

<CASE>

TAEWON AGRICULTURAL PRODUCTS CO., LTD

—The canned mushroom enterprise in Korea—

Sang Lak Oh

I. Mushroom Industry and Situation of International Market

1. Mushroom industry

According to written material, mushroom raising as an industry was started in around 17th century with France taking a lead in this field.

In the beginning of the 19th century, the business of mushroom growing spread to other European countries such as Belgium and Germany and finally ended up in almost every nation of the world.

The mushroom has been popular in the European nations as well as in the United States as a food with a characteristic flavor. It has gradually been accepted as a generally enjoyable food but somewhat expensive. As standards of living improve, we can safely predict that demand will increase and that lower prices will follow.

(1) West Germany

As the best market for mushroom products in the world, West Germany has seen the demand for this product continue to increase. Today, it is thus changed from a highly expensive food to one available at popular prices.

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Champignons/Canned Mushrooms Imports to Western Germany

Exported by	1964		1966		1968	
	Quantity (M/T)	Amount (in thousand DM)	Quantity (M/T)	Amount (in thousand DM)	Quantity (M/T)	Amount (in thousand DM)
Free China	13,732	40,866	15,425	59,987		67,961
France	12,412	19,149	5,330	23,721		45,181
Netherland	19,915	19,343	2,472	10,020		
America	18,583	29,504	117	487		
Denmark	17,842	25,214	73	312		
Spain	4,859	8,249	6	22		
Canada	7,161	5,804	29	82		
Japan	1,938	5,008	257	1,239		
Korea	—	—	113	443		
Others	—	—	—	—		
Total	140,735	188,440 (42,107)	23,843	96,416 (24,324)		137,843 (34,460)

※The figure in bracket is in thousand U.S. dollars

Champignons/Canned Mushrooms

Imports to Western Germany from January to December 1969

Exported by	Quantities (tons)	Std.cartons	Percentage	Amount (US-\$)	Percentage	US-\$(Per carton)
France	14,946.50	934,156	33.09	14,480,495	35.07	15.50
Netherlands	11,516.90	719,806	25.50	10,863,461	26.31	15.01
Belgium/ Luxemburg	242.30	14,144	0.54	204,670	0.50	13.51
Italy	4.60	287	0.01	3,571	0.01	—
Common Market Total	26,710.30	1,668,393	59.14	25,552,197	61.89	15.31
Taiwan	16,917.20	1,057,325	37.45	14,594,505	35.34	13.80
Japan	1,032.50	64,531	2.29	701,923	1.70	10.88
Korea	393.10	24,569	0.87	349,725	0.85	14.23
Denmark	88.30	5,519	0.19	66,758	0.16	12.10
Others	29.70	1,856	0.06	27,473	0.06	—
Third Countries Total	13,460.80	1,153,800	40.86	15,740,384	38.11	13.64
Grand Total	45,171.10	2,823,193	100.00	41,292,581	100.00	—

※ 1 Std-carton calculated basis 16,—kos net weight (24 tins of 660g net)

(Source of material: Wachmuth & Krogmann, Hamburg.)

Champignons/Canned Mushrooms
Imports to Western Germany from January to November 1970

Exported by	Quantities (tons)	Std. cartons	Percentage	Amount (US-\$)	Percentage	US-\$ (per carton)
Netherlands	15,729	983,063	30.65	16,490,659	31.09	16.77
France	14,485.10	905,318	28.22	15,306,043	28.86	16.91
Belgium/ Luxemburg	1,218.80	76,175	2.37	1,166,483	2.20	15.31
Italy	317.50	19,844	0.62	325,824	0.61	16.42
Common Market Total	31,750.40	1,984,400	61.86	33,289,009	62.76	16.78
Taiwan	16,214.20	1,013,380	31.59	16,369,780	30.86	16.15
Japan	1,780.30	111,268	3.48	1,663,736	3.14	14.95
Korea	1,412.10	88,256	2.76	1,532,692	2.89	17.37
U.S.A.	84.20	5,262	0.16	104,945	0.20	
Denmark	38.70	2,418	0.07	31,318	0.07	
Hongkong	17.20	1,075	0.03	17,308	0.03	
Ecuador	16.70	1,043	0.03	18,956	0.04	
Others	11.70	730	0.02	12,361	0.02	
Third Countries Total	19,575.10	1,223,431	38.14	19,751,096	37.24	
Grand Total	51,325.50	3,207,831	100.00	53,040,105	100.00	

※ 1 Std-carton calculated basis 16, -kos net weight (24 tins of 660g net)
(Source of material: Wachsmuth & Krogmann, Hamburg.)

In 1961, fifty seven percent of West Germany's imports was from France, while 27 percent was imported from the Republic of China. However, in 1966, China became a nation with the largest volume of exports to West Germany, supplying 65 percent of her total imports. France supplied only 22 percent.

Free China's endeavors not only to improve the quality of the product but to lower its price helped in increasing her exports to West Germany. The rapid increase in China's exports also was attributed to decreased exports by both the United States and Denmark because of increased domestic demand.

However, it is interesting to note that the share of market by China in West Germany has been reduced compared with that of France due to the

removal of tariffs in European Economic Community areas and, the lowering of prices by GECA, a unified export organization in France.

(2) The United States of America

In the United States, almost half of the demand for mushroom has been met by their own production. However, indications are that the volume of imports are on the rise since its demand as an instant food in America is increasing, although various elements such as shortages in manpower and rising labor costs are making it difficult to expand its cultivation.

Import of Canned Mushroom by America Quantity: in thousand pounds
Amount: in thousand US-\$

Nation	1 9 6 5		1 9 6 7	
	Quantities	Amounts	Quantities	Amounts
China (Taiwan)	11,570	5,845	16,609	9,176
France	1,064	846	604	510
Japan	353	247	565	351
Switzerland	36	57	25	37
Italy	30	27	38	43
Korea	—	—	58	33
Others	155	94	157	127
Total	13,208	7,116	18,056	10,277

(Source of material: US Imports for Consumption 1965, 1967)

(3) Republic of China as the biggest mushroom exporting country

Taiwan began processing mushrooms as a means of improving their rate of operation for the pineapple plant which has been one of the traditional industries of Free China. They succeeded in raising mushroom for the first time in 1958 owing to cooperation between Taiwan Agricultural Experiment Station, Joint Commission on Rural Reconstruction, and the Farmers' Association.

In the same year, 68 boxes of mushroom were exported to the United States bringing an increase in China's exports to US \$ 32,651,000 in 1967. This amounted to a 5% of US \$ 669,000,000 of the Taiwan exports.

To cope with a rapid increase in demand for the mushroom abroad, Free China expanded their scale of production sharply from 195,000 pyung (58.5 acres) in 1960 to 3,130,000 pyung (939 acres) in 1966. At the same time the quantity of the production increased from 3,120 M/T to 39,500 M/T during the period.

Mushroom Production in the Republic of China

Year	Growing areas (in thousand pyung)	Production (M/T)	Raw materials (M/T)	Quantity (cases)
1959-60	45.0	720	126	5,968
1960-61	195.0	3,120(16.00)	2,660	139,339
1961-62	980.0	15,680(16.00)	12,069	635,204
1962-63	2,419.5	38,639(15.97)	29,445	1,549,647
1963-64	1,799.5	22,718(12.62)	18,981	998,975
1964-65	2,572.9	32,429(12.60)	29,753	1,638,437
1965-66	3,130.0	39,500(12.62)	35,266	1,873,629
1966-67	3,580.0	53,700	45,700	2,516,567
1967-68	3,715.0	55,700	45,600	2,503,163

※ The figure in bracket shows the quantity (kg) harvested per pyung (6 square feet=0.0003 acre)

This remarkable increase in mushroom exports in the Republic of China suggests a good deal of governmental support for the project. It is interesting to note that the weather in Taiwan is not altogether suitable for growing mushroom. The growing period is restricted to the period from September to April.

Main governmental supporting activities are as follows;

a) Agriculture and Forestry Department has organized a production guiding committee to direct cultivation techniques. The costs incurred in this undertaking are assumed by the Foreign Exchange Trade Screening Committee.

b) A strict system of growing mushroom based on mutual contracts between processors and farmers is insisted upon by the Government.

c) Production volume has been controlled on the basis of the preceding year's exports, and by quality standard that have resulted in the protection

of producer's interest.

d) The popularity of mushrooms among buyers has been developed through quality control which included adherence to standard and strict inspection from production through to end including the shipping point.

e) These matters came under the direction of a unified export corporation which was formed in October, 1963.

f) The Taiwan Mushroom Packers United Export Corporation (TMPUEC) was commissioned to carry out all the exports on the basis of uniform prices. In the course of doing this, they contributed a great deal to raising export prices.

