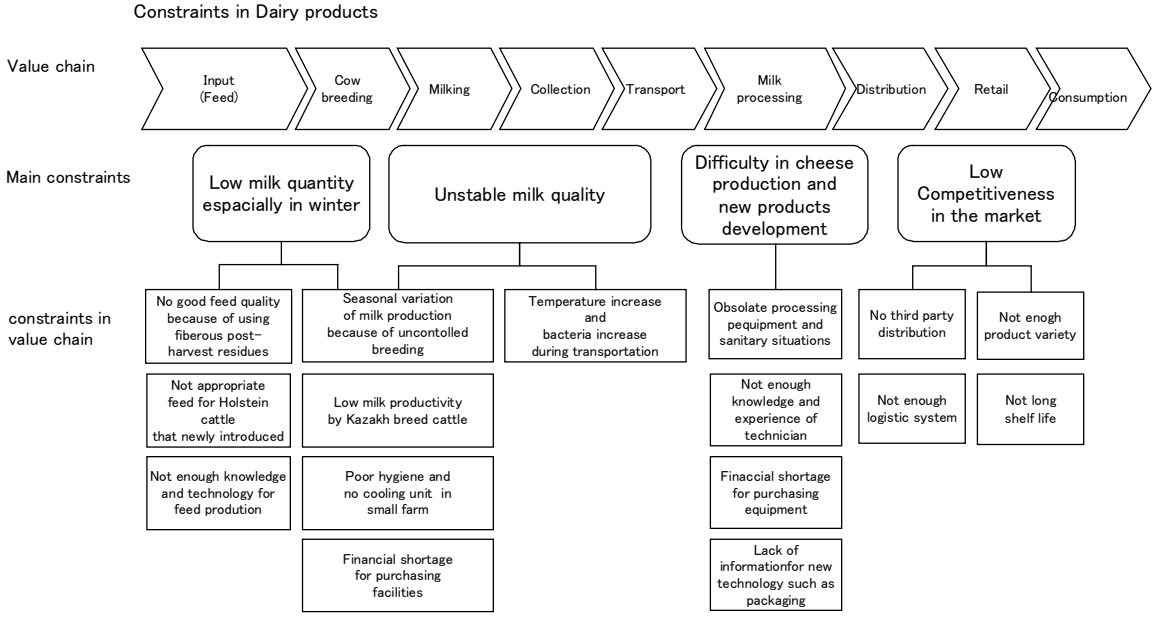
5.1.2 Value chain analysis of food processing industry

This chapter has discussed several strategic frameworks for the enforcement of competitiveness in the food processing sector, especially dairy products and processed meat. As mentioned previously in the project purpose, the time-line analysis from primary production to processing, distribution, and export should be included in this study.

And also the competitiveness enforcement strategies should be proposed with effective cluster promotion strategies, to clarify the specification and quality to satisfy market requirements.
Therefore, this report applies the value chain analysis for dairy products and process meat products to identify the value sources and locating bottlenecks in the chain from raw material production to final products. And this report applies SWOT analysis and develop the short-, middle- and long-term strategies with the Strength, Weakness, Opportunity, and Threat in North Kazakhstan Oblast.

(1) Key issues in the value chain for dairy products

The following diagram identifies key issues at each stage of the value chain for dairy products.



Source: Prepared by JICA Study Team

Figure 5-4 Key issue analysis in dairy product value chain

There are four key issues in the value chain for dairy products: low milk production volumes, especially in winter; inconsistency of milk quality; difficulties with cheese production and with developing new products; and lack of competitiveness in the market.

The causal analysis and countermeasures for each key issue is summarized as following table;

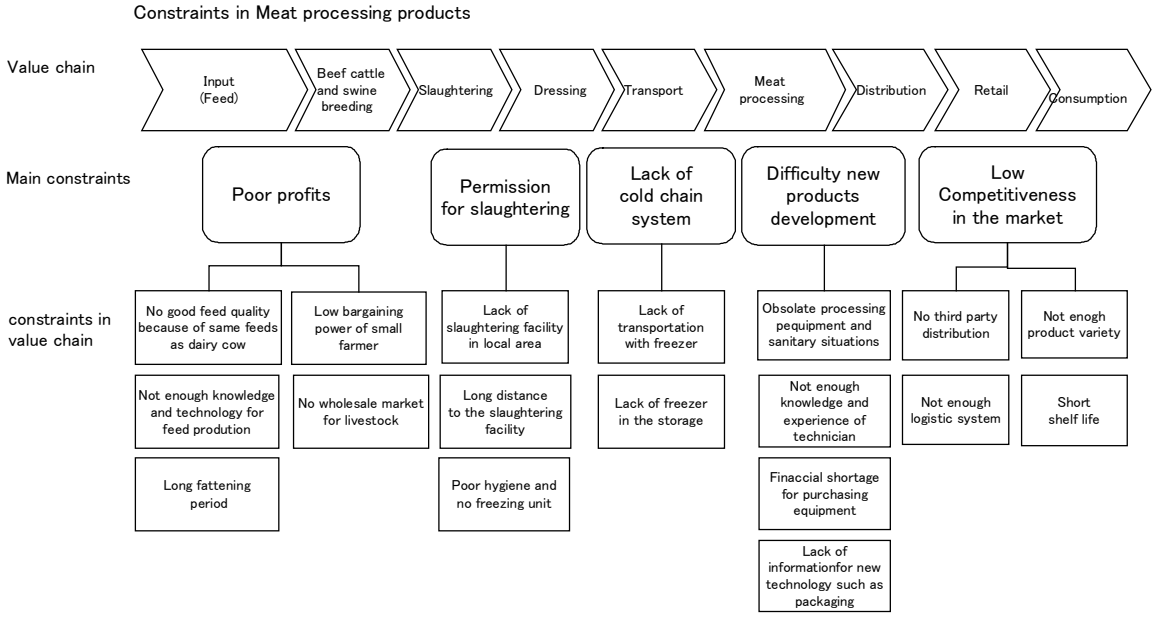
Table 5-2 Causal analysis and countermeasures for dairy products value chain

Key issues	Causal analysis	Primary cause	Countermeasure
Shortage of milk production, esp. in winter	・Some farmers have no good quality of feed, such as low digestive fibrous feed using the post-harvest residues in winter. ・Some farmers have not enough feeding management to Holstein breed to increase milk production. ・Some farmers have not enough knowledge and technology for feed production.	・Disparity in farmers knowledge and technology level ・Not enough agricultural technical extension service	Technical extension to small scale farmers
Unstable raw milk quality	・Some milking cowshed are not hygiene. ・Not well equipped refrigerated storages ・The number of bacteria increases during transportation	・Disparity in farmers knowledge and technology level。 ・Not enough hygiene control	Technical extension to small scale farmers Improvement of collection center
Difficulty in new product development	・Difficulty to produce cheese with existing time and cost consuming technology. ・Existing machine is obsolete, and difficulty for financing of replacement ・Shortage of food processing technicians who have information and technology on the new product development and food hygiene.	・Lack of information on new technology and equipment. ・Lack of information on financing system ・Lack of educational system for food technician.	Establishmenof information dissemination system on technology and equipment. Establishment of supporting system for technology and financial issues.
Low competing power in the market	・Low product diversity compare to foreign products ・Shorter shelf-life compare to foreign products. ・Difficulty to expand sales channel because of no third party transporters.	・Difficulty to grow in diversity because of long time for Gov. certification to expanding shelf life. ・The cost of introducing new packaging is high.	New technology development including packaging Developing marketing strategy such as branding

Source: Prepared by JICA Study Team

(2) Key issues in the value chain for process meat products

The following diagram identifies key issues at each stage of the value chain for processed meat products.



Source: Prepared by JICA Study Team

Figure 5-5 Key issue analysis in processed meat product value chain

There are five key issues in the value chain for processed meat products: Poor profits from breeding in farmers; Need permission from the Government for slaughtering; Lack of cold chain system both in storage and transportation; Difficulty in new products development and quality improvement; and low competitiveness in the market.

The causal analysis and countermeasures for each key issue is summarized as following table;

Table 5-3 Causal analysis and countermeasures for processed meat products value chain

Key issues	Causal analysis	Primary cause	Countermeasure
Poor profits in farmers	・Long fatten period for swine（Nine months） ・Some farmers have not enough knowledge and technology for feed production. ・Farmer has weak negotiation power ・No price formation system because of no public market	・Disparity in farmers knowledge and technology level ・Farmer cannot negotiate fairly with processing company ・Not enough agricultural technical extension service	Technical extension to small scale farmers Establish livestock public markets
Need permission for slaughtering by the Government	・Some local areas do not have certified slaughterhouses. ・Inconvenient for small farmers because the slaughter house is far distance.	・Shortage of slaughterhouse	Awareness of slaughter house regulation to small farmers Parallel establishment of slaughter house and public market

	・Some slaughter has no good hygiene condition		
Lack of cold chain system	・Lack of transportation truck 冷 with freezer ・Some processing factories donot have freezer but refrigerator.	・Fund shortage for purchasing cold system	Financial assistance system for introducing cold chain
Difficulty in new product development	・Existing machine is obsolete, and difficulty for financing of replacement ・Shortage of food processing technicians who have information and technology on the new product development and food hygiene.	・Lack of information on new technology and equipment. ・Difficulty to grow in diversity because of long time for Gov. certification	Introduction of new packaging technology development
Low competing power in the market	・Low product diversity compare to foreign products ・Shorter shelf-life compare to foreign products. ・Difficulty to expand sales channel because of no third party transporters.	・Lack of marketing strategy ・High cost for introducing packaging to expanding shelf-life	New technology development .Development of marketing strategy such as branding

Source: Prepared by JICA Study Team

5.2 Food processing industry development strategy for enforcement of competitiveness

Based on the results of value chain analysis, Study team analyzes the external factors such as Opportunities and Threats, and Internal factors such as Strength and Weakness, and plans the strategies for enforcing the competitiveness on each products in North Kazakhstan Oblast.

5.2.1 SWOT Analysis of Dairy and Meat Products

(1) SWOT analysis of dairy products

North Kazakhstan Oblast is one of the major producer state of butter and cheese in the country, with its amount of production increasing every year, and the dairy product processing industry is given great importance as a political measure. Nevertheless, the amount of production varies greatly between summer and winter, and the quality itself is variable. Cheese products are mostly imported, and local products have to compete with imported products and those from other states. The commencement of FTZ, the free trade zone with Russia and Belarus, from January 2010, is both an opportunity and a threat for North Kazakhstan Oblast.

SWOT analysis of Dairy Products

		Opportunity	Threat
		Domestic market is expanding Potential markets in overseas Trade liberalization in FTZ	Competition with imported goods Dependency of import Market penetration of big retailers
S	-Production increase Politically important Regional market Major production area	<To pursue the opportunities> Market expansion of local competitive products by branding	<To change threat to chance> Product diversification with low cost , Marketing to big retailer in Astana
W	Problems in quality And sanitary condition Lack of cold chain system Seasonal fluctuation of raw milk, Old equipment Shortage of specialist	<To identify the way to use its strength> Increase the raw milk in winter, Quality improvement training for small farmers, Human resource development	<To establish defensive plan> Introducing new packaging technology and design, Product development for long shelf life

Resource: Prepared by JICA Study Team form field collection data

(2) SWOT analysis of meat products

The land of North Kazakhstan Oblast has especially bountiful soil, and the area produces lots of grains, such as wheat and barley, which are given as fodder to livestock. Additionally, a great number of livestock are farmed in the state. The amount of livestock has been increasing each year, which is given importance as a political measure in the same way as dairy products; however, farmer profits are not very high, as many of them are small and their productions are dependent on the contracts they have with processing manufacturers. Meanwhile, wholesale markets are not well-organized. In the domestic market, local products compete with imported products from Russia, as the market depends on imports. The free trade zone beginning from January 2010 is both an opportunity and a threat to the market, just like dairy products.

SWOT analysis of Processed Meat Products

		Opportunity	Threat
		Domestic market is expanding Potential markets in overseas Trade liberalization in FTZ	Competition with imported goods Dependency of import Difficulty in purchasing fund
S	-Production increase Politically important Regional market	<To pursue the opportunities> Brand marketing for high class sausage products to appeal special breeding and processing	<To change threat to chance> Product diversification with low cost , Marketing to big retailer in Astana
W	Problems in quality And sanitary condition Lack of cold chain system Old equipment, No livestock market Shortage of specialist	<To identify the way to use its strength> Quality improvement training for small farmers, Distribution system improvement Human resource development	<To establish defensive plan> Introducing new packaging technology and design, Product development for long shelf life Master accreditation system

Source: Prepared by JICA Study Team

(3) The free trade zone and customs unions in Kazakhstan

Column: The Kazakhstan Free Trade Zone (FTZ) and Customs Union (CU)

Russia, Belarus, and Kazakhstan have signed a treaty on the creation of a customs union on November 27, 2009. Accordingly, uniform custom duties among the three countries will come into force on January 1, 2010, and at least 90% of the products will have Russian tariff rates. A final customs union will be established on July 1, 2010, after custom systems are adjusted. These countries are in process of the creation of a customs union and the free trade zone as a step toward the establishment of a united economic block, such as the EU, aiming at accession to the WTO in the future.

For Kazakhstan, temporary tariff rates will be separately designated and applied to some articles as a transit measure for a maximum of five years.

(Reference: Japan External Trade Organization, "World's Business News", December 17, 2009, with additions by the investigative group.)

According to the information of the committee of the customs union, the tariff rates of dairy products and meat processing products are as follows, though we will reconfirm this when we go back to the site. http://www.tsouz.ru/db/ettr/tnved/Pages/ett04.aspx

-Unsweetened milk and cream: 20%
-Sweetened milk and cream: 20%
-Yogurts and kefir: 15%, or 0.18 euros/kg or more
-Cheese and cottage cheese: 15%, or 0.3 euros/kg or more
-Livestock food products: 15%

At present, it is still difficult to estimate the impact of the free trade zone on the food processing industry in Kazakhstan, as uniform custom duties have just come into force in January 2010. Therefore, it is necessary to collect more information. We also need to study trade liberation, due to the free trade zone, from both the viewpoints of its opportunities and threats, taking into account the increase in the amount of imported and exported dairy and meat processing products.

The following are issues taken from information such as an article in an English newspaper in Kazakhstan (Focus December 21, 2009) that states "The free trade zone is about to start but synchronization of custom duties requires some time", as well as other sources.:

<u>Opportunities for Kazakhstan expected from the free trade zone</u>

-A huge market will be created by the free trade zone, and its annual import and export amounts are estimated to reach 900 billion dollars. Furthermore, the GDP is expected to increase by 15% in 2015, due to abolition of tariffs among the three countries. North Kazakhstan Oblast, which is located near the border of Russia, is situated in an important area as a logistics base of an enormous number of products flowing into Kazakhstan, and can make good use of its geographical advantage in food processing and distribution.
-Thanks to the free trade zone, Russia and Kazakhstan will be able to reinforce their competitiveness in the energy industry and grain market, in which they have comparative advantage. Furthermore, the customs union will have a strong influence on both of them. Dairy and meat processing products will strengthen their competitiveness by offering high-value-added products.
-Some economists who favor customs unions say that the customs union will increase trade, support a free flow of cash and labor, and facilitate access to the markets of non-member countries, and will make further investment possible in the member countries.

Possible threats for Kazakhstan caused by the free trade zone
-It is possible that the development of its industrial foundation could be hindered since untaxed Russian products that are cheaper than domestic products will flow into Kazakhstan.
-Companies will be exposed to the threat of corporate acquisition by major Russian dairy product and/or meat processing product companies; therefore, it is necessary for small- and medium-size enterprises to develop original merchandise or foster human resources.
-As custom clearances will be simplified, there is the risk that imported food products may be distributed without enough control and inspection. It will be necessary to reinforce incoming inspections on imported products in terms of their quality and safety, from the viewpoint of consumer protection.

5.2.2 Strategy for the Reinforcement of Competitiveness Based on SWOT Analysis

Below figure shows the issues and main causes as well as the response policy for the components in the value chain including raw materials, production / processing and marketing.

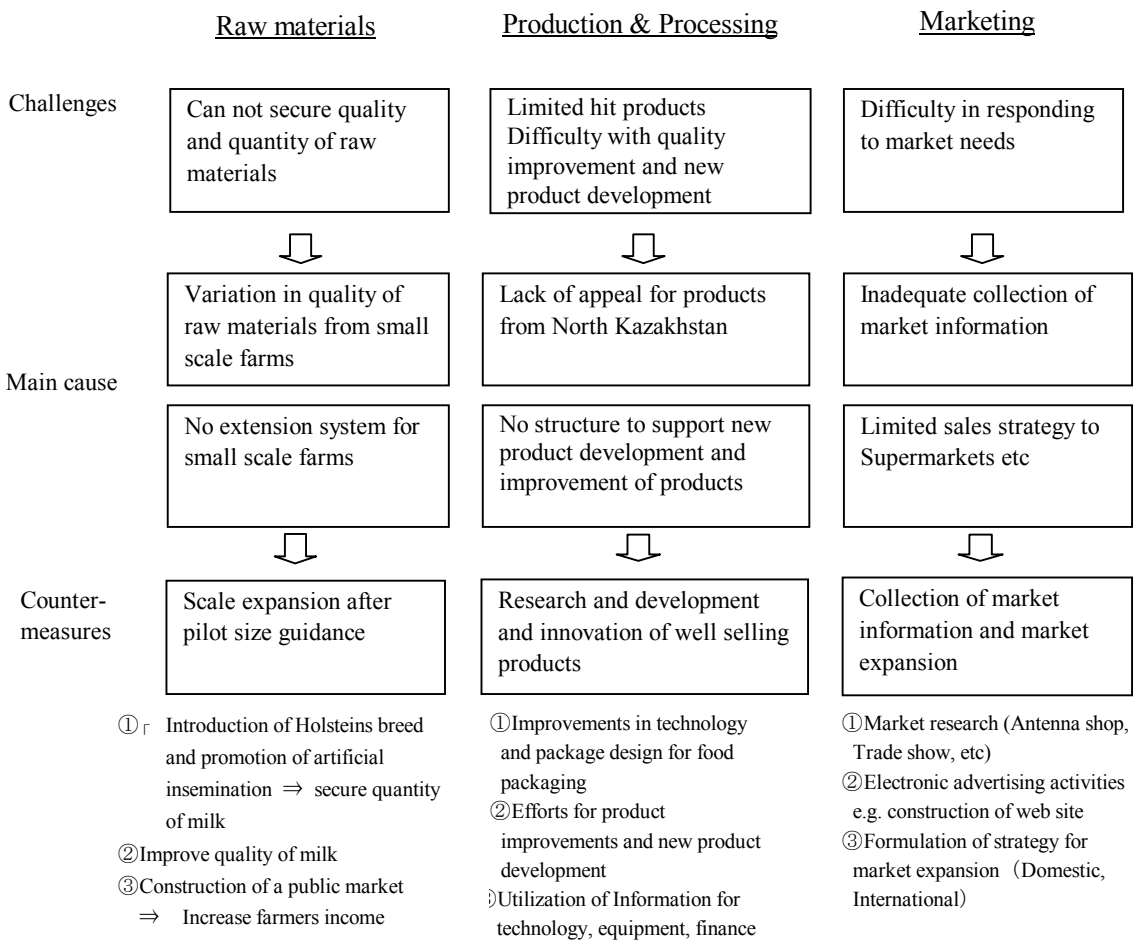


Figure 5-6 Flow chart from issues, main cause, to counter measures

Based on the discussion of above figure, the study team suggests the establishment of short-, medium-, and long-term strategies to enforce competitiveness in the three fields of the dairy products and meat products processing industry as following table.

Table 5-4 Strategy plan for enforcement of competitiveness by SWOT analysis

Area	short-term strategy	middle-term strategy	long-term strategy
Competitiveness reinforcements in raw materials	Technical training for small-scale farmers in pilot area; feeding, bredding and sanitary conditions etc.	Expansion of pilot area for the technical training	Establishment of livestock public market Development of local collection center
Reinforcing competitiveness within product development	Brand building such as Petropavlovsk butter and special breeding pork sausage etc.	Development of packaging technology Improvement and development of livestock production	Product development assistance system: Quality evaluation system and information services for technology
Enhancement of competitiveness in market development	Market survey in principal cities to study future plan of food processing products	Establishing marketing strategy for big retailers Development of distribution center in domestic market	Development of marketing strategy for overseas market

Source: Prepared by JICA Study Team

(1) Competitiveness reinforcements in raw materials

In the production of processed foods, the procurement of and quality of raw material is the most important factor; thus, this field should be the first item in any strategy for the reinforcement of competitiveness. It was already mentioned that small-scale farmers will play an important role as suppliers of the raw material of processed foods, both in terms of amount and quality, while the production of dairy products and meat processing products will increase in the state as the domestic market expands. However, the knowledge and skill levels of small-scale farmers regarding fodder and livestock husbandry vary widely, which creates an obstacle and affects the supply of raw material required for processing.
Thus, short-, medium-, and long-term strategies should be developed in terms of raw materials.

Short-term strategy: Quick results can be expected from small-scale farmers in terms of fodder, rearing, and hygiene, only by raising and equalizing their skill levels without spending capital on equipment and machinery. First, we shall select a pilot region and disseminate and implement farming techniques concerning fodder design, the rearing environment, and rearing techniques, etc. Then, an improvement in the quality of raw milk will be encouraged, in tandem with a production increase. In addition, implementation and reinforcement of livestock artificial insemination, as a countermeasure against a shortage of milk yields in the winter, will be promoted.

Medium–term strategy: Expanding on the pilot area established in the short-term strategy, promotion and reinforcement of farming techniques all over the country will be increased. In addition, we will teach small-scale farmers to rear Holstein cattle for the purpose of increasing milk yields, and will provide financial support to the farmers themselves (for the financing of facilities, etc.), in order to expand the rearing of Holstein cattle.

