석사학위논문

A Multidimensional Analysis of Jeju Tangerine Industry

제주감귤산업의 입체적 조명

제주대학교 통역번역대학원

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서은숙

2005 년 12 월

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Notes on *A Multidimensional Analysis of Jeju Tangerine Industry*

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A Multi-dimensional Analysis of Jeju Tangerine Industry

May 2005

Tangerine Marketing Order Promotion Committee

Association of Jeju Tangerine Council

Submitted by Cheju National University

Letter of Submission

To: Chief of the Tangerine Marketing Order Promotion Committee

We would like to hereby submit the Comprehensive Assessment Report on Tangerine Marketing Order for the 2004 production as the final research paper as commissioned by your committee.

April 2005

Ahn, Youngwha

Acting President of Cheju National University

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Ⅰ Introduction

1. Object and Needs

○ The research paper analyzes and assesses the achievements and issues during the process of introducing and implementing the Marketing Order for the production of 2004 field tangerine with its expanded reinforcement to cover not only Jeju but also wholesale markets of the entire country. The Marketing Order for the production of 2003 covered the Jeju area only when it was implemented for the first time in the history of the tangerine industry.

○ The research paper seeks for efficiency in promoting the marketing order in response to any future re-implementation of requesting tangerine marketing order.

○ The assessment data is to be distributed to any related institutions and organizations so that it could be utilized for future implementation of the marketing order on other species.

2. Main Contents

□ Outline of Marketing Order

○ Outline of marketing order based on the Agricultural Stabilization Act, Enforcement Ordinance, Enforcement Regulation, Enforcement Guidance

○ Case studies of marketing orders in other countries and policy Implication

□ Introduction of Tangerine Marketing Order into the Market

○ Background of market introduction of the order, implementation process, and regional opinion trend (media reports)

○ Procedural issues raised during the market introduction of the order and solutions

- Issues on the related laws (including the guidance) and others

□ Assessment on the Implementation Methods of the Order

○ Appropriateness of the guiding method for the compliance of the order

- Assessment on the promotion of the order to all related parties including tangerine

farmers, producer market, distributors, wholesalers, and consumers

○ Achievement and issues from the activities of the compliance inspection team in Jeju

○ Achievement and issues from the activities of the compliance inspection team in the consumer market

⇒ Suggestion for efficient inspection of compliance in Jeju and the consumer market

□ Comprehensive Assessment

○ Comprehensive assessment of the order implementation

- Increase in tangerine gross income, quality enhancement, and change in shipper mentality

○ Various reactions to the implementation of the order

- Survey execution on the order effectiveness

、Farmers, Producer Market Collectors (in Jeju), Consumers (Seoul, Busan, Daegu, Gwangju), Consumer Market Wholesalers (Seoul, Busan, Daegu, Gwangju)

○ Comparison of survey results between 2003 and 2004

○ Improvements to institutionalize the order including change in mentality of the related parties and the content of the order

3. Methods

□ Quantitative Assessment of the Tangerine Marketing Order using Mathematical Technique

○ Comprehensive Assessment of the Tangerine Marketing Order using Statistical Data

○ Comprehensive Assessment of the Tangerine Marketing Order using Econometric Model

□ Qualitative Assessment using Survey method on the related principal parties of the Tangerine Marketing Order

○ Assessment of production area: Assessment and awareness of the Tangerine Marketing Order among tangerine farmers and collectors in producer market, tangerine industry outlook, assessment of product distribution

○ Assessment of consumption area: Assessment of the Tangerine Marketing Order among consumers and wholesalers in the consumer market, actual pattern of fruit purchase, understanding pattern of consumption between imported orange and tangerine

Ⅱ Significance and Implementation Result of Tangerine Marketing Order

1. Significance of Tangerine Marketing Order and Its Implementation Procedure[1]

A. Significance and Characteristics

□ The marketing order refers to an institutionalized system of which legality is validated as the Minister of Agriculture and Forestry orders the enactment upon request of producers, and it seeks for efficient distribution of shipments such as elimination of free-riders.

◦ The legal base of the marketing order is provided in the rectification of the 2000 Agricultural and Fishery Products Distribution and Price Stabilization Act (AFPDPS Act).

- The Minister of Agriculture and Forestry has been entrusted to determine the elements of the marketing order such as the subject products and requesting party of the order.

* AFPDPS Act, Clause No. 10, article No. 2: The Minister of Agriculture and Forestry may enact the marketing order when the situation is deemed to necessitate calling for the order to dissolve significantly unstable demand and supply in agricultural and fishery products upon request by producers.

- The virtual marketing orders for highland cultivated cabbages and tangerine were exercised in July and December of 2000, respectively.

◦ The marketing order is characterized as a law that commands whether permitting certain marketing and distribution activities of agricultural and fishery products against random majority of related parties.

◦ As the marketing order is a governing action that limits the exercise of property rights, it needs to be seriously examined considering its ripple effect.

◦ Penalty on violation

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[1] were composed on the basis of the amended and complemented data that is posted on the Ministry of Agriculture and Forestry (MAF)'s web site

- Nonperformance of the obligation is subject to administrative punishment, however, any legal activities such as transactions related to the violation of the order are not deemed invalid.

• Violation of the order is subject to a fine of 3,000,000 won and 5,000,000 won for a repeated violation in accordance with the Enforcement Ordinance of AFPDPS Act.

◦ The legal obligatory burden is limited to the subject parties affected by the order in the aspect of agricultural products, place, and period.

◦ Supplementation of the marketing order: A marketing and distribution agreement is to either precede or coincide with the order so that the order can be operated as supplementary or complementary to the producers' autonomous control of marketing and distribution activities.

B. Requirement and Procedure

1) Requirements of the marketing order upon the AFPDPS Act.

① Request for the order enactment by producers or producer groups of agricultural products

② Acknowledgement of the needs to call for the order in order to dissolve significantly unstable demand and supply

③ Production or shipment control such as certain period, area, and producers of the subject agricultural fishery products

④ Consultation of Fair Trade Commission

2) Marketing order subject items

□ The Minister of Agriculture and Forestry determines a selected perishable item that satisfies the requirement criteria to be subject to the marketing order in accordance with the Agricultural and Fishery Products Distribution and Price Stabilization Act (AFPDPS Act) Clause No. 10, Article 2.

① Agricultural products that concluded a marketing and distribution agreement in accordance with the AFPDPS Act

② Agricultural products of which production is specialized and the producing area is highly concentrated

□ The marketing order is a system that heightens the efficacy of the voluntary control of marketing and distribution by producers, hence the organizational capacity and the concentration level of production are crucial criteria.

◦ Tangerine and other items with 50% or more of the cultivated area in all top 10 cities and counties and a self-supporting fund raising organization based on the AFPDPS Act.

3) Qualification to apply for the marketing order and its procedure

□ According to the AFPDPS Act, there are two channels available to apply for the marketing order: a promotion committee of marketing and distribution control and a producers' association. The channels should satisfy all necessary conditions required by the Minister of Agriculture and Fishery.

- Promotion committee of marketing and distribution control: consists of producers, collectors in producer market, owners of product storage, wholesalers, and consumer representatives.

- When multiple producers' associations apply for the order enactment in unison, there should be a committee of producers' association for marketing and distribution control.

◦ As the effect of the marketing order broadly affects producers, distributors, and consumers, it is necessary to establish a decision making system to embrace all of the concerned parties' opinions.

* It is common to include participations of producers, distributors, and storage owners in the discussion process to prepare the application for requesting the marketing order.

• United States: In the United States, distributors and storage owners participate in the promotion committee of preparing for the marketing order enactment application.

• France: In France, the association of vegetable and fruit producers and distributors (Interfel) submits the application for the marketing order enactment.

□ In order to accomplish the efficacy of the marketing order, it is necessary for the applicant organization to have 'capability to control demand and supply and to enhance product quality'.

○ Common requirement: The total production or cultivating area of the committee members applying for the marketing order should be 60% or more of the nationwide total production or cultivating area of the subject product item.

○ The applying committee should arrange a voluntary marketing and distribution control plan such as a marketing and distribution agreement.

○ The applying committee should be differentiated upon the scale of the marketing order as per the content in the application of the marketing order enactment.

○ When the content of the marketing order is limited to the production and the phase of shipment: Either the producers' association alone or the marketing and distribution promotion committee becomes the applicant for the marketing order enactment.

○ When the marketing order includes the phases from the shipment at the production site to the distribution: All concerned parties form a marketing and distribution promotion committee and apply for the marketing order enactment.

□ Marketing order applying procedure

ⅰ) Composition of application for requesting a marketing order: Agricultural and Fishery Products Distribution and Price Stabilization Act (AFPDPS Act) Clause No. 11

○ The contents of application include a reason(s) of applying for the marketing order, subject product item, the enactment period of the marketing order, the area to be covered, the subject parties, production control, methods to control shipments, methods of order of compliance, and penalty for the violators.

○ The procedure includes experts' evaluation of the application elements such as the need for the marketing order, appropriateness, the ripple effect of the order enactment.

ⅱ) Opinion collection and holding public hearings on the request for the marketing order

○ When the producers' association alone requests for the marketing order enactment, the association should collect opinions for 10 days or more by disclosing the application to request for the marketing order in a regional daily newspaper or by mailing a copy of the application to the representatives of all concerned parties.

○ There should be public hearings and/or local authorities meeting on the subject of the marketing order

○ The collected opinions should be reflected in the application for requesting the marketing order.

ⅲ) Final decision of the request for the marketing order enactment

○ The resolution needs 2/3 or more votes from the total registered members of the producers' association and the marketing and distribution control promotion committee.

- The producers' association needs a resolution from the association's general meeting. The producers' association consisting of multiple associations needs 2/3 of the total votes from the entire members of all associations to pass the resolution.

- The marketing and distribution control promotion committee needs 2/3 or more votes from the total committee members including the chairman of the committee to pass the resolution.

iv) Submission of the application for requesting the marketing order enactment

C. Examination Procedure and Review Criteria

1) Examination Procedure

■■ Examination of compliance with the procedural requirement: Product item dealing department and system handling department: When the application lacks in the procedural requirement, the applicants shall be asked to fulfill completion of the procedural requirement or the application is to be returned.

○ Assessing conformity of criteria to request the marketing order: a producers' association with 60% or more of the total production, or the existence of the marketing and distribution control promotion committee, and the scale of the marketing order

○ Compliance with the opinion collecting procedure from the concerned parties

- To inquire opinions to the representatives of the concerned parties about the application for the marketing order enactment – status of holding a public hearing

○ Status of acquiring the required level of votes, 2/3 approval of the registered members of the producers' association (or the marketing and distribution control promotion committee)

○ Status of submitting the required documentation, such as, the examination report from an expert of the marketing order, statistical data related to demand and supply of the subject product

■■ Proclamation of the marketing order and examining the scale of the order: composition and operation of a special evaluation committee

○ The approval of the order enactment and the content of the marketing order are determined through the evaluation of the Marketing Order Evaluation Committee.

- Composition: Marketing an Distribution Director (Chairperson), Product expert, Expert on marketing and distribution of agricultural product and agricultural economics, Expert on consumer economics, Legal expert, and the National Agricultural Cooperative Federation participate in the committee.