Exports of Canned Mushroom to the United States and West Germany by Republic of China (in thousand US dollars)

Nation \ Year	1963	1964	1965	1966	1967
West Germany	8,100	9,287	11,185	12,700	15,290
America	5,952	3,924	6,269	7,842	9,939
Total	16,218	15,817	20,803	25,251	32,621

(Source of material: Foreign Trade Quarterly, October, 1968)

II. Taewon Agricultural Products Co., Ltd

1. Background of establishing mushroom enterprises in Korea

It was in 1955 when we got the first mushroom germ-seed and tried raising it in Korea. Mr. Chou, director of Forestry Laboratory in Kyunggi Province, carried out an experiment to find out the possibility of making it an enterprise. Nevertheless, it provided momentum to turn our attention to mass-producing mushroom in the nation. Following that, there was a period of inactivity for three or four years. Mr. Chang in the city of Taegu, in the southern part of Korea, tried another experiment using Japanese-type cultivation methods. A member organizations then tried out mushroom growing in various parts of the country.

The germ-seed and its raising method were patterned after that of Japan. A down-to-earth enterprising try in growing mushroom was carried out in 1963. In 1964, Umsung Industrial Company, the first of its kind for processing mushroom in Korea, was set up. Technicians from Taiwan were invited to help in the raising and processing of mushrooms. They succeeded in exporting them.

The number of farmer households who took part in this project was 123 in Umsung-gun of Chungchung Province where the Umsung Industrial Company was located. This was a real start. As a result, quite a number of enterprises joined in this business. In 1965, the growing area increased to 33,201 pyung (9.96 acres) and exports to US \$15,617.

This explosive rising of interest in mushroom cultivation in Korea was attributed to the fact that export prospects seemed to be bright. In addition, it may be said that this phenomenon was influenced by a national encouragement to increase exports.

With mushrooms becoming an important export item, the Government gave support to the experiment of mushroom growing by making a presidential decree. Japanese specialists were then invited to give technical advice. In the following year of 1967, an American expert was invited to conduct a feasibility study on the mushroom industry in Korea.

Governmental support was given beginning in 1966 in the form of financial aid to cover the costs of building growing houses and facilities for the cultivation of breeding seed, improving techniques, and for research into the competitiveness of the industry in foreign markets. The results of this study stimulated interest in this field among individuals and enterprises.

First, the weather of Korea is ideal for growing mushrooms. The temperature most suitable for it ranges from 8°C to 27°C. For this reason, it is possible to raise mushroom in the spring and again in the autumn thus providing two crops a year without making it necessary to adjust tempera-

tures and humidity.

Secondly, materials for mushroom seedbed such as rice straw and barley straw are easily acquired in Korea. After harvest, these materials are put in a state of fermenting compost and are also helpful in the growing of other agricultural crops. As our saying goes, this means two birds with one stone for the farmer.

Thirdly, the span of time required for raising mushroom is short. In other words, if materials for seedbed are piled up and germinated for a period of a month, mushrooms begin to sprout and can be harvested in 5 or 7 days. This enables small-time businessmen to engage in this business and the turn of the capital is faster than in the other crops.

Since mushrooms enjoy an intermediate temperature, effort must be made to maintain this level at all times. Furthermore, it requires a seedbed growing which in turn calls for a method of personal care because of its weakness to humidity. In this light, we can say that a nation like Korea provides an ideal place for growing mushroom, particularly since labor costs are not high.

The humidity of mushroom is more than 90 per cent. It discolors when exposed to the air. Since it is so perishable that careful construction of the mushroom processing plant is a prerequisite. Moreover, if we take into consideration the fact that we grow mushroom only for export to foreign countries with no domestic demand at all, it is clear that we have to give special attention to the problem of protecting the interests of mushroom producers as well as processors.

With this in mind, the results of the study and research could be taken as an indication that farmers and processors alike must cultivate mushroom on the basis of a mutual contract that assures product quality and adequate quantities for profitable business. Also, it recommended that direct growing

of mushroom by processors should be approved by the Ministry of Agriculture and Forestry.

2. Establishment of Taewon Agricultural Products Co., Ltd

It was in 1965 when Taewon Foundation showed their interest in the mushroom industry. The reason was that Mr. C.S. Kim, who was chairman of the board of directors to Taewon Foundation and later became a congressman, had a cherished desire to accomplish regional development of his own home town by introducing an enterprise. He believed that mushroom growing would be not only an industry of bright prospect but an ideal one to achieve his goal. Before he started the project he checked into the possibility in securing land needed for growing mushroom. It turned out that public land could be leased on the condition that it be purchased when the business was developed. It seemed to him this was very encouraging in that an excessive investment at the time of inception could be avoided. Much depended, of course, on cooperation of Administration which already had a goal of introducing industrial facilities to their district. Other favorable conditions which included suitable underground water stands at 9°C, an abundant work force, temperatures ranging from 13°C to 15°C, which is ideal for growing in spring and autumn, and general conditions of humidity ideal for mushroom growing.

The Taewon Foundation formed the Taewon Agricultural Products Co., Ltd. in January, 1966 which was to be responsible for growing and processing mushrooms. It was capitalized at 25,000,000 won (US \$1 is equivalent to 271 won at that time). A mushroom growing house and a processing plant were built in compliance with the project plan. Mr. J. H. Lee, a retired army colonel, was appointed president. He was a very aggressive and challenging man who was willing to learn and gain experience on all techniques of mushroom growing.

3. Project plan

The content of the project plan was made by Mr. J.H. Lee, and Mr. C.W. Doo, ex-professor of College of Agriculture and standing director in charge of production:

(1) Production under the system of unified working processes consisted of piling up compost for cultivation, simplified ways of processing mushroom, and indoor facilities for growing, which were unique in Korea.

(2) Facility planning

The areas needed for growing house and processing plant—4,318 pyung (1.2954 acres) were divided into the following:

a) 1,882 pyung of compost fermenting house (2 wards, one story on the ground)

b) 2,000 pyung of mushroom growing house (2 wards underground..... shelfe-style, 7 stages-total pyung of spaces used for cultivation was 10,000)

c) Processing plant—200 pyung

Capacity of the plant—500 cases in 8 hours.

d) Management building—236 pyung (one story underground and one story on the ground)—containing boilers for low and high pressure, electric facility, pump, and filtering facility.

e) Machine facility

1. 2 sets of boilers

2. 24 sets of air regulating facilities.

3. A can processing facility with the capacity of 500 cases in 8 hours.

(3) Cultivation, Producing and Processing Plan.

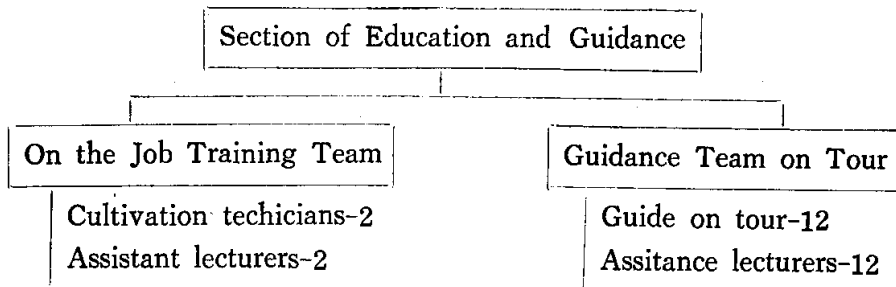
(4) Education and training was carried out by having cultivation technicians and lecturers make tours to growing areas where they gave assistance

to farmers on contract.

Plan for Mushroom Growing and Processing

	1966	1967			1968		
		Growing by company	Growing by farmers	Total	Growing by company	Growing by farmers	Total
Mushroom production		900M/T (10,000 pyung x 3 times x 30 kg)	937.5M/T (50,000 pyung x 15kg)	1,837.5 M/T	900 M/T (10,000 pyung x 3 times x 30 kg)	2,250M/T (120,000 pyung x 3 times x 15 kg)	3,150 M/T
Mushroom processing	16,000 cases			98,000 cases			168,000 cases

1 case (48/8 oz)



In selecting lecturers' team, difficulties arose in finding people with enough experience in mushroom raising. In this context, technical consultants were appointed from their respective professional fields to train specialists who used teaching aids prepared by themselves.

Appointees and Their Experiences

In charge of	Experience	Name
Production	Professor of Agricultural College of Tongguk University	C.W. Doo
Compost	Professor of Agricultural College, Koryo University, Ph. D.	J.H. Choi
Germ-seed	Director of Institute of Agricultural Experiment	K.J. Ku
Disease and insects	Dean of Chungnam Agricultural College, Ph. D.	Y.W. Jin
Processing	Professor of Seoul Agricultural College, Ph. D.	S.O. Sung
Growing	Professor of Chungbuk Agricultural College	M.I. Ma

(5) Financial plan

Capital Financing Plan

	Amount of Capital needed	Loans expected	Self-capital
Capital for Fixed Assets	120,000,000	78,000,000	42,000,000
Working Capital	36,021,000	20,000,000	16,021,000
Total	156,021,000	98,000,000	58,021,000

At the time of legal registration as a corporation, Taewon company had capital of 25,000,000 won. An increase of capital to 58,000,000 won in 1966 was contemplated.

As shown in the table above, borrowed capital surpassed that of their own. This was possible because Taewon Foundation had four subsidiary companies under its control with capability of mobilizing quite an amount of capital if needed. After the first year in business, they planned to reduce the ratio of capital borrowed in the form of capital increasement.

4. Project achievement

(1) Change of plan

The first thing Taewon Company did after its activation was to conduct the training of contract farmers in techniques of mushroom growing. In the meantime, they started constructing their own growing houses and processing plants. They were advised in drawing up plans by Japanese technicians and Canadian specialist, and 12 other scholars whose expertness was sought by the Ministry of Agriculture and Forestry. Their advice was that a mushroom growing house of 2,000 pyung should be changed into many small scale houses to minimize the effects of diseases and insects. This advice disappointed management because it meant a total change of their original plan. In consequence, after engineering reappraisal, the following changes were made:

a) Two wards of growing house of 1,000 pyung each were changed into six on the basis of the most optimum scale in terms of growing management.

b) The originally planned growing-beds with 7 stages were changed into 6 stages for the reasons of operational conditional conditions. The result was a reduction in total spaces for growing from 10,000 pyung (3 acres) to 6,420 pyung. Due to the changes on the original plan and necessary engineering reexamination, construction was delayed.

To make the matter worse, construction was suspended time and again because of unavoidable contingencies. Finally it managed to come to completion in July 1967, seven months behind schedule. Furthermore, education and training projects were also delayed. Work on the mushroom growing houses was belatedly completed in May 1967. As a result, there was no production at all during 1966.

Three crops were actually tried from March 1967. In the meantime, they were confronted with difficulties in the process of experimental growing. An air washer was supposed to be used for adjusting temperature and ventilation for underground mushroom cultivation; however an error in calculation caused the air washer to malfunction.

To compound the problems, a high-pressure boiler used as an energy-resource for maintaining a suitable temperature in the mushroom growing

Content and Scale of the Additional Investments Required

Facilities	Contents	Amount (capital)
1. Mushroom growing house	Change on plan for mushroom growing house supplements of facilities and new installations	56,191,759
2. Air washer & boiler		2,482,633
3. Facilities for cold-storage	New installation of cold-storage for 3 crops a year	58,023,333
4. New installation of other facilities and its supplements		35,664,175
5. New installation of on-the-ground growing house		81,928,883
6. Total		234,290,783

house was not working properly. All of these retarded mushroom growing during the summer of 1968. About 50,000,000 won worth of cold-storage facilities were also required which called for a substantial increase in additional investment

The investments mounted up to 234,290,783 won and could increase to more than 300,000,000 won including interest and depreciation.

(2) Production

a) Growing by company

The decreased production, brought by reasons already mentioned, caused an increase in production cost which emphasized the need for additional expenditure and facilities.

Mushroom Growing Areas and Production by Year (raised underground)

Year	1 9 6 7			1 9 6 8			
	Spring	Autumn	Total	Spring	Summer	Autumn	Total
Growing areas (pyung)	5,400	5,400	10,800	5,400	2,700	5,400	13,500
Crops per pyung (kg)	2.86	22.5		24.7	35.39	26.59	
Quantity harvested (kg)	44,600	121,500	116,100	133,362	95,294	143,573	372,229

Analysis on Income and Loss of Mushroom Production
(raised underground by season, 1969)

Seasons	Break-even point per pyung	Production per pyung	Shortage	Production cost per kg (in won)
Spring	49.05kg	24.7kg	24.35kg	162.88
Summer	66.67	35.39	31.28	154.86
Autumn	56.21	26.59	29.62	173.36
Average	55.45	28.86	26.59	164.90

Seasons	Buying-price from contract farmers	Differentials	Gross income	Production cost	Loss
Spring	82	80.88	10,935,684	21,722,283	10,786,599
Summer	82	72.26	7,814,108	14,757,112	6,943,004
Autumn	82	91.63	11,772,826	24,890,053	13,117,227
Average	82	82.90	30,522,778 (Total)	61,379,448 (Total)	30,856,670 (Total)

Unprofitability of mushroom growing "underground" by Taewon Company compelled the firm to give up their growing in 1968. As a substitute, they tried mushroom growing "on the ground" and built an on-the-ground growing house in December 1968, cultivation began in the spring of 1969.

Production (raised on the ground)		Analysis on the Growing (on the Ground)		
Year	1969 (Spring)	Income	Production cost	Loss
Growing area	4,230 pyung	8,938,000	11,867,986	2,929,986
Crops per pyung	25.73 kg			
Quantity harvested	108,837 kg			

b) Cultivation based on contract

In order to assure securing raw material from farmers on contracts, Taewon Company invested a good deal in their education and training.

Amount Spent for Training

Year	Cost of Training
1 9 6 7	1,206,258
1 9 6 8	3,457,585

The break down of the cost of training made in comparison with actual production costs shows that 30 won was used per kg in 1967, while 14 won was spent in 1968. Continued training, it was thought, might not be necessary if there was sufficient concentration on the education phases in the earlier part of project. Despite their plan to secure 40,000 pyung by forming mushroom growing groups during 1969, production in the spring did not improve over 1968. This may have been partly due to the farmer's low morale caused by the delay in repayment of 82 won per kg for which the company contracted with the farmers.

Production raised on contract

Year	1967	1968	1969 (Spring)
Growing area (pyung)	12,705	12,360	9,462
Crops per pyung (kg)	3.3	19.7	19.3
Quantity harvested (kg)	41,338	243,110	183,100
Quantity purchased by Taewon (kg)		145,636 (59.9%)	124,400 (67.9%)

(3) Processing

As mentioned earlier, mushroom production remained far below the quantity envisioned in their plan. And still the mushroom produced by farmers on contract was not purchased 100 per cent by the Taewon Company. There might be many reasons for this, but to cite a few, it could be said that:

a) Delivery from growing site to processing plant was slow.

b) The farmers' worry and complaint over delays in the repayment resulted in the flow of their products being directed into local markets. Under these circumstances, the rate of operation in the processing plant was greatly lowered and an increase in the cost of production resulted.

Processing Achievement

	Raw material available to process	Raw material processed	Rate of processing
1967			
Growing by company	166,100		
Growing by farmers	41,338		
Total	207,438	165,227	79.7%
1968			
Growing by company	372,229	362,257	97.3%
Growing by farmers	243,110	145,636	59.9%
Total	615,339	526,271	85.5%
1969			
Growing by company	109,000	108,890	100%
Growing by farmers	183,100	124,400	67.9%
Total	292,000	233,290	79.9%

Comparison of Plant Capacity and Actual Operation

Year	1967	1968	1969
Capacity (%)	2,700	4,050	1,350
Quantity of raw material processed (%)	165	526	233
Rate of operation	6.0%	13%	17%

Remarks: (1) basic number of days of operation in 1967-150 days

(2) basic number of days of operation in 1968-225 days

(3) basic number of days of operation in 1969-75 days

(4) Sales

From the beginning, Taewon endeavored to exploit and locate foreign

buyers who would import their products since their original project plan called for total exports of the mushroom. Because of low production, however, the company mainly depended on consignment export through either Japanese or American firms in Seoul.

In 1969, the company managed to sign an export contract with one of the leading American importers in the amount of US \$ 1,000,000 per year; and further, they tried to make a contract for an agent with leading firms in Canada and Europe.

Export from Taewon Company

Year	Exports (US \$)
1 9 6 6	—
1 9 6 7	43,814
1 9 6 8	174,510
1 9 6 9	205,309

The high cost of production caused by trials and errors by the Taewon Company brought about a great deal of loss on the part of the company. The accumulation of these losses as times went by threatened the halt of enterprising activity.

Amounts Exported Compared with Total Cost

(Unit: in won)

Year	Total cost of production	Amounts exported	Loss
1 9 6 6	893,170	—	893,170
1 9 6 7	79,884,898	17,436,351	62,448,547
1 9 6 8	120,774,605	37,907,030	82,867,575

In this light, Taewon was forced out of business in the spring crop of 1969. Failures of the company in the business of mushroom growing disappointed agricultural officials since it represented, not only bankruptcy of the company itself, but a national loss. The information and experiences provided through the process of trial and error might have been useful, and the Ministry of Agriculture and Forestry requested the Agriculture and Fishery Development Corporation to look into the matter of taking over

the company and salvaging what they could from the investment.

III. Agriculture and Fishery Development Corporation (AFDC)

1. Background to the establishment of the A.F.D.C.

Korea has made great strides in the field of mining and industry since 1961. These remarkable increases in national income brought about a higher standard of living in Korea. As a result, food consumption structure began to change and the development of a processing project for agricultural and fishery products was required.

However, the production structure of agriculture and fishery was not in a state which enabled them to respond to both qualitative and quantitative changes in demand.

On the other hand, initiation of enterprises for processing main products of agriculture and fishery was hardly expected due to lack of techniques, funds and raw materials. Even further, the existing firms were in a state of financial difficulties. All these phenomena, in turn, worked against improving income of both farmers and fishers alike who comprise 58 per cent of the population in this nation. In this light, the Government established the Agriculture and Fishery Development Corporation in December 1967, for the purposes of: a) assisting the development of agriculture and fishery with a concentration of investment with a view of increasing the level of income for both farmers and fishers. b) improving the level of other related industries c) and realization of balanced development between agriculture and manufacturing.

2. Its functions

According to the Law of the Corporation:

- (1) To invest and construct facilities for processing agriculture and fishery

products financing the operation enterprises in this field with domestic capital and foreign loans.

(2) To assist with technical guidance and management consultation and introduce the know-how of advanced countries.

(3) To exploit foreign markets for the export of the products and to supply the raw material required.

(4) To help storing and processing agricultural and fishery products and conducting quality control in processed goods.

(5) To carry out other businesses incidental to the projects as well as ones entrusted by the Government.

3. Experience on mushroom growing and processing

As of the end of December 1969, the corporation consisted of 22 companies with a total investment reaching 5,168,000,000 won (US \$ 17,000,000). Among those 22 firms, only Kyongbuk Agricultural Company established in the area of Kumosan of Sunsang-gun, Kyongbuk Province, had experience in mushroom growing and processing.

The corporation started in the mushroom industry in 1968 with a view of playing a pioneering role in introducing and developing the industry in this country. In the same year, the corporation brought in good germ-seed of mushroom from abroad to develop a variety suitable to the climate of the nation, and also designed and constructed a standard mushroom growing house and training center for technicians.

In December 1968, they built a mushroom growing house and processing plant for Kyongbuk Agricultural Products Company, and made a contract with the farmers for growing mushroom.

4. Unified export processes of mushroom products

There were 16 mushroom growing and processing enterprises in the

country as of the end of 1969 and the amount of exports from those firms was trivial, indeed. Out of the total exports of US \$ 558,562, 36 per cent (US \$205,309) was done through Taewon Company, while the remainder was carried out by the remaining 15 companies. For their exports, they had to individually import empty cans for canned mushroom and also set up a trade department to take care of their export process regardless of their actual export quantity. The result was excessive costs and, further financing was needed for importing raw materials. It was indeed difficult to stay in business. Under these circumstances, manufacturers of canned mushroom moved to form a council for promoting their exports.

The corporation undertook the execution of exports on behalf of all the mushroom producers under the system of a unified handling process. Besides, the corporation was entrusted with the following supporting activities.

(1) To provide producers with an advance payment of 70 per cent of expected export value based on F.O.B. price with an interest rate of 10% per annum (in case bank's repayment guarantee by means of a collateral is available, the rate of interest should be reduced to 6% per annum).

(2) To purchase raw material en bloc and supply all the quantity required by producers on credit basis.

(3) Commission for handling exports business should be 0.5 per cent of export value on the basis of F.O.B. price.

(4) After the completion of export, advance payment and the money cost of empty can should be deducted from export price.

All these supports extended by the corporation to mushroom producer contributed a great deal to the enhancement of producers' enterprising activities.

The total amount of advance payment given by the corporation since the unified system went into effect is given here:

Amounts of Advance Payment by Year

(in thousand won)

1 9 6 9		1 9 7 0		1 9 7 1	Total
Spring	Autumn	Spring	Autumn	Spring	
70,394	130,200	210,300	378,420	270,100	1,059,414

Amount for the spring of 1971 is as of March 1971

The new system helped encourage the activity of collecting data and foreign market information through Korea Trade Promotion Corporation and Korean Embassies abroad, which resulted in the continued rise of export price.

Price fluctuation before and after the new unified handling policy

Year	Exports(US \$)	Std. cartons	Average unit price(US \$)	Rate of increase as compared to the preceding year (1968)
1 9 6 8	439,969.25	34,102	12.90	
1 9 6 9	275,713.33	20,740	13.29	3%
	857,411 (after March)	61,340	13.97	8%
1 9 7 0	2,512,980.19	140,559	17.88	38%

The new policy went into effect from March 1969; 1Std. carton (24 tins of 16 oz)

IV. State of Management after Taewon Company was turned over

The Agriculture and Fishery Development Corporation took over Taewon Company from its creditors after the Taewon was formally proclaimed bankruptcy in October 1970.

1. Innovation of management

As soon as the corporation took over the Taewon, readjustment of personnel was done in a broad range. Then, the main office in Seoul was closed and 37 employees in the management level were removed. All in all, the

107 employees were reduced to 52.

A new operation office set up in the plant located in Puyo, Chungnam Province, concentrated on production activity only. Sales activities have been doing by the head office of the corporation in Seoul.

Since a lack of management capability was cited as one of the most important reasons for the failure of the Taewon operation, men of competence were chosen from the corporation to be staff of the new business office.

Appointees and Their Experience (Puyo Operation Office)

Assignment	Experience	Name
Director	Manager of Technical Development Department, AFDC	H.J. Nam
Chief of Production Section	Worked for Kyongbuk Agricultural Products Company. (M.S. in Bacteriology)	Y.C. Ahn
Chief of Accounting Section	ditto	K.S. Song
Chief of General Affairs Section	ditto	D.H. Lim

2. Repairs and supplements of production facilities

About 10,000,000 won was newly invested in repairs of production facilities, changes in plant layout, and introduction of flow system in the production process. By the introduction of the flow system, productivity was raised from daily processing capacity of 3.5 M/T in 10 hours by 230 employees to that of 10 M/T in 10 hours with only 160 in the labor forces. In addition, difficulties in personnel management were reduced by way of hiring laborers in force when needed.

3. Lending funds and payment when needed

Part of the funds needed for production was delivered to the contract farmers in advance, and cash was payed on the spot when mushrooms were purchased by the corporation.

In addition, technicians were re-educated to more efficiently service the farmers. As a result, crops per pyung of 19kg in the old days of Taewon operation were increased to more than 22kg. Even 25kg of crops per pyung were expected before the closure of seedbed. For this reason, securing of 320 M/T of raw material from 12,000 pyung of farms on contract seemed to be a certainty by late spring.

4. Introduction of know-how

Through concentrated growing activity for "on-the-ground" cultivation and growing of good germ-seed, as well as through improvement in growing techniques, 50kg of crops per pyung were expected from 3,200 pyung of cultivation area.

In case of underground growing experimental cultivation was conducted on 600 pyung and about 40kg per pyung were expected before the closure of mushroom floors.

5. Miscellaneous improvements

According to the project plan of the operation office in Puyo, the mushroom growers group is to be readjusted. At the present, only 50 percent of total growers group is located within 20 kilometers from the plant, and the remainder is situated in the sphere of from 20 to 40 kilometers which is too far from plant.

This situation brought about lowering of raw material quality during transportation, an increase in cost in transporting, and difficulties in training farmers.

Therefore, the corporation is planning to establish concentrated mushroom growing areas between 1,000 and 2,000 pyung within 20 kilometers from the plant. It is also planned to reward excellence in the area groups according to production achievements to let them compete each other. Mutual

exchange of techniques will be encouraged among the growing area groups.

The remarkable achievement brought about by the operation office in Puyo in the first year of mushroom growing after the corporation took over, is a shining example for other mushroom raisers in the country.

Mr. Ahn, Chief of production section is quoted as having said that the most important factor in the success of the business is the improvement of management and control. The benefits of adequate capital for use in operational funds is, of course, not to be ignored. But, also, the abundant raw material made available by a remarkable increase in mushroom production really turned the tide. Besides, the various experiences obtained through the operation of the extinct Taewon Company served as a foundation on which we could build. The Taewon Company, in fact, depended upon information and material obtained only from books.

V. Argument on the unified handling system of the exports processes by the corporation

After two years of the unified handling of the export processes by the corporation, arguments arose over the benefits mushroom producers affiliated with the corporation would receive from the system and some expressed an intention to withdraw from it.

1. Some reasons why they raised arguments against the system

(1) Their production capacity is increasing gradually with the bright prospects in the future. In this light, they thought they might be able to induce governmental assistance such as financial aid without help from the corporation.

(2) They produce merchandizes other than mushrooms and for which they have their own trade department. It seems much more economical to make

the most of this department by handling their own mushroom export business.

(3) It is true that the export price has been raised after uniformed handling of the trade process was put into force. However, the price they are now offered in the letter of credit is higher than the previous one.

2. Opinion of the corporation

Against those afore-mentioned arguments, the corporation insists that:

(1) Most of the small scaled mushroom growing and processing companies are not yet able to do business on their own (2) they are not in a position to have their own trade department in terms of efficient management and qualified personnel (3) higher price offer received by some producers might work as an agitating element contemplated purposefully by some competitors abroad.

There is always the danger that if any one withdraws from the present structure, the whole system may collapse and difficulties in mushroom export activity will increase.