Long-term strategy: As for cattle and swine for the production of meat processing products, farmers do not have strong bargaining power when it comes to setting prices, since, in most cases, they produce raw meat based on the contracts they have. One of the reasons for this situation is the fact that there is no livestock market. Also it is necessary to establish facilities where a slaughterhouse and a public market can exist side-by-side, as certified facilities will be required for slaughtering in the future. The quality of raw meat will also be publicly evaluated, which can be an incentive for farmers. In addition, it is necessary to study the implementation of raw milk evaluation by an independent organization, such as a quality evaluation (amount of milk fat, etc.) performed by an independent organization in Japan, by which farmers can stand on a equal footing with processing companies in regard to setting prices.

(2) Reinforcing competitiveness within product development

In order to reinforce competitiveness against exported products and those from other states, it is effective to have equal or better quality than the characteristics of the competing products and to develop a brand of merchandise with uniqueness and originality. The following is an examination concerning short-, medium-, and long-term strategies concerning product development.

Short-term strategy: In Astana, butter from Petropavlovsk is recognized as a high-fat product in the market. Because Buraevo in North Kazakhstan Oblast is famous for being a butter production region, we will provide a scientific basis and a certification system to make it a branded product, and will establish a marketing strategy to boost its appeal. Additionally we will implement test marketing in and out of the state, promoting butter as a branded product. Furthermore, we should examine the possibility of branding other products, such as high-fat smetana and local, specialty pork sausages.

Medium-term strategy: Dairy products and meat products are perishable, and supermarkets in North Kazakhstan Oblast sell not only local fresh groceries but also lots of food products from Russia, Ukraine, and the EU. North Kazakhstan Oblast imports a variety of food products, in order to meet the needs of consumers, but local food products must also be flexible to accommodate market changes. It is urgently necessary to develop food packaging techniques, since major supermarkets have lots of small packaged products, such as packages of sliced ham. Packaging techniques can help to realize longer storage and distribution at normal temperature, which may be applied to sales in other cities of the country and to future exportation. Additionally, more attractive package design may help sales promotion.

Long-term strategy: As for dairy and meat processing products, new products are constantly being developed according to market needs and consumer preference. Currently, there is no system to support the development of new merchandise in North Kazakhstan Oblast. We should examine the establishment of a study center for reinforcing competitiveness in collaboration with the public, private, and academic sectors. The functions of this center will include: “inspection and analysis of products and raw materials for quality evaluation”, “simulation in a mini factory for manufacturing tests”, “training and fostering in terms of hygiene and food product safety”, “tests related to packaging techniques”, “information services for the implementation of food equipment”, and “financial support for the purchase or lease of equipment to be implemented”.

Column: Product specifications required to enhance competitiveness

Specifications for dairy and processed meat products, which are necessary to enhance competitiveness, are suggested below.

1) Suggestions for product specifications to enhance competitiveness in the field of dairy products

In Kazakhstan, belonging to a cultural area fond of flour-based food, product specifications that enable people to enjoy eating bread and pasta are in demand. Generally speaking, within this culture foods are mainly spread, added, topped, eaten (lactic acid fermentation products, ice cream products), and drunk (milk, yogurt drinks). Some products need to be well-designed, in order to reflect strong regional characteristics. For example, designing certification and brand logos of dairy products certified by North Kazakhstan Oblast would be a good idea. Likewise, differentiating brands of butter that have a long history by marking them with the fortress mark of Saint Peter and Paulo, whose names form the root of the word "Petropavlovsk", would also be a good option. As a result, product quality is also likely to be improved significantly. As milk itself is not a strong source of profit, more lucrative products, such as lactic acid drinks and ice cream, need to be developed and promoted.

Table Recommended Dairy Product specification for enforcing competitiveness

Productd	Product name	Specification	Remarks
Cheese	Cheese paste Commercial realization of three kinds of cheddar cheese based on aging period: normal, medium, and aged. New product development of Mozzarella for pizaa, toast and pasta use	Cheese paste: blending aged and young cheese Commercial realization of chedder cheese by aging period	Utilize hoey from byproduct of cheese.to make ice cream and cheese paste. Pay attention to cross-contamination from agricultural products
Fermented milk	Lactobacillus bevarage with cereal Lactobacillus bevarage for school and/or hospital	Plain type without viscosity improver.	Good for allergic student, because they can drink cereal drink after lactobacillus treatment
Butter	North Kazakhstan special butter	Need to consider new packaging such as tube type for combined butter with vegetable oil	Brand building is necessary. Pay attention to mold during packaging process.
Ice cream	Sterilized soft cream mix	Vanilla ice cream with blue berry or bilberry	Widely distributed because of long storage period

2) Suggestions for product specifications to enhance competitiveness in the field of processed meat products

In Kazakhstan, where the annual consumption of meat per capita is four kilograms, the attitude towards meat and processed foods is very different from that of Japan. Categories and the handling of processed foods in Kazakhstan, therefore, differ completely from those in Japan. As for meat products, there is no clear distinction between ham and sausages. At the Central Market in Petropavlovsk, which is sponsored by the provincial government every Saturday, raw meat, which is sold at duty-free prices (10-12% lower than open market prices), is priced by the kilogram. Because consumers in Kazakhstan purchase the amount of processed foods they need, it may not be suitable to sell products in a small packages, as they do in Japan. As Kazakhstan is totally dependent on imports for its packaging materials, it should be taken into consideration that import charges are included in the prices of products. Essentially, the storage period for current product conditions is too short, which is clearly undesirable from the aspect of quality assurance and food safety.

Table Recommended Dairy Product specification for enforcing competitiveness

Productd	Product name	Specification	Remarks
Sausage	Slice-packaged sausage	5mm sliced sausage with primary packaging 250g, 500g, and 750g for small family	The amount is calculated by dairy intake, 125g. Label shows heating after packaging. Shelf-life is longer than usual type.
Sausage	Vinna, Frankfurt, Boronia and cooked sausage	various sausage with primary packaging 250g, 500g, and 750g for small family	
Ham	Shoulder ham	250g, 500g package	
Perimeni	perimeni package	Tray packaging with Plastic film. Frozen distribution	Protection of the product from cross contamination

(3) Enhancement of competitiveness in market development

It is necessary to analyze the needs of markets and establish strategies tailored to each market and customer, in order to maintain and expand markets in competition with imported goods and other provincial products. Short-, medium-, and long-term strategies for market development will be considered:

Short-term Strategy: In supermarkets and bazaars in Astana, some Petropavlovsk products, such as packages of sliced sausages and high-fat butter, are sold. However, the market share of Petropavlovsk processed foods is not necessarily high. This is because it is difficult to make an adjustment to business customs in which major supermarkets need to shoulder high costs for sales, such as storage fees, and costs for distribution to Astana. It is therefore necessary to conduct market research in existing major cities, including Petropavlovsk (as well as Astana, Karaganda, Pavlodar, Kostanai, and Almaty, etc.), and establish city-by-city and product-by-product market strategies that match regional characteristics. Also, it is important to situate North Kazakhstan Oblast's antenna shops in major cities, and to consider systems that exhibit developed brand-name products and regional specialties, such as butter and smetana.

Medium-term Strategy: Food sales channels in Astana and Almaty consist mainly of markets (bazaars) where buyers and sellers meet face to face, as well as supermarkets, where consumers select products from within a spacious retail space. These cities are battleground regions for imported processed foods and domestic products. To promote sales, processed food manufacturers design packages attracting consumer interest to ensure the advantage of their products, supply showcases to gain their own sales space, and provide sales forces (such as mannequins). Consumer buying trends tend to shift from markets (bazaars) to supermarkets.
It is necessary for food processing companies to conduct market research and establish market strategies arranged by type of sales because needs for quality and quantity vary depending on each market sales system.

Long-term Strategy: The non-domestic markets that are geographically closest to North Kazakhstan Oblast are Omsk, Ekaterinburg, Chelyabinsk, and Kurgan. These cities are seen as promising markets because they are large cities located in the Siberian Federal District and have a large population. Because these cities are also areas of production for dairy and processed meat products, it is necessary for Petropavlovsk to consider competitive products, such as its regional specialties and brand-name products. Although a free trade zone (FTZ) is expected to be established, there is an urgent need to develop competitive products because price competition is likely to occur in destinations for export and even within the country itself. Information concerning regulations necessary for exports into Russia must be collected, in addition to information about the FTZ.

6. Recommendations for the Purpose of Business Solutions in the Food Processing Industry

In chapter 4, the current situation and the issues facing the food processing industry in North Kazakhstan have been separated and organized into "Raw materials（Livestock industry）", "Food processing", "Distribution", "Financing" and "Cluster policy". With chapter 5, investigations into strategies directed at enhancing the competitiveness of the food processing sector and a direction which has lead to "Enhancement of competitition in raw materials（Strategy Ⅰ）", "Enhancement of competitiveness in product development（Strategy Ⅱ）", "Enhancement of competitiveness in market development（Strategy Ⅲ）". In this chapter, keeping in mind the 3 strategies for the issues relating to the various sectors, which will be overcome somehow, these recommendations are presented below in point form.

Table 6-1　Organizing issues and proposals for strengthening competitiveness

Sector	Issue	Strategy ※	Proposal
Raw materials (Livestock industry)	Technology improvements for fodder producers	Ⅰ	In relation to the production of fodder
	A lack of technical guidance in the dairy sector		Further increase improvements in the dairy industry and activity system Enhance the placement of veterinarians
	Contamination of fresh milk		
	Livelihood stabilization for full time farmers		Management improvements for small scale dairy farms Breeding and reproduction of dairy cows
	Product differentiation for pig farmers	Ⅰ,Ⅱ	Production of specialty ham and sausages
Food processing	Lack of manpower		Establishment of practical education facilities
	Development of profitable products	Ⅱ,Ⅲ	Establishment of regional food processing technology centers
	Improvements to packaging		
	Lack of management strategy		
Distribution	Improvements in product value through distribution levels		
	Lack of sales strategies	Ⅲ	Establishment of a regional brand
	Lack of output of information		
Financing	Conditions relating to fund procurement for corporations	Ⅰ,Ⅱ,Ⅲ	Financial information service. Establishment of a regional food processing technology centre.
	Lack of information in relation to institutional finance		
Cluster policy	Secure constant administration and academic consultation services		Establishment of a regional food processing technology centre.
	Implement events and educational programs		Establishment of a regional brand.
	Establish a cooperative structure with inter regional and international bodies		Establishment of practical education facilities.

※ Ⅰ=Enhancement of competitiveness for raw materials, Ⅱ=Enhancement of competitiveness for product development, Ⅲ=Enhancement of competitiveness for developing new markets

6.1 Recommendation concerning livestock and introduction of advanced technologies.

6.1.1 Recommendation.

In this portion, the proposal about the importance of the advanced technology introduction activities concerning the raw-material quality improvement and the livestock raising policy regarding feed production, establishment of an agricultural improvement extension activity system, and quality improvement of the processed food and agriculture policy is made. The demonstration of the technical guidance also carried out in order to get the persons involved in the area to recognize the contents of the proposal.

(1) Recommendation concerning forage production.

In 4.2.6, the issue of raw materials about livestock field has pointed out. About the issues when using after-harvest residual substance and wild grass as storage feed. Reference is made the countermeasure about it. Although it differs from silage, the "urea treatment technique" of straw is recommended as one of the way to solve the problem. Usually, the "ammonia treatment technique" is used for the quality improvement of the low quality forage, as this technique uses ammonia, some danger are accompanied in handling. On the other hand, in the case of urea treatment, it can be carried out in the yard of a farm also. A member of the investigating team has the experience which introduced this technique as a measure for the dry season feed preparation for the beef cattle producing farm of 350 animals, and conducted quality improvement of rice straw and obtained good result. Moreover, the addition of molasses which is one of the food residual substances is recommended urgently as a technique to promote silage fermentation.

The feed fitted to each cattle species must be given. Now, in the North Kazakhstan state, the Holstein species was introduction in addition to conventional red Kazakh species. This is mentioned also in another clause. Our impressions from a viewpoint of feed are as follows. Each species of dairy cow has its own characteristics. Since the Red Kazakh species is the native cow aiming at meat production, therefore, much milk production can not be expected. However, the strong point of this species is the strong body and can bear poor feed quality under severe environment.[40] On the other hand, the Holstein species can produce more milk than the Red Kazakh species. But it is delicate species and the adaptability to different environment is by no means high.

When dairy farmer introduces the Holstein species and want to improve the milk production, the re-examination of the whole feeding management must be made. Holstein cannot be performed its ability with the feeding resources of combination of Wild grass and the post-harvest by-product adopted in the feeding system to the Red Kazakh species. Perennial ryegrass, alfalfa, or other clovers, for example, need to be grown on the grassland. In addition, cultivation of Sudan grass is appropriate for cut and caries practice (2 times harvest is possible during summer). Although hay or barley straw is used as preserved feed for winter, since hardness of fiber is already formed in many cases, more cautions are still required. As suitable feed for Holstein raising, the all-season feeding of Sudan grass, hay made from alfalfa and whole corn silage is desirable.

About solution of these issues, it is desirable to consider in the scheme of establishment of Holstein breeding management training system mentioned on the action plan.

[40] The body condition is not so bad with present feed conditions at the time of investigation.

(2) Establishment of dairy farming technology improvement and extension system.

In the 4.2.6, insufficient of basic technology about the feeding management of the Holstein is mentioned.

Since expecting more production of raw milk, the Holstein species are introducing many in addition to conventional Red Kazakh species. The Red Kazakh species can not produce much milk because it's characteristic. However, the Holstein species can produce more milk compare to the Red Kazakh species, but it is rather delicate species and the adaptability to different environment is by no means high. Therefore, it is necessary to consider the re-examination of the whole feeding management must be made, when the farmer try to introduce Holstein species.

During the investigation, the both cases were recognized such as well managed and not so well managed concerning the Holstein cow management. In this connection, several activities were are also provided to the department of Agriculture and milk processing companies about Adequate Holstein species care method. Also, the importance of obtaining the characteristic of raw milk condition according to the line of cow and bull both are recommended.

It is advisable to carry on with the action plan of livestock feeding management.

(3) Improvement of veterinary serviceies

New veterinary department was established February 10. 2010. Their main activity is the providing veterinary service in all 13 districts and 205 areas (rural area, villages). There are specialists in 13 districts now, and in the most areas. They are going to set specialists in 205 areas in a two weeks period. The idea of veterinary service system was created by the Prime Minister in the scope of Medical and Prevention Plan for rural areas and villages. The government had subsidized 129 mil tenge in this sector last year. There are veterinary inspection facilities in every district from 1999. This inspection provided all kind of services control, legal services and veterinary services. The government had split their charges in a two organizations. Veterinary inspection takes care mainly about the policy control (legal and veterinary), and veterinary service took the organizational activity such as slaughter-houses building and all type of services for farmers.

This organization has the Action Plan for 2010. It covers vaccination, diagnostic activity, serology, bacteriology studies, tuberculosis, brucellosis, anthrax examination and other veterinary services. The work in rural area will be conducted by private Licensed Veterinaries. Each of them will have the action plan and will report about the activities to the governmental representatives.

It is thought that such a policy is very suitable action when thinking of live stock policy in the future. About on-going activities concerning slaughtering facilities, among the limited number of personal should be done. Although we were anxious about delay of activities about future progress, considerable efficient deployment is expectable by this correspondence.

(4) Improvement of dairy farming management concerning small-scale farmers.

In 4.2.6, it is mentioned about the small-scale dairy farmer's management issue.

As measures, it is mentioned the establishment of the tentative name "dairy farming extension center" mentioned as an action plan. In the agricultural office, when aiming at synthetic stable development of the area, the small-scale dairy farmer's economical improvement is very important thing. However, North Kazakhstan state is an area which has a vast area, and

obtaining actual condition of the small-scale dairy farmer is not easy. Furthermore, if it is the matter of technical improving management instruction, you have to consider much of preparatory step.

Moreover, as the main point of a preparatory step, not the attack from the "field" but the attack from the "point" should set in mind. That is, it is because it will be surmised that a big difference can see in each case when it sees from a synthetic viewpoint with the existence of the fundamental agricultural knowledge which the farmer of here has, or a successor even if it tells a small-scale farm in one word. Therefore, as first measure, it is not an extreme poverty farm but the farm which has dormant faculty comparatively, and also it is important to select the place which is able to work as area's mind. Furthermore, although instruction whose instructor goes to the spot directly is the optimal as a means to improvement the technology in the production site, it is guessed only by the extension system of the present condition of North Kazakhstan state that there are many conditions difficult for instruction to an end. Dairy extension center is very useful in that situation. After discussed between the persons concerned, it will be selected in the most suitable area.

It is a demonstration farm equipped with necessary conditions such as grassland, cattle barn and required for dairy management as a function. If farmers attend the technical training held in this institution, they will have obtained know-how of almost necessary dairy management. Suitable technical training as which the technological level of the farm was consideration is carried out.

In this center, it proposes also having the "life improvement" activities for dairy-woman. Because it is necessary to shared among the persons concerned that it cannot tell it if the positive and self-sacrificing relation about the farm woman's dairy management is accepted in development of the dairy in Japan. Although the technical improvement presentation has been held several times among dairy farmers, there were many requests that they wanted opportunities like training also the spot. If there are opportunities which can receive technical guidance in the form which actually touched livestock etc., it will be effective to understanding about each technology deepens more.

This is just same thing which the investigating mission has proposed. On the time of steering committee held by the beginning of the second investigation, the importance of "dairy extension center" establishment proposed. At that time, although there was no opinion in particular, the re-proposal was orally performed in as follows to the agricultural bureau chief later.

Although it is a "dairy extension center", an institution in particular that makes big facility imagine is not required. It is enough if the place in which farmers and technicians meet with all the persons concerned and which can perform dairy technical guidance centering on training fundamentally is sufficient. It is an aim that without building a new facilities but an agricultural office technicians invite small-scale dairy farmer to suitable production area and performs technical guidance in training in each area of responsibility. For example, the construction of the dairy farming complex which introduces 2500 Holstein cows is planned in the state now, how what gives the function as a "dairy extension center" to that part? And he answered this activity is not being a project led by an agricultural department, but incorporating such a portion were by no means impossible.

As an aid for drawing a concrete image, the schematic view of the "dairy extension center" built in "Indonesia dairy technical improvement plan" under the JITruckural development

department to be managed favorably still now. By referring to this example, when actually taking in and arranging activities about the portion needed, it is good enough.

(5) The establishment of breeding system of dairy cattle.

Although the Holstein species from Canada was introduced aiming at improvement in local raw milk production capacity, if future development of prospective breeding business is taken into consideration, we believe the introduction of an excellent bull is more desirable.

In National Livestock Breeding Center, a system needs to be built where excellent Holstein Species frozen semen will be produced there as a base and distribute to various areas under suitable insemination plan. "Special selection centre" is prepared in Astana and a plan to produce the hybrid of the Holstein species and the Red Kazakhstan is in progress now. The purpose of this breeding plan is to produce new type dairy cow having two capabilities called the strong body and the feature of large adaptable-to-environment nature which the Red Kazakh species has, and the high milk production capacity which the Holstein species has. We believe this is fundamentally the most effective improvement method. In a sense, this will influence most the future of dairy cow situation in North Kazakhstani state. Therefore, prudent management in collaboration with other section such as breeding division is expected.

According to analysis made by officers in charge of dairy in North Kazakhstani state, the milk production in summer is much and it tends to decrease in winter. Therefore, a stable supply throughout the years to the dairy industry factories is not possible. In turn, factories have troubles in keeping their production schedule. During our work of consultation, we were asked many times about the suitable remedy by which they can carry out all-season stable supply.

In fact, this problem is suffered not only in this state but in other states where milk is produced by cattle's grazing in the pasture. In this state, all the cows are moved to grazing land and there suitable bulls are led and natural breeding take place in the beginning of spring when snow starts to melt. This system does not require time and hands from the viewpoint of breeding management. But it produces some problem in multiplication. The impregnation rate is high in natural mating. Many cows will be pregnant at the same time result many baby cows are delivered at same period. Suppose commercial dealings of milk by its ingredients will be practiced in future, it will be necessary to grasp the ingredients of milk by conducting line breeding. Naturally, milk production is concentrated in a certain period and there will be a seasonal difference, In the natural world, animals deliver when and where there is a plenty of food. If a certain quantity of milk is to be secured throughout the stably for the convenience of human being, it must be achieved through artificial breeding technology. In order to alleviate this problem, the technology of artificial insemination of cattle was developed. In this technology, breeding can be made to suite the condition of individual cattle, and is different from free natural breeding in the field. Farmers can artificially inseminate in their barn by continuously observing the heat condition of the cows. As a result, delivery season is extended and seasonal difference of milk production can be reduced. One of the reasons for few seasonal variations at the large-scale farms here is because artificial insemination has spread completely. In addition, there is another technique taken when raw milk production is desired intensively in a certain period. It is the inoculation of hormone injections. Although it is the method of inducing sexual heat in a short time for a certain number of cattle, whether it is the method easily taken and be adjusted to this country is another issues.

(6) Manufacturing special qualities pork ham and sausage

Several companies who manufacture ham and sausage were inspected. During the interviews the following information was recognized "when purchasing carcass of pork, we must buy the carcass which took a long fattening period, and try to deal with the hog raisers who has let their pig to graise as long period as possible. It is because instruction was given at the time of technical training in Germany. We were told such materials meat were desirable".

There was a hog raiser who exactly corresponds to these statements. As regards the place and the period of feeding or grazing, there are some differences. But the technique of performing three-way cross mating, the Duroc species for enriching redness meat is made to mate with F1of the landrace species which is excellent in breeding, and large-yorkshire species, and preparing the long-term fattening period of eight to nine months makes it bear a close resemblance to production of the Iberico pig of Spain. In our interview, some hog raisers explained that such prolonged fattening is not necessarily performed from a strategic viewpoint, they merely have a feel from experience that better meat is made with this method and it is automatically continued. There are no extra profit found in this method although it is future issues, by specifying the difference of material with such special fattening method, and the other ordinary meat in a package by ham and sausage companies, it may give a high-class feeling and it can sell as a brand-name product of the area. Naturally, if a price can be set to evaluate an appropriate difference about the material meat which performed such long-term fattening process, it can contribute to the stable management of hog raisers.

6.1.2 The demonstration of introducing new technologies

(1) Improvement of raw milk quality

In order to manufacture the processed food which quality was stabilized, the most necessary conditions is cleanliness of raw materials. Then, it taught about livestock processed food and especially the stable production of clean raw milk made into the issues when manufacturing the processed food about dairy products.

One of the dairy processing companies which belong to working groups asked to companion support of technical improvement instruction especially concerning milking hygiene for the dairy farm which exists under the influence of the company.

When the background is checked, the number of bacteria of the raw milk produced from the contract production site is increasing in these days. The problem developing into the serious stage for the processing company, those situations are investigated carefully and consider necessary countermeasures. Initially to select the farm which is poor as for the situation, to begin from the first milk, inspection the number of bacteria for every point until the time of factory arrival, then to specify at which stage the problem has occurred, and to devise countermeasure about each.

As an investigating mission, this support is an important subject linking directly to production of the clean raw milk here.

Dairy farm 1 Stripinskoeram area's dairy farm
Dairy farm 2 Pagurino area's dairy farm

Both farms have the business connections for 20 years or more with the company. About the farm 1, we already visited during the primary survey. There are about 80 heads of milking cow and all of them are Red Kazakhstan. Raw milk production is 5-6 kg/head/day they have another business also such as rabbit breeding and ostrich farming besides dairy farming. About the farm 2, this farm is also performing many kind of business and the cereal production is mainly. Wheat and barley is a core business. In addition, the dealership of electric power is also secured and various enterprises besides agricultural output are performed. Farms 2 have milking cows with all Holstein, and are 800 heads in total. The raw milk production is a 10 kg/animal/day.

【Instruction and result】

Early in the morning, the work preparation procedure was checked before the milking operation start, and the whole work environment including the attitude engaged in a worker's has been obtained. The result has checked as the following.

(Farm 1) We had joking if there are Olympics game named "the dirty cattle barn", this farm receives the bronze medal could probably be gained as it is bad.
Since the building of the old Soviet Union age was re-used as a cow barn as it is, ventilation was bad. The windows were small and were unsuitable breeding environment on the health of a milking cow. The lighting installation is like to which it is only attaching some and a naked light bulb does not look well in a step.
Since the last visit was daytime, we did not notice, but with this lighting, the environment condition could not check, though manure has adhered to the breast at the time of milking. Since it was not covered with straw, the dirtiness was excessive and the breast was full of cow manure.

Since the woman specializing in milking was repeated washing hard, but she became pitiable.
When the situation of the pre-milking was checked through veterinary, although instruction of the pre-milking was guided, it was corresponds by the method of finally squeezing a little milk into a dishcloth in process of washing instead of the method of put into a container. However, by this method is cannot be said that the purpose of pre-milking is achieved. The whole situation is not good. The milking machine was indifferently put to the pass Passage with much cow manure. Straw was appearing on the milk bucket.

(Farm 2) it was markedly clean condition comparing with the farm 1. The lighting installation was also prudent well. The bed is fully covered with straw, and, there was almost no cow which the breast is dirty. The workers worked joyfully. Whole worker exchanged jokes in a very bright atmosphere also about work scenery.

However, although pre-milking was carried out, milk is not received by the cup and was directly dropped to the bed. It must be said that the fundamental knowledge about milking health is insufficient. Although the firm net was covered on the bucket, straw had floated in the surface.
The milk cooling tank was also furnished. However, during the work, the lid has been opened and it is apprehensive about fear of mixing of the fly or animal hairs.

・The result of bacteria examination

The sample collection was performed by two technicians of the company. The inspection was carried out in the inspecting room at the head office, and data analysis was carried out immediately. When pointing out details, such as the accuracy of an inspection, many things were recognized, but it consisted helpful of obtaining global image very much. The following

table is the number of bacteria according to sampling stage for every farm. Hereafter, the subject was arranged focusing on the mark.

Table 6-2 The number of bacteria in the rawa milk

The nubmber of bacteria in the raw milk (ml)								
Date	Name of the farm	The number of bacteria in the water from well	Milking time	Small bucket	Large bucket (50kg)	Cooling tank	Refrigerated tank of track	Non refrigerated tank of track
2010.3.3	Farm 1	37	(*2) 12,280	(*4) 187,000	(*5) 230,000	(*7) 313,000 (4℃)	(*10) 480,000 (3℃)	
2010.3.10	Farm 1	39	11,200	71,500	(*6) 199,500	(*8) 226,000 (4℃)	(*11) 247,000 (4℃)	(*12) 520,000 (21℃)
2010.3.18	Farm2	(*1) 3,880	(*3) 13,000	25,200		(*9) 490,000		

Source: The laboratory data of dairy processing company

(*1) These characteristics inspected are the test results of the well water used for the usual management, such as drinking water for cows, and apparatus washing in the farm. Although the farm 1 and 2 were performed with about 40 □ warm water about washing of apparatus using alkali detergent, the issue is a stage of a rinse after washing.

If rinse water is not clean even if washing is done carefully, the result that various germs have adhered will be brought. The well water of the farm 2 has brought the result that degree of contamination is very high.

Probably, this number is correct, since the dirt can be checked even if it sees visually.
According to the owner, this situation will be changed when new cattle shed will be constructed, also new well will be constructed.
(Note) About a numerical value, it is unknown in what kind of unit it is judged. Therefore, I would like to mention to an understanding as an index which can check the degree of contamination of the well water about the farm 2.

(*2) (*3) These characteristics inspected are in the time immediately after milking. Although it is in the situation which cannot be said that a milking towel and breast washing hot water are by no means clean, it can be called a clean test result rather than having expected.

(*4) This test result expresses the issues of the dairy situation of here accordingly. Although the milk right after milking is never bad result, the number of bacteria increasing at this stage. As a cause, contamination of a milking machine and the pipeline's contamination are serving as a key factor. In having put the milking machine on the passage unclean with feces and urine, it is a natural result during milking work. When moving milk from a milking machine to a bucket, it is good that foreign matter removal is carried out with the fine filter. There is issue also in the degree of cleanliness of a filter. Straw was appearing on the bucket. It is issue of the future farm concerned how the number in this stage can be lowered.

(*5) (*6) The number of bacteria is increasing further in this stage. It is causing washing of a can is insufficient after all.

(*7) (*8) It is a refrigerated storage tank of 500 kg capacity. In spite of introduced the tank with refrigeration equipment was completed; the number of bacteria is increasing also here. It is causing that inconsistency of everyday washing after all.

(*9) While being disappointed very much about this number, made to feel actually with issue of the dairy of here is recognized.

This farm is regarded as the superior about cleanliness of the cowshed. It is expected that since the attentions concerning milking were good, the condition of contamination in a shipment stage
However, the contamination in the refrigerated storage tank was very high. According to further investigation, there was the place which has not imagined. Thus, although it kept raw milk to the refrigerated storage tank, the important cooling device had not carried out movable.
When the reason was checked to the veterinary, he decide to stop cooling device during winter that it is not dared have the necessity for refrigeration since outside temperature is low.

However, the outside temperature is low but isn't the property room of a refrigerated storage tank. Since the number of bacteria increase for every per second under such environment, the instruction from the mission were given to the staff the refrigeration switch movable immediately. Since the device is carried out movable immediately, the situation has improved.

If such a mistake is caused among general workers, it will solve soon after continuous instruction, however, this mistake has made the veterinary himself.

In the agricultural bureau chief's view, the technical level of this country is not so low, but the issue is in the technology-transfer system. However, if such an example on this time is encountered, it cannot say that it meets generally but the issue to hold must be called many things.

(*10) Even when the raw milk currently refrigerated on the farm is carried in to the factory using milk collection truck with refrigeration facilities, the number of bacteria is increasing greatly in this way. This has important thoroughness of the hygiene supervision. It is guessed that the cases which can never be said as perfectness also about everyday management of milk collection truck of the dairy company. Thoroughness of the hygiene supervision before shipment is important in a fundamental matter.

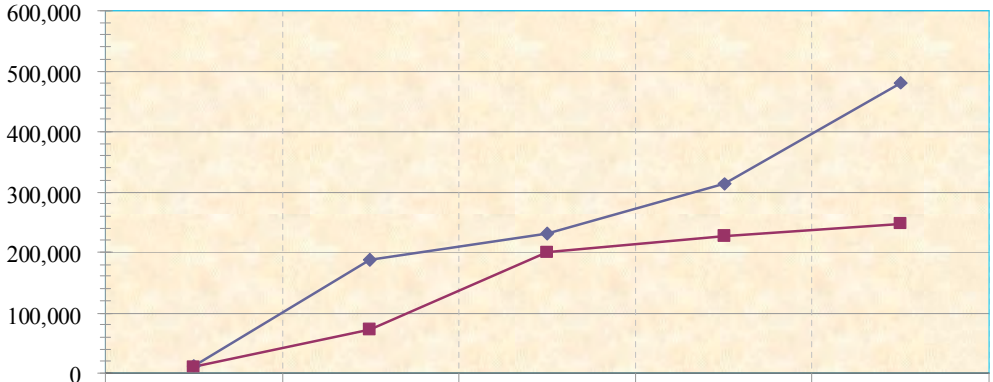
(*11) (*12) (*13) This number is expressed about the effect of the refrigeration milk track. When the number was 226,000 using the refrigeration track at the time of farm shipment, it was 247,000 pieces, and when it became shipment with a non-refrigerated storage tank, it was increasing to 520,000 pieces. The travel time from a pasture to a factory is about 2 hours.

The purpose of this investigation was to specifying the pollution source of raw milk, and to consider concrete measures. The number of bacteria was increasing by the upward rise, and, as a result, became the very simple conclusion that there was issue in all the stages.

If such a situation is came out apparently, although the impression of being facing a lot of difficulties cannot be denied, but an investigating member thinks, according to efforts of the persons concerned, considerable issue is improvable from now on.

For example, since the situation about the farm 1 was poor this time, instruction was strictly opposed to the farm 1. First-time inspections have done on March 3, and many issues were recognized in the milking process of operation. The investigating member made the milking improvement instruction manual with an eye on issue solving about it. Actual instruction was made to the staff concerned on March 5 using the instruction manuals, and the second inspection was tried out after that on March 10.

As a result, the instruction activities took effect about decreasing until 247,000 on the time of arrives factory from 480,000. (Refer to lower graph)



	Milking Time	Small Bucket	Large Bucket (50kg)	Cooling Tank	Refrigerated Tank on the Truck
3-Mar	12,280	187,000	230,000	313,000	480,000
10-Mar	11,200	71,500	199,500	226,000	247,000

Source: The laboratory data of dairy processing company

Figure 6-1 The number of bacteria in the raw milk (ml)

Based on this result, the processing company will be scheduled to make milking hygiene supervision instruction to the raw milk producer from now on. That it is improvable so far by only one time technical guidance impresses the earnest enthusiasm applied to the dairy producer of the state. If it compares this figure with the level (thousands of pieces) of Japan, although good results can never say, it will be made good in view of the natural environment of this country, and a social situation. The further improvement is possible by taking continuous improvement instruction from now on. The teaching materials used in the process of instruction are the milking improvement manual and the dairy technical improvement manual including the example of Japan.

About the dairy improvement manual, it has utilized at the opportunities', such as a steering committee, a workgroup meeting, and a presentation for producers. Emphasized matter especially in the manual is the point of being in the shortcut of a technical improvement studying an advanced effective example positively, and taking it into one's management one by one. Two dairy companies are included among workgroups and each has several contract dairy farmers in connection with raw milk purchase. Among the producers there are already considered introduction of the Holstein.

Then, based on the dairy technical improvement manual, dairy technical guidance was performed.

The figure showed in next page is explanation of dairy extension center.

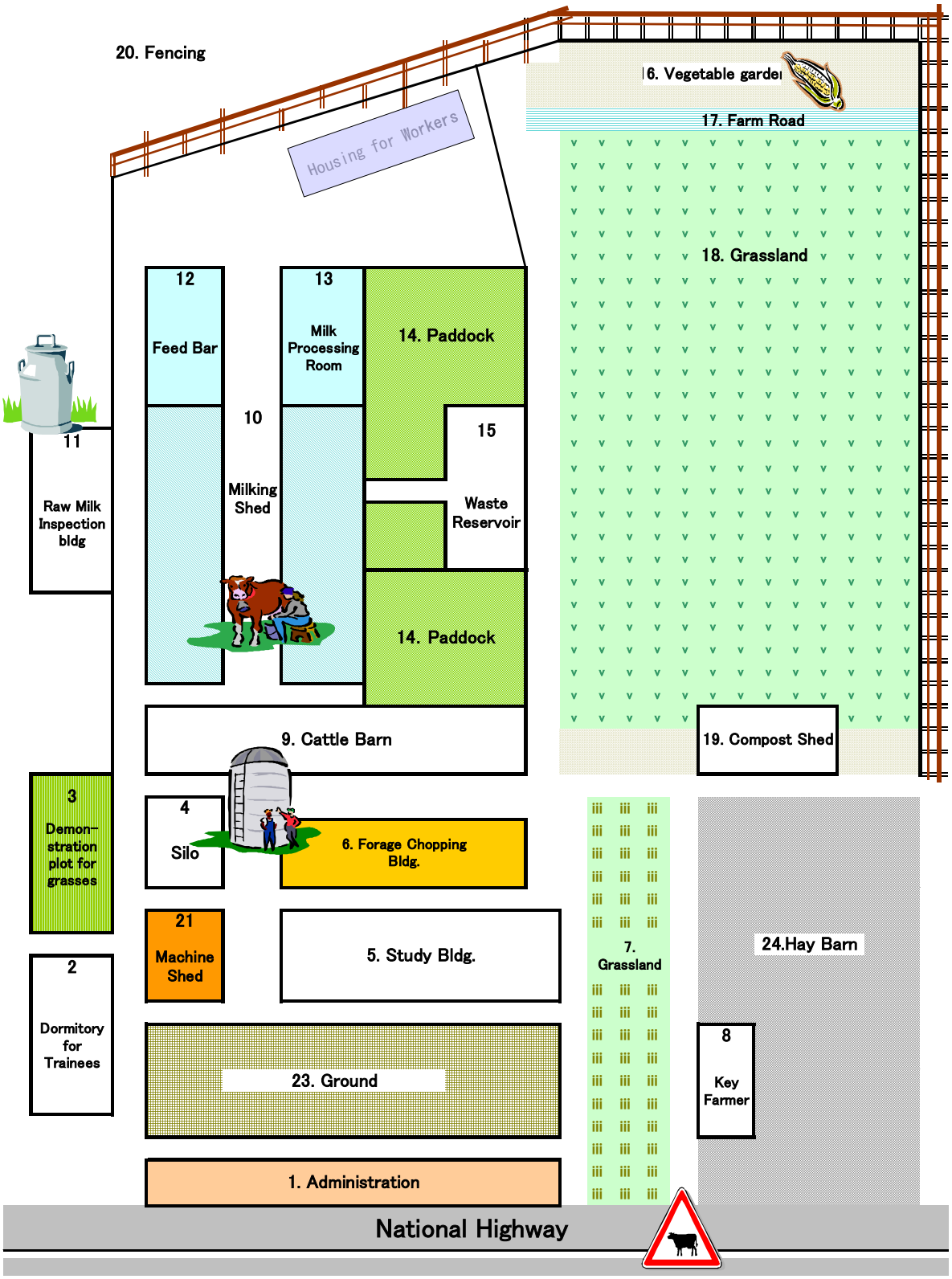


Figure 6-2 Dairy Extension Center (Proposal)

6.2 Recommendations in relation to the establishment of practical educational facilities

6.2.1 A case study of practical education within the Japnaese education system

The lack of man power is the one major issue in the food processing sector in North Kazakhstan. At higher education facilities, the introduction of technology and research of a high academic level is carried out however there is no structure for the provision of practical education that is deemed necessary by small and medium sized businesses in the region. For example, in the case of Hokkaido, practical education is carried out with features as mentioned below at High Schools and Universities.

Table 6-3 A case study of practical education in food processing and Agriculture in Japan

School name	Feature
Bibai Agricultural High School	Apart from carrying out Agricultural education, permanent shops have been erected in order to allow students to gain first hand business experience. Also, there is cooperation with the area with events such as harvest festivals etc.
Hakkou Gakuen	For those young people who have their sights set on agriculture, the provision of a location where a broad range of general farming activities can be experienced. There are locations where agricultural produce is sold directly to the public, as well as a tourism flower farm and the provision of a location where work experience can be obtained.
Tokyou Agricultural University	Focusing on the development of high value added products from raw materials to the development of functional food. Practical programs that link the metropolitian areas to the region.
Rakuno Gakuen University	An educational institute that has been established by farmers themselves. Integrated education is carried out from the production of raw materials to distribution. Product development under their own brand is carried out.

For example, in the instance of Bibai Agricultural High School, (3 year system) a food science department has been established (40 students per year) where study is undertaken looking at the whole system from the production of food processing sector and quality control to sales. It is possible to undertake near to practical activities within the confines of the school facilties with details of the curriculm described below. Also, the students themselves gain hands on experience in product development and have the experience of selling items they have produced as part of the course themselves directly in metropolitain department stores.

Table 6-4 Contents of the practical curriculm at Bibai Agricultural High School

School year	Curriculm
1st year practical work	Production of bread, production of noodles, production of sweets
2nd year practical work	Production of jam and marmelaide from the raw materials of farm produce Processed meat products (Canned)
3rd year practical work	Processed meat products (ham, bacon, saucages etc) Processed dairy products (ice cream, natural cheese) Processing of brewed products Practical experience at selling (department stores and participating in events etc)
Other subjects	Food production, total practice, microbe basics, food chemistry, food production hygiene, food production and distribution, animal microorganisms bio, agricultural information processing

6.2.2 Proposal summary

(1) Managing entity

The education administrators of the main specialist education facility will operate as a new educational structure dur to the existing Construction and Economic State College in North Kazakhstan and private business. If possible, it would be preferrable to have a structure similar to a business corporation set up where the stock holders are the State Government and private business. Also, at the Construction and Economic State College in Kazakhstan, currently cooking practice is carried out with sweets and bread etc.

(2) Upgrade of education conditions

- The existing education administrators and the Construction and Economic State College in North Kazakhstan will upgrade the necessary subjects for College, University and Master's programs and would need to be accredited by the National Government.
- In order to provide national and state qualifications upgrading and organization of corresponding subjects and the related credit points earned is necessary.
- Upgrading of conditions for qualification acquisition (setting up of subjects)to enable State Governments to have independent State Government qualifications.

(3) Boarding School style

All students are educated and are required to board. Practical work such as raw material procudrement and distribution etc is carried out on many early mornings and as such participation by all students would be very difficult if they were to commute to school at the normal time and means.

(4) Necessary education term for Senior technology program

The education program consists of compulsory education for Primary School (4 years), Junior High School (5 years) and that is followed by a 2 year Senior High School program.

＜A course that meets the conditions for graduating from Junior college＞

- 6 year course（For students that complete compulsory education）plus practical work at a business for 1 year, total of 7 years
- 3 year course（For graduate students of Senior High School）plus practical work at a business for 1 year, total 4 years
- 2 year course（Graduate school students）plus practical work at a business for 1 year, total 3 years

＜Conditions of entry＞

- Graduate students of Junior High School（Compulsary education）, Graduate students of Senior High School, University Graduate Students, adult education

(5) Features of the main curriculum

There are reports that there are 11 State junior colleges in North Kazakhstan. If all the teachers at these colleges were employed, it would be possible to process most of the liberal arts subjects.

- Raw material and product inspection・analysis method（The inspection・analysis institution would be a state institution that carries the same weight as a public institution）.
- Entire experience including practical experience from raw materials to processing and from practical experience on the fields to processing.
- Food hygiene, food regulations, food analysis, production regulations, acquisition methods of HACCP and ISO
- Lectures can be taken via satelaite by using a computer line.
- Lessons can be taken via intensive courses.

(6) Characteristics of education administration

- A method where businsees that receive labour can cover boarding costs, food, class fees etc.
- There are problems with high interest rate education loans, so consideration is given to amounts that are payable to schools.
- Aim at export promotion, in particular, study of a language, produce graduates that are educated and are work ready.
- Have an effective curriculm that educates design, naming, etc.

6.2.3 The steps required to set up an educational institution

It is understood that in order to set up a technical education institution the following steps are necessary. In this case, at the time of taking the next step, it is not that the previous step needs to be completed, as this is ongoing and can be implemented in the image where the next step is incorporating into the project.

(1) 1st step

1) A barrier free link between University and business

This starts from confirming the needs and possibility of both those involved with University and private enterprises etc. Together with private industry visits by education institutions which include company inspections and internships for students, with strategists including companies visiting Univesities and teaching the students things such as what it is like on site and the structure of society. This has already been partly implemented in North Kazakhstan but will need to be established as a system.

2) Implementation of short term courses and intensive courses

Prior to implementing new departments or year round courses, it would be important to obtain feedback from both students and the private sector in relation to the implementation of a short term intensive course or a summer seminar which would include lessons conducted by business men from the private sector. With a short term course, utilizing a program at the JICA Japan centre（Astana）, inviting someone from a Japanese company who is stationed in Kazakhstan or providing new technology or stimulation from a related party such as sending a specialist from Japan would be conceivable.

(2) 2nd step

1) Formation of a supporter company

Throught the 1st step, after building a trust relationship between the University and company, organize a company that will be the supporter that provides assistance to university activities. Through accepting graduate students and supporting the students the companies will create technicians which will match the needs of the region. Furthermore, it will be possible to provide guidance so that the University curriculm will meet the needs of business.

2) Participation in events

The University and region can cooperate and participate in events such a trade fairs and product development. As for the students, not only will it be study of a practical nature it will allow the companies to reduce costs through the utilization of the students and they will be able to obtain the chance to employ talented students.

(3) 3rd step

1) Set up of departments and courses

Thinking of the steps up to now, the idea is to be able to formulate a department or a subject and establish a technical course at the level which secures places of employment for students and graduate students. At that time, continuous operation is possible by devising mechanisms that attracts money from external sources, such as courses donted by business, selling students produce where part of the money earned goes towards lesson expenses. At the same time, developing a plan which brings into view the establishment of a specialist education facility is the ultimate goal.