○ When necessary, the committee may ask for the applicant organization and local

authorities to make a presentation on the related matters. It may seek to hold a public hearing along with the concerned parties and visit the site for investigation.

○ Examining items: 'Circumstantial appropriateness', 'Necessity', 'Methodological suitability'

- Whether there is a significant level of instability in demand and supply that should call for the enactment of the marketing order
- Whether the content of the marketing order is especially necessary to ease the instable demand and supply
- Whether the circumstantial elements are ready to generate the effect of the market order: voluntary demand and supply control plan such as a marketing agreement, an investigative system of compliance, and so on
- Scale of content in the marketing order, other additional conditions

2) Examining Criteria

□ The status of instability in demand and supply is stipulated in the law as to refer to the lack of stability in the market due to the imbalance in quantity such as excessive supply. Hence the word of instability in demand and supply should be interpreted in a narrow scope, which necessitates the collection of objective statistical and analytical data to support the status of instability.

* An attempt to implement a marketing order as well as its mission to control product distribution may not be easily accepted unless there is a legitimate premise of instability in demand and supply. Thus, it would not be easily accepted to enhance quality elements to include grade, sweetness, size, and standardization of maturity and product.

◦ When the arrangement of all other circumstances, such as, a voluntary plan i.e. a marketing agreement has been made and when it is essential to prevent any defaulters of the plan.

□ Contents of the Marketing Order

◦ Execution of an appropriate regulation that helps easing the significant level of instability in demand and supply of agricultural products

Ex) Shipment control: Fruit culling, Fruit disposal at the production site, Shipment quota, and so on

Shipment timing control: Dispersion of shipment periods by controlling the timing of planting, peak shipment timing, shipment quantity allocation, shipment holiday system,

and so on

Market differentiation: Limit control for the shipment to domestic markets while shifting part of shipment to secondary markets, such as, overseas markets and processing market

◦ The contents of the marketing order should be designed to objectively confirm its compliance.

◦ The contents of the marketing order should be designed clear enough so that its compliance is affordable by the parties such as producers, marketer and distributors who are subject to the marketing order under the general circumstances of production and distribution.

□ Confirmation of approval and content of the marketing order through consultation with the Fair Trade Commission

D. Execution and Financial Aid

1) Execution structure of the marketing order

□ Ministry of Agriculture and Forestry (MAF)

The department that is in charge of the subject product item orders the details of the execution plan in accordance with the marketing order enactment.

- The MAF handles methods to support implementing the marketing order.
- The MAF authorizes the right to execute the marketing order to the local authority and the applicant organization for the order (producers' association or marketing and distribution control promotion committee).

* Agricultural and Fishery Products Distribution and Price Stabilization Act (AFPDPS Act), Clause No. 11, Article No. 2: The Minister of Agriculture and Forestry may authorize part of tasks to execute the marketing order to the chief of the local authority and the subject organization such as producers' organization or producers' association.

□ Local authority

Establish 'Marketing Order Implementation plan'

Execute and monitor the marketing order: violator disclosure and imposing fine to the violators

Support the producers' association relating to the execution of the marketing order

□ Producers' Association and others

The applicant organization (producers' association, marketing and distribution control promotion committee) forms a 'Marketing Order Implementation Committee'.

- The Marketing order implementation committee consists of the applicant organization, other producers, distributors, and consumer representatives.
- Promotion of the marketing order
- The committee circulates or deploys a monitoring team in the APC and joint markets and guides and uncovers violations of the order.

2) Financial Aid

□ The financial aid is not necessarily a prerequisite to the implementation of the marketing order and may be considered upon cases under the bases listed below.

◦ The self-raised fund of the subject product item to the marketing order is allowed to be primarily used for the implementation of the marketing order.

◦ Financial aid for promotion and advertisement of the marketing order and operation of the Marketing Order Implementation Committee

- Necessary expenses for promotion and advertisement of the marketing order or for the order enforcement against violators

◦ Other expenses for the implementation of the marketing order

- Other supplementary expenses to the implementation of the marketing order are to be supported upon the Marketing Agreement.

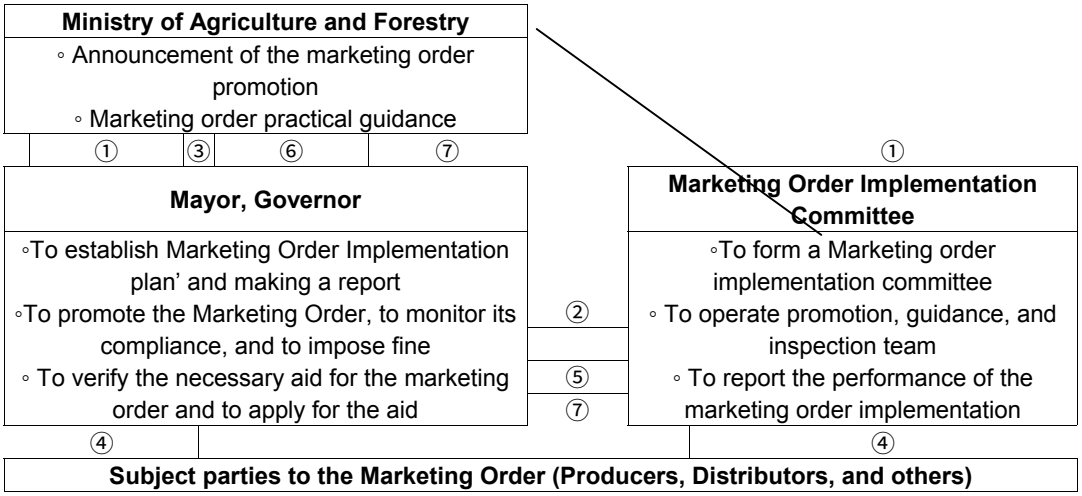
* Financial aid for any activities beyond the scope of the marketing order is not allowed; compensation for farm closedown and cost of government procurement is not allowed.

* Government subsidies to the loss arising from the order enactment cannot be rationalized as the order was called upon the request of producers. Any necessary cost incurred during the processes of the marketing order examination and implementation is paid by the producers, i.e. the applicant of the marketing order.

<Table II-1> Marketing Order Application Procedure

Raising issues on marketing and distribution	
Marketing Control Promotion Committee Producers' Association, Distributors, Consumers, approximately 18 members **Producers' Association** Multiple Producers' organizations request in unison and a Producers' Association is formed	◦Common criteria: The total production of the members should be 60% or more of the entire product volume. ◦When the scale of the marketing order includes the phases of the production at the producing area and post product shipment, a Marketing Control Promotion Committee should be formed.
◦ Composition of the Application for requesting the Marketing Order ◦ Expert examination of the marketing order effect ◦ Inquiry of Opinion on the application for requesting the marketing order request ◦ Holding a public hearing	◦The application for requesting the marketing order is to be composed after deliberation by the producers' association and experts' review. ◦Public disclosure in daily newspapers and to the representatives of concerned parties and collection of opinions in writing for 10 days or more ◦ Public hearing: the related parties to the order including collectors in the producer market, sellers, consumers, and so on
◦ Confirmation of the application for requesting the marketing order	◦ The application for requesting the marketing order is confirmed upon obtaining 2/3 or more votes from the total registered members of all of the producers' organizations belonging to the producers' association. - The marketing agreement should be preceded.
◦ Request for the marketing order	◦ Submit the request to the department handling the subject product item in the Ministry of Agriculture and Forestry via Mayor and Governor - Request for the Marketing Order, Processing Report, Marketing Agreement, Minutes of Public Hearing - City and Provincial Opinion for the Marketing Order
◦ Examination of the marketing order request - Marketing Evaluation Committee is formed. ◦Consultation between related departments to the marketing order ◦ Enactment of the marketing order	◦Examination of 'Circumstantial appropriateness', 'Necessity' and , 'Methodological suitability' - To be suitable to ease the significant instability of demand and supply and to be practical to execute the order - Voluntary plan such as a marketing agreement should be preceded. ◦ Enactment of the marketing order: MAF's website, and announcement in the regional daily newspapers

<Table Ⅱ-2> Execution of the Marketing Order and Procedure of Financial Aid



① Announcement and Promotion of the Marketing Order

Ordering 'Marketing Order Implementation Guidance' (from the MAF to Major and Governor, producers' association)

② Forming 'Marketing Order Implementation Committee' and Reporting (from the implementation committee to mayor and governor)

③ Establishing 'Marketing Order Implementation Plan' and Reporting (from Mayor, governor to the MAF)

④ Promotion and Inspection of the Marketing Order and Imposing fine (the implementation committee, mayor, governor)

⑤ Making a Performance report on the marketing order implementation upon the expiration of the marketing order (from the implementation committee to mayor and governor)

⑥ The result report on the marketing order performance and application for financial aid (from mayor and governor to the MAF)

⑦ Financial aid related to the execution of the marketing order (from the MAF via mayor, governor to the implementation committee)

2. Foreign Case Studies of Agricultural Production and Distribution Control and Its Policy Implications

A. Marketing Agreement and Marketing Order in the United States

1) Summary of the execution

The United States has been using refrigerated trains for the transportation of perishable agricultural products since the end of the 19th century. As a result the distance and volume of transportation from producers to consumers has widened.[2] Some packers collected agricultural products from producers in the western region and transported them to the cities in the eastern region. The processes of product selection and packing were performed at container basis. Meanwhile, the producers wanted to form a producers' association to strengthen their bargaining power in dealing with common shipment, common sales, and common settlement of their products.

Since the legalization of the 1922 Capper-Volstead Act, which enabled the formation of sales cooperatives, the number of sales cooperatives of fruit and vegetables rapidly increased. Especially, the 1920s' depression triggered the producers' collective efforts to broaden the producers' organization to regulate the flow and quality of products in the market. Since the early 1930s, both federal and state laws began to allow self-relieving programs by the producers for certain agricultural products. However, the farmers realized that it was virtually impossible to remove the 'free-rider' problem despite the formation of the sales cooperatives according to the Capper-Volstead Act.

The Agricultural Adjustment Act (AAA) of 1933 institutionalized a system of licenses and agreements. Under the AAA, the Department of Agriculture issued licenses to traders and producers' organizations in the metropolitan markets to control milk distribution and to set the producer price and consumer price. Such a license system, like a marketing order, regulated all milk distributors in the market. The case proved that

[2] The Capper-Volstead Act of 1922 as an exception of antitrust laws which is prohibited under the Serman Antitrust Act of 1890 and the Clayton Antitrust Act of 1914 permits formation of sales cooperatives for agricultural products and joint activities of the members except if it is for "unfair" price raise of agricultural products. Based on the Capper-Volstead Act, the Department of Agriculture is given the right to enforce the marketing order binding traders and processors of agricultural products to the price and volume control which was set by the agricultural cooperatives in the 1930s. (Scherer,F.M. and Davis Ross, Industrial Market Structure and Economic Performance, 3rd ed., 1990, p.324).

the market controlling system only works when it binds all related parties in a specific market to have any effect even in the early phase of market control.

However, trouble emerged immediately after the licenses and agreements were enforced in the fluid milk market. The matter of legitimacy was uncertain whether to regulate the market participants who did not sign the agreement as they were automatically licensed. Moreover, the fixed price in every transactional phase caused undesirable market rigidity. There was also a question of who would be the main body to determine the distribution margin. The Agricultural Adjustment Administration eliminated the resale price clause of the program as a matter of policy in early 1934. Nonetheless, the possibility to execute the milk license under the AAA of 1933 was weakened in 1934. The Department of Justice refused to execute some licensing regulations. As a result, violations were prevalent in the market as the traders refused to pay the designated price. Additionally, the well-known Hoosac-Mills case ruled the tax on the processors and the supply control regulation as illegal.

Under the AAA of 1933, the marketing agreement and license was applied to fluid milk, evaporated milk, dry skim milk, peaches, other fruits, vegetables, nuts, and rice. Cigarettes were also under the control of the agreement and license in 1933 and 1934 but were released in 1935. Among 65 agreements that were enacted until the fall of 1935, many of them gradually expired.

In 1935, the AAA of 1933 replaced the license with the marketing order and in the Agricultural Marketing Agreement Act (AMAA) of 1935 re-stipulated the marketing order and agreement regulation while the method of controlling was more clearly mentioned, thus items to be controlled by the program were specifically enumerated.

The amended Agricultural Act of 1963 listed all of the excluded items and made all of the non-excluded items available for the program. The Agricultural Act of 1965 allowed a limited control of milk supply while restraining supply control of other items. The allowed supply control did not have an enforcement power but could be used after as such following administrative procedures.

Later, many states utilized the marketing order and agreement. In 1966, 25 states used similar programs to the federal marketing order to regulate milk distribution. Those programs basically set the milk price. In many cases the federal government and state government jointly regulated the price of milk, though the federal marketing order had an advantage of enforcing the regulation beyond state boundaries.

The marketing order for fruit and vegetables was enforced under the AMAA of 1937 in

California and many states enacted the marketing order by having their own state act as well as the federal act.

In 1965, marketing orders in major fruit and vegetable producing states including California were enforced. Among 90 of the active marketing orders in 1966, 56 of them had been implemented since 1953 while only 10 of them were since 1940, showing that many marketing orders had come and gone. Among those 90 orders as of 1966, 47 orders were enforced under the federal law and the other 43 orders were under states laws. In particular, California, as the biggest producer of fruit and vegetables, was under the enforcement of 44 orders from the total of 90 orders in 1966 and among them 15 orders were under federal law and 29 of them were under the California Marketing Agreement Act (CMAA).

The deregulation trend in the 1970s in the U. S. economy made the Department of Agriculture move its policy focus to development and maintaining the market rather than market regulation through product volume control. In the 1970s, the Federal Trade Commission and the Department of Justice began to pay attention to the impact of competitiveness of the order and its influence to the price. They came to a conclusion that the high food price in the 1970s was caused by the marketing order. Accordingly, many research results were disclosed and the Secretary of Agriculture proclaimed the Guidelines of a marketing order in January 1982 which limited entry-barrier (quota), supply control, monopolistic control, and so on.

Much research was performed in the 1970s and 1980s, especially concentrated in 1981, such as the efficiency of the marketing order and the order's influence to income distribution and agricultural structure. The focus of the research includes; "Was the order really beneficial to the producers' organization?" "Who are the real winners and losers?" "Is there any effect on consumer welfare?" "Did it affect the consumer price rise and distort the resource distribution?"

In 1995, the federal marketing order was implemented for 35 items such as fruit, vegetable, nuts, and cash crops (47 items in 1981). In 1994, the marketing order for California-Arizona lemon, Valencia orange, and Navel orange was ended by the Secretary of Agriculture. The marketing orders for potato in Maine, tomato in Texas valley, and lettuce in southern Texas were still valid but became a dead law while 2 marketing orders for peach were postponed. In the case of peanuts, the minimum level of quality was regulated through the marketing agreement without a marketing order, which eliminated harmful peanuts, contaminated by aflatoxin, from edible peanuts. As of 1998, the

marketing order for peanuts was added and a total of 36 federal marketing orders for fruit and vegetables were validated.

2) Characteristics of Marketing Agreement and Marketing Order

The norm of both the marketing agreement and the marketing order is permissive rather than mandatory. Hence, they are enacted by approval of the Ministry of Agriculture after going through the process of hearings, which is initiated and suggested by the producer when needed.

The goal of the marketing agreement and marketing order is to enhance producers' income by regulating distribution of certain products. Despite the scope of state or federal laws which can mandate methods to improve producers' income, individual orders do not utilize all available methods as they are not allowed by state or federal laws.

Meanwhile, there are differences between the orders by U. S. federal laws and by state laws. First, it is not possible to make an entire control over distribution or production by the order under federal laws. On the contrary, some state laws allow a producer allotment that regulates the quantity of products for sales by individual producers. Second, federal laws concentrate on mainly quality standardization and market-supportive activities such as regulating quality, standard sizes of container and package, research, and market development programs. Third, federal laws do not bind processed products, yet some marketing orders under state laws bind can and frozen products.

The United States adopts a negative list system that stipulates a list of product items as being excluded from marketing orders, such as, animal feed grain, soybean, livestock, poultry (except turkey), and so on.

< Table II-3> Comparison of Distribution Programs between Federal and State of California

	Federal Distribution Program	California Distribution Program
Composition	Marketing Order	Marketing Order, Committee, Board
Legal Ground	Agricultural Marketing Agreement Act (1937)	California Marketing Act (1937: Marketing Order) Each Special Act(Committee, Board)
Target Function	Volume Management, Quality Management	Research and Development, Market Promotion
Subject Items	Milk, Special Fruit and Vegetables, Special Purpose Crops	All Agricultural and Livestock Products

3) Main Programs of Marketing Order

The current U. S. market order programs in practice are largely categorized to volume management control, quality management, market supportive activities, and milk price control. The marketing order in the U. S. had consisted of a direct distribution management including a producer allotment in the early stage, which has gradually changed to focus on quality management such as grade and size of products and market support activities including research and development and promotion and advertisement.

A) Volume Management

There are only 9 marketing orders among 36 of the orders that regulate product volume.

Producer Allotment: refers to the method to increase Sales Gross Income by making individual and total allotment based on the individuals' past records of sales, and is highly effective when demand is inflexible. In principle, this method is the most effective to heighten producers' income, yet, its practical effect of raising price is lessened under special market circumstances where regional competitiveness exists or the producers' income is high. The producer allotment system regulates only cranberry and spearmint oil in the Far West region[3]. Celery in Florida is also applicable for the producer allotment system, yet its application was postponed in January 1995.

Market Allocation: refers to a method that utilizes price differentiation to enhance producers' income, and incorporates limiting sales volume in the primary market i.e. domestic market and fresh market where demand elasticity is low while selling the remainders to the secondary market i.e. export market and processing market where demand elasticity is higher. Currently, 4 federal marketing orders have been enacted in the U. S. and the subject items of the orders are almonds, plums, and walnuts in California and filberts in Oregon, Washington.

The method of market allocation incorporates determining "free sales ratio" and "limited sales ratio" before the harvesting season so that each distributor determines the volume of free sales by applying the free sales ratio to their own revenue and the remaining volume is to be sold through non-competitive channels such as exports and processing markets. When it turns out to have an unexpectedly higher demand in the

[3] Far West: Region of Far West, refers to the west side of Rocky Mountain and the coastal area of the Pacific Ocean

primary market, the free sales ratio may increase during the distribution period; however, it is not allowed to be lowered.

Reserve Pool: in principle, it is the same as the market allocation method and refers to isolating a certain ratio of the excessive volume from the market by either setting aside or through a reserve pool when supply is more than the demand under the market condition of set prices rather than switching the excessive to the secondary market. The set-aside or reserved volume is allowed for re-sales in the primary market in the same fiscal year or the sales in the processing market or in the secondary market, as well as, carry-forward sales to the next fiscal year upon the increase in price under favorable market conditions. The use of this method usually coincides with producer allotment or market allocation. The subject items of the reserve pool are walnuts, raison, and plums in California and spearmint oil in the Far West region.

Market Flow Regulation: Although all product volume is to be sold within the period of distribution, the market flow regulation refers to the method of enhancing producers' income either by regulating shipment volume at a weekly basis during the peak shipment period or by strategically limiting patterns of shipment timing. Theoretically, it is the same as the market allocation; however, it aims to avoid periodic excessiveness or shortage by timely isolating markets rather than dividing markets by space between domestic and exports markets and by type of products between fresh and processing markets.

① Handler Proration in Particular Period

The shipment period is to be regulated on a weekly basis (normally 1 week but 3 days or an unspecified period is also available), which does not affect the entire fiscal year's distribution. Producers' shipment volume is prorated for certain weeks. This method was widely used for tangerine species because of the advantage to maintain the quality of fruits without harvesting from the trees. Hence, it was also applied to tokay, grapes, celery in Florida, lettuce in the south Texas region. This method was used for 3 citrus species before the order was ended in August 1994.

② Shipping Holidays

The method of shipping holidays refers to banning shipment of products for a period, especially before and after holidays, to prevent accumulation of agricultural products during times of less movement of product volume. This method is the weakest type of regulation, as it affects the market to the least extent. Currently, 5 shipping holiday

orders have been effective and enforced on citrus species and avocados in Florida, dessert grapes of California, Vidalia onions in Georgia, and onions in Idaho and Oregon.

B) Minimum Quality Standards

The method of enforcing minimum quality standards is an important program of the marketing orders. It refers to applying minimum standards of quality i.e. minimum grade, size, and maturity to products in order to eliminate low quality products from the market. Consequently, the method aims to improve producers' income through making supply of high quality products available for consumers' choice of high quality agricultural products. The economic functions of minimum quality standards include: promoting transactions based on the product detail through brand recognition by consumers, reducing transaction costs, improving efficiency of distribution, and differentiating products.

The method of minimum quality standards have been applied for many product items except milk. In the case of milk, the quality standards cannot be determined under the marketing orders as grade and the minimum required standards are regulated either by the regional or state public health care center.

In the U. S. any intentional reduction of supply volume through the method of minimum quality standards is considered against the administration's policy[4]. In other words, the method of minimum quality standards has its final goal of promoting consumption of high quality agricultural products in the U. S.[5]

There are three types of minimum quality standards: ① To establish minimum quality standards of distribution, ② To limit the entire supply volume for sale during a specified period or to limit size and grade, ③ To limit products' selling ratio by grade and size.

The marketing order, including the minimum quality standards, also regulates the same kind of imported products as the domestic product items being regulated by the

[4] According to the USDA report of 1982, "Guidelines for Fruit, Vegetable, and Special Crop Marketing Orders", when the industry implements marketing orders, quality regulation should not be used as means to control supply volume. Accordingly, the Department of Agriculture shall continue to evaluate the order implementation while focusing on whether the quality regulation changes frequently between the years of distributions or within the year of distribution, whether the ratio of products that is congruent to the minimum quality standards is reduced, or whether the quality standards are strictly maintained.

[5] Jesse (1981) composed of a quality index to verify an impact of the quality standards on pricing of agricultural products and came up with a result that the quality standards affects demand which causes increase in prices.

order.

An equivalent product to a domestic product being regulated by the marketing order, including the minimum quality standards, should also be regulated by the same or comparative standard. Any discriminatory quality control on the imported products is a violation of Non Tariff Barriers, which will cause international trade restraint.

C) Market Supportive Activities

Market supportive activities contribute to reduce uncertainty and stabilize the market by providing higher prices for producers and a steady supply of products for consumers. Market support activities are as follows:

① Standardization of package and container: unifies package size and containers for shipment to improve efficiency and is used for citrus and lime in Florida market and citrus in Texas market.

② Research of production, distribution, and promotion for consumption: are marketing orders for citrus, except in Florida and 2 marketing orders for grapes in Florida, and financially supported for research and development.

③ Advertisement: Supportive advertisements have been executed for the marketing orders for citrus in Texas, limes in Florida, and grapes in California.

④ Prevention of unfair trading methods: In most states, there are special acts that limit unfair trading methods and some of federal marketing orders prohibit retailers from selling products at below purchase prices.

D) Price Regulation

The U. S. allows the administrated pricing under the order only for milk. There were 83 federal milk marketing orders enacted in 1962 but they were integrated to 38 orders at the end of 1993. Despite the reduced number of orders the ratio of milk included in the orders became higher. The enacted marketing orders are not only federal but also state orders, including California.

Milk marketing orders do not regulate either volume or quality but determine producers' prices of fluid milk (grade 1), condensed milk (grade 2), or processed milk (grade 3). Producers' cooperatives usually lead and suggest marketing orders but the agricultural secretary is not authorized to suggest the order.

B. Marketing Order in France

Marketing orders in France was adopted in 1975 to solve the problems of excessive agricultural products by revising the U. S. marketing orders. The Interfel in France is similar to the U. S. marketing orders, which goes through agreement of regulating shipment and quality of products among the members of an organization composed of producers, collectors, wholesalers, and retailers before the government promulgates and enforces the special act, Interprofession Agricoles[6].

There is no farmers' voting system like in the U. S. Instead, the order suggestion is determined by unanimous agreement[7] in the board meeting which the government acknowledges and is represented equally by the producers and distributors without presence of consumer representatives. Nevertheless, the government is not obliged to issue a decree; there has not been any rejection by the government legalizing the consensus of the Interfel.

The procedure of introducing the marketing order normally takes steps as follows:: ① Issue raising→ ② Research(technical and economical aspects) → ③ Suggesting solutions → ④ Agreement of the operational committee → ⑤ Consultation among related parties and the government's legalization. The details of the procedure are as follows:

① Distribution agreement can be suggested when the 9 member organizations of Interfel, consisting of the producer and distributor organizations are faced with

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[6] The Interprofession Agricoles which is the ground law for the French council of producers and distributors has been amended July 10, 1975, July 4, 1980, December 1, 1986, and February 1, 1995 for the execution of marketing orders.

[7] 9 participants of the Interfel, an association of producers and distributors in France: Fédération Nationale des Producteurs de Fruits (FNPF, Federation of National Producers of Fruit), Fédération Nationale des Producteurs de Lait (FNP,: Federation of National Producers of Vegetable), Fédération Française de la Coopération Fruitière, Légumière et Horticole (FELCOOP, Federation of Fruit, Vegetable, Horticulture Cooperatives), De l'Association française des comités des fruits et legumes (AFCOFEL, Association of French committee of fruit and vegetable), Fédération nationale des producteurs de pommes de terre et de primeur (FNPPTP, Federation of National Producers of Potato), Association nationale des expéditeurs et exportateurs de fruits et légumes (ANEEFEL, Association of National Collectors and Exporters of Fruit and Vegetable), Union nationale de commerce en gros de fruits et légumes (UNCGFL, Union of National Wholesalers of Fruit and Vegetable), Fédération pour le Lobbying Marketing à Bruxelles (FEDIM, Federation of European Direct Marketing), Union nationale des syndicats de détaillants en fruits, légumes et primeurs (UNFD, Union of National Retailers of Fruit and Vegetable)

adversities, and there is no limitation on the scope of suggestions explicitly mentioned.

② Upon suggestion of the distribution agreement, a research team is formed to study the technical and economical aspects and solutions are submitted to the board.

③ The marketing agreement is unanimously signed by the board before the board makes a suggestion for the government's enactment of the marketing order.

④ The government has to make a decision whether to enact the order within 2 months from the suggestion. If the government decision is not announced within the 2 month period, it is considered that the suggestion has been accepted. The government is not obliged to enact the order; however, there has never been a case that the government rejected the suggestion for the enactment of the marketing order.

The marketing order focuses on quality regulation and sales promotion rather than pricing and shipment control and there is no government support for the operation. 80% of the total operating budget is spent to promote consumption, including domestic consumption and exports. It is judged that price control incurs expenses and is difficult to be enforced under the circumstances of market openness in the EU region. The followings are cases of distribution agreement and marketing orders of the Interfel in France. The cases reveal that the marketing orders in France mostly contain quality control while adopting shipment control in some items.

Though some producers and distributors resisted depending on product items, once the agreements were enacted, they have been operated for a long term and broad-gauged aspect. For example, there was an order to ban potatoes of bigger than 75 mm diameter for sale to consumers to restrain the excessive potato production in 1997. Later, as the price of potatoes rose, the farmers demanded to ease the agreement but it was not accepted in an effort to improve potato quality (potatoes for the use of processing companies, restaurant, and exports are excluded from the order.)

In France, the employees of the Interfel, the Interfel authorized personnel, employees of Ministries of Economy, Finance, and Budget, and Agricultural and Fishery, employees of the National headquarters of Competition, Consumption, and Corruption Prevention are empowered to control and inspect in order to monitor and supervise the execution of the marketing order.

All members of the Interfel organizations share the operating expenses, which are collected in advance as mandatory payment, deemed to be the members' liability under

the civil law. The tax authorities in France also impose and collect the appropriate shares on the imported agricultural products by law.

Any violations are to be legally penalized from 500 French Francs to the entire amount of loss based on the district court's decision upon request by the member organizations. The share payment should be made within 3 months, if it is not paid within the due date; the Interfel is empowered to press the delinquent for the payment before making a legal claim.

<Table Ⅱ-4> Marketing Agreement of Interfel in France and 23 cases of Marketing Orders

Item	Marketing Agreement	Signature Date	Announcement Date	Expiry Date
Apple	□Regulating Shipment Period of sweet and modified varieties(Golden Granny and Early Smith) □Bushel(New variety) □Golden(Small Green) □Industrial processing	1998. 7. 21 1995. 5. 10 1995. 5. 10 1996. 7. 10	1998. 8. 12 1995. 8. 3 1995. 8. 3 1996. 8. 11	1999. 8. 11 1998. 12. 31 1998. 12. 31 1999. 7. 31
Pear	□Comice/Pass-Crassane(Diameter size, packing condition) □Guyot (Diameter size) □William's (Diameter size) □Guyot and William's (Shipment period, Degree of maturation) □Beune Hardy/Comice/Pass-Crossane (Shipment period, Degree of maturation)	1997. 7. 9 1997. 6. 11 1997. 6. 11 1997. 6. 11 1998. 8. 4	1997. 9. 6 1997. 7. 9 1997. 7. 9 1997. 7. 9 1998. 8. 23	2000. 8. 31 1998. 12. 31 1998. 12. 31 1998. 12. 31 1999. 8. 22
Kiwi (Chinese goosebery)	□Shipment period □Payment of expense shares	1998. 8. 4 1998. 8. 4	1998. 9. 11 -	- -
Peach	□Shipment prohibition of "C" grade diameter □Degree of hardness	1997. 4. 30 1998. 4. 22	1997. 7. 8 not applied in 1998	After 1999 -
Fresh Potato	□Diameter size □Grade	1997. 4. 30 1998. 4. 22	1997. 6. 3 1997. 7. 21	After 1999 season 2001. 7. 20
Others	□Ciron de melon and other shapes □Amanita pantherina (Fly mushroom) □Endive (a type of lettuce) □A type of garlic □Fresh Truffee mushroom □Fresh Walnuts □Payment of Ad Valorem Duty	1997. 2. 12 1996. 1. 11 1996. 9. 11 1998. 4. 22 1996. 10. 8 1996. 7. 10 1997. 12. 17	1997. 7. 8 1996. 3. 15 1996. 10. 2 1998. 7. 11 1996. 12. 17 1996. 8. 11 1998. 1. 29	1998. 12. 31 1998. 12. 31 1999. 8. 31 2001. 4. 22 1999. 8. 10 1999. 8. 10 possible for extension

Data Source: Ministry of Agriculture and Forestry Report on the Europe in-service tour, 1998

In particular, France implemented a Dual Pricing System that provided two sets of prices, one for producer and one for sales, as a part of the marketing order in August 1999. The French government implemented the marketing order that forces retailers to mark the purchase price and sales price in parallel on the product for 9 items including apples starting from August 16, 1999. This method was possible to introduce in French market because of the high market share of large-size distributors and the simplicity of transactional phase between producers and consumers.

According to the French government's analysis, farmers' receiving prices dropped in recent 2 or 3 years because the mega size distributors including Carrefour put the pressure on farmers to lower the purchase price and merchants benefited from the excessive profit taking. Consequently, this method was implemented to curb the unfair practices as a part of a marketing order, a measure of protecting farmers.

The plummeted prices of agricultural products for the last 2 years or so triggered the aggravated protest demonstrations by farmers in the southern region since July 1999. That was the highlight of farmers' complaints. More than 70% of the agricultural product market was dominated by the mega size franchised distributors. They were increasing direct purchase from the producers through the exclusive channel (farmer/farmers' cooperatives ⇒ central purchasing center of distributors ⇒ supply to their chain shops). The pressure to lower supply price on the supplier/producer organizations was getting intensified as the distributors utilized agricultural products as hostage, which eventually led the producers to loss. On the other hand, the mega size distributors made a controversial argument that the high distribution margin and high retail prices are not from excessive profit taking but due to the interim distribution costs such as packing and transportation.

Hereupon, the French government intervened by making the Ministry of Agriculture and Fishery take the role of arbitrator and arrange for the Interfel (association of vegetable, fruit producers and distributors) to establish a marketing agreement as a step to suggest enactment of a marketing order. As a result, the Interfel made an agreement among representatives of producers and distributors that retailers are to mark both purchase price from producers and sale price to consumers for the purpose to accomplish transparent and straightforward transactions. Consequently, the government proclaimed the enactment of the marketing order.

The marketing order was published in the public bulletin board as of August 14, 1999. The scheduled enactment date was August 16, 1999 and execution date of August 30,

1999 but they were postponed for 1 week considering the backlash of retailers. The order affected items are total of 9 items including apples, grapes, peaches, melons, pears, and tomatoes. However, it was decided to review the effect of the order implementation for 3 months before expanding it to pork, chicken, and livestock products because there were issues raised on the practical effectiveness of the order as academic circles and industrial experts made different appraisals about the order.

C. Marketing Board in Canada and Australia

1) Concepts and Functions

The marketing board is a powerful marketing body that unites the efforts of cooperatives, a marketing order, and the bargaining groups. The marketing board has been commonly utilized in Canada, U. S., U. K., Australia, France, and Africa. These governments acknowledge the exclusive power of the marketing board in broad-range activities of production and distribution, which empowers producers to directly exercise their control on the marketing board.

There are major operational functions of a marketing board as follows.

① The marketing board acts as an independent body for the producers of the corresponding product incorporating a collective method of bargaining and price negotiation.

② As the only marketing body for the corresponding product item, the marketing board exercises a broad controlling power on every aspect of distribution facets including the ownership of storage houses.

③ The marketing board takes the role of a sponsor for informational activities and market research.

④ The marketing board performs a collective bookkeeping for the producing farmers.

⑤ The marketing board assumes the function of control and allotment of production and distribution.

2) Marketing Board in Canada

In Canada, a marketing board for each product item is established and operates with exclusive power in most of the major agricultural and livestock products i.e. wheat and grains, livestock products, and vegetables. In general, the marketing board is based on a

ground law, the Agricultural Products Marketing Act and its enforcement ordinance, and deals with such tasks as producers' licensing, allocation of production, administrative price determination, and a collective bookkeeping.

The marketing board for eggs, dairy and poultry products as part of the supply management program in Canada, sets prices based production cost research although there are marketing interventions from the federal and state government. The income from the sales of the product items under the supply management program in 1999 reached 20% of the total cash gross income of the farmers. Agreement between the federal and state governments necessitates revisions of the supply management program.

In the dairy product industry, supply volume and prices are controlled by production quotas, maintenance of administrative prices, and monitoring cross region activities. The dairy farmers need to acquire a permit for the production of raw milk and must go through the marketing board to sell their product to processing companies. The Federal Canadian Diary Commission (CDC) manages the system of sustaining milk prices and production quota.

The poultry and egg supply management program has also operated a similar system to that of the dairy sector. The producers produce poultry products after acquiring a product permit from each state and sell through the marketing board to processing companies. The marketing board makes allotments to the producers based on the National Allocation Agreement. The marketing board maintains closely cooperative relationships with various organizations of poultry producers including Chicken Farmers of Canada, Canadian Turkey Marketing Agency, and Canadian Broiler Hatching Egg Marketing Agency.

The Canadian Wheat Board (CWB) demonstrates its absolute exclusivity in the production and distribution of Canadian wheat and its influence is even extended to domestic distribution as well as overseas exports. Though the CWB often directly exports wheat to overseas markets, the exporters also purchase wheat from the CWB to sell overseas.

3) Marketing in Australia

In Australia, the Marketing of Primary Products Act was enacted in 1983 providing the basis of operating a marketing board for major agricultural products. The Wine Grapes Marketing Board in New South Wales is an exemplary case, thus illustrated as follows.

First, all of the producers of wine grapes belong to the marketing board as they are divided into the groups of company and individual producers with 4 distinguished levels.

Second, the marketing board is managed with 5 major producing areas of wine grapes.

Third, the functions of the marketing board are as follows:

① To develop behavioral formality for the purpose of contractual negotiation between the producers and the brewers of wine grapes

② To develop the contents of contract for the sales of wine grapes to include trading price and payment terms with the brewers

③ To collect and disseminate information of market and the industry

④ To conduct research and development

⑤ To provide educational training in relation with production, marketing, and so on

⑥ To promote public campaigns for wine consumption

⑥ To enhance the regional industries

Fourth, the management of the marketing board consists of 7 directors of whom are 5 elected and 2 appointed by the other elected directors.

D. Implication of Foreign Systems and Its Application to Jeju

1) Implication

The marketing orders in the U. S. and France are compared as follows. To summarize the differences, first, there is a difference in the base laws; the U. S. bases on the Law of Agricultural Product Distribution Arbitration while France bases on the special act, Interprofession Agricoles. Secondly, in the area of drawing the industrial agreement or voting procedure, the U. S. generally adopts a voting method among farmers while France draws the industrial agreement through the INTERFEL in a form of unanimity. Thirdly, the U. S. directly charges the share of expenses to the producers or distributors while France collects the shares from the members of each participating organization for the necessary operating expenses.

The marketing order in the United States is the system that was formed during the period of the 1929 Depression when the producers made endeavors, voluntarily and from necessity, to control market distribution. During the process, the marketing order was institutionalized by the producers asking for the government's legal support to resolve the problem of free-riders. Hence the majority of farmers have continued their efforts to comply with the marketing order as a legal regulation which the farmers opted on their

own. Rather, the Federal Trade Commission (FTC) or the Department of Justice (DOJ) pointed out the unfair trading activities of the producers' organizations by exercising their monopolistic and oligopolistic power in the market through manipulating distributing product volume via the marketing order. Actually, there were many complaints in the 1970s that the marketing order largely violated the anti-trust law, which led to the promulgation of the marketing order guideline by the Secretary of Agricultural Department in the early 1980s to circumscribe the market entry limit, regulating supply volume, and monopolistic regulation.

<Table Ⅱ-5> Comparison of Marketing Orders in U. S. and France

	Marketing Order in the U. S.	Marketing Order in France (INTERFEL)
Enforced period	1937(Marketing Agreement 1933)	1975
Base Law	Marketing Agreement (1933 Agricultural Adjustment Act) Marketing Order (1937 Agricultural Marketing Agreement Act)	Special Act (Interprofession Agricoles)
Operating body	Producer group of each product (Committee composed of producers by item, distributor representative, governmental representative)	INTERFEL(vegetable and fruit producer and distributor council) : 5 producer groups, 4 distributor groups, 26 directors, excluding consumers
Supervision	USDA Agricultural Marketing Service (AMS) regional offices (AMS)	Ministry of Agriculture, Producer and Marketing Department
Circumstances in the beginning of introduction	During the period of the Depression, over-supply and depressed consumption, etc. cause the increased need to adjust the distribution	Due to over-supply basis
Procedure of agreement	Suggested by producers' groups, distributors □ Ministerial confirmation of legality □ Public hearings □ Voting by farmers □ Ministerial pronouncement of Marketing Agreement and Marketing Order simultaneously	Suggestion □ Research □ Board's agreement and suggestion (with unanimity) □ Order by Secretary of Ministry of Agriculture
Voting by farmers	Yes	No
Contents of agreement and enforcement	□Volume control, quality control, marketing supporting activities □ Milk: Allowed price and supply control (38 items in 1993) □Vegetables and fruits: : Mostly concentrated on quality control and market supporting activities (36 items in 1998)	□Focused on quality control and product promotion project rather than price and shipment control □Enforcement of dual price marking system including producer price and consumer price in August 1999
Budget allocation	Collection of the designated	Cost of operation is covered by fees paid by

	amount per transaction or the amount by the designated charge rate per transaction from the first buyers	4,500 umbrella organizations of the member organizations (determination of fees based on the sales amount by organization). To be collected by tax authorities
Agreed items	Livestock: milk Fruit: tangerine, lemon, orange, avocado, pear, kiwi, plumb, peach, cherry, olive Vegetable: potato, onion, tomato, celery, lettuce, melon, almond, etc.	Pear (diameter, packing condition, shipment timing and maturity), kiwi (shipment timing), peach (prevention of shipment for below certain product level), potato (diameter, level), apple (shipment timing), others (mushroom, melon, garlic, salad, walnut, etc.)
Budget execution	Required ministerial approval for execution	80% of budget is used for advertisements to promote consumption (domestic market promotion, export facilitation)
Government's support	None	None
Processing violations	CDN$100 to CDN$1,000 fine or 10 days to 6 months imprisonment Fine imposition of 3 times of the exceeded amount	Not less than 500 French Franc fine and total amount of damage
Duration of law	Unless otherwise specified of its duration, the duration is to be reviewed through discussion every 5 years.	The duration continues until the corresponding situation improves.

Source date: Kim, Byongryul et al. 『Marketing Agreement of Agricultural Products and Methodology to implement Marketing Order』, Korea Rural Economic Institute, 1999. p.71 amended

The marketing order in France, unlike the U. S.'s marketing order, chose a speedy procedure by simplifying the procedural agreement among farmers, distributors, and other participating parties. The French system also adopted the procedure to secure the validity of representing farmers and distributors, which is to take the ministerial appointment of the recommended personnel by the industries for the composition of the Interfel members.

Nevertheless, there are arguments that the marketing order in France also violates the Fair Trading Act due to its nature of being a fixed deal. The U. S., the U. K., and Scandinavian countries have been enforcing similar systems to the French system while Spain and Austria are under the process of introducing the system. The European Union (EU) is currently carrying out the research on the system, as well. At the end of the 1990s, France enforced the Dual Pricing System to include a producer's sale price as part

of the marketing order as a measure to counteract abusive activities of the mega scale retail distributors to lower their purchase prices.

In Korea, it is not easy to adjust cultivating area or production volume because the farming scale is small and it is difficult to predict harvest volume per cultivating unit due to changes in cultivating environment. Furthermore, the activities of controlling production caused the government's responsibilities and risks in post production activities e.g. supply and demand adjustment, price control and stabilization; They may also include the supplemental post production activities e.g. volume control and quality control in the processes of market distribution and/or promotion of consumption. The marketing order in the U. S. began in the Depression of the 1930s, as a countermeasure to the problems of depressed consumption, low prices, and excessive production. France also adopted the marketing order but revised it to be suitable to a given situation and adjusted market distribution to excessiveness.

In this aspect, the adoption of a marketing order in Korea is justified to boost stagnant consumption and to ease the problem of excessive supply of agricultural products. The problems in distribution and the marketing sector can be identified for the development and implementation of a suitable marketing order to resolve the problems.

In order to implement an effective marketing order, it was necessary to choose an item like the tangerine with its limited production area to introduce an appropriate initial program. At the same time, a phase based implementation which gradually strengthens the level of regulation after providing visible effects through incentives rather than regulation, was also reasonable.

2) Application to Jeju Tangerine

The marketing order was first implemented to the Jeju tangerine. Although the marketing order is a foreign institution that is mostly exercised in advanced countries i.e. the U. S. and France, there is a common value that could be applied to the Jeju tangerine industry. The target of a marketing order is to increase farmers' selling prices and income by making aggressive adjustments to the distribution volume in the market and to control quality, promote consumption, and to support market activities through research and development. Provided the essential conditions are met to implement the marketing order, there is sufficient value to adopt the order with its highly expected effects.

The U. S. has continued the enforcement of the marketing agreement and marketing order since the Depression in the 1930s. At that time, producers' groups, on their own,

searched for a resolution to the problems of excessive production due to stagnant consumption and falling prices. They supported the marketing agreement and marketing order to adjust market volume, control quality, and promote consumption. France also adopted a revised version of the U. S. system in 1975 to adjust market volume to counteract excessive production.

In the same aspect, the implementation of a marketing agreement and marketing order in Jeju is a worthy attempt especially in the situation of a stark need for shipment volume adjustment, quality control, and promotion of consumption. Frequent over-production and shipments of poor quality products caused the perception of the Jeju tangerine being of low quality compared to oranges, thus the activities to correct the situation is necessary.

The marketing order should have a clear selection of the subjective parties. It must be to encourage farmers' support and their recognition of the effects of the order to induce reduction of administrative expenses and motivate high participation. Therefore, the recent enactment of the tangerine marketing order is most appropriate as the tangerine is the most suitable product in Korea for this initial project.

Particularly, volume control through quality regulation i.e. restraining shipment of low quality product and the product sizes outside of acceptable levels deems to be more effective than direct volume control through a reduction of cultivated areas and product volume manipulation. At first, restraining shipment of outer range product of the size level 1 or below, or 9 or above, a defective product, and artificially ripened product appears to bring, not only the effect of volume adjustment but also the opportunity to raise the level of quality. Hence, it significantly contributes to mitigate the perception of being lower quality fruit than oranges.

Yet, the Jeju tangerine needs to shift up its quality through thrusting forward with stricter measures than the enforced two exemplary marketing orders. The selection and packing processes need to be radically improved while targeting for premium prices by pricing individually per tangerine instead of pricing by the tally which could contribute to lower the weight of high transportation cost. At the same time, efforts should be made to adjust the supply of fresh market through the appropriate manipulation of market supply between fresh and processing market by raising the weight of the tangerine processing businesses.

Finally, improvement in production phase has to be prioritized because sweetness in tangerine is the most critical element. The worst case scenario is that the current ban on the Chinese mandarin based on the Vegetation Disinfection Law is lifted and allowed to be

imported. Therefore it is of the utmost importance to build up competitiveness against the Chinese mandarin.

Further, the producers' organization needs to be developed into a marketing board like those that have been practiced in Canada, Europe, and Australia in order to strengthen the power of the producers' organizations so that production and distribution could be strictly controlled on their own.

It is also possible to strengthen the controlling capacity of the current marketing order by incorporating a marketing board. In the U. S. a dual control system comprised of a marketing order and a marketing board is operated to control production and distribution. Therefore, the Jeju tangerine industry can also adopt a marketing board system, as well.

3. Major Implementation Procedures in Tangerine Marketing Order

□ **Comprehensive Evaluation of 2003 Product of Field Tangerine**

○ Date: May 11, 2004

○ Place: National Agricultural Cooperative Federation (NACF) Regional Headquarters, Conference room

○ Host: Jeju Tangerine Council Corporation

○ Main Contents

- To supplement the problems revealed during the implementation of the initial marketing order and to suggest re-implementation of the marketing order as a short term strategy for revival of the tangerine industry

□ **Marketing Order System Forum**

○ Date: June 11, 2004

○ Place: National Agricultural Cooperative Federation (NACF) Regional Headquarters, Conference room

○ Host: Jeju Tangerine Council Corporation, New Marketing Research Institution of Agricultural Foods Corporation

○ Theme: Achievements of Tangerine Marketing Order and its development tasks

○ Main Contents: Supplementation of a marketing order focusing on quality and Increasing need for reimplementation of a marketing order

□ **Consultation for Measures to Re-implement Tangerine Marketing Order**

○ Date: June 18, 2004

○ Place: National Agricultural Cooperative Federation Regional Headquarters, Conference room

○ Host: Jeju Tangerine Council Corporation

○ Main Content: Collection of opinions from the former members of cooperative chiefs (20 persons) on measures of the order re-implementation

□ **2004 Special Countermeasure Meeting for Tangerine Industry**

○ Date: July 12, 2004

○ Place: Jeju Provincial Hall Conference room

○ Participants: Governor, Deputy Mayor, Deputy county mayor, Chief of NACF headquarters, Chief of Tangerine Consultation Council, and more

○ Host: Jeju Province

○ Main Contents: Consultation to push forward a marketing order on 2004 product of tangerine

□ **Consultation of Proposition to Re-implement Marketing Order for 2004 Product of Field Tangerine**

○ Date: July 22, 2004

○ Place: NACF Regional Headquarters Conference room

○ Host: Jeju Tangerine Council Corporation

○ Main Contents

- Composition and Operation of the Promotional Committee for Nationwide Distribution Control

- Consultation of a fundamental implementation plan to include proposition for re-implementation

□ **Related Institutional Meeting for 2nd Phase of Tangerine Industry Special Measure**

○ Date: July 23, 2004

○ Date: Jeju Provincial Office Conference room

○ Participants: Province, Cities, Counties, Towns (Eup), Township (Myun), Agricultural Cooperatives, and more

○ Main Contents: Consultation to implement a marketing order for the 2004 product of tangerine

□ **Composition of Promotional Committee for Tangerine Marketing Order**

○ Time to compose: August 6, 2004

○ Committee members: Total 21 members

- 10 Producer representatives, 10 Consumer representatives, 10 Distributor representatives, 10 Experts in marketing and distribution

○ List of Committee Members

<Table Ⅱ-6> Member of Promotional Committee for Tangerine Marketing Order (Total 21 Members)

Classification	Participant (Group) Name	Title	Name	Remarks
Producer Representatives (10)	Seoguipo Agricultural Cooperative	Chief of Cooperative	Kim, Bongsoo	Seoguipo City Area
	Jungmoon Agricultural Cooperative	Ditto	Kim, Kyungsik	
	Hyodon Cooperative	Ditto	Kang, Kyungeon	
	Weemi Cooperative	Ditto	Kim, Changrim	Namjeju County Area
	Namwon Cooperative	Ditto	Kim, Changeon	
	Pyoseon Cooperative	Ditto	Ham, Dooil	
	Jeju City Cooperative	Ditto	Hyun, Kyunghee	Jeju City, Bukjeju County Area
	Jucheon Cooperative	Ditto	Han, Youngtaek	
	Hagui Cooperative	Ditto	Kim, Kyungchool	
	Tangerine Cooperative	Ditto	Oh, Hongsik	Product Cooperative
Consumer Representatives (3)	National Council of Homemakers Classes	Director	Ko, Seongah	
	Consumers Korea	Permant Director	Kang, Kwangpah	
	Jeju Council of Woman	Chairman	Kim, Aekyong	
Distributor Representatives (3)	Korea Agricultural Wholesaler Association (Seoul Fruit Vegetable Cooperation)	Representative Director	Kim, Hyangkwon	Wholesale Market Corporation Representative

	Association of Korea Fruit Intermediary Wholesaler Cooperative	Chairman	Yu, Samjae	Intermediary Wholesaler Representative
	Korea Supermarkets Alliance	Chairman	Kim, Kyongbae	Wholesaler and Retailer Representative
	Jeju Nambu Fruit & Vegetable Sales Cooperative	Managing Director	Hyun, Yangjoon	Producer Market Collector Representative
Marketing and Distribution Experts (4)	Korea Rural Economic Institute	Researcher	Kim, Byongryul	
	New Marketing Research Institution of Agricultural Foods Corporation	Chief of Institution	Kim, Dongwhan	
	Cheju National University	Emeritus Professor	Kang, Kyongseon	
	Cheju National University	Professor	Ko, Sungbo	

□ **First Meeting of Promotional Committee for Tangerine Marketing Order**

○ Date: August 6, 2004

○ Place: NACF Jeju Regional Headquarters, Small Conference room

○ Participants: 17 members out of total 21 members

○ Main Contents

- Establishment of committee operational regulation

- Election of the president of committee: Kim, Bongsoo, Jeju Tangerine Council Corporation

- Deliberation of the request (bill) for tangerine marketing order and marketing agreement (bill)

- Jeju Tangerine Council Corporation is designated as a secretarial organization for the management of the committee.

□ **Request for Expert's Analysis and Review on Marketing Order Suggestion (Bill)**

○ Requested Date: August 7, 2004

○ Requested Parties

- Jeju Development Institute, Head Researcher Ko, Sungbo

- New Marketing Research Institution of Agricultural Foods Corporation, Chief Kim, Dongwhan

□ **Opinion Collection from Stakeholders**

○ Period: August 7 2004 ~ August 26 2004 (20 days)

○ Method of Opinion Collection

- Internet advertisement (through NACF Web page)
- Collection of opinion of the representative of stakeholders by mail
- Operation of desks to collect opinions from member agricultural cooperatives

□ **Hosting Public Hearing for Marketing Order Suggestion**

○ Date: August 13, 2004

○ Place: Jeju Local Public Service Workers' Education Center

○ Participants

- Designated discussants: 8 discussants
- General audience: approximately 240

○ Contents of Public Hearing

- Explanation of the suggestive plan for the Tangerine Marketing Order
- Opinion collection from the stakeholders

□ **Newspaper Announcement of Marketing Order Suggestion (Bill)**

○ Dates of announcement: August 17, 2004 ~ August 18, 2004

○ Carrying media

- Nationwide circulation: Maeil Business Newspaper, Nongmin Newspaper
- Local circulation: Jeju Daily, Jemin Daily, Halla Daily

□ **Consultation of Suggesting Marketing Order (Bill) with Local Government**

○ Date: August 19, 2004

○ Place: Office of Departmental Head of Jeju Provincial Agricultural, Fishery, and Livestock Department (AFLD)

○ Participants (7)

- Jeju province: Head of AFLD, Tangerine section chief, Officer of tangerine distribution, Junior Official in charge
- Tangerine Marketing Order Promotional Committee: Committee Chief, General Secretary

○ Contents of consultation: Contents of requesting a marketing order, implementation methods and others

□ **The Second Meeting of Tangerine Marketing Order Promotional Committee**

○ Place: August 27, 2004

○ Place: Small Conference room of NACF Jeju Regional Headquarters

○ Participants: Committee members of Tangerine Marketing Order Promotional Committee

○ Main contents

- Presentation of the promotional processes for Tangerine Marketing Order and the result of the collected opinions
- Completion of Marketing Agreement
- Finalizing a letter of suggestion for a marketing order

□ Request for Tangerine Marketing Order

○ Date: August 30, 2004

○ Place to submit the request: via Jeju province to the Ministry of Agriculture and Forestry

□ Consultation Visit To Ministry of Agriculture and Forestry and Fair Trade Commission

○ Date: August 31, 2004

○ Visitors: Tangerine distribution in charge from Jeju province, Section chief of regional headquarters in charge

□ Jeju Governor's Talk with Head of Fair Trade Commission

○ Date: August 31, 2004

○ Place: Office of Fair Trade Commission

□ Visit to Ministry of Agriculture and Forestry and Fair Trade Commission to Request Cooperation

○ Date: September 10, 2004

○ Visitors

- Jeju Province: Tangerine Section Chief
- NACF: Committee Chief of Promotion Committee for Tangerine Marketing Order, NACF Regional Chief, Tangerine section Team Leader

□ Ministry of Agriculture and Forestry's Deliberation Committee for Marketing Order

○ Date: September 16, 2004

○ Place: Ministry of Agriculture and Forestry

○ Meeting result: The contents of original request were partially changed and the change was accepted.

□ Submission of Consulted Data with Fair Trade Commission by Ministry of Agriculture and Forestry

○ Date of data submission: September 17, 2004

□ Submission of Supplementary Data by Related Personnel of Jeju Province and Consultation of Work Process with Fair Trade Commission

○ Date: September 20, 2004

○ Visitor: Tangerine Section Chief and Supervisor of Jeju province

□ Jeju Governor's Visit to Fair Trade Commission

○ Date: September 24, 2004

○ Visitors: Governor, Tangerine Section Chief

□ Consultation between Ministry of Agriculture and Forestry and Fair Trade Commission

○ Consultation period: September 17, 2004 ~ October 2, 2004

□ Document Submission for Enactment of 2004 Tangerine Marketing Order (October 8, 2004)

○ Date of Enactment: October 14, 2004

○ Authority of Enactment: Minister of Agriculture and Forestry

○ Contents of Enactment: Refer to the attached public announcement

□ Deployment of Promotion Activities for 2004 Tangerine Marketing Order

○ Newspaper advertisements in accordance with the enactment of the marketing order

- Nationwide circulation: Chosun, Joongang, Donah, and 14 agriculture related special newspapers

- Regional circulation: Jeju, Jemin, Halla dailies, Jeju Times, Seoguipo newspaper, and so on

○ Installation of 400 promotional placards

○ 2,100 promotional posters (public announcement)

○ Distribution of 4,000 promotional pamphlets for the marketing order

○ Installation of Wide Color Airport Advertisement for tangerine promotion: Jeju International Airport

○ Caption and Campaign Ads in the broadcasting companies

- Broadcasters: KBS, MBC, JIBS, KCTV

□ **Establishment of Implementation Plan for 2004 Tangerine Marketing Order**

○ Date: October 10, 2004

○ Contents: Composition of installation promotion team, Promotional plan and Supervision plan

(Attachment)

Public Announcement of Ministry of Agriculture and Forestry

No. 2004 – 116

The marketing order for tangerine is enacted as follows in accordance with the law of stabilizing distribution and price of agricultural and fishery products (to be quoted as "the law"), article number 10.

October ___, 2004

Minister of Agriculture and Forestry

Tangerine Marketing Order

Article 1 (Purpose)

The Marketing Order (to be quoted as "the order") aims to ease the unbalanced supply and demand of tangerine and to supply high quality tangerine to consumers.

Article 2 (Target item)

The order targets the field tangerine (Unshiu tangerine) of Jeju product.

Article 3 (Period)

The order is valid from October 14, 2004 to April 30, 2005.

Article 4 (Area)

The order covers the entire nation.

Article 5 (Subject parties)

The order affects tangerine producers, producer groups (including agricultural cooperative corporation) and distributors (producer market collectors, wholesale market

corporations, and wholesalers in accordance with the law, article number 2).

Article 6 (Duty to adjust shipment)

Enforcement regulation of ordinance on unsalable tangerine (diameter sizes with 51 mm and below or 71 mm and above: smaller than fruit size number 1 and below and number 9 and above), artificially colored tangerine, and Jeju tangerine production during the enacted period of the order.

The shipment of the fruits with serious defects as determined in the article number 13 is prohibited in domestic markets. Except, the shipment for the purpose of processing is excluded from the prohibition.

Article 7 (Confirmation method of the order compliance and disciplinary measures)

① Violators of the order are to be fined upon the degree of the violation as per the article number 90, clause number 1 of the law.

② Jeju governor executes the tasks related to the order including promotion and discipline and imposes fines to producers, producer groups, and collectors in producer market while mayors and governors in other jurisdictions are empowered to exercise imposing and collecting fines on wholesale corporations and wholesalers in each governing district.

□ **Urgent Meeting of Related Officials upon Enactment of 2004 Tangerine Marketing Order**

○ Date: October 12, 2004

○ Place: General situational briefing office of Jeju Provincial Office

○ Agenda: Guidance and disciplinary matters upon enactment of the marketing order

□ **2004 Tangerine Marketing Order Implementation Committee Meeting**

○ Date: October 13, 2004

○ Place: Jeju NACF Regional Headquarters

○ Agenda

- Composition of the order implementation committee (26 members)
- Presentation of the order promotion
- Presentation of the order implementation plan

□ **Establishment and Operation of General Briefing Room for 2004 Tangerine Marketing Order**

○ Date: October 28, 2004 ~ April 30, 2005

○ Establishment: 137 places (Provinces, Cities, Counties, Agricultural and Tangerine Cooperatives)

□ **Employment and Education of Order Inspectors in Consumption Sites**

○ Number of Inspectors: 78

○ First Education: October 21, 2004 (Seoul area office)

○ Secondary Education: October 28, 2004 (Barocco's KyungIn Distribution Center)

□ **Employment and Education for Night Members of Mobile Monitoring Squad Team about Order Compliance**

○ Date of Education: October 26, 2004

○ Target participants: 32

○ Place: Jeju NACF Regional Headquarters

□ **Rejection of Auctioning Order Violated Unsalable Tangerine**

○ Date: November 2, 2004

○ Place: Central Fruit and Vegetable Market of Daegu North Wholesale Market

○ Quantity: 17 boxes of mixture of size 1 and 2 fruits, 16 boxes of size 9 fruit, total 33 boxes (495 Kg)

○ Reason of Rejection: Mixed shipment of size 1 and 2 fruits and shipment of size 9

○ Shipper: D Shop in Seoguipo

□ **Evaluation Meeting after One Month of Order Enactment**

○ Date: November 15, 2004

○ Place: Jeju Province

○ Participants: Related officials from Jeju province, cities and counties, Inspectors of the Order and more

□ **Tangerine Marketing Order Related Visit to Garak Wholesale Market**

○ Date: November 18 ~ 19 2004

○ Participants: 18 including Governor, Section chief, Heads of Cooperatives

□ **Contracting for Comprehensive Assessment of Tangerine Marketing Order**

○ Date: November 26, 2004

○ Service Provider: Cheju National University

□ Invitation of Distributors from Nationwide Wholesale and Consumption Markets for Discussion

○ Date: February 24, 2005

○ Place: Jeju Provincial Office

○ Guests: 25 including auctioneers in nationwide wholesale markets and intermediary wholesalers

□ Presentation of Appreciation Plaque to Distributors in Wholesale and Consumption Markets

○ Date: March 3, 2005 ~ March 5, 2005

○ Place: Wholesale markets in the nation

○ Number of recipients: 157 including auctioneers and intermediary wholesalers in the nation

○ Presentation of Appreciation Plaque and Monitoring & Supervision team: 5 teams 15 members

□ Report Presentation of Comprehensive Assessment on 2004 Tangerine Marketing Order

○ Date: May 4, 2005, 15:00

○ Place: Jeju NACF Headquarters

○ Host: Tangerine Marketing Order Promotion Committee Marketing Control

○ Major Contents

- Presentation of appreciation plaque
- Comprehensive assessment and discussion and more

4. Monitoring Squad and Compliance Enforcement of Tangerine Marketing Order

A. Composition Status of Monitoring Squad for Compliance

1) Status Summarization

□ Composition of Monitoring Squad for Tangerine Marketing Order Compliance

○ Composition of Monitoring Squad: Dualization of monitoring squad for the compliance in nationwide wholesale markets and producing areas within the province

- Total 354 monitoring persons in 89 squads of 42 teams
- 75 persons in producer groups, 7 persons in merchant groups, 10 persons in shipment associations

78 persons in loan government agencies, 184 persons of special employment, and more

- The scope of the monitoring squad assigned to monitor compliance of the marketing order for the 2004 production is at the level of 2.6 times of the marketing order for the 2003 production

: Total 134 monitoring persons in 6 squads of 27 teams for the 2003 production

<Table Ⅱ-7> Summarization Status of Monitoring Squad for Compliance of Tangerine Marketing Order

Classification	Total	Civil Servant	Agricultural Cooperation	Shipment Association	Citrus Marketing & Shipping Associations (CMSA)	Merchant Association	Civilian		
							Net Total	Employed Number	CAPS
Total	354 (89 squads)	78	47	10	28	7	184 (81)	152 (71)	32 (10)
Compliance Monitoring Squad in Nationwide Wholesale Markets	103 (47)	9	2	8	2	4	78 (39)	78 (39)	-
Compliance Monitoring Squad in the Provincial Production Sites	251 (42)	69	45	2	26	3	106 (42)	74 (32)	32 (10)

2) Monitoring Squads in National Wholesale Markets

□ Composition of compliance monitoring squad for the tangerine marketing order in national wholesale markets

○ Composition of monitoring squads: is dualized between inspecting and post-guidance squads

- Total 103 persons of 47 squads: 39 inspecting squads with 78 persons, 25 post-guidance squads with 39 squads

<Table Ⅱ-8> Status of Monitoring Squad for Compliance of Tangerine Marketing Order in Nationwide Wholesale Markets

Classification	Total (persons/squads)	Civil Servant	Tangerine Shipment Assns.	Agricultural Cooperatives	CTMAs	Northern Fruit and Vegetable Assn.	Tax Payer's Association	Southern Fruit and Vegetable Assn.	Civilian
Total	103 persons (47 squads)	9	8	2	2	1	2	1	78
Monitoring Squads	78 (39 squads)	-	-	-	-	-	-	-	78 (39)
Post-guidance Squad	25 (8 squads)	9	8	2	2	1	2	1	-

□ Monitoring Squads for Nationwide Compliance of Marketing Order in Nationwide Wholesale Markets

○ Composition: 103 persons in 47 squads

- Civil servants: 6 persons in the tangerine department, 3 persons in the agricultural administration department

- Inspecting team: 39 public and private wholesale markets in the nation with 2 persons each

○ Objective parties: Nationwide 39 public and private wholesale market corporations

○ Inspecting team: employment of 2 civilians per each wholesale market

- Number of workers: 39 places X 2 persons/place = 78 persons

○ work/tasks: residential work (excluding Sunday) ⇒ started to work after training on October 21st.

- Monitoring and inspecting unsalable tangerine in the markets within the province (size number 1 and 9 fruits, artificially colored tangerine, fruits with serous defects) ⇒ Collection of confirmation and filming photos for evidence

- Maintaining the daily monitoring record of distribution and inspection, daily report to the compliance promotion committee

○ Compensation to workers

- Labor: 38,000 won per person per day

- Meal & transportation (per person per day): Meal 5,000 won, Transportation 12,000 won

- Uniform: 100,000 won per person basis

<Table Ⅱ-9> Composition of Nationwide Wholesale Market Compliance Monitoring & Supervision Team of the Tangerine Marketing Order

Team Leader	Tangerine Section Chief

Squad No. 1 (13 persons)	Squad No. 2 (10 persons)	Squad No. 3 (16 persons)	Squad No. 4 (19 persons)	Squad No. 5 (15 persons)	Squad No. 6 (11 persons)	Squad No. 7 (10 persons)	Squad No. 8 (8 persons)
(Tangerine Strategy Jinseok Kim)	(Tree Support Seongkeun Kang)	(Tangerine Cheoljoo Koh)	(Tangerine Cheolwon Yun)	(Tangerine Dongkyu Kim)	(Marketing & distribution Woocheol Lee	(Marketing & distribution BongCounty Kang)	(Marketing & distribution Woonseop Cho)
(Shipment Assn. Sangwon Seo Hwaok Kang Ikwhan Cho)		(Shipment Assn. Sanghyun Koh Euiho Shin)	(Shipment Assn. Kyungryeon Lee)	(Shipment Assn. Soonok Park)	(Shipment Assn. Ilho Bae)		
AC Kwonwooo Kang	AC Hoyoung Jin	CMSA Yunchang Yang	CMSA Huisoo Kim	Northern Vegetables and Fruits Kwangbeom Koh	Association of tax payers Bongnam Hyun	Association of tax payers Kangseok Kim	Southern Vegetables and Fruits Yangjoon Hyun
8 hired	8 hired	12 hired	16 hired	12 hired	8 hired	8 hired	6 hired
Seoul (2) Incheon (2)	Gyeonggi (4)	Daejeon (2) Chungnam (2) Chungbuk (2)	Daegu (1) Gyungbuk (7)	Busan (2) Ulsan (1) Gyungnam (3)	Gwangju (1) Jeonnam(3)	Jeonbuk (4)	Gangwon (3)

□ Compliance Guidance Team in Nationwide Wholesale Market

○ Composition: Administration + Farmers' & Tangerine Associations + Traders' Association, 2 persons in one team

○ Basis of duty tour: Weekly base (2 nights 3 days) to the cities and provinces in charge

- Cities and provinces are to be designated to each team before exercising the compliance guidance

○ Duties

- Accountability tracking system by team and by city or province
- Provision of guidance and oversight of the order violation in the responsible areas
- Provision of guidance and supervision of the number of hires in wholesale markets

3) Compliance Monitoring and Supervision Team in Jeju Province

□ Composition of Jeju Compliance Monitoring & Supervision Team: 34 squads 219 persons

○ Jeju city area: 6 squads and 45 persons

○ Seoguipo area: 8 squads and 66 persons

○ Bukjeju area: 8 squads and 48 persons

○ Namjeju area: 10 squads and 60 persons

□ Mobilization of All-time Monitoring System via Contracting with Private Security Providers on Packing Houses with High potential for Repeated violation

<Table Ⅱ-10> Status of Jeju Compliance Monitoring & Supervision Team of Tangerine Marketing Order

Classification	Total	Government Employees	ACs	Shipment Assn.	CMSAs	Traders' Association	Civilians		
							Sub total	Hired	CAPS
Cities, Counties	251 persons (42 Squads)	69	45	2	26	3	106	74 (32 squads)	32 (10 squads)
Jeju City	52 (8squads)	12	8	2	4	2	24	17 (6squads)	7 (2squads)
Seoguipo City	76 (11squads)	23	13	-	7	1	32	22 (8squads)	10 (3squads)
Bukjeju County	54 (10squads)	13	14	-	6	-	21	15 (8squads)	6 (2squads)
Namjeju County	69 (13squads)	21	10	-	9	-	29	20 (10squads)	9 (3squads)

<Table Ⅱ-11> Jeju City Area – Compliance Monitoring & Supervision Team of Tangerine Marketing Order

Jeju City Area Team Leader: Industry Section Chief, Boksoo Koh (45 persons and 6 squads)

Team	Organization	Name
No. 1 Team	Industry Section	Dongkeun Byun
	Hwabuk Village Office	Taejin Oh
	Jeju CMSA	Taekil Kim
	”	Jaewoo Kim
	Farmer	Jongbeom Shon
	Farmers’ group	Seok Han
	Civilian	Youngchang Kim
No. 2 Team	Samyang Village Office	Changkwan Cho
	Samyang Village Office	Seongho Kim
	Jeju City AC	Kyungsoo Kim
	Jeju City AC	Namyong Kim
	Northern Vegetables and Fruits	Kwangbeom Koh
	Farmer	Hyucksoo Kho
	Civilian	Jongwhan Baek
	Civilian	Bongchan Koh

Team	Organization	Name
No. 3 Team	Agricultural Technology Center	Seokjoong Kim
	Agricultural Technology Center	Hyungkeun Kim
	Jeju City AC	Youngjoon Yun
	Jeju City AC	Khiban Kim
	Tax payers’ Association	Seunghyun Baek
	Farmer	Dongkwan Hyun
	Civilian	Seungpil Kang
	Civilian	Dongyun Lee
No. 4 Team	Industry Section	Mooryong Kim
	Ora Village Office	Seokja Kwon
	Ara Village Office	Soonbok Lee
	Jeju City AC	Changmin Jeon
	Jeju City AC	Secheol Yang
	Farmer	Yongjong Song
	Civilian	Jaeseong Koh
	Civilian	Sangyong Kim

Team	Organization	Name
No. 5 Team	Industry Section	Euibong Kang
	Bonggae Village Office	Hongbae Baek
	Jeju CMSA	Daehyu Yang
	Jeju CMSA	Yongseok Huh
	Farmer	Dohyung Park
	Farmers’ group	Seokwhan Song
	Civilian	Kyunghoon Hyun
No. 6 Team	Tangerine Shipment Association	Yongjo Chung
	Tangerine Shipment Association	Minjeong Kim
	Jeju City AC	Seungho Koh
	Jeju City AC	Changdon Hong
	Farmer	Keunsik Moon
	Civilian	Dongwhan Kim

<Table Ⅱ-12> Seoguipo City Area Compliance Monitoring & Supervision Team of Tangerine Marketing Order

Seoguipo City Area Team Leader: Tangerine Agricultural Manager, Choonghee Kim (66 persons, 8 squads)

Group	Affiliation	Name
No. 1 Team	Regional Agricultural Cooperative (AC)	Moonseok Jang
	Seoguipo AC	Uji Han
	Hyodon AC	Kyedam Kim
	Citrus Marketing & Shipping Association (CMSA) – Seogui	Moonseong Kim
	Association of Tax Payers	Youngcheol Kim
No. 2 Team	Tangerine Agricultural Dept.	Sangpil Im
	CMSA – Seogui	Ikbeom Kim
	Tangerine Agricultural Dept.	Bong-oh Koh
	Songsan Village Office	Seongheun Han
	Hyodon Village Office	Seongboo Yang
	CMSA – Seoguipo	Deokjin Hyeon
	Hyodon AC	Jeongsoo Han
	Civilian	Dongjoo Koh
	Civilian	Moonsan Oh
No. 3 Team	Civilian	Moonsam Koh
	Tangerine Agricultural Dept.	Seunghyun Kim
	Tangerine Agriculture Dept.	Youngkwan Koh

Group	Affiliation	Name
No. 4 Team	Tangerine Agriculture Dept.	Hongseok Hyun
	Donghong Village Office	Yeohoon Chung
	Tangerine Agriculture Dept.	Cheolyong Jwa
	CMSA – Seogui office	Jeonghoon Hyun
	Seoguipo AC	Cheolwoo Hyun
	Civilian	Hyucknam Kim
	Civilian	Eun-il Kim
	Civilian	Seongsam Oh
	Civilian	Seunghyup Kang
	Civilian	Changhwa Hyun
No. 5 Team	Tangerine Agriculture Dept.	Sangcheol Kim
	Seoguipo AC	Beopjoo Heo
	CMSA – Seoguipo Office	Beom Kim
	Agricultural Technology Center	Changkyu Kim
	Seohong Village Office	Seungwoo Moon
	Civilian	Hyunsoon Moon
	Civilian	Youngjin Kim

Group	Affiliation	Name
No. 6 Team	Agricultural Technology Center	Jungseok Lee
	Jungmoon AC	Jungbeom Im
	Daeryun Village Office	Kyungmin Lee
	Agricultural Technology Center	Seongdon Lee
	Jungmoon AC	Kilyong Cho
	CMSA – Jungmoon	Kyunghoon Lee
	Civilian	Kwangsik Im
	Civilian	Yonghee Kim
No. 7 Team	Jungmoon AC	Woojoon Lee
	Tangerine Agriculture Dept.	Byungjin Lee
	Daecheon Village Office	Woonam Im
	CMSA – Jongmoon Office	Jinwoo Oh
	Civilian	Seungwan Kang
	Civilian	Younghwan Koh
	Civilian	Jaewoo Lee
No. 8 Team	Tangerine Agriculture Dept.	Dongyun Oh
	Jungmoon AC	Wook Kang

	Yongcheon Village Office	Ilhyun Jeon
	Agricultural Technology Center	Seongjin Hyun
	Seoguipo AC	Junseok Yang
	Hyodon AC	Seongjong Kang
	Hodon AC	Bongjun Kang
	Civilian	Kinam Kim

	Civilian	Hyungnam Lee
	Civilian	Inho Koh
	Civilian	Seongmin Kang

	Jungmoon Village Office	Changseong Jin
	Yerae Village Office	Hyukjin Hong
	Civilian	Daehoo Jin
	Civilian	Sangmoon Lee
	Civilian	Young-yae Kang

<Table Ⅱ-13> Bukjeju County Area Compliance Monitoring & Supervision Team of Tangerine Marketing

Bukjeju County Area Team Leader: Agricultural Manager, Kyuheon Park (48 persons 8 squads)

Group	Affiliation	Name
No. 1 Team	Agricultural Dept.	Kihoon Kang
	Agricultural Dept.	Eundeok Koh
	AC City, County Office	Inshik Kim
	CMSA – Jeju City Office	Daehyu Yang
	Farmer	Seokjin Kang
	Farmer	Youngsik Kang
No. 2 Team	Hallim Town Office	Eun-il Kim
	Hallip Town Office	Taeyoo Moon
	Halliom AC	Yongsoo Ahn
	CMSA – Hallim Hankyung Office	Seungryong Jwa
	Civilian	Soohyung Yang
	Civilian	Minho Jang
No. 3 Team	Aewol Town Office	Younghee Koh
	Hagui AC	Deokil Kim

Group	Affiliation	Name
No. 4 Team	Aewol Town Office	Sangkook Kim
	Aewol AC	Youngsik Kang
	Hagui AC	Seungjoo Koh
	CMSA – Aewol Office	Hongjoon Koh
	Civilian	Inbo Moon
No. 5 Team	Gujwa Town Office	Jeseon Hong
	Gujwa Town Office	Kwonyul Kim
	Gujwa AC	Youngbae Booh
	Gimnyeong AC	Samyul Kim
	Civilian	Hyungsoo Koh
	Civilian	Jeongcheol Yang
No. 6 Team	Jocheon Town Office	Changhwee Kang
	Jocheon AC	Yangpil Moon
	Jocheon AC	Yongjun Kim

Group	Affiliation	Name
No. 7 Team	Jocheon Town Office	Yunwook Kang
	Hamduck AC	Youngseok Booh
	Hamduck AC	Taeon Kim
	CMSA – Jocheon Office	Hyungjin Kim
	Civilian	Soocheol Cho
	Civilian	Doocheol Koh
No. 8 Team	Hankyong Township Office	Jeongbeum Koh
	Hankyong Township Office	Byungcheol Kang
	Hankyong AC	Hongki Lee
	Gosan AC	Jeonghoon Lee
	Civilian	Jinbong Kim
	Civilian	Dongcheol Kim

	Hagui AC	Youngcheol Yang
	CMSA – Aewol Office	Chanjong Kang
	Civilian	Sangwoo Kim
	Civilian	Hyunjin Kang

	CMSA – Jocheon Office	Jaeyu Hyun
	Civilian	Changseok Cheon
	Civilian	Seongmin Hong

<Table Ⅱ-14> Namjeju County Area Compliance Monitoring & Supervision Team of Tangerine Marketing

Namjeju Area Team Leader: Tangerine Special Agricultural Manager, