

A Study on Agricultural Electronic Commerce: A Case Study of NACF's Hanaro-Club in Korea*

In-Sik Shin**

The purposes of this paper are to investigate the actual condition and problems of e-commerce in agricultural products and special preference for Hanaro-Club in National Agricultural Cooperative Federation (NACF) and to find a way to solve confronting problems of e-commerce in Hanaro-Club. The NACF has an ambitious plan to open an internet marketplace in which B2B2C (business to business and business to consumer) type of transaction and international trade can be done. Major contents of claim on the primary cooperative shopping malls are delay of distribution and deliberation of different goods. While on the integration shopping mall, it is mostly complained about the deliberation of different goods and delay of exchange and refund. This study suggests the ways to solve problems of e-commerce in Hanaro-Club are as follows. Firstly, establishing for standardization of commodities and their quality control system are needed. Secondly, expanding a foundation of information facilities and super-highway networks widening education and training for relevant information technologies are necessary.

Keywords: E-Commerce, Hanaro-Club, Marketplaces, Integration Shopping Mall, Standardization

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** Professor at Department of Cooperative Management, Agricultural Cooperative College, South Korea.

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I. Introduction

Agricultural commodity prices are much more volatile than are the prices of most nonfarm goods and services. The biological nature of agricultural production is a principal cause of price instability. Yields vary from year to year because of favorable or unfavorable weather and the presence or absence of disease or insect infestations. Many crops are harvested only once a year and some of these can not be stored, and livestock products like fluid milk also are perishable.

One of the agricultural marketing characteristics of the small-scale farming is that marketing channels are long and complex, with produce passing through multiple intermediary channels. Thus, the major marketing problems faced by small scale farmers are their small marketable surplus and inefficient marketing practices and systems. These problems consequently lead to higher marketing costs, weak bargaining power, low prices, and serious price fluctuation.

One of the most promising areas to deal with these problems of Korean agricultural marketing is to introduce electronic commerce in farm marketing. The National Agricultural Cooperative Federation (NACF) opened internet shopping mall (<http://www.shopping.nonghyup.co.kr>) in 1999.

This study will analyze the role of cooperative marketing business and digital commerce with special preference to the NACF Hanaro-Club in Korea.

II. Agricultural Cooperative marketing in Korea

2.1 Cooperative Marketing of Farm Products in Recent Years

In 2000, the NACF focused on strengthening cooperative marketing and the

delivery of agricultural produce. Eight additional Agro-product Processing Complexes (in addition to the existing eighty-six) and another two agricultural marketing complexes were built to increase opportunities for farmers to bring their produce to the consumer at competitive prices.

Cooperative marketing of farm products is one of the most essential services providing stable markets and higher returns to member farmers. The NACF pursued to increase sales of agricultural products by expanding the direct marketing business; by increasing the number of agricultural marketing complexes; and by operating the Agricultural Wholesale Marketing Centers in the large consumer marketing areas. NACF and member cooperatives also expanded the Distribution Centers, Agro-products Processing Complexes, and Rice Processing Complexes. NACF launched "The Marketing Revitalization Projects" with the goal of turning member cooperatives into innovative leaders of agricultural marketing in 2000.

As a result of expanding marketing and production facilities, sales of farm products by NACF and member cooperatives totaled 11,125 billion won¹ in the year of 2000, an increase of 7.4% over the previous year. The sales of the member cooperatives reached 7,774 billion won - 69.9% of the total sales. The market share of the cooperatives is about 40% in Korea.

Agricultural cooperatives are engaged in food retailing in urban areas and by the end of 2000, the NACF and member cooperatives were running 2,576 "Hanaro-Marts" (non-membership supermarkets), and twelve "Hanaro-Clubs" (membership warehouse discount stores), both of which sell agricultural products and other consumer goods. The "Hanaro-Clubs", run by an NACF subsidiary company, Korea Agricultural Cooperative Marketing Inc.(KACM), have introduced product recall and around-the-clock operation. The turnover of "Hanaro-Marts" was estimated at 3,660 billion won for 2000 and that of the "Hanaro-Club" at 200 billion won for the

year of 2000. The NACF opened the Hanaro-Clubs or cyber-shopping mall on its website. The NACF operates 601 "Sintoburi" which are mini - grocery marts in NACFs' banking branches. The turnover of the Sintoburi totaled 251 billion won for 2000.

In 2000, NACF also sought to expand direct marketing, in which producers or producer cooperatives sell farm products directly to consumers or consumer cooperatives. The NACF has been actively engaged in developing and promoting outlets for direct marketing in consuming areas. Marketplaces for direct marketing include the agricultural marketing complexes, large-scale discount stores, retail food stores, Sintoburi shops in Nonghyup bank branches, and seasonal and periodic marketplaces in urban areas. The direct marketing business is expected to give better prices to farmers, as well as consumers, by simplifying marketing channels and by reducing marketing costs. The turnover of direct marketing was 4,483 billion won in 2000, an increase of 11.2% over the previous year.

2.2 Integrated Marketing Center

The NACF has tried to introduce the auction system in fruits and vegetable wholesale market since the early 1960's. The main purpose of the auction is to improve transparency in price discovery for perishable commodities. Wholesalers or brokers in wholesale markets were believed to be unfair and dishonest in dealing with the non-standardized commodities.

Through the activities of the NACF and support of the farmers and government, the transparency in wholesale market has been improved considerably, but many producers and consumers are still not satisfied. However, it was recognized that auctions costs too much because of repeated loading and unloading required in the wholesale market. In addition, it is impossible to regulate the quality and quantity of

the commodities delivered to the market every day under the current auction system. Thus the prices determined by auction fluctuate everyday to clear the market. This market clearing system is an important advantage because it accepts all products but it is a disadvantage at the same time because the price fluctuates to clear the market.

To reduce the shortcomings of the wholesale market, to meet the needs of farmers who prefer stable prices and to meet the needs of consumers who prefer more convenient and reliable retailing a new marketing channel for agricultural products was introduced by the NACF in 1998 under the name of "integrated marketing center." It is similar to large supermarkets or discount stores in the U. S. A. or Western Europe.

In Korea, the marketing institution integrates both wholesale with retail, and producer cooperatives with consumer cooperative. The integrated marketing centers became very popular among consumers. The main reasons for the popularity may be summarized as: (a) it is reliable in terms of quality, quantity, and food safety because of NACF operates them. (b) It is convenient because of sufficient parking spaces. (c) Prices are reasonable, and dividends may be available based on total purchases. Through the operation of the integrated marketing centers, direct transport from rural shipping points to distribution centers/discount stores becomes feasible. Thus only physical handling costs but also transaction costs can be reduced.

The first attempt toward the innovation was made by the opening of Yangjae integrated marketing center which is known as "Yangjae Hanaro-Club" located in southern part of the Seoul, in 1998. It has been much more successful than expected in improving farm marketing and in its own viability. Following the success of the distribution center, several of the same types of integrated distribution centers were established and to ten more similar businesses are planned for major metropolitan areas by 2003.

2.3 The New Era of Digital Marketing

One of the promising areas of Koran agricultural cooperative marketing is electronic commerce in farm marketing. The NACF opened an internet shopping mall (<http://www.shopping.nonghyup.co.kr>) in 1999. More than 500 goods are transacted between 150 primary agricultural cooperatives and internet users.

Since its opening on June 21 of 1999, the transaction volume for the first six months was one billion won, and jumping to 15 billion won in 2000. The monthly transaction volume in 2000 was 10 times that in the previous year. The amount of sales on the internet shopping mall of the NACF exceeded 100 billion won in 2001.

The current system of digital commerce initiated by the NACF is limited to B2C (business to consumer) type. The NACF has an aggressive plan to open an internet marketplace in which B2B2C (business to business and business to consumer) transactions and international trade can be made.

III. Agricultural E-Commerce Market in Korea

3.1 E-Business Environment

3.1.1 New Business

Business development remains strongly influenced by the various types of capital, such as human, working and physical capital. Table 1 identifies the role of e-business in the transition from the traditional business to the new business, and associated changes in using capital.

Table 1. New Business Model in the New Economy

(Traditional Business) →	(E-Business Revolution) →	New Business (E-Transformation)
Sales "Push" Focus	Brand Capital	Customer "Pull" Focus
Production Focus	Human Capital	Customer Focus
High (Goods)	Working Capital	Low(direct delivery)
High (Ownership of production)	Physical Capital	Low(Outsourcing)

Source: Ryum (2002).

3.1.2 Market Structure

Characteristics of traditional market structure are that marketing channels are long and complex with produce passing through multiple intermediary channels. In order to reduce the marketing channels, e-commerce is needed. Two types of marketing channel can be charted as Table 2.

Table 2. Types of Marketing Channel

Traditional Marketing Channel	Producers → Wholesaler → Retailer → Consumers
E-Commerce Marketing Channel	Producers → Retailer → Consumers Producers → Consumers

3.1.3 E-Business Environment

- (1) Well-developed infrastructure: optical cable backbones have been already laid in 144 regions and the information super-highway will be laid by 2005.
- (2) Subscribers of broadband internet services: as of August 2000, internet users are over 16 million. Asia has only three countries where internet users are over ten million (Japan-27 million, China-15.8 million). Sixty-five percent of the total households have PCs and more than seven million subscribers.
- (3) Favorable legal framework for e-business: In February 1999, the basic legal

framework for e-commerce was established such as "The Basic Act on E-Commerce" and "The Electronic Signature Act."

3.2 Overview of E-Business in Korea

3.2.1 Types of E-Commerce

Types of e-commerce are classified into five types. They are B2C, B2B, C2C, C2B, B2G. Each type of e-commerce is shown in Table 3.

Table 3. Types of E-Commerce

Types	Sellers	Buyers	Intermediation
Business – to – Customer (B2C)	Producer	Consumer	Shopping mall
Business – to – Business (B2B)	Producer	Producer	---
Customer – to – Customer (C2C)	Consumer	Consumer	Auction
Customer – to – Business (C2B)	Consumer	Producer	Reverse Auction
Business – to – Government (B2G)	Producer	Government	---

3.2.2 Performance of E-Commerce in Korea

The market sizes surveyed by the institutes are very different. However, Korean e-commerce market is rapidly growing and this trend will continue for quite sometime. The performance of e-business from 7.1 billion won in 1999 to 22.6 billion won in 2001. In 2005, it is expected that the amount of e-business will be 144.4 billion won, which is about 5 times more than that currently (Korea Institute for Electronic Commerce, 2002).

3.2.2.1 Business to Consumer (B2C) E-Commerce

The first Korean internet shop was opened at the end of 1996² and the number increased rapidly. The number of internet shops in October 1998 and 1999, August 2001 and end of 2001, 357, 1,000, 2,032, and 2,166 respectively.

The most rapidly growing business models in B2C areas are cyber stock trading, internet bidding and retail e-commerce. Notably, cyber trading constitutes 69.3% of the total stock trading volume as of September 2001. At the end of 2001 major items sold in the internet shops were computers and accessories 846.3 billion won(25.3%); electronics 704.1 billion won(21%), ; and agriculture and fisheries (6.1%) etc.

3.2.2.2 B2B E-Commerce

Nowadays, interests over the e-commerce have moved from B2C to B2B in Korea. Korean companies' interest in B2B e-commerce has exploded in 2000. B2B e-commerce ratio is about 3% in Korea and 218 e-marketplaces were open as of 1st quarter 2001.

3.2.3 E-Business Barriers in Korea

As e-business development proceeded, facing problems are as follows: firstly, there is lack of collaboration among corporation. Secondly, there is limited e-business resources such as rare success stories, financial resources, and e-biz manpower etc. Thirdly, there are unsound business practices and lack of information. Fourthly, underdeveloped standardization and e-payment still exist.

3.2.4 Government Policies

3.2.4.1 Policy Principles

The private sector should lead the development of e-commerce and the government provides the technical infrastructure, legal and institutional framework for e-commerce. Where governmental involvement is needed, the aim should be to support and enforce a predictable, minimal, consistent and simple legal environment.

3.2.4.2 Key Policies Agenda

The government policies aim to achieve the following objectives for the development of e-commerce. Firstly, it is to secure the reliability of consumers and expand infrastructure on e-commerce. Secondly, acceleration in the public sector and encourage e-commerce is essential. Finally, it is to facilitate cyber trade etc.

3.2.4.3 Policy Issues

3.2.4.3.1 E-Commerce Standardization

The success of e-commerce greatly depends on standardization. There exist no de-facto standards in e-commerce without Electronic Data Interchange (EDI). Most standardization-related organizations and leading companies participated.

Standard setting activities should be neutral and developed by industry-led organizations, not by government. E-commerce is growing at a breathtaking speed, so government-led standardization cannot keep pace with the speed of the development in technology. E-commerce is global by nature, so a neutral and market-led approach to standards is beneficial to all industries, whether domestic or not. Standardization is a key to secure seamless interoperability between networks.

3.2.4.3.2 Consumer Protection

Consumer protection guidelines on e-commerce are prepared in January 2000. The guidelines mainly came from the OECD guidelines on consumer protection, and self-regulation for an industry.

3.2.4.3.3 E-Payment

E-payment is an essential part in e-commerce, so-called electronic money is entering e-commerce market and essentially belongs to IC chip-embedded cards. The value of money is stored as a digital record in the IC chip and used for multi-purposes payments.

Currently, three kinds of e-money systems provide their services-Mondex e-money by Mondex International, Visa Cash by Visa International, K-cash by Korea

Financial Telecommunications and Clearing Institute.

3.2.4.3.4 Human Resources

Drawing up a three-year plan to train e-commerce personnel is based on a survey on each industry's shortage of e-commerce man-powers. It is encouraged for universities and private institutions to train e-commerce experts to establish e-commerce course in universities and to introduce e-commerce master qualification system.

A gold card system was introduced to attract skilled foreign IT and e-business experts and exempt them from some requirements of the Immigration Control Act.

3.2.4.3.5 Connecting the Globe

Completing global paperless e-trade system, all export and import related workflow, including contracts, fulfillment and settlement, should be processed in on-line. Trade networks of six countries, namely, Korea, China, Japan, Singapore, Taiwan and Hongkong are to be connected. It is important to strengthen the cooperation activities with major strategic countries, such as China, India, and EU, and to support IT industry's advancement into overseas markets.

3.3 E-Commerce for Agricultural Products

E-commerce of agricultural products: e-commerce is in the initial stage and interests B2C type. However, huge potential for growth exists in the future.

3.3.1 Internet Users and Composition of E-commerce

As shown in Table 4 from 1998, the number of e-commerce users rapidly expanded. This increase is consistent with the increase number of internet users. The number of internet users was 1.75 million compared 170 thousand e-commerce users in 1998. As e-commerce developed, also the portion of e-commerce users expanded. From these results, it is expected the portion of e-commerce users among the total

internet users will increase from 9.7% in 1998 to 43% in 2003.

Table 4. The Number of Internet Users in Korea

(million persons)

Year	1998	1999	2000	2001	2002	2003
The Number of Internet Users (A)	1.75	3.31	5.03	7.02	8.15	9.23
The Number of E-commerce Users (B)	0.17	0.58	1.39	2.36	3.16	3.97
B/A (%)	9.7	17.5	27.6	33.6	38.8	43.0

Source: Ministry of Commerce, Industry, and Energy, 2000.

3.3.2 On-Line Business of E-Commerce and Web Site

As shown in Table 5, the number of on-line site was about 40% of total sites, while the on-line site of e-commerce was only 9.0% of total on-line sites. The number of agricultural hunting and forestry on-line sites was about 268 or 42% of the total 642, and the on-line site of e-commerce was only 83 (31%). The kinds of items sold in internet shops (Ministry of Commerce, Industry, and Energy, 2000) were books (55.1%), computers and accessories (34.4%), travel and reservation service (29.6%), audio and video (29.2%), game software (22.8%), and food and agriculture (2.6%).

3.3.3 Performance of E-Commerce in Agricultural Products

The exact market share of agricultural products in e-commerce cannot be known, but approximately 6% of the total on-line sales were agricultural products (MAF, 2000). According to the KIEC data, as those shown in Table 6, performance of e-commerce in agricultural products increased from 24.6 billion won in 1999 to 282.7 billion won in 2001. The share of agricultural products of the total volume of e-commerce increased from 0.3% in 1999 to 1% in 2001.

Table 5. On-Line Business of E-Commerce and Web-Site by Industry

By Industry	Num.of Total Site(A)	Num.of On-Line Site (B. B/A)	On-Line Site of E-Commerce (C,C/B)	% of E-Commerce Type			
				B2B	B2C	C2C	Others
Agricultural hunting and forestry	642	268(41.7)	83(31.0)	15.7	56.7	1.2	0.0
Fishing	125	55(44.0)	11(20.0)	18.2	54.6	0.0	0.0
Mining and quarry	42	12(28.6)	2(16.7)	50.0	50.0	0.0	0.0
Manufacturing	59,082	25,472(43.1)	2,794(11.0)	68.0	30.0	0.9	0.5
Electric gas and water supply	197	87(44.2)	1(1.1)	100.0	0.0	0.0	0.0
Construction	5,945	2,807(47.2)	76(2.7)	29.0	56.6	15.8	0.0
Trade and repair	37,512	16,322(43.5)	2,314(14.2)	18.6	82.9	4.9	0.5
Hotel and restaurants	2,718	1,113(40.9)	132(11.9)	6.8	69.7	24.2	7.6
Transportation	1,489	646(43.4)	95(14.7)	42.1	82.1	2.1	6.3
Communications	8,708	3,329(38.2)	299(9.0)	35.1	82.9	6.7	2.3
Financial intermediation	4,139	945(22.8)	22(2.3)	13.6	95.5	0.0	0.0
Real estate and renting	3,666	1,368(37.3)	85(6.2)	7.1	90.6	2.4	0.0
Business activities	64,317	22,802(35.5)	1,543(6.8)	30.3	58.1	8.4	3.6
Administration national defense, Social insurance	809	315(38.9)	5(1.6)	20.0	80.0	0.0	0.0
Educational service	3,000	1,414(47.1)	39(2.8)	15.4	87.2	0.0	0.0
Health and social welfare	2,948	940(31.9)	13(1.4)	7.7	69.2	15.4	0.0
Culture, recreation and exercise service	8,692	3,789(43.6)	112(3.0)	8.0	83.0	6.3	0.0
Other public and private service	16,040	6,972(43.5)	323(4.6)	21.7	88.5	11.8	2.8
Home service	4	2(50.0)	2(99.9)	50.0	50.0	0.0	0.0
International and foreign institutions	10	5(50.0)	0(0.0)	0.0	0.0	0.0	0.0
Total	220,085	88,663(40.3)	7,951(9.0)	38.9	59.0	4.8	1.4

Sources: Information and Communication Policy Research Institute (2001) and Lee, Lee, and Jeon (2000).

* B2B: Business to Business, B2C: Business to Consumer, C2C: Consumer to Consumer

Table 6. Performance of E-commerce in Agricultural Products
(billion won)

Year	1999	2000	2001
Agricultural Products (%)	24.6(0.9)	51.6(0.3)	282.7(1.0)
Total Products (%)	8,132(100.0)	16,880(100.0)	29,970(100.0)

Source: Korea Institute for Electronic Commerce (2002).

IV. Internet Hanaro-Club in NACF

4.1 Overview of Internet Hanaro-Club

4.1.1 Objective

Internet Hanaro-Club of NACF aims to achieve the following objectives. They are to lower marketing cost by reducing marketing channel, to encourage sales of agricultural products through e-commerce by expanding of infrastructure, to facilitate cyber trade, and to protect farmer and consumers by reducing marketing channels.

4.1.2 History

Internet shopping mall of Hanaro-Club was opened in 1999 and May 2000 was opened electronic money service and November 1 of 2000 was constructed integrated internet shopping mall among agricultural cooperative. Table 7 summaries number of members and participating institutes by the end of February of 2002.

Table 7. Number of Members and Participating Institutes

Year	Members	Office			Visitors/ day
		Primary coop.	RPC	Marketing center etc.	
30 Aug. 2001	72,980	210	250	75	7,000
End Feb. 2002	95,084	214	250	75	10,000

Source: National Agricultural Cooperative Federation (2002).

4.2 Business System and Performance

4.2.1 Business System

Business systems of internet Hanaro-Club are shown in Figure 1. Firstly, suppliers, such as primary cooperative and marketing center have efficiently given product information to the shopping mall. Secondly, in the internet Hanaro-Club information gives customers the convenient order and then customers order goods to shopping mall. Thirdly, payment of purchasing goods is done through credit-card company and bank. Fourthly, purchasing goods are delivered to the order by delivery company.

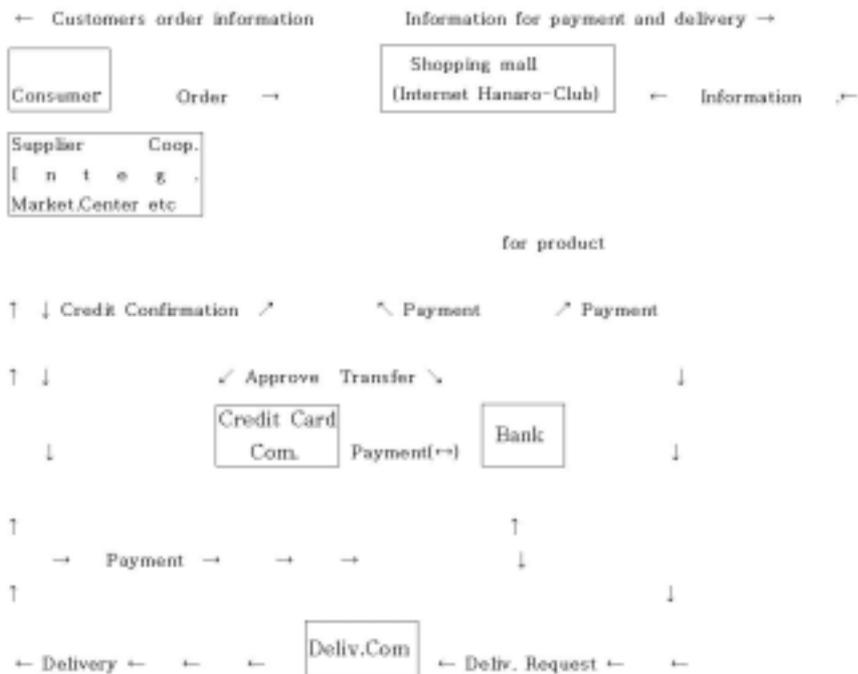


Figure 1. Business System in Hanaro-Club

4.2.2 Management and Operation

Suppliers of internet Hanaro-Club are primary cooperative, marketing center and traditional food company etc. Suppliers consigned or registered product to the internet Hanaro-Club and also product screened by internet Hanato-Club. Purchasing goods are paid by the credit card, internet banking, electronic money etc.

Product distribution system is explained by Figure 2. Logistic base (Integrated Marketing Center, Hanaro-Club) purchases products from the supplier (Primary cooperative etc.). The integrated shopping mall receives product order from the customer and then orders to logistic base. The purchasing goods are delivered from the logistic base to the purchaser by delivery company.

4.2.3 Performance of Internet Hanaro-Club Business

It is known from Table 8 that at the end of February in 2002, performance of e-business in the Hanaro-Club was 6,983 million won and two months later increased more than two times. The proportion by item was agricultural cooperative rice (65.6%); special agricultural products (15.2%); e-Hanaro-Club (18.0%) etc. Percentage changed rapidly by April of 2002. Agricultural cooperative rice rose from 65.6% to 72.5% and special agricultural products sales fell during the same period.

Table 8. Performance of Internet Hanaro-Club Business by Item
(million won, %)

		Agri.Coop. Rice	Agri.Special Product	E- Hanaro	Gift Certificate	Consumer Goods	Total
End of Feb. 2002	Amount	4,583	1,065	1,259	31	45	6,983
	Share	65.6	15.2	18.0	0.4	0.8	100.0
End of Apr. 2002	Amount	10,996	1,434	2,318	44	350	15,142
	Share	72.5	9.5	15.3	0.3	2.3	100.0

Source: National Agricultural Cooperative Federation (2002).

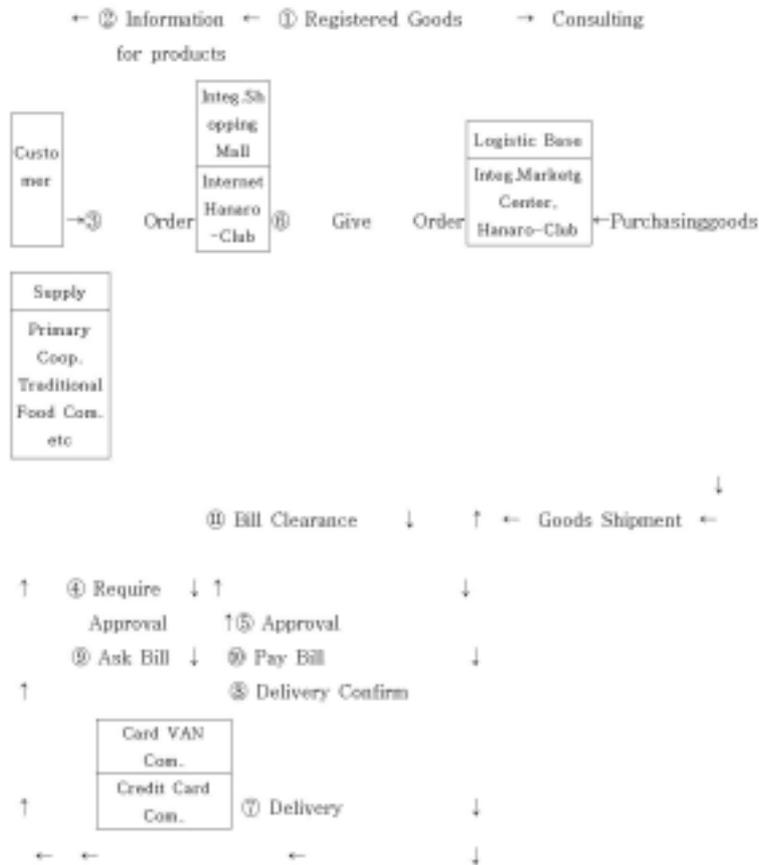


Figure 2. Physical Distribution in Hanaro-Club

The market sizes surveyed by the institutes are very different. Nonetheless, the Korean e-commerce agricultural product market is growing rapidly. By 1999, the entire of e-business was 8,132 billion won with 24.6 billion won from agricultural products and 1 billion won from internet Hanaro-Clubs shown in Table 9. The proportion of agricultural products to the total has been less than 1% in recent years. The share of internet Hanaro-Club to the agricultural product was 4% in 1999, 29.8% in 2000 and 15.3% in 2001.

Table 9. Performance of E-Commerce in Agricultural Product
(billion won)

Year	1999	2000	2001
Internet(%)*	1(4.1)	15.4(29.8)	43.3(15.3)
Agricultural Product(%)**	24.6(0.3)	51.6(0.3)	282.7(0.9)
Total Product	8,132	16,880	29,970

Source: Korea Institute Electronic Commerce (2002).

* The percentage represents ratio of internet to agricultural products.

** The percentage represents ratio of agricultural product to total products.

4.3 Results of Consumer Survey

4.3.1 Happy Call

Happy call is the one of the best way of confirm the distribution and quality of product for the purchaser. Telephone survey for the customers is more convenient and cost-effective than any other survey method. The results are summarized in Table 10.

4.3.2 Analysis of Customers Calls

The NACF surveyed customers claims from July 21 of 2001 to October 22 of 2001 to review consumers' behavior. The total number surveyed was 1,309 and 10.3% (137) of the customers calls came from dissatisfaction. The numbers of customers who experienced on-line shopping in primary cooperative shopping mall and integrated shopping mall were 91 (66.4%) and 46 (33.6%) respectively.

Contents of customers claim in e-business Hanaro-Club are varied and differed by shopping mall. About 46.0% and 19.7% of total customers calls complained about the delay in delivery and different goods. Major complaints about the primary cooperative shopping malls were delay in delivery and delivery of different goods. While on the integration shopping mall the most complaints are the delivery of

different goods and delay in exchange and in receiving refund. This is due to the primary cooperative being located far from consuming area.

Table 10. Contents of Customers Claim

Questionnaire Item	Number of response*		
	Integrated Shopping Mall	Prim. Coop Chopping Mall	Total
(1) delivery of different goods	15(32.6)	12(13.2)	27(19.7)
(2) delay of exchange and refund	7(15.2)	3(3.3)	10(7.3)
(3) omitted of goods	5(10.9)	4(4.4)	9(6.6)
(4) shortage in quantity of goods	5(10.9)	3(3.3)	8(5.7)
(5) delay in delivery	5(10.9)	58(63.7)	63(46.0)
(6) poor assortment of goods	3(6.5)	1(1.1)	4(2.9)
(7) others	2(4.3)	2(2.2)	4(2.9)
(8) expired products	1(2.2)	1(1.1)	2(1.5)
(9) unkind of distributor	1(2.2)	1(1.1)	2(1.5)
(10) inferior packing	2(4.3)	1(1.1)	3(2.2)
(11) cold storage food not refrigerated	0	2(2.2)	2(1.5)
(12) price is higher than the other shopping malls	0	1(1.1)	1(0.7)
(13) no information in delay of delivery	0	2(2.2)	2(1.5)
Total	46(100.0)	91(100.0)	137(100.0)

* Numbers in parentheses are percentage.

V. Conclusion

The objective of this study is to analyze the role of cooperative marketing business and digital commerce with special preference to the NACF Hanaro-Club.

Electronic commerce is one of the most important aspects to emerge from the internet. The characteristics of electronic commerce in agriculture compared to an

existing off-line commercial transaction are as follows:

- (1) Reduced costs by using the web as a distribution channel and simplified multi-stage marketing process.
- (2) No need to invest in shop equipment.
- (3) No barriers of time or distance. Anytime of the day or anywhere, you can go on-line and buy almost anything you want.
- (4) Can suit a wide variety of customer tastes and preferences.

These characteristics affect both producers and customers. The market growth of electronic commerce both in Korea and abroad will continue at a dramatic pace. The market sizes surveyed by the institutes are very different. However, Korean e-commerce agricultural product market is rapidly growing.

After instruction of happy call, greatly decreasing of customers un-satisfaction, such as customers claim on the Hanaro-Club e-business before and after instruction of happy call were per day 15 and 5 respectively. The results of consumer survey by telephone, among them 34%(567), 52%(852) and, 14%(24) were no response, satisfaction and un-satisfaction, respectively.

This study suggests the ways to solve problems of e-commerce in Hanaro-Club are as follows; firstly, establishing for standardization of commodities and their quality control system are needed. Secondly, expanding a foundation of information facilities and super-highway networks widening education and training for relevant information technologies are necessary.

Notes

1. Exchange rate per US dollar is 1,130.6 Korean won for the period average in 2000.
2. Interpark (Book Selling): opened by the internet service provider Dacom Lotte. Com: opened by the Lotte Department Store, the biggest Korean department store.

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<http://www.shopping.nonghyup.co.kr>

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農業電子商務研究：韓國 NACF Hanaro-Club 的個案研究

In- Sik Shin*

本文的研究目的是調查農產品電子商務的實際情況與問題、NACF (National Agricultural Cooperative Federation) 中 Hanaro-Club 的特殊偏好以及解決 Hanaro-Club 中電子商務所正面臨的問題。NACF 有一雄心勃勃的計畫，要以業務與國際貿易可行的 B2B2C (business to business and business to consumer) 形式打開網際網路市場。過去主要合作的購物中心，多數宣稱的內容是分配的延遲與不同產品的商討。當在整合購物中心抱怨最多的不同產品的商討與交易及退款的延遲時，為解決 Hanaro-Club 中電子商務所面臨的問題，本研究建議如下：第一，商品規格化與品質控制系統的建立；第二，擴展資訊技能的基礎、高速公路網的拓寬教育與相關資訊技術的訓練。

關鍵詞：電子商務、Hanaro-Club、市場、整合、購物中心、規格化

* Professor at Department of Cooperative Management, Agricultural Cooperative College, South Korea.