2) The commencement of international exchanges

With the exchange between foreign Universities and technical colleges which have a proven educational track record in the food industry and agricultural sector, it will be possible to increase the consciousness of students and staff alike as well as expanding their experiences. Currently, there is lively inter University exchanges between Kazakhstan and Japan, and it is possible to search for target educational institutions in Japan.

6.3 Recommendations in relation to the Information Service for Finance

The previous topic reviewed in 4.5.7 considered how to conduct and complete effective information delivery from both sides of suppliers and recipients of the required business funds. Commercial bank staff regularly visit customers for discussions with the intention of further business promotion aiming at mutual benefits. However, the service provided by the commercial banks is only for the major and established clients and doesn't include small and medium companies that have recently been set up. For those new and small companies a third party such as Techno Park, in the province of North Kazakhstan, should play a necessary and effective role in order to promote information availability between financial organizations and small and medium private companies. The study team identified and proposed that Techno Park should be this specific organization that provides information. However, it is unfortunate that currently Techno Park does not have the capacity to handle such tasks.

Many entrepreneurs are often usually worried about the complex issues before being successful. Those entrepreneurs expect that Techno Park is able to respond and suggest solutions correctly, timely and satisfactorily in relation to comprehensive business issues such as technology, manpower, finance etc.

Although Techno Park does some financial advisory work at present, they do not have sufficient knowledge on the financial products and specific financial technology. Therefore, customers rarely ask them for help. Techno Park has the objective of providing technical consulting and marketing for new products which customers do not order so often.

First of all, Techno Park will need to have a business environment in order to be consulted by more customers. It is important that Techno Park should be prepared in order to provide clients with more practical knowledge and have the capacity and deal with corporate finance issues so that Techno Park can perform and carry out the function of a one stop shop. Regarding financial knowledge and skills, two economists currently employed by Techno Park are to be trained as trainees through an external training course. With insufficiencies in business performances by Techno Park, team work through cooperation with KasAgro Marketing should be the practical and tentative solution for a while. It is reasonable to think and recommended that Techno Park will increase its turnover through being a one stop shop with a function of providing effective solutions expected by the general public and customers.

In the following chapter, the Master Plan will be reviewed on how to provide Techno Park with the sufficient capacity for consultations and the practical methodology for identifying the financial solutions to potential customers. The action plans for the Master Plan will be detailed as well.

6.4 Recommendation to establish regional food processing technology center

6.4.1 Needs for regional food processing technology center for food processing sector

The main industry of North Kazakhstan Oblast is agriculture and livestock industry including processing sector, and its positioning is not large shift from raw material suppler at former Soviet Union. The food processing industry which has large share of manufacturing industry, is closely related to agricultural and livestock industry and plays a important role for the development of regional economy.

In the Petropavlovsk market, the sales volume is increasing in the supermarket with increasing consumer's purchasing power. The dairy industry and meat processing industry in North Kazakhstan Oblast is expanding the market share with its health oriented marketing, but has some threats from the competition with overseas and other oblast product.

To enforce the competitiveness in the food market, it is necessary to have nontraditional points of view for the production and marketing.

- To meet the variety of consumer needs
- To appeal the safety of raw material and final products
- To design the marketable products

Presently, there is no supporting organization for the purpose to enforce the competitiveness for small and medium-sized enterprise in North Kazakhstan Oblast. As mentioned in previous chapter, some organizations can provide several services to SMEs as followings;

- information dissemination for entrepreneur, certification acquisition, lending production facility by Techno park;
- Education for food processing experts in the classroom lecture of university;

- Financial information from DAMU and TOBOL

But the existing supporting system is not so functional because of vertical segmented administrative system and no adjustment function each other to providing services to SMEs. So, it is difficult for SMEs to access the information and services from existing organization.

JICA Study Team recommends the regional food processing technology center that has a comprehensive and accessible supporting functions for SMEs. The center is not a physical facility but a set of functional group which has several functions of technical support, information dissemination, human resource development and marketing support from existing peripheral organization with one-stop function by the Techno park.

(1) The objectives of the regional food processing technology center

The regional food processing technology center has three objectives of its activity as follows:

- Enforcement of competitiveness in SMEs：To enforce the competitiveness by product development to comply with health oriented market needs with quality and safety assurance.
- Promotion of local industry including agriculture and livestock industry：The promotion of food processing industry is contributed to the vitalization of agriculture and livestock sector.
- Market expansion in domestic market and export promotion: To compete with products from foreign countries such as Russia and Belarus and other oblast in domestic market, to expand the domestic and international markets with competitive product development.

(2) Meanings of the regional food processing technology center

North Kazakhstan Oblast has both grain production zone such as wheat and main livestock production zone which are breeding by the grain. And the Oblast is also a boundary with Russia and physical distribution base.

In North Kazakhstan Oblast, there is no research institute related to food industry, no environment to develop competitive brands for fostering of regional industry. The regional gap is expanding, and it is unprofitable for regional industry. Therefore, it is essential to have a supporting function with community based for the development of food processing industry in North Kazakhstan Oblasts.

(3) Necessary functions for regional food processing technology center

The necessary functions are supposing as follows with a central one-stop function of comprehensive supporting center;

- Soft function for information dissemination and coordination to promote product development and business linkage
- Combined function between production and sales promotion such as technical advice and commissioned testing.
- Marketing function such as sales support and market strategy development

(4) Constraints in the existing government certification system

Food products and its raw material are analyzed in three central laboratory such as veterinary laboratory, agricultural laboratory, and hygiene and epidemiology laboratory. The purpose of

inspection by the Government is to protect animal, plant, and human from hazard from the points of disease and health, however, not for the production improvement and/or new product development.

And the inspection fee is so high that the burden for the company is very heavy. It is necessary to keep the inspection price low for promoting food processing industry with Government subsidy in the regional food processing technology center.

(5) Expected effects from regional food processing technology center

The expected effects from the regional food processing technology center is as follows;

- Development and improvement of value-added livestock process food
- Open laboratory and processing machine to meet the needs for regional industry characteristics with technical supports
- Promotion of product development and improvement of production and quality
- Farmer income increase in association with the sales increase of process food

6.4.2 Function concept of regional food processing technology center

The regional food processing technology center is comprehensive supporting center with one-stop function for small and medium size food enterprise to solve the problem and receive necessary information on technical development, collecting information, human resource development, marketing survey.

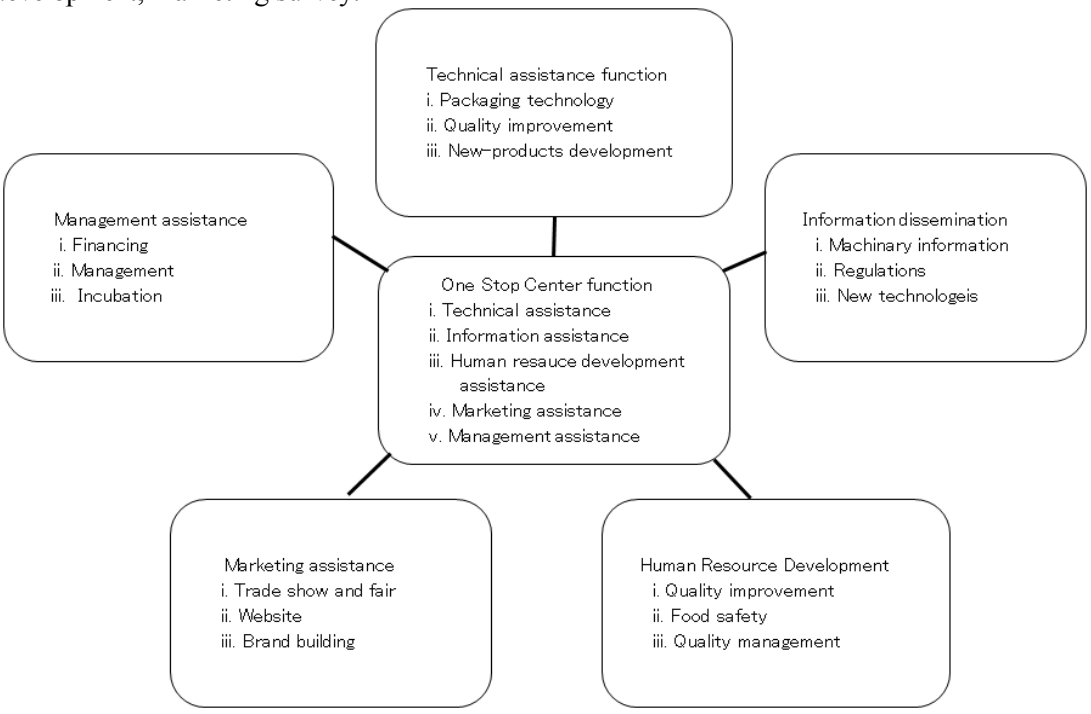


Figure 6-3 Function structure of regional food processing technical center

The regional food processing technology center will have a following organization which is corresponding to each function, also entrust basic services of technical, information, and training to external intuitions.

Table 6-5 The function and organization of regional food processing technology center

Function	Services	Expected intuition
One stop center function	Window service	Techno park
Technical support function	Food processing and quality control support	Research institution and private company
Information dissemination function	Information collection support of Food technology and regulation	Education, Research, and Administrative institution
Human resource development function	Education and training	Education, Research, and Administrative institution
Marketing function	Market survey and sales promotion support	Private company
Management support function	Financial information support	Financial institution

6.4.3 Basic design of regional food processing technology center

Based on the functional concept of regional food processing technology center, the JICA Study Team consider the basic design of regional food processing technology center to promote food processing industry in North Kazakhstan Oblast.

(1) Necessary functions

Necessary functions for regional food processing technology center are listed based on the present activities by companies and present services by government as following table.
Both dairy products and processed meat products should be produced in accordance with the Government certification, and it takes cost and time to develop new products, so the development of new products and introduction of new technology for enforcement of competitiveness is not promoted.

1) Dairy products

	Present activities performed by companies	Present services performed by government	Necessary functions to be conducted by food processing technology center
Food packaging technology	Packaging material such as carton box and PP, and packaging machine	No service	Plastic bottle and its packaging machine Hygiene control in packaging room New packaging design
Quality and safety improvement	Raw material receiving inspection, Final product inspection, Preservation test etc.	Product inspection and factory audit for production and sales	Accelerated preservation test, packaging material test, Physical test, Foreign material test, Information collection of complain in the market etc.
New product development	It takes long time and cost to apply to the government, that not so much new product development	Certification and permission for the production and sales of new products	Development of original products and high value-added products
Equipment procurement	Direct talk to the equipment manufacture, information exchange at exhibition.	No service	Wide range of information

Staff education and training	In-house and external training	Food regulation seminar by Central committee of metrology and technical regulation	Practical training for microbiological testing and quality control
Marketing survey	Existing channel survey	No service	Market survey and test marketing for new product development and quality improvement

2) Processed Meat Products

	Present activities performed by companies	Present services performed by government	Necessary functions to be conducted by food processing technology center
Food packaging technology	Packaging material as Plastic casing	No service	Small size packaging as slice pack and its machine, hygiene control of packaging room, new packaging design
Quality and safety improvement	Raw material receiving inspection, Final product inspection, Preservation test etc.	Product inspection and factory audit for production and sales	Accelerated preservation test, packaging material test, Physical test, Foreign material test, Information collection of complain in the market etc.
New product development	It takes long time and cost to apply to the government, that not so much new product development	Certification and permission for the production and sales of new products	Differentiation strategy from other products
Equipment procurement	Direct talk to the equipment manufacture, information exchange at exhibition.	No service	Wide range of information
Staff education and training	In-house and external training	Food regulation seminar by Central committee of metrology and technical regulation	Practical training for microbiological testing and quality control
Marketing survey	Existing channel survey	No service	Market survey and test marketing for new product development and quality improvement

Necessary functions to support SMEs are summarized as follows;

- Introduction of functional packaging technology for increasing shelf-life of the products and attractive packaging design
- Collection of technical information for development of competitive product and introduction of quality improvement method
- Practical training for development of staff abilities such as quality control and hygiene control

(2) Basic Design of Regional Food Processing Technology Center (Draft)

・Basic Service items of Regional Food Processing Technology Center (Draft)

Basic service items of Regional Food Processing Technology Center are provided to SMEs as follows;

- Target sector: Dairy and meat processing SMEs
- Purpose: To contribute to quality improvement and new products development for enforcement of competitiveness in food processing sector

Field	Service item
Food packaging technology	Open laboratory for packaging machine and inspection equipment, Inspection of packaging material, Information dissemination of functional packaging, Consulting for packaging design
Quality and safety improvement	Preservation test, Collection of market information, Provision of food safety information, Commissioned test (Microbiology, chemical analysis etc.)
New product development	Technical support for new product development, Information dissemination of new technology, Consultation for technical issue, Patent acquisition by collaboration research
Machine procurement	Database for food packaging machine and technology, Participation support for trade exhibition
Staff training	Training for microbiological test, quality control and marketing Food safety seminar
Marketing survey	Test marketing in the market, Market survey at exhibition, Support for establishment of marketing strategy for new product development

・Facility for Regional Food Processing Technology Center

To provide supporting services of Regional Food Processing Technology Center, following facilities and equipment for analysis and training are necessary;

Facility	Activities and equipment
Storage	Food storages（Freezing and refrigerated）, Supply shed
Market	Retail shops for test marketing (20 ～ 30 shops)
Open laboratory for food processing	Food processing machine, testing machine (Paid service)
Training and consulting	Seminar room, consulting room
Test and analysis	Equipment for testing
Administrative office	Director room, Accountant office, Reception, Reference room

・Supposed equipment for Regional Food Processing Technology Center (Especially, Equipment for Food packaging and quality control)

In case of equipment operation, maintenance cost should be considered for food packaging and quality control testing. The initial cost for purchasing main equipment will be considered the application of Japanese Glass Roots Grant Aid Scheme.

１． Vacuum packaging machine :	30,000US$
２． Filling machine：	5,000US$
３． Heat sterilization chamber：	10,000US$
４． Constant temperature and humidity chamber：	10,000US$
５． Testing equipment：	5,000US$
６． Silent cutter：	30,000US$
７． Test devices：	5,000US$
８． Other：	10,000US$
Total：	105,000US$

(3) Operation structure of Regional Food Processing Technology Center

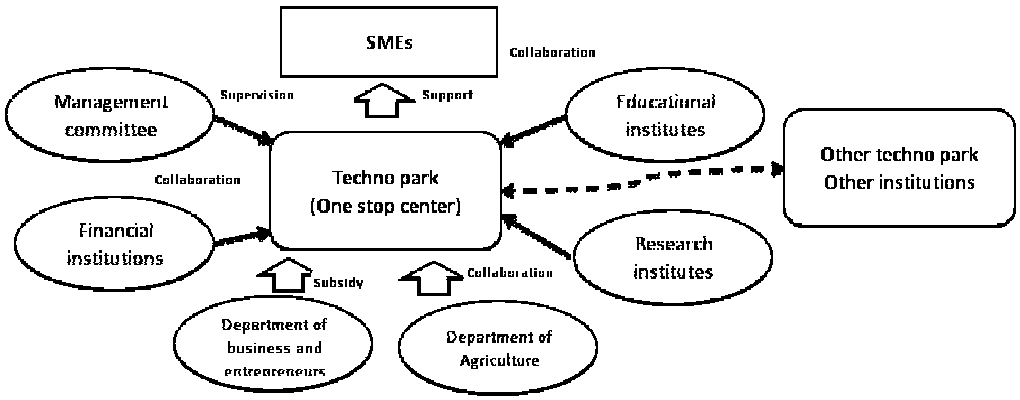
In Regional Food Processing Technical Center, Techno Park has a function of head office as a one-stop center, and provides comprehensive services by unifying the management for regional development. And Techno park will be a abase for provision of information, technology and education to SMEs.

Management committee consists of the member of government, private and academy, has a monitoring on contribution of Regional Food Processing Technology Center to regional industry development, and supervision of the proper usage of subsidy to the supporting program. And the committee has also a function to select the audit members for regional brand certification.

Main services for technical support, information, trainings are basically utilizing outsourcing such as educational institutes, research institutes, and financial institutions. In terms of operation, specific technical services such as testing and training are based on the Public- Private-Partnership, commissioned the management of the center to private sector. And state government is supporting SMEs by the subsidy for food processing industry development.

The activities of the regional center will be enforced by cooperation with other techno parks or supporting agencies. And it is recommended to strengthen the services with the linkage of public and private institutions in foreign countries.

The purpose of Regional Food Processing Technology Center is to promote regional food processing technology which is directly connected to the regional needs. Therefore, it is desirable to operate as other organization than Industrial park which is promoted by Kazakhstan Government. It is a good reference for the positioning to understand the functions of both Tokachi regional food processing technology center and Tokachi industry promotion center.



Source: Prepared by JICA Study Team

Figure 6-4 Positioning of Techno Park in Regional Food Processing Technology Center

6.5 Policies directed at constructing a regional brand

6.5.1 The implementation of technology transfer as a model business

In spite of producing products of a superior quality, compared to other regions, dairy products and processed meat products from North Kazakhstan lack attraction and fail to be sufficiently competitive. In order to enhance market competitiveness, not only the development

of high value added unique products and their subsequent production but benefit from the development of a regional brand that is able to form a link with a good regional image and rediscover resources of the region.

With this study, the aim is to develop regional branding of North Kazakhstan, by conducting exchange of opinions between Government administration and private industry, and provide a collective view of the region. After that, work on a regional brand web site, promote participation in trade shows, work on forming ties between Government administration of North Kazakhstan and private business, which serves as a stepping stone to the cluster construction.

i) Recommendations for the location for exchange of opinion

After receiving an offer from North Kazakhstan department of New business and Industry, a food seminar was set up for 2 days on the 11th and 12th of March 2010 with the target being dairy product producers and meat-packing companies. Based on a specific theme like this, due to carrying out opinion exchange with others of the same trade in the region, it is possible to construct relationships of mutual trust and it is possible to form cooperation between companies which is essential for cluster formation.

An example from a local company is that in order to protect local brands it is important to maintain product quality. On the other hand, there was criticism that even if domestic standards had already been cleared, the establishment of even higher standards would be at the expense of business. In order to send products to the market that have domestic and international competitiveness it is essential to show product differentiation. For that purpose, establishing a standard that certified the image of North Kazakhstan 「Safety and freshness」 and acknowledging this as a brand is important and related parties indicated understanding after the study team explained this to them. With this type of mutual contribution, it is necessary to build an environment where all can adjust. Also, the main opinions of participants in the opinion exchange have been noted below.

Long term strategy	・Time is required in order for a brand to be established. For our brand to be established it took 30 years. It is necessary to have a long term view with building a regional brand.
Quality standards	・In order to maintain a regional brand it is necessary to have a fixed standard. With the establishment of a standard, quality maintenance of the reginal brand product is possible. ・Even in Kazakhstan there are strict standards, and in order to clear even highr standards it would require money and time and for regional companies this burden is large.
Implementing agent	・In relation to the construction of a regional brand, we are unable to see a body that would take on the responsibility of having central administrative duties. ・Even in relation to the key private businesses, without the Governor of North Kazakhstan taking leadership it is thought that local companies may not participate.
Establishment of an antenna shop	・We want you to investigate the setting up of an antenna shop where local branded products can be sold. From the viewpoint of effective distribution an antenna shop would be convenient.
Regional brand name	・Petropavlovsk would be good as it has a higher level of awareness than North Kazakhstan. ・As Petropavlovsk is registered as a trade mark for Masurajeru Co. Ltd. North Kazakhstan State would be good. Also, in Russia there are people that link Petropavlovsk to Kamchatka.

ii) Making a web site for the regional brand

As for a tool for tramsmitting information about the regional brand a web site was attempted to be set up. With the setting up of a web site, not only carrying out advertising in relation to products and services and being thought provoking and carrying out promotional activities, but it is possible to conduct market surveys through questionnaire surveys directed at online users. Also, through the creation of a web site, it enables information exchange between companies and it is possible to build mutual understanding.

The internet diffusion rate in Kazakhstan is of a low standard as is the internet diffusion rate in the state of North Kazakhstan. Also, there are only a few companies that have a web site. However, the internet diffusion rate has been steadily increasing worldwide and it is expected that even in Kazakhstan the diffusion of the internet will occur.

Actually, in North Kazakhstan the web site of Government administrations of Petropavlovsk city are well developed, and in the future, with the linking to web sites of private business, it will be possible to expand the results of information transmission through the internet.

In the creation of corporate web sites, apart from the provision of material from the state government, they are made with the cooperation of local businesses and information is extracted from corporate pamphlets as well as meetings with those same companies. With the information that is displayed on the web site, various companies identify that there is a consciousness of regional brand development and it is considered that there is a feeling of unity. Also, food producers in North Kazakhstan carry our sales activities to wholesalers and supermarkets and other retailers but there are many companies that do not consider doing sales promotions to the general public. Accordingly, with a web site, it is possible to include information on stores that stock the products which general consumers are able to purchase from. Below are the contents which should be displayed.

An example of the contents for a regional brand web site[41]

Name of contents	Contents
Introduction of regional brand	Greeting from the government institution, differences with other regions, PR points, etc
Company profile	Company history, profile, list of trading partners, etc
Representative's profile	Brief background of representative, photo, greetings, hobbies, work policy, etc
Staff introduction	Self introduction of key staff, photo, comments, etc
Consumer comments	Consumers comments, etc
Introduction of products and services	Summary of products and services, etc
Benificial information for the consumer	Examples of recipies, etc

As for the approach to building the web site for the North Kazakhstan regional brand, it is necessary to prepare a schedule where the web site can be expanded thoughtfully and as such a period of 1 year would be required.

This time JICA started a regional brand web site but it is desirable that techno park or Government institutions in cooperation with the private sector continue with it. Below is an example of a schedule from start for a period of 6 months.

[41] Reference to Web marketting institute of research Co. Ltd

Example schedule for creation of a regional brand web site[42]

Plan	Contents
Start	Company profile, representatives profile, staff introduction
1st month	Product and service introduction
2nd month	Consumers comments
3rd month	Upload information progressively which is important for the consumer
Between 4th and 6th month	Update and correct product and service introduction

iii) Participation in trade shows

At the time of food seminars, there was a request from local business that antenna shops should be set up. In fact, when introducing regional brand products to other regions, in order to increase the awareness, the setting up of a regular antenna shop is very important. With that, as for the first step in setting up an antenna shop, it was proposed to participate as North Kazakhstan Oblast in "Inter Food" which was held in Astana for 3 days from the 27th of May to the 29th of May 2010.

As for businesses in North Kazakhstan, there are individual companies from the region that have participated in the trade show but there has never been the case of a combined effort from businesses from within North Kazakhstan. At the time of advertising for participant companies, 1 company that deals with dairy products and 1 company that deals in meat products indicated they would participate. As for participation in the trade show, North Kazakhstan Department of Agriculture, Department of New Business and Industry and Techno park were discussing with the two participants from the private sector and carried out preparation for the exhibition.

The trade show "Inter Food", is an international trade show "Food、Drinks、Wrapping for the food industry and equipment" and has been held in Astana since 1999. The promoter is a company called "ITECA", and is also a partner to ITE Group Plc which is an international trade show company with offices in Kazakhstan and central asia. The specific items that are displayed include dairy products, meat products, seafood products, sweets, and bread. Each year about 4,000 visitors attend from various regions of Kazakhstan, Central Asia, Russia and various neighbouring countries.

As for the 2 companies that plan to participate in the trade show, they are both companies that provide produce to the Hyper markets of "Metro" and the Super market chain "Lambs Stall" located in Astana City. Accordingly, a study was carried out as to what the main items displayed are that can be purchased in Astana city by residents of Astana.

This time JICA served as the administrative office, but from now on the administrative functions will be performed by Techno Park in North Kazakhstan and it is recommended that it forms partnerships with private business and work on establishing participants for trade shows. As the participacion fee is very high it is thougt that participation by business is limited. In order to provide the opportunity to participate in the trade shows it is necessary for the State Government to bear some of the cost of booth fee or registration fees in the way of a fixed subsidary etc. Currently, an event participation subsidary program for corporate groups is being looked into by the central government with the purpose of promoting exports. It is recommended that systems of this type are positively put into practice.

[42] Reference to Web marketting institute of research Co. Ltd

＜Column＞Trade show "Inter Food" Results（Period：27th of May ～ 29th of May 2010）

・Location：Astana city "Congress hall"
・Participating companies：70（60% are from Kazakhstan, 30% are from the former CIA block, 10% from others areas）

3 companies from North Kazakhstan exhibited.（2 dairy, 1 meat processing）. Among those, 2 received first prize in the contest "Best exhibition products" and all 3 companies recorded healthy sales from their direct sales. At the same time the seminar "Master Plan Study of Cluster Promotion in Food Processing Industry in North Kazakhstan" by government related staff and private business etc was enthusiastically received by a large number of participants.

As for the specific results of the trade show, the positive attitude of the participating companies was acknowledged, Bank finance was provided, and also due to joint activities outside of the state, solidarity between the participating companies has been developed.

North Kazakhstan exhibition booth


A seminar at a location within the trade show

6.5.2 Policy for future developments

As for the market for dairy products and for processed meat products in Kazakhstan, the market for Russian and other foreign products is increasing. At the same time, there has been an increase in competition between domestic regions and the products of large domestic makers from Kazakhstan have entered regional markets. Even during the 9 months of the research it was confirmed that there was an increase in the space for products of a large maker from Almarty in the shelves of a large supermarket located in central Petropavlovsk.

Among the intensifying competition between domestic and foreign companies, it is clear that the way for local comapnies to survive is through product "differentiation". The provision of products where there is clear discrimination between other products, that is the so called "differentiation" will also become the starting point for a regional brand.

Furthermore, it is necessary to investigate the means where the features of differentiated products are clearly conveyed to the customer. That one thing will be the use of a web site. The quality of the product, concept, production method will be conveyed to the consumer via the web site and being able to "differentiate" will be extremely important. Kazakhstan is a typically vertical society, and a feature is that horizontal conections are very rare. For example, in North kazakhstan because the distribution system is immature, the cost of maintaining a cold storage truck is at the expense of the producer. 1 company that participated in the working group mentioned that "if there was a system of a joint cold storage truck it would be benificial to all companies but there is no opportunity to talk about such things".

Also in other regions, as for one policy which promotes the expansion of overseas sales routes, it would be effective to set up an antenna shop. Even from the side of businesses in North Kazakhstan, there was the opinion that if there was an antenna shop that stocked North Kazakhstan produce it would be efficient distribution and have good results for PR. However, in setting up an antenna shop costs and know how are essential, so in the immediate future it would be recommended to work on grasping the consumer needs and building up management experience by starting from establishing local events in establishe shops and participate in trade shows etc.

With such circumstances, it is thougth that the most suitable leader for the building the regional brand in North Kazakhstan is Techno park. In the case of "Miyazaki brand", at the core was "Miyazaki Brand headquarters", coordination between the producers and consumers was carried out, a coherent strategy from production to sales was built and a regional brand was marketted nationwide. In the same way, as for small and medium sized companies of North Kazakhstan, it is thought that the most appropriate method to implement a regional brand develoment is to receive support from Techno park and regional government institutions at the same time. The mid to long term objectives of regional branding development are organized below. The participating members are assumed to be the working group members that have been developed according to the C/P of the study.

Short term and long term objectives of regional branding construction

	Purpose	Contents	Establishing body
Phase 1 (Initial year)	Establishment of regional brand WG (Particitpation by industry-government -academia)	Commencement of web site	Techno park
		Investigate policy for establishment of regional brands E.g.）Rediscover “resources” in North Kazakhstan and research the production of “differentiation”.	Private business
		Participation in domestic trade shows	Techno park
Phase 2 (2nd and 3rd year)	Expand domestic market for regional brands	Make accredited standards for regional brands	Techno park
		Establishment of regional antenna shops	Techno park
		Participation in domestic trade shows	Techno park
Phase 3 (4th and 5th year)	Expansion into foreign markets for regional brands	Establish an overseas antenna shop	Techno park
		Participation in foreign trade shows	Techno park

7. A proposal in relation to food processing cluster masterplan

7.1 Summary of the masterplan

7.1.1 Policy in relation to the cluster formation

The counterpart (C/P) in North Kazakhstan who is formulating the food processing cluster promotion master plan for this main study, provided independent advice from different perspectives as well as experience to previous study missions. Based on joint work and discussions with C/P, the study team proposed the structure of the master plan and the action plan for feasible cluster promotion policy within the same state but the final masterplan policy was carried out independently by the C/P.

The assumed master plan from this study is to enhance the competitiveness of the food processing sector of North Kazakhstan and with the purpose of invigorating the regional industries, the issues are the implementation of cluster activities that are appropriate to the actual condition of the target region. With the proposed master plan presented by the study team, the assumed structure of the 3 phases for the cluster in North Kazakhstan is noted below.

In the embryonic period, the North Kazakhstan C/P will form the core of the structure of the working group, and it is assumed that raw material suppliers and retail distribution businesses will cooperate with food processing companies. In particular, it is expected that a synergetic effect will be generated by the cluster due to cooperation from meat processors and dairy product processors.

Table 7-1 Schedule for cluster formation[h7]

Phase	Period	Level	Contents of main activities
1	1～3 years	Embryonic period	Systemization, trial and error accompanied by execution of business enterprises
2	3～5 years	Growth period	Define strategies, structural upgrading, expansion of business operations
3	More than 6 years	Stable period	Confirmation of economic effects, contribution to regional development

After this, due to the initial members activities becoming stable, the significance of the cluster activities in the region were confirmed at this level and resulted in the addition of members from regionalindustries including other food processors, tourism operators and the media etc. In addition, activities were starting to take off, and it is expected that economic results will be stable with cluster activities at the regional based level.

Administration and academic institutions are regularly providing support in terms of the system, finance and technology from opinions from the private sector about clusters and at the same time investigating development strategies for the region. Furthemore, as for the stimulus for maintaining continuous activities and the collection of new information it is desierable that cooperative relationships with domestic and foreign institutions are kept.

Indicating such a flow is shown in the following diagram, and it is assumed that entry into a period of stability will occur after 5 years. Also, in order for masterplan implementation, in relation to implementation of the action plan（refer to 5.2）, it is assumed that similar phases will be promoted however the period and schedule will depend on the mechanisms of the various features of the companies and the budget.

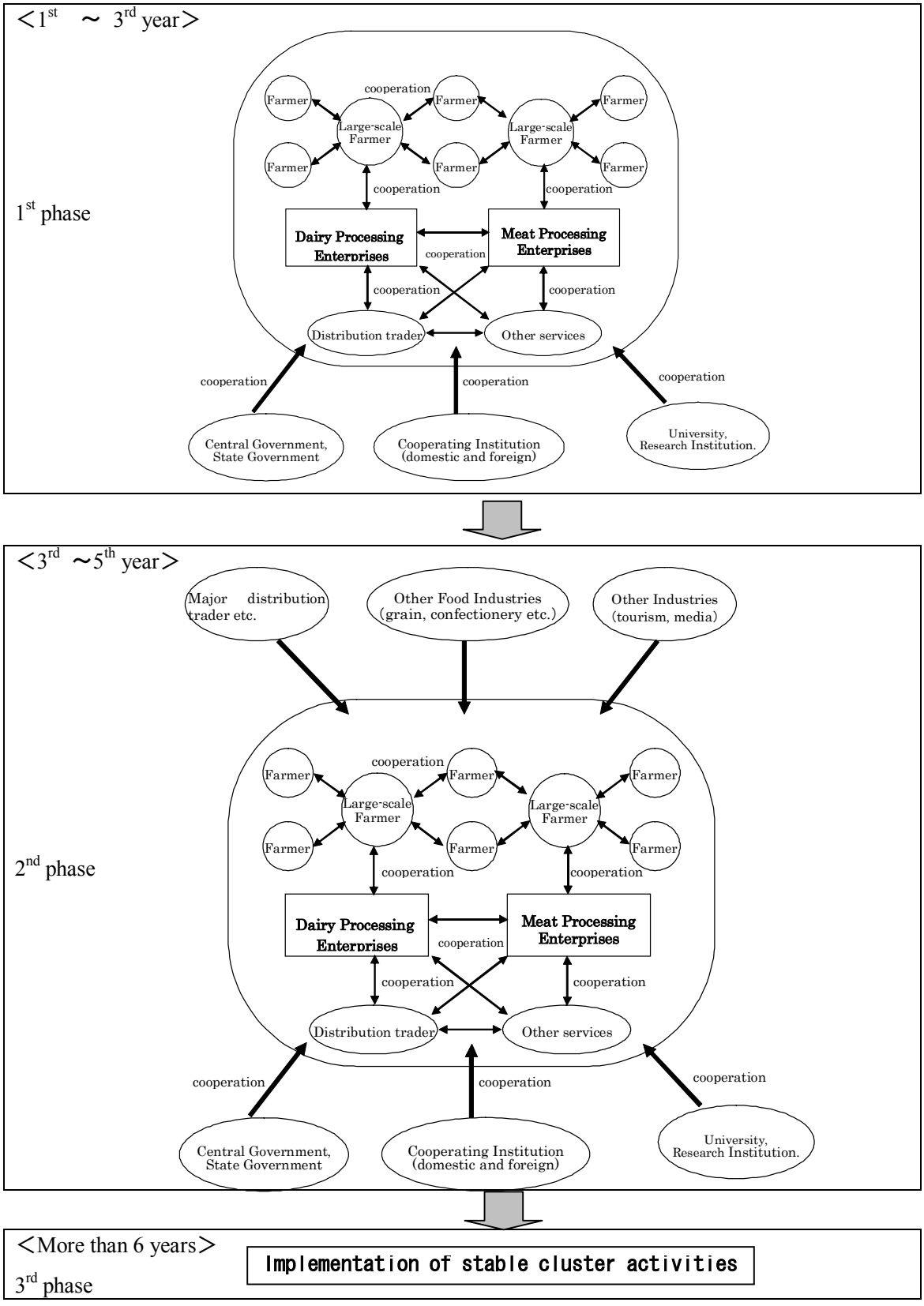


Figure 7-1 North Kazakhstan food cluster formation flow

7.1.2 The purpose of cluster activities

With this main study, the results from the analysis of the food processing sector in North Kazakhstan, as explained in "4.2 Recommendations in relation to food processing industry promotional strategy for the purpose of enhancing competition" it is necessary to enhance competition in the 3 sectors of (1) raw materials, (2) product development and (3) market development. Consequently, the objectives of the food processing cluster activities are the implementation of the enhancement of the competitivness measures for the 3 sectors mentioned above.

Table 7-2 3 strategies for the enhancement of competitivness based on the SWOT analysis[h8]

Sector	Short term strategy	Mid term strategy	Long term strategy
Enhancement of competitiveness in raw materials	Technical guidance for small scale farmers in pilot regions (Fodder planning, farming environment, farming technology etc) Further increase artificial insemination of livestock	Expansion of small scale farming technology in guidance regions. Farming guidance in relation to Holsteins for the purpose of increasing milk production	Establish public markets for livestock (Strengthen price structure functions) Promote the establishment of regional milk collection centers
Enhancement of competitiveness in product development	Investigate the creation of butter and specialty pork sausage brands	Investigate the development of technologies for food packaging etc. (Packing technology is necessary for the purpose of increasing sale routes and storage life)	Investigate the making of new product development support systems (Efforts for improvements in product quality, provision of information relating to food machines, etc)
Enhancement of competitiveness in developing new markets	Market surveys in large cities including Astana and Almaty (Explore future perspective processed food products with a multi faced view point)	Investigate the development of distribution points for distant domestic locations and control strategy for large scale supermarkets, investigate total cost reductions	Strategies for penetration into foreign markets "Investigate support proposals such as Trade barriers and necessary specifications (product specification sheet)"

7.1.3 Implementing body

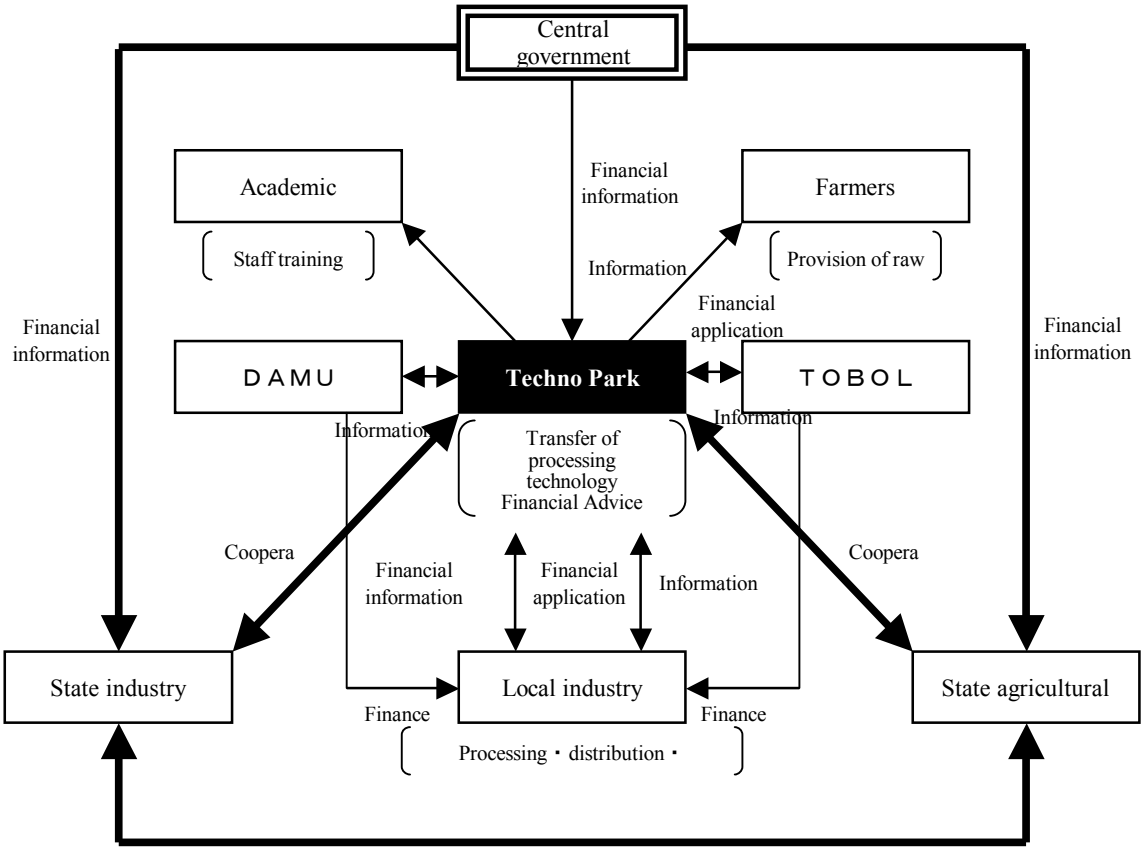
In chapter 6, various recommendations in relation the promotion of the food processing industry were covered, being able to create a synergistic effect for the whole are the features of cluster techniques. When looking at cluster development the most important point is the structure at its core. To set a cluster in motion it is necessary to centralize information, labor and technology into one location, and the desired structure will be able to manage on a neutral and impartial ground with no conflicts of interest.

During the study period various perspectives such as state administrative institutions, private industy, commercial bodies, Universities etc were considered, however considering political orientation of the central government and the establishment purpose, a decision was made where having Techno Park as the central point was the most appropriate.

At the core of the cluster will be「Techno Park」and business development will be possible with the support from the Central Government, North Kazakhstan administrative institutions, academic institutions and Government affiliated financial institutions. Techno Park will

accumulate information obtained from related institutions and will also have the role of distributing this information to private industry and farmers etc. At the time of moving ahead the various programs, as outlined in the next chapter, will need to deal with the activity base and administrative responsibility.

Furthermore, Techno park will assume the responsibility of the administration office for the project "Regional food processing technology centre" for the proposed food processing sector.



Source: Prepared by JICA Study Team

Figure 7-2 Diagram: Techno park being central to North Kazakhstan food processing cluster operations Structure

7.1.4 Core Project : Establishment of Regional Food Processing Technology Center

When the cluster is formed on above mentioned policies, purposes and structure, it is necessary to establish the specific project to enforce the competitiveness for regional small and medium size enterprise. It will make the cluster solidity and serve as the driving force for step-up with the collaboration of involved parties.

The Study Team makes a proposal of the Project on Establishment of Regional Food Processing technology center as core project with collaborative projects. The facility will be established for the purpose of enforcement of SME power related to technical development, management, and market cultivation. Techno Park is an administrative body and it has a one-stop function as organizer, also the base for cluster activities. The plan of the project is explained as follows, and the collaborative projects are described at next section.

Column: Core project, Establishment of Regional Food Processing Technology Center

1. Background

Main industries of North Kazakhstan Oblast are agriculture and livestock and their processing industries, and they play a important role for regional economy. The buying power of consumers is increasing, especially in Petropavlovsk, and sales volume of food is also increasing in the market.
Processed food from foreign counties such as Russia and other states are increasing and competing fiercely with local products by internationalization of food distribution and effects by free trade zone in Kazakhstan. Some food processing companies try to expand their markets such as big domestic market such as Astana and Almaty and overseas markets such as Russia and EU.

Currently the Techno Park is supporting incubation for SMEs in North Kazakhstan Oblast, but it is hard to say that the contribution for enforcement of competitiveness in SMEs is not enough since the functions is very limited for new production development, such as subsidy for inspection fee and market survey. And there is no research institute for food industry development, and not enough system to build competitive brand for regional industry development. It makes the disparity with other states widen, and disadvantage to regional industry in North Kazakhstan Oblast, therefore, it is necessary to have a supporting agency with community base for food industry improvement.

The following table describes main issues for SME in North Kazakhstan Oblast, the solutions will lead to enforcement of competitiveness.

Table Main issues for SMEs in North Kazakhstan Oblast

Area	Main issues	Remarks
Raw material	Unstable quality and supply	Good quality raw material is important for good processing
Product development	Packaging technology and design Product variety	Needs information from the questionnaire in Astana
Market development	No brand products	Need differentiated products
Management	Lack of financial information	Need for financial decision making information

2. Purposes

Small and medium food processing companies can understand the idea and methodology of quality control and market development, and apply them to practical quality improvement and new product development, by introducing the functions of regional food processing technology center.

- Technical support for quality improvement and new products development
- Support for market development through brand development and sales promotion activities
- Cluster development to solve the problems in food processing technology
- Introduction of Kaizen (Improvement) team for quality control and food safety
- Testing and experiments for practical problem-solving in food processing
- Training for human resource development on food processing

3. Basic concept

Regional food processing technology center will provide supporting survices to small and medium size enterprises. The survice providers are research instutites, educational institutes, financial institutions, and private consulting companies, and they provide services at Techno Park or their own sites.

Techno Park is the organization under Department of Entrepreneurship and Industry in North Kazakhstan Oblast, and mainly working as an administrative section. Main technical services by Regional Food Processing Technology Center will be provided by the outsourcing inside or outside Kazakhstan, such as educational /research institutes and private consultants.

The Regional Food Processing Technology Center will be operated by Public-Private-Partnership (PPP) with collaboration of public and private organization, and it contributes the maintenance of optimum size of Techno Park and the promotion of cluster development.

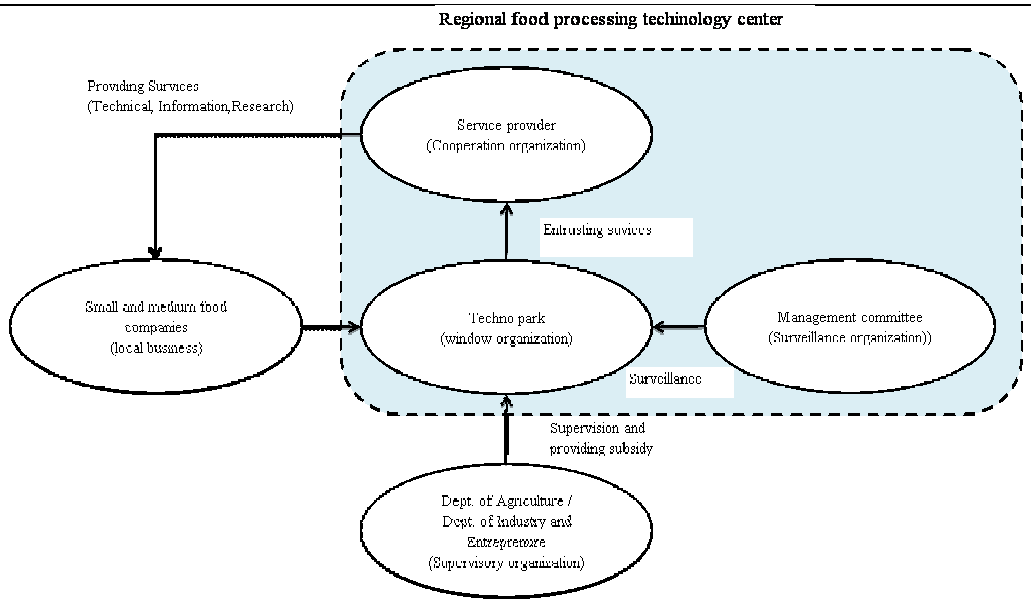
Table Structure of Regional Food Processing Technology Center

Function	Core staff in Techno Park	Service provider	Service space	Remarks
Administration	Director(1), General affairs (2), Accouting(2)	Techno Park	Techno Park	
Technical improvement	2	Research institute Private consultants	Techno Park Research institute	Including packaging technologies
Quality control		Research institute Private consultants	Techno Park, Research institute	
Testing	2	Research institute	Techno Park, Research institute	
Training		Educational institute	Techno Park, Educational institute	
Marketing	2	Private consultants	Techno Park, Shop	Shop for test marketing
Finance		Financial institute	Techno Park	

4. Service providing procedure

Service providing procedure is as follows from Regional Food Processing Technology Center to regional small and medium size food enterprises.

i. SME registers as a member of Regional Food Processing Technology Center, and submit an application for service.
ii. Management committee discusses the application at quarterly meeting, and decide the service provider for each applicant.
iii. Techno Park informs the acceptance of the application to SME.
iv. Techno Park commission the service item to the service provider.
v. The service provider deliveries the requested service to SME.
vi. After finishing service provision, the provider report the result to Techno Park.
vii. Management committee evaluate the result of the service yearly.



Service items are followings;
- Support for improvement of packaging technology
- Support for quality improvement in food facility
- Support for new product development
- Information dissemination about food processing machine
- Human resource development related to food processing technology
- Financial information dissemination
- Marketing support such as brand building, exhibition, web-site building
- Others

5. Beneficiary group

Directly to small and medium size enterprises in North Kazakhstan Oblast
Indirectly to Government of North Kazakhstan Oblast and its instutitions

6. Implementing agencies

- Administrative organization: Techno Park
- Cooperation organizations：Research institutions, Educational institutions, Financial institutions, Private consultants

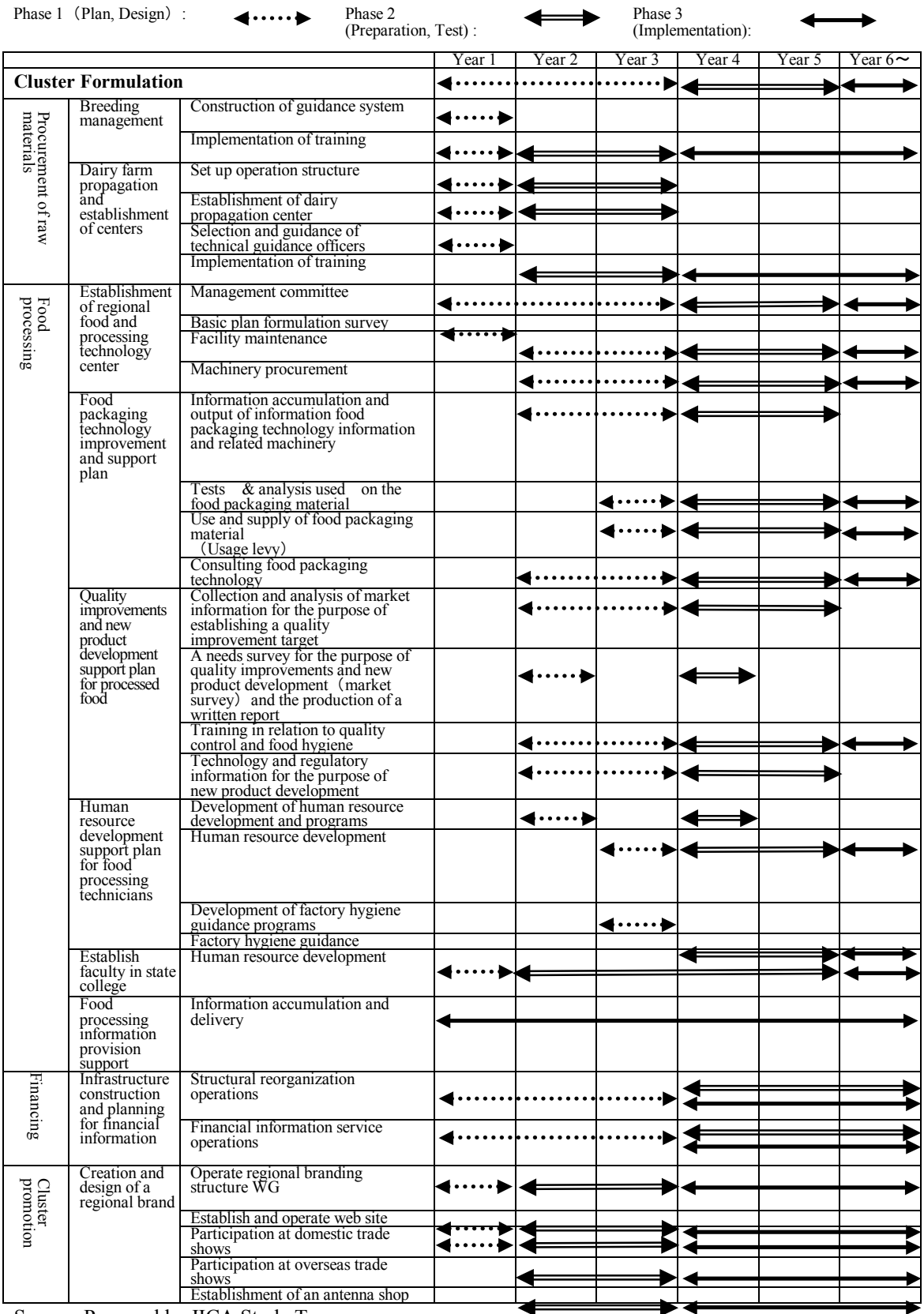
7.1.5 Implementation of the action plan

With this enterprise, in order to implement the enhancement of competitivness of raw materials, the enhancement of competition in product development, the enhancement of competition in market development, (1)Raw material procument sector,(2)Food processing sector, (3) necessary capital procurement and financial information services for enterprises, (4) and the promotion of cluster orientated regional activities are necessary. For that purpose, as proposed in chapter 4 of this report, it is necessary for the implementation of these kinds of enterprises individually. This has been organized as an action plan. These are related to the core businesses ＜Organization of regional food production technology centre＞ as outlined in the previous chapter. The background and results of the various projects are shared with the cluster related participants, in order to bring about a synergetic effect, it was assumed that implementation of the regional food processing technology centre includes many of the related projects.

After the establishment of the regional food processing technology centre, action plans that should be implemented including the implementation of related projects are listed below. In relation to the various schedules which are below, just like the formation of clusters, it is believed that dividing and promoting into 1st phase (Planning & design), 2nd phase (Preparation & testing), 3rd phase (implementation) , but in relation to the expected period, from the various project features, there will be differnces and the implementation possibility should done as needed. Also, the details of the action plan such as main operating body, procedure, roadmap and financial plan, etc have been organized and can be found in 7.2.

Table 7-3 Action Plan List

(1) Procurement of raw materials	Farming management
	Establishment of a Dairy technology dissemination center
(2) Food processing	Establishment of a regional food processing technology center <Regional food processing technology center project>
	Food packaging technology improvement support plan <Regional food processing technology center project>
	Quality improvement and new product development support plan for processed foods <Regional food processing technology center project>
	Human resource development support plan for Food processing technologists <Regional food processing technology center project>
	Establishment of new departments at State Colleges
	Information provision support related to food processing
(3) Capital procurement	Financial information for infrastructure building plan
(4) Cluster promotion	Regional brand building plan <Regional food processing technology center project>



Source: Prepared by JICA Study Team

Figure 7-3 Action plan implementation schedule

7.2 Action plan

7.2.1 Organization of action plan according to issues, strategy, recommendation

Sector	Issue	Strategy※	Recommendation	Action plan in response to the business solution
Raw materials （Livestock）	Technical improvements of rough fodder producers	Ⅰ	In relation to rough fodder production	Farming management
	Lack of technical guidance in dairy sector		Dairy improvements extention activity system Enhance the placement of veterinarians	Farming management
	Contamination of milk			Dairy extention center
	Stable livelihood for full time farmers		Operational improvements for small scale farmers Breeding and reproduction of cattle	Farming management、Dairy extention center
	Product differentiation for pig farmers	Ⅰ,Ⅱ	Production of specialty ham and sausages	Quality improvements and new product development support planning for processed food
Food processing	Labor shortages		Establishment of practical education facilities	Establish a new faculty in the state college
		Ⅱ,Ⅲ	Establishment of regional food processing technology centre	Staff training support（Quality improvements、food safety、management）
	Development of profitable products			Product quality improvements and new product development support plan for processed food
	Packaging improvements			Food packaging technology improvement support plan、human resouece development support
	Lack of Management strategy			Human resource development support、Food processing related information support
Distribution sector	Increasing product value due to distribution			Product quality improvements and new product development plan for processed food
	Lack of sales strategy	Ⅲ	Develop regional brands	Human resource development support、food processing related information provision support
	Lack of information transmission		Develop regional brands	Development of regional brands、food processing related information provision support
Finance	Conditions for fund procurement for business	Ⅰ,Ⅱ,Ⅲ	Finance information service Establishment of regional food technology centre	Infrastructure building for the purpose of analysis reporting for financial information aimed at private companies
	Lack of information re institutional finance			
Cluster policy	Secure constant administration and academic consultation center		Establish a regional food processing technology centre	Establish a regional food processing technology center
	Establish events and education businesses		Establish regional branding	Construction of a regional branding plan
	Establish cooperative structures domestically and overseas		Establishment of a practical training body	Establish a new faculty at a state college

※Ⅰ=Enhancement of competitiveness for raw materials、Ⅱ=Enhancement of competitiveness for product development、Ⅲ=Enhancement of competitiveness for developing new markets

7.2.2 Procurement of raw material

(1) Livestock feeding management

i. Outline

Purpoose	・The number of Holstein is increasing for the purpose of increasing raw milk production. In this connection, it is necessary to urge about introduction of necessary technology concerning Holstein raising management such as reproductive health, feeding management and milk hygiene which are introducing for increasing raw milk production.
Back ground	・In the present, in the North Kazakhstan state, the Holstein species are introducing many in addition to conventional red Kazakh species since the Red Kazakh species is the native cow aiming at meat production, therefore, much milk production can not be expected. However, the Holstein species can produce more milk than the Red Kazakh species, but it is rather delicate species and the adaptability to different environment is by no means high. Therefore when dairy farmer introduces the Holstein species and want to improve the milk production, the re-examination of the whole feeding management must be made. Therefore, it is necessary to urge about introduction concerning technical transfer system.
Organization of operation	・Department of agriculture in North Kazakhstan state ・Raw milk producers
Operation term	・To carry continuously
Activities	・The shortcut of the acquisition about agricultural technology is learning the technology by analyzes an advanced similar management needed from there. Then, each raw milk producer dispatches some technicians to the advanced Holstein farm in north Kazakhstan state, takes a lecture on training, and makes the result reflect in management of the self-dairy farm.
Output	・The raw milk production in the area increases because the producer who has only the breeding management techniques of native cow learns the technology about the Holstein and performs suitable breeding management.
The source of revenue	・Providing by each producers
Issues	・The friendly correspondence is necessary to obtained from the advanced Holstein dairy farm.
The others	

ii. Road map

	Phase1	Phase 2		Phase 3
	1st year	2nd year	3rd year	On and after the 4th
Establishment of training system 〔Exemplary dairy farms〕	Investigation of training system → To request of training acceptance to excellent dairy farms → Establishment of evaluation system			
Technical training 〔Exemplary dairy farms〕	Establishment of bylaws about training → Preparation of curriculums and technical manuals → Training and evaluation 〔In necessary times〕			

iii. Financial Plan （Unit：Tenge）

＜expenditure＞	Phase1	Phase 2		Phase 3
	1st year	2nd year	3rd year	On and after the 4th
The cost of making technical manual	100,000	100,000	100,000	100,000
The amount of expenditure	**100,000**	**100,000**	**100,000**	**100,000**
＜Income＞	Phase1	Phase 2		Phase 3
	1st year	2nd year	3rd year	On and after the 4th
Attending farms	100,000	100,000	100,000	100,000
The amount of income	**100,000**	**100,000**	**100,000**	**100,000**
The balance	**0**	**0**	**0**	**0**

(2) Establishment of dairy extension center

i. Outline

Purpose	・The portion which a small-scale dairy farm contributes about the dairy in a north Kazakhstan state has a very big, and about 70 percent of the present raw milk is come from the small-scale dairy farmer origin of a 2-3 average milking cow. However, these small-scale dairy farms cannot say that they have sufficient dairy technology, but the economical improvement of these farms is very important thing according to analysis in the department of agriculture. Then, establishment of a tentative name "dairy extension center" is proposed as a means to aim at technical improvement of small-scale farm in the area. This center is a demonstration farm equipped with all the necessary conditions about dairy farming as a function, such as pasture, cow barn, raw milk inspecting room, and milk deposit facilities. Any farmers can be learned almost necessary know-how about dairy management by attending the technical training held in this center.
Back ground	・Technical transfer activities had held several times among dairy farmers. In this opportunities, there are many request from those farmers, that is, although the technical transfer activities has been held by the department of agriculture by the time among dairy farmers, it is very much useful if there are opportunities which can receive technical guidance with actually touched livestock etc., it will be effective to understanding about each technology deepens more. This is just same thing which the investigating mission has proposed.
Organization of operation	・Department of agriculture in North Kazakhstan state
Operation term	・To carry continuously
Activities	・Phase1, 1st year ① Selection of instructors ② Selection of the site ③ Preparation of training materials ・Phase 2, 2nd year and 3rd year ① Technical transfer activities to small-scale dairy farmers
Output	・The production of raw milk of the area increases by the small-scale farmers learns sufficient dairy technology.
The source of revenue	・Department of agriculture in North Kazakhstan state and dairy farmers
Issues	・The place of training center is securable where the small-scale farmer gathers easily.
The others	・Although it is a "dairy extension center", it is enough if the place in which the farmers and technicians meet with all the persons concerned and which can perform dairy technical guidance centering on training fundamentally is securable. For example, there are planned of the construction of the dairy housing complex which introduces 2,500 Holstein cows in the state now, it is also a thought to give the function as a "dairy extension center" to the part.

ii. Roadmap

	Phase1	Phase 2		Phase 3
	1st year	2nd year	3rd year	On and after the 4th
Settlement of the administrative structure 〔Department of agriculture〕	Selection of administrators → Establishment of the policy → Steering committee〔twice a year 〕			
Establishment of dairy farming training center 〔department of agriculture〕	Investigation of planning and scheme → Settlement of the area and budget	Establishment of the center	Administration and maintenance	
Selection and upbringing of the instructors 〔department of agriculture〕	Settlement of plan and scheme → Budget secure → Obtain the instructors			
Training 〔department of agriculture〕	Settlement of plan and scheme → Preparation of training manuals → Training			

iii. Financial Plan （Unit：Tenge）

＜expenditure＞	Phase1	Phase 2		Phase 3
	1st year	2nd year	3rd year	On and after the 4th
The cost of making manuals and training materials	100, 000	100, 000	100, 000	100, 000
The cost of office supply	2, 000, 000	100, 000	100, 000	100, 000
The amount of expenditure	**2, 100, 000**	**100, 000**	**100, 000**	**100, 000**
＜Income＞	Phase1	Phase 2		Phase 3
	1st year	2nd year	3rd year	On and after the 4th
The budget from state	2, 100, 000	100, 000	100, 000	100, 000
The amount of income	**2, 100, 000**	**100, 000**	**100, 000**	**100, 000**
The balance	**0**	**0**	**0**	**0**

7.2.3 Food processing area

(1) Establishment of Regional Food Processing Technology Center
i. Outline

Purpose	- Technical support for quality improvement and new product development - Support for market development through brand development and sales promotion - Cluster development for problem solving in food processing technology - Introduction of Kaizen (Improvement) Team for quality control and food safety - Testing and experiment for practical solution in food processing - Training for food processing technology
Background	Currently the Techno Park is supporting incubation for SMEs in North Kazakhstan Oblast, but it is hard to say that the contribution for enforcement of competitiveness in SMEs is not enough since the functions is very limited for new production development, such as subsidy for inspection fee and market survey. And there is no research institute for food industry development, and not enough system to build competitive brand for regional industry development. It makes the disparity with other states widen, and disadvantage to regional industry in North Kazakhstan Oblast, therefore, it is necessary to have a supporting agency with community base for food industry improvement.
Responsible organization	- Administrative organization: Techno Park - Cooperation organizations：Research institutions, Educational institutions, Financial institutions, Private consultants
Execution Period	- Five years
Activities	Phase I（1st year ～ 3rd year） i. Establishment and operation of management committee ii. Basic design study for design of facility, equipment and activities iii. Construction and maintenance of the facility iv. Office rent and equipment procurement v. Execution of action plans by outsourcing Phase II (4th year～5th year） i. Continuous operation of management committee ii. Operation and maintenance of facility and equipment iii. Continuous execution of action plans by outsourcing

	Phase III (6th year or later) i. Continuous operation of management committee ii. Operation and maintenance of facility and equipment iii. Continuous execution of action plans by outsourcing
Expected results	To be able to apply to the diversification of consumer needs To master the methodology to appeal the safety of raw material and final product To design the sellable products with experiments
Budget and financial resource	- Budget for basic design study - Cost for establishment of management committee - Operation and maintenance cost
Necessary issues on the realization	- Formulation of public-private partnership - Collaboration with external experts (food packaging) - Collection of information on advanced example through overseas training
Remarks	

ii. Roadmap

	Phase I			Phase II		Phase III
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Management committee（Ten members from Public and Private sector）〔work with Working group〕	Systematization Policy decision →	Holding in 4 times / year				
Basic design study（Design of facility, equipment and activity, study and reporting, discussion with working group）〔Local consultant〕	Study					
Facility(Five stories): Testing room, Open room for equipment, Training room, Seminar room, Administration room, market, Storage room〔Techno Park〕	Budget →	Construction →	Operation and maintenance			
Equipment（Equipment or machine for packaging and quality control）〔Techno Park〕(Considering the budget for procurement from Grass-roots grant aid scheme）	Budget →	Procurement →	Equipment operation and maintenance			

iii. Financial Plan （Unit：Tenge）

＜Expenditure＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Management committee（Ten members from Public and Private sector）@10,000 x 10 members x 4times/year	400,000	400,000	400,000	400,000	400,000	400,000
Basic design study（Design of facility, equipment and activity by local consultants）@1,000,000 x 6M/M x 3 members）	18,000,000					
Facility construction and maintenance		1,000,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Equipment procurement for packaging and quality control and maintenance		15,000,000	500,000	500,000	500,000	500,000
Rental fee for administrative office（Before using Techno Park own building ）@270,000 x 12	3,240,000	3,240,000				
Office machines such as PC：PC11sets, purchase cost at 1st year (@130,000x11), maintenance cost for 2nd year or later	1,500,000	200,000	200,000	200,000	200,000	200,000
Personnel expenditure（Director 1, Core staff 10）(Including sanitary workers)	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000
Subcontract cost : refer to action plan						
Total Expenditure	**38,140,000**	**1,033,840,000**	**17,100,000**	**17,100,000**	**17,100,000**	**17,100,000**
＜Revenue＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Central Government budget (Project cost)						
For Basic design, and building construction	18,000,000	1,000,000,000				
State budget（Administration、Personnel expense etc.）						
Management Committee	400,000	400,000	400,000	400,000	400,000	400,000
Operation and maintenance for facility			1,000,000	1,000,000	1,000,000	1,000,000
Operation and maintenance for equipment			500,000	500,000	500,000	500,000
Office rental cost	3,240,000	3,240,000				
Office machine cost	1,500,000	200,000	200,000	200,000	200,000	200,000
Personnel expense	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000
Assistance from foreign donors						
Equipment procurement for packaging and quality control		15,000,000				
Total revenue	**38,140,000**	**1,033,840,000**	**17,100,000**	**17,100,000**	**17,100,000**	**17,100,000**
Balance						

(2) Project on improvement of food packaging technology

i. Outline

Purpose	- Information dissemination and support to introduction of new food packaging technology - Support for equipment procurement of food packaging - Support for procurement of food packaging material
Background	- It is difficult to introduce new packaging technology because of high cost of packaging machine and material - It is necessary to improve the packaging technology for expanding shelf-life.
Responsible organization	Head office: Techno Park as
Execution period	From three to five years
Activities	Phase I（1st year） i. Preliminary survey for function and activity plan of Techno Park, ii. Staff training for the operation and maintenance of Techno Park Phase II（2nd and 3rd year） i. Preparation of Facility and equipment for Techno Park (Esp. packaging equipment), ii. Commencement of Packaging machine operation iii. Trail sales in the market of Techno Park Phase III（4th and 5th year） i. Training and consulting for improvement of food packaging, ii. Marketing survey for food packaging, iii. Information of food packaging technology
Expected results	- New products will be developed and sold by introducing food packaging technology - Product development is promoted by enhancement of the consciousness on quality improvement and new product development in SMEs
Budget and financial resource	- Preliminary study on establishment of Techno Park（6M/M）(Mainly food packaging technology) - Cost for facility construction or room rent. - Cost for equipment procurement (esp. packaging machine)
Necessary issues on the realization	- Formulation of public-private partnership - Collaboration with external experts (food packaging) - Collection of information on advanced example through overseas training
Remarks	

ii. Roadmap

	Phase I			Phase II		Phase III
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Information collection and dissemination on food packaging technology and machine 〔Par-time operator〕		Establishment of database →	Input data and information dissemination			
Test and analysis for food packaging 〔Part-time food analyst〕 (Collecting test fee)		Equipment Procurement →	Food packaging test			
Food packaging machine for lending (Collecting lending fee) 〔Open laboratory in Techno Park〕			Machine lending			
Consulting service on food packaging technology 〔On call base outsourcing to private consultant〕 (Collecting consulting fee)		Consulting service				

iii. Financial Plan （Unit：Tenge）

＜Expenditure＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Information collection and dissemination on food packaging technology and machine（Operator）@75,000 x 12month		900,000	900,000	900,000	900,000	
Test and analysis for food packaging （Part-time food analys）@100,000 x 10 month			1,000,000	1,000,000	1,000,000	1,000,000
Consulting service on food packaging technology （Consultant）@100,000 x 5 ヶ月		500,000	500,000	500,000	500,000	500,000
Total expenditure		**1,400,000**	**2,400,000**	**2,400,000**	**2,400,000**	**1,500,000**
＜Revenue＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Central Government budget (Project cost)	-	300,000	300,000	300,000	300,000	-
State budget（Administration、Personnel expense etc.）	-	900,000	400,000	400,000	400,000	-
Assistance from foreign donors	-	-	-	-	-	-
Other revenues （Test fee）@10,000 x 100 item （Open laboratory use charge）@5,000 x 100 / year （Consulting fee）@10,000 x 20 cases		200,000 (200,000)	1,700,000 （1,000,000） （500,000） （200,000）	1,700,000 （1,000,000） （500,000） （200,000）	1,700,000 （1,000,000） （500,000） （200,000）	1,700,000 （1,000,000） （500,000） （200,000）
Total Revenue		**1,400,000**	**2,400,000**	**2,400,000**	**2,400,000**	**1,700,000**
Balance		**0**	**0**	**0**	**0**	**200,000**

(3) Project on support for quality improvement and new product development of processed food

i. Outline

Purpose	- Support to quality improvement and new product development for enforcement of regional food processing industry - To utilize consumer needs and complain to improve quality and new product development.
Background	- It is necessary to collect information and learn some techniques to differentiate the products from foreign and other state products. - It takes time and cost to improve quality and develop new products, because of Government certification system for production and selling.
Responsible organization	・Head office: Techno Park ・Collaboration organization：North Kazakhstan State University、Central Committee of metrology and technical regulation, National Institute of Hygiene and Epidemiology
Execution Period	Three years
Activities	Phase I（1st year） i. To establish quality improvement targets by collection and analysis of market information, ii. Needs survey for quality improvement and new product development, iii. Practical training for quality control and food hygiene Phase II（2nd and 3rd year） i. Research on new and similar products in the market, ii. Training for quality control and food hygiene in the factory, iii. Support for obtaining ISO9001, HACCP
Expected results	- To clarify the methodology to improve the quality and to understand the market needs based on the complain from the market - To improve the quality continuously by enhancement of self-responsible consciousness
Budget and financial resource	・Constant active capital, burden share with private sector
Necessary issues on the realization	- Formulation of public-private partnership - Collaboration with external experts - Collection of information on advanced example through overseas training
Remarks	

ii. Roadmap

	Phase I			Phase II		Phase III
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Collection and analysis of market information to establish quality improvement targets〔Private Consultant〕 Training on collecting marketing information is provided until Phase II, and each SME can collect information voluntary from then on.		Collecting information →	Training for data collection			
Needs survey for quality improvement and new product development, and reporting 〔Private consultant〕		Market survey(1)		Market survey (2)		
Training on quality control and food hygiene 〔Private consultant, Hygiene and epidemiology center, and University〕		Development of training program →	Factory training →	Practical Hygiene training →	Practical Hygiene training →	Consulting on ISO9001, HACCP
Technical and regulatory information for new product development 〔Private consultant/Central committee of metrology and technical regulation〕		Database establishment →	Data input, information dissemination			

iii. Financial Plan （Unit：Tenge）

＜Expenditure＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Collection and analysis of market information to establish quality improvement targets（Operator）@75,000 x 6month		450,000	450,000	450,000	450,000	
Needs survey for quality improvement and new product development, and reporting @1,000,000 x 2M/M x 2members		4,000,000		4,000,000		
Training on quality control and food hygiene @100,000 x 5 month x 2 members		1,000,000	1.000.000	1,000,000	1.000,000	1,000,000
Technical and regulatory information for new product development @100,000 x 12 month		1,200,000	1,200,000	1,200,000	1,200,000	
Total Expenditure		**6,650,000**	**2,650,000**	**6,650,000**	**2,650,000**	**1,000,000**
＜Revenue＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Central Government budget (Project cost)	-	4,000,000		4,000,000		-
State budget（Administration、Personnel expense etc.）	-	1,200,000	1,200,000	1,200,000	1,200,000	-
Assistance from foreign donors	-	-	-	-	-	-
Other revenues （Consulting fee for marketing）@45,000 x 10 companies （Training fee）@100,000 x 10 社		1,450,000 (450,000) (1,000,000)	1,450,000 (450,000) (1,000,000)	1,450,000 (450,000) (1,000,000)	1,450,000 (450,000) (1,000,000)	1,000,000 (1,000,000)
Total revenue		**6,650,000**	**2,650,000**	**6,650,000**	**2,650,000**	**1,000,000**
Balance		**0**	**0**	**0**	**0**	**0**

(4)Supporting human resource development（Quality improvement, Food safety, Management）

i. Outline

Purpose	- Practical training on hygiene control of food processing - Practical training of microbiological testing - Quality control practice in food factory - Management training in food factory
Background	- No practical training educational system - Shortage of trainer for quality improvement
Responsible organization	・Head office ：Techno Park ・Collaboration organization：North Kazakhstan State University, Esil Agricultural Collage, North Kazakhstan State construction and economy collage
Execution period	Three to Five years
Activities	Phase I（1st year） i. Creation of training program (Microbiological testing, quality control), ii. Training of trainer, iii. Preparation of instruction manual for hygiene and quality control Phase II（2nd and 3rd year） i. Training implementation and its evaluation, ii. Factory hygiene control instruction and its evaluation Phase III（4th and 5th year） i. Revision of training program, ii. Revision of factory hygiene and quality control manual
Expected results	Improvement of awareness on food quality and safety
Budget and financial resource	・Constant active capital, burden share with private sector
Necessary issues on the realization	- Formulation of public-private partnership - Collaboration with external experts (food packaging) - Collection of information on advanced example through overseas training
Remarks	

・Constant a

ii. Roadmap

	Phase Ⅰ			Phase Ⅱ		Phase Ⅲ
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Development of training program 〔Private consultant / University〕		Commission of training program		Revision of training program		
Implementation of training program （Basic / Applied course for microbiological testing, and quality control） 〔Private consultant/ Hygiene and epidemiology center/University〕			Implementation of training （Four times / year）			
Development of factory hygiene control training program 〔Private consultant〕			Commission of hygiene training program			
Implementation of factory hygiene control training 〔Private consultant〕				Implementation of hygiene training program in factory		

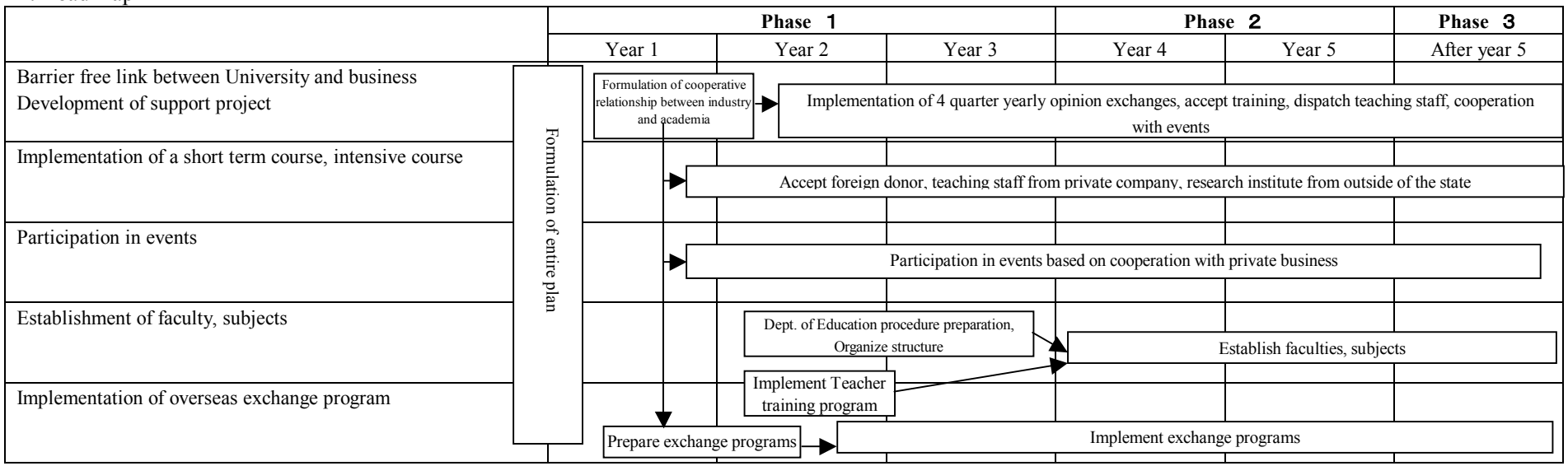
iii. Financial Plan （Unit：Tenge）

＜Expenditure＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Development of training program Development @1,000,000 x 2M/M x 2member Revision @1,000,000 x 1M/M x 2member		4,000,000		2,000,000		
Implementation of training （Basic/Applied course for microbiological testing, and quality control） (Trainer) @100,000 x 2 x 4times			800,000	800,000	800, 000	800, 000
Development of factory hygiene training program @1,000,000 x 2M/M x 2members			4,000,000			
Implementation of factory hygiene training Auditor @100,000 x 6M/M x 2members				1,200,000	1, 200, 000	1, 200, 000
Total expenditure	**0**	**4,000,000**	**4,800,000**	**4,000,000**	**2, 000, 000**	**2, 000, 000**
＜Revenue＞	**Phase I**			**Phase II**		**Phase III**
	1st year	2nd year	3rd year	4th year	5th year	6th year or later
Central Government budget (Project cost)	-	2,000,000	2,000,000	2,000,000		-
State budget（Administration、Personnel expense etc.）	-	2,000,000	2,000,000			-
Assistance from foreign donors	-	-	-	-	-	-
Other revenues （Training fee）@8,000 x 100 名 （Audit fee）@100,000 x 12 社			800,000 (800,000)	2,000,000 (800,000) (1,200,000)	2, 000, 000 (800, 000) (1, 200, 000)	2, 000, 000 (800, 000) (1, 200, 000)
Total revenue		**4,000,000**	**4,800,000**	**4,000,000**	**2, 000, 000**	**2, 000, 000**
Balance		**0**	**0**	**0**	**0**	**0**

(5)Setting up a faculty in the state college
i. Outline

Purpose	・Ongoing education for staff that have practical know-how in accordance with the business needs of the region
Background	・Up until now the the education style has been classroom focused and specialist study is quiet segmented. ・In small and medium sized companies, many specialists have a grasp of a wide range of various fields, but people that can practically handle situations are in demand. ・Not only in domestic North Kazakhstan, there are very few case studies of education of practical food processing nationwide. ・With cluster promotion it is necessary for participation of young energetic people. ・There are examples in Japan where University and high school students and staff cooperate with local businesses and contribute to the regions economic development through the development of new products and brand construction etc.
Implementing body	・North Kazakhstan State Construction・Economic college and local business
Implementing perion	・The preparation period will be between 3 to 5 years
Activity details	・Step 1：□ Barrier free link between University and business、□ implementation of short term courses and intensive courses ・Step 2：□ Development of support businesses,□ participation in events ・Step 3：□ Establishment of faculty and subjects,□ commence overseas exchange □ At the time of moving to the next step, completion of the previous step is not necessary, rather continuing with it and implementation of a schedule that adds the next step to the project.
Expected results	・Securing staff for the regional food processing industry ・Increasing the knowledge of students and staff, in particular practical knowledge ・Activation of cluster activities
Project budget	・School fees, personal financial resources（contributions and project income）, government support ・Anticipation of support from international institutions in relation to dispatch of teaching staff and exchange programs
Issues in relation to implementation	・Acknowledgement from Ministry of Education, Culture, Sport, Science and Technology ・Coordination with related businesses（unity of consciousness） ・Secure personal financial resources（contributions and project income）
Other special instructions	Carry ouy sale of local products and food that is produced as part of the lesson and participation in events. Pass on benefits from the sales to University activity expenses.

ii. Road map


Phase 1
Phase 2
Phase 3
Year 1
Year 2
Year 3
Year 4
Year 5
After year 5
Barrier free link between University and business Development of support project
Implementation of a short term course, intensive course
Participation in events
Establishment of faculty, subjects
Implementation of overseas exchange program
Formulation of entire plan
Formulation of cooperative relationship between industry and academia
Implementation of 4 quarter yearly opinion exchanges, accept training, dispatch teaching staff, cooperation with events
Accept foreign donor, teaching staff from private company, research institute from outside of the state
Participation in events based on cooperation with private business
Dept. of Education procedure preparation, Organize structure
Establish faculties, subjects
Implement Teacher training program
Prepare exchange programs
Implement exchange programs

iii. Financial plan（Unit：Tenge）

＜Expenditure＞	**Phase 1**			**Phase 2**		**Phase 3**
	Year 1	Year 2	Year 3	Year 4	Year 5	After year 6
Barrier free link between University and business Develop support business	□	□	□	□	□	□
Implement short term courses, intensive courses（**Donor capital, Implement private business volunteers**）		□	□	□	□	□
Participation in events(exchange fees, participation fees, etc)□1	50,000	150,000	150,000	250,000	250,000	250,000
Establish faculty, subjects**(Establish as part of University operations)**	□	□	□	□	□	
Establish overseas exchange programs（**Implement with the cooperation of an overseas donor**）		□	□	□	□	□
Total expenditure	50,000	100,000	100,000	100,000	100,000	100,000
＜Financial resources（Income）＞	**Phase 1**			**Phase 2**		**Phase 3**
	Year 1	Year 2	Year 3	Year 4	Year 5	After year 6
University accounting（Subsidaries, school fees, etc）	Staff costs and activity fees have been posted as University activity expenses					
Support from overseas donors etc	Project expense burden					
Private sector capital（Event cooperation fee） 50,000 per company ×（1st year 1 company、2nd～3rd year 3 companies、From 4th year 5 companies） Income from events□	50,000	150,000 70,000	150,000 100,000	250,000 150,000	250,000 200,000	250,000 300,000
Total income	**50,000**	**220,000**	**250,000**	**400,000**	**450,000**	**550,000**
Differene in income and expenditure		**70,000**	**100,000**	**150,000**	**200,000**	**300,000**

□1：Inspection visit and corporate support only in initial year.

□2：Sales from the 3 day event called‘2010 inter food Astana’were between 1,500,000,000 ～3,000,000,000 tenge per stall、sales are expected to increase due to experience and improvements in quality each year

(6) Support on information dissemination of food processing technology

i. Outline

Purpose	- Information dissemination of food processing machine - Information dissemination of food safety regulation - Information dissemination of new food processing technology
Background	- Not enough information on food processing machine procurement - Need to meet the requirements in the food regulations of imported countries - Necessary to collect new technology information for new product development and quality improvement
Responsible organization	・Head office ：Techno Park ・Collaboration organization：Central committee of metrology and technical regulations
Execution Period	Three years
Activities	Phase I（1st year） i. Establishment of database for food processing manufacturers from website and maintenance (Russian version) ii. Establishment of database for food regulations; EU , US etc. Phase II（2nd and 3rd year） Revision of above database
Expected results	- To confirm latest version of food machinery and regulations - To select the processing machine with high cost/performance
Budget and financial resource	- Cost for database development - Cost for data imput
Necessary issues on the realization	- Formulation of public-private partnership - Collection of information on advanced example through overseas training
Remarks	This project is easily implemented as daily operation, so roadmap and financial plan are omitted.

7.2.4 Financial information service

(1) The Plan for organizing the Infrastructure for the analysis and communication of the Financial Information to the private companies of Northern Kazakhstan

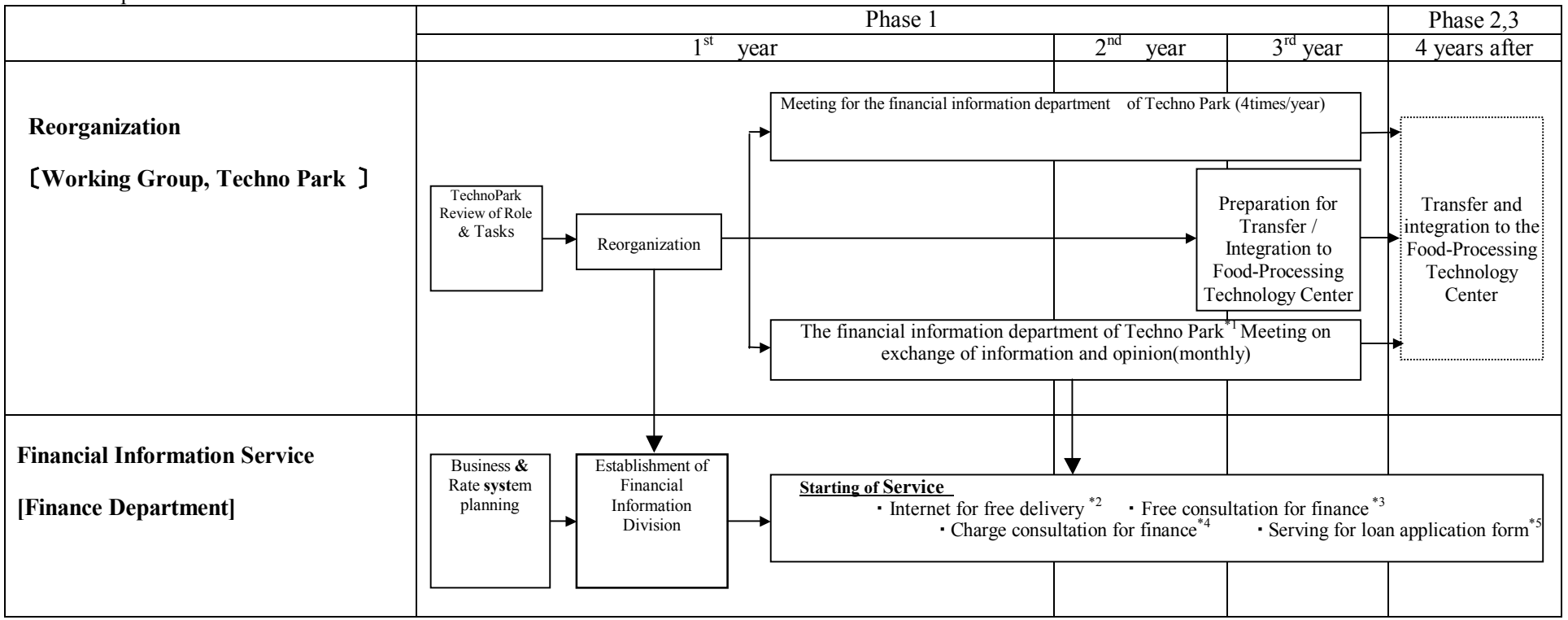
i. Outline

The Purpose	For realization of an effective funding mechanism both by public and private financial organizations ・Collection and analysis of information on financial programs for small and medium entrepreneurs business and after analyzing, delivery of the result as [the information for the entrepreneurs]. ・Carrying out [Understanding the actual conditions of entrepreneurs of small and medium enterprises] and [Understanding the actual conditions of the financial demand], delivery of the result [the information for the financial organizations]. ・As the third party, deliver the information individually both to the financial organizations and the entrepreneurs. ・In order to formulate [the appropriate package of loan scheme], carried out [deliver the information simultaneously both to the financial organizations and the entrepreneurs].
The Background	・The person concerned with DAMU and/or TOBOL as the public financial organizations seeking the comprehensive information on the financial demand of the private sectors. ・The Commercial Banks as the private financial organizations try to secure the new potential customers for the excellent loan schemes through participation in the operation for the public funding. ・The entrepreneurs demanding funding are experiencing problems, i.e. required fund is not available on time 1.The entrepreneurs demanding funding do not have access to sufficient and appropriate financial information or a portfolio of the available financial products and do not fully understand them for deciding on an optimal financial program to meet their own financial needs. 2.The entrepreneurs may have incorrect funding because of the lack of the appropriate information. ・The output analysis from the appropriate analysis on the financial programs should be given to the entrepreneurs. Such feedback is necessary to promote the cluster development. ・To match the financial demand and supply is really necessary to promote the cluster development. In order to promote the effective matching of available funding and the demand requirements, ideally there should be a third party between the financial organizations as suppliers and the entrepreneurs as end users to ensure full transparency of any arrangements offered. The third party will also assist in analyzing the necessary information, which is delivered both to each sector.
The Organization in charge	・The Third Party as mentioned above, i.e. in “The Purpose”, “The Back Ground”, “Techno Park (to promote the partnership with KazAgro Marketing, tentatively ” of the Department of Entrepreneurship under the Provincial Government is appointed as the Organization in charge
The Period	・3 years

The Activity	<u>The First Phase (The 1st year – The 2nd year)</u> (The 1st year) • Restructuring "Techno Park" (Department of Entrepreneurship) to establish "Financial Information" Division (Tentative naming). • The Financial Information is provided from Financial Suppliers, i.e. DAMU and TOBOL as Public Financial Organizations and Commercial Banks. • "Financial Information Division" (Tentative naming) organizes "The Workshop for Exchange of Views" every month with Financial Suppliers, i.e. DAMU and TOBOL as Public Financial Organizations and Commercial Banks. "Financial Information Division" (Tentative naming) is to obtain "the Needs" from Financial End User and "the Seeds" from Financial Suppliers. "Financial Information Division" (Tentative naming) is to analyze the information provided from the Financial Suppliers and the "The Workshop for Exchange of Views". The Output from the monthly analysis and the information on the Financial Products are to be announced on the Internet for the general public. The Information is to be updated monthly. • Staff from "Techno Park" are to be placed in "Financial Information Division" (Tentative naming). The staff are to be " Financial Officers" trained through OJT by Technical Assistance from Donors and the in house training scheme. (The 2nd year) 1. "Financial Officers" selected from "Techno Park" are trained through OJT by Technical Assistance from Donors and the in house training scheme continuously from the 1st year. 2. "Financial Officers" placed in "Financial Information Division" (Tentative naming) are to provide "Financial Consultation" for the entrepreneurs demanding funding where this service is provided free of charge. The output from the consultation is to be submitted to general public with agreement from those providing responses (data and information related to their operation) where this will be provided free of charge. As the pilot case, there is another "Financial Consultation for Funding Purposes" in public. Where this service is requested there is a charge of US$10 per questionnaire (request). 3. "Case Studies" on financial products of "The Financial Organizations" are conducted for the practical consultation and advice for entrepreneurs demanding "Funding Schemes" where these will be used to introduce optimum Financial Schemes. If "Funding Schemes" are materialized, a contingent fee is paid from the customers (approx. 1% of the funding amount). (The 3rd year) 1. To continue to carry on "Free Consultation" by "Financial Officers" placed in "Financial Information Division" (Tentative naming). The output from the consultation is to be submitted to general public with agreement from those being questioned where this is provided free of charge. 2. "Financial Consultation for Funding Purposes" started in the 2nd year is to be implemented as the regular routine business by

	"Techno Park" and available to the general public. Where this service is requested there is an increased charge of US$30 per questionnaire (request). 3. Entrepreneurs demanding "Funding Schemes" order the "Financial Information Division" (Tentative naming) to provide a Case Study/s to introduce and analyze "Financial Products" of the "Financial Organizations" as "Financial Suppliers" for advising "Optimum Financial Schemes" for Entrepreneurs. If "Funding Schemes" are materialized a contingent fee is paid from the customers (approx. 2% of the funding amount). (After the 4th year) ① When "Food Processing Center" is established, the functions of "Financial Information Division" (Tentative naming) of Techno Park will be consolidated into "Food Processing Center"..
Expected Result and Effect	・Promotion of Cluster Development for Food Processing Industry through the optimum fund distribution, i.e. Funding , by Public Finance for Entrepreneurs in North Kazakhstan
Financial Resources & Budget	・Regular Fund: Budget from the Local Government of North Kazakhstan, Income from Entrepreneurs and Financial Organizations ・Irregular Fund: Budget from the Central Government
Required Solution for Realisation	・Restructuring of "Techno Park" ① Identification of the role and business Definition of the job description ② Restructuring the organization to set up "Financial Information Division" ・Training for "Financial Officers" through Technical Assistance by Donors and/or In House Training Course
Other Special Arrangements	・The Consolidation of the Function with "Financial Information Division (Tentative naming)"of Techno Park will be at the time of the Establishment of "Food Processing Center"

ii. Road map



*1 DAMU・TOBOL・KazAgro Marketing
*2 Measures for getting new clients.
*3 Measures for getting new charge clients or clients who need the new loan application service.
*4 Measures for getting clients who need the loan application service.
*5 The main source of income

iii. Financial Plan （Unit：Tenge）

Expenditure	Phase 1			Phase 2,3		
	Year-1	Year-2	Year-3	Year-4	Year-5	After year-6
Internet Service including O & M (if support by own maintenance : free of charge) Year-1 ： 300,000 + 50,000×12months After year-2 ： 50,000×12months	900,000	600,000	600,000	600,000	600,000	600,000
Training Fee for Financial Course (if support by donors: free of charge) year-1 ： 25,000×12months year-2 ： 25,000×6months	300,000	150,000				
Total Expenditure	1,200,000	750,000	600,000	600,000	600,000	600,000
Revenue	Phase 1			Phase 2,3		
	Year-1	Year-2	Year-3	Year-4	Year-5	After year-6
Budget of Techno Park for the establishment of " Financial Information Division"	1,000,000					
Financial Consultation Year-2 ： Fee @1500/result （2/month,24/year） After year-3 ： Fee @4,500 （2/month,24/year）	-	36,000	108,000	108,000	108,000	108,000
Business Planning, Loan Application Year-1 ： Fee @30,000 (1/ month , 12 /year) After year-2 ： Fee @30,00 （2/month,24/year）	360,000	720,000	720,000	720,000	720,000	720,000
Total Revenue	1,360,000	756,000	828,000	828,000	828,000	828,000
Balance	160,000	6,000	228,000	228,000	228,000	228,000

7.2.5 Cluster promotion

(1)Development plan for North Kazakhstan regional brand

i. Outline

Purpose	・With the utilization of regional resources and the provision of products and services that match the needs of the consumer, the aim is to enhance the competitiveness of the entire region by being able to differentiate between domestic and foreign products.
Background	・In the processed meat market and the dairy product market of North Kazakhstan, not only has the competition between regions for domestic products heated up, but there has been an increase in the distribution routes for imported products, in particular from Russia. ・It needs to work in your favour when introducing dairy products and processed meat products from North Kazakhstan to overseas markets.
Implementing body	・North Kazakhstan cluster development working group ・Administration office：Techno park
Implementing period	・Completed in 5 years. It will continue after that.
Activity details	・Phase 1（Initial year） □ Establish concept of regional brand □ Set up Web site □ Participation in domestic trade shows ・Phase 2（2nd and 3rd year） □ Development of regional branding accreditation standards □ Participation in domestic and overseas tradeshows □Preparation for the Astana Antenna shop（A sales store in a supermarket etc） ・Phase 4（After 4th and 5th year） □ Investigate and establish a structure for internet sales □Participation in domestic and overseas tradeshows □Set up and operate an antenna shop
Expected results and advantages	・Enhance the regional and international competitiveness of processed meat products and dairy products from North Kazakhstan ・An increase in tourists born from the synergetic effect of tourism etc
Project budget and financial resources	・Constant funding for activities：The burden of private industry ・Expenses for various events：Apply to the federal budget（exhibition etc）
Issue with implementation	・Develop a continuous cooperative structure between Industry, Administration and Academia ・Work together with outside domestic and foreign specialists ・accumulate information about advanced case studies through foreign research projects
Other special instructions	－

ii. Road map

	Phase 1	Phase 2		Phase 3	
	Year 1	Year 2	Year 3	Year 4	After year 5
Operation of regional brand development WG 〔Techno park、Private industry、Administrative institutions〕	Establishment of WG, Establish concept of regional brand →	Implementation of 4 quarter yearly opinion meetings, accept training (Regional branding accreditation standards policy & confirmation			
Set up and operation of Website 〔Techno park〕	Production of sample web, Organization of structure, Decide on skeleton design etc→Open site →	Update, maintenance（as required）		Update, Maintenance (as required), Investigate net sales structure etc →	Start of net sales
Participation in domestic tradeshows 〔Techno park〕	Participation in domestic trade shows				
Participation in oveseas tradeshows 〔Techno park〕		Participation in overseas tradeshows			
Setting up of antenna shop 〔Techno park〕		Test projects（Supemarket sales shop） Development of operation plan →		Set up of Antenna shop →	Antenna shop operation

iii. Financial plan（Unit：Tenge）

＜Expenditure＞	Phase 1	Phase 2		Phase 3	
	Year 1	Year 2	Year 3	Year 4	After year 5
Establish WG（Techno park） 150,000 / month × 1 person × 12 months	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
Set up and operation of Website（Techno park） 150,000 / month × 1 person × 12 months	80,000 1,800,000	17,000 1,800,000	17,000 1,800,000	17,000 1,800,000	17,000 1,800,000
Participation fee in domestic trade shows（Techno park） 150,000 / month × person 1 × 2 months	480,000 300,000	480,000 300,000	480,000 300,000	480,000 300,000	480,000 300,000
Participation fee in international trade shows（Techno park） 150,000 / month × 1 person × 2 months				480,000 300,000	480,000 300,000
Rent for Astana antenna shop 100 ㎡/year（Techno park） 150,000 / month × 1 person × 1 month（Presentation type for shop in supermarket） 150,000 / month × 1 person × 12 months		150,000	150,000	8,100,000 1,800,000	8,100,000 1,800,000
Total expenditure	**4,460,000**	**4,547,000**	**4,547,000**	**15,077,000**	**15,077,000**
＜Financial resources（Income）＞	Phase 1	Phase 2		Phase 3	
	Year 1	Year 2	Year 3	Year 4	After year 5
State budget（Management、labour costs）	**4,220,000**	**4,307,000**	**4,307,000**	**10,547,000**	**10,547,000**
Corporate burden（Domestic trade show）（50%）	240,000	240,000	240,000	240,000	240,000
Corporate burden（Overseas trade show）（50%）				240,000	240,000
Corporate burden（Antenna shop rental）（50%）				4,050,000	4,050,000
Total income	**4,460,000**	**4,547,000**	**4,547,000**	**15,077,000**	**15,077,000**
Difference in income and expenditure	**0**	**0**	**0**	**0**	**0**

8. Moving towards master plan implementation

8.1 Implementation activities for advanced technology and the results of the model project

The implementation of the model project and implementation activities for advanced technology with the purpose of technology transfer to the C/P occurred simultaneously as analysis of current condition and issues as well as concrete measure and policy recommendations for the main study. In relation to the implementation activities for advanced technology, the introduction of technology from Japan into Universities and Technical Colleges, the introduction of hygiene management in the food processing industry and technical guidance for raw material producers (farmers) was carried out. Also, the model project was conducted with the cooperation of government institutions and companies which are members of the W/G which set up the local brand Web-site, participated in the Astana food trade show, and held the opinion exchange with different business types (Technology seminar).

As for the results of these activities, concrete results were shown even though the survey period was short. As for the study teams model, in dairy farms that received technical guidance, they were able to reduce by half within 1 week the number of bacteria that developed in fresh milk. Even in the food processing industry where hygiene implementation was carried out, changes were seen in the management methods of the facilties.

As for the model business, through participation in the Food trade show in Asatana, confirmation of merits of cooperation between local industries were seen and there is a plan to carry out activities which will centre on local industry.

Also, through the opinion exchange, there was a proposal for problems that were shared by participating industries from the W/G to be resolved as a group.

Following is an evaluation from a participant in relation to the final defriefing session. 「It goes with out saying that the Master plan was a success, but the greatest support was the change in consciousness of the participants.」 The change in consciousness of the participating industries also had a favourable effect on the evaluation from finance institutions. An example was seen where a credit provision that had been put on hold was adopted.

At the time when this study commenced, the study team thought that the largest obstacle would be the change in consciousness of the participating industries. However at the completion stage of the joint work which was about 6 months, it was proven that overcoming those obstacles would be possible.

8.2 Performance target of the master plan

As for the performance target of the master plan the following is assumed.

①The Regional administrative bodies（Department of Agriculture, Department of New Industry and Entrepreneurship） will formulate measures and policy (Master plan) for the purpose of regional activation based on information from cluster members and related structures from the private sector and with submissions to the central government it will be possible to acquire grant funding directed at private industry.

②Local research and educational institutions can carry out technical development based on necessary technology and information needs in regional activation and private industry support capacities will be enhanced.

③The final objectives are the enhancement in the competativeness of the local private sector as welll as the increase in exports to regional countries and the increase in domestic market share.

The final objectives of the cluster promotion in North Kazakhstan is the enhancement of competitivness of small and medium sized business in the area and with that implementation the most important component is the core operation「Local food processing technology centre」of the master plan. Looking at the functions on the technology side of the centre, there will be the provision of services such as technical support, support for staff training, provision of information (including financial information) and the catalyst for the cluster structure in the region is the dual function of the cooperation from government bodies and the collaboration with the private sector.

However, with the establishment of the [Regional food processing technology centre] there will be competition in the economic environment and other regions and in the instance that it is not established in North Kazakhstan, or even if there are instances where there are some functions of the implementation that are impossible, it is important to establish the above performance target, build a cooperative structure between the local industry, government and academia, and to continue the cluster activities.

More often than not Industrial clusters are compared to a [bunch of grapes]. That is, even if one of the grapes becomes rotten and disappears, should the remaining bunch be in a healthy state, then there is no change in the value of the bunch. Similarly, it is not necessarily the case that if part of the action plan for the proposded master plan can not be implemented then there is no significant change to the independent food processing cluster in North Kazakhstan.

With this master plan, 10 action plans have been proposed and the procedures for the implementation have been displayed by the road map moving towards implementation. However, according to the economic conditions of the participants, the acquisition of the budjet and the social environment, should there be an issue with the implementation, it is thought that the implementation may be possible earlier than originally scheduled. Also, in relatin to Techno Park which is assumed to be one of the implementing bodies, currently the institutional reforms by the govermnet are still in progress and the viability is also unclear. In such circumstances, it is not the complete execution of the initial plan, through trial and error it is necessary to obtain the understanding from all the related parties in moving in the direction of performance targets by means of a flexible response.

8.3 The issues of implementation of the master plan

There are 4 factors that are necessary for the implementation of a master plan and they are「capital」,「technology」,「man power」and 「structure」. In relation to capital, Kazakhstan government have sufficient budget for the implementation of the proposed budget. This has been confirmed from the cooperation between the private sector and government in the final briefing.

In Kazakhstan, in order to implement the main proposals the specialists that have technology and knowledge are being trained. However, a leader has not been groomed who can generally dispurse staff and technology of a high level in order to carry out cluster activities in the region. Also, for this project, a working group of industry, government and acadamia has been put in place in North Kazakhstan, and have been able to confirm the results similar to the above while working with the study team. The leader of the W/G has announced that the structure will continue in the future, and with the lack of stimulus from external sources such as this study team, many examples have been seen domestically in Japan where the cluster activities stop to function. Should these types of activities stagnate, there is a strong possibility that change in consciousness of the region planted during the period of the study will revert to the former state of affairs.

Accordingly, as for the issues of future master plan implementation, the two points which come into focus are ① the training of people who will become regional leaders,② creation of a mechanism which gives periodic stimulus to the activities structure. As for North

Kazakhstan, it will be necessary to obtain cooperation from both domestic and foreign specialized institutions and overcome these issues. For example, as for the support from internal and external specialized institutions and donors, it would appear that training which includes facilitation of the dispatch of training specialists, food processing specialists and staff training as well as field surveys both external and internal and the dispatch of specialists related to the improvement of food quality.

8.4 Other things to keep in mind

It is necessary for the various participating members to keep in mind the following points for implementation of this master plan at the same time as trying to have countermeasures to issues similar to those above.

(1) The aim of expansion due to the constant exchange with those from different sectors

With this study, the team has proposed a plan that builds a regional cluster with dairy products and meat processing sectors at its core. However, clusters fundamentally have knowledge and experience from different industries, for the purpose of taking advantage of the characteristics that provide a synergetic effect while using the network it is necessary to investigate the structure which guides those peripheral companies into the cluster. For example, it can be effective in order to make a regional brand through efficient distribution and product development with the cooperation from the grain production sector which the main industry in North Kazakhstan from which powder, pasta & macaroni and sweets etc are derived from. From this early stage, it is extremely important for the transmission of information and regular opinion exchanges between businesses from different sectors.

(2)Eliminating sectionalism

The entire Kazakhstan consciousness of bureaucratic sectionalism administration is a feature of the former communist block and still remains. With the younger generation in the cities, changes are visible, however in North Kazakhstan and in particular the regional areas this consciousness is felt strongly. Within changing market environments, new information and technology reflect the mechanisms of economic activities and it is important to make quick decisions, however, sectionalism will obstruct this. It is necessary to create an environment where candid opinion exchanges can be carried out between businesses from different sectors, together with differing government bodies and experts.

(3) The movement away from a top down system to a free and lively new entrepreneurial one

While carrying out this study, there was a request from a member of the North Kazakhstan side as follows「Please tell us to do something, we are good at following instructions」. This is an effect of social change from the former Soviet Union, with changes to the political and economical environment, enterprise and the region need to establish their own strategy, and it is necessary to be aware of the progression of business with individual ideas. Even looking at policies such as “Business Road Map 2020”, the Government has to strongly hammer out an approach which supports the project with a planned and strong entrepreneurial spirit. Former passive business practices are not desirable for future development.

9. Concluding Remarks

This study was based on the request from the state of North Kazakhstan and was implemented according to an agreement with Japan International Cooperation Agency（JICA）. The 3 features of purpose, structure and timing for this study are mentioned below.

- A trial promoting the cooperation between Industry・Administration・Academia where there have been only a few successful case studies to date in the former socialist country.
- The party concerned from the Kazakhstan side was not the Government but rather from the regional Government offices.
- The timing was right as there were dramatic changes in the economic environment in Kazakhstan

This study was not related to industry promotion in general, rather the enhancement of competitivness of regional industry based on cluster promotion. In other words, it is not industry promotion based on Governments national strategy but where related organizations such as Industry・Administration・Academia put their heads together while cooperating and utilize the regions resources to develop the regions economy.

While working on this study, it has been understood that there has been a feeling of confusion about changes in recent years to the mutual stance and role of Private industry, Adinistration and Universities in the region.

「The time is over where private industry acts from the commands of administration.」

This is a comment from a regional Government administrator at the time of preparing for an event in the region. This was looked upon by the Government administrator as something unfortunate. However, this shows the transfer from an environment of a socialist structure where the power and authority was concentrated in Government to where the economy is in the hands of the private sector. The economic system is gradually changing.

The research team with this study, proposed “the establishment of a regional food processing technology centre”. The implementation requires construction with Government money and policy, but it is essential to have economic sense and ideas which will come from private industry and will provide effective management. In other words, centre management will rely on PPP（Public Private Partnership）. For that purpose, both the private and public sectors need to be fully aware of their respective roles and it is necessary to be conscious of those tasks that each will carry out themselves. Even in North Kazakhstan, both the public and private sectors have experienced changes to the economic system, eventhough it is in a period of transition, the private sector will show initiative and the groundwork for the introduction of the PPP methods which the Government will support have been set in motion.

This study was implemented based on the request from North Kazakhstan. For that purpose, as it is also reported in this report, it is the point of view that rather than the Central Government, it will be the regional Government that will need to do something. However, at this study level, authority and resources of the regional Government are limited, and it is felt that it is difficut for it to serve as the driving force for the propulsion of various projects. However, in 2010 the 「business road map 2020」 was announced as the representative and most current economic policy and the roles of the central Government and the regional administrative agencies were made clear and it was decided to move the authority and the budget to the region. At the same time, apart from commencing the exchange of administrative officials between the central Government and the regional Government, the regional promotion structure which was under nation control was trasnfered to the jurisdiction of the regional Government and the transfer of technology and know-how was also progressing. Should these policies sink, it is possible to

expand the role of the state Government in regional promotion and perform the central role of the regional masterplan promotion.

Also, this study was implemented under dramatic changes to the economic environment of Kazakhstan. The effects of the world recession in September 2008 had a big effect on the finances of both the Government and the region and there was an attempt to create a new economic region with surrounding countries with Russia at its centre and also included Kazakhstan. With the effects of the recession the budget of the regional administration was scaled down and business trips and office expenses were reduced. At the same time, private sector sales compared to that of a few years ago were also on a downward spiral and there were also debt ridden businesses that had invested in infrastructure implemented during the boom times.

At the same time, Kazakhstan, Russia and Belarus formulated a customs tarrif union from the 1st of January 2010 and indicated a desire to develop a new economic region with neighbouring former CIS countries. With the signing of the customs tarrif union an integrated tarrif rate for participating countries was applicable from January 2010 and 90% of items were matched to Russian customs duty. From July of the same year tarrif inspections at the border of Russia and Belarus stopped and 1 year later they will be stopped between Russia and Kazakhstan. During the study period this effect was also apparent in North Kazakhstan. Apart from the increase in purchases of local real estate by Russian capital there has also been a trend where Russian companies will seek to transfer imported car parts purchased in North Kazakhstan once the tarrifs have been removed. The import tarrifs in Kazakhstan at the present stage are less than they are in Russia and hence they can be purchased cheaper. Also, with the food processing industry, there are examples where local companies are having difficult in the procurement of raw materials as Russian companies have purchased Kazakhstan materials in bulk as there will be no tarrifs after July.

In this kind of situation, the Kazakhstan Government carries out bail-out measures for companies with operational problems due to the recession, and in order for Kazakhstan companies to survive in the new economic region they are developing a policy aimed at enhancing corporate competitiveness. In particular, the small and medium sized companies which are the target of this study, the food production industry became the target of Governmet support, and it is possible to develop and reconstruct the regional economy thorough clever activation of the Central Government budget and a new system. The issue is whether the region is able to carriy out independent business promotion.

With this main study one of the purposes is the creation of new economic activity for the region. For that purpose, the study team has carried out surveys and activities together with various Industry, Government and Academia. The activities of the study team were smooth and effective and were supported by the Government with a limited budgets and staff. Even private industry which was a little paranoid at the beginning understood that the activities of the study team had an effect on the regions economy and on the operations of their own companies and in the second half participated proactively in the project. As the study period was over winter the temperatures in North Kazakhstan reached minus 40 degrees but with the advice and cooperation of the local members the study teams activities were able to proceed as initially planned. Finally, as a conclusion to this report we would like to express our gratitude to all that cooperated. Furthermore, with reference to the activities of the main report and the study team, we expect related parties with their own opinion to cultivate the cluster and develop the regional economy of Northern Kazakhstan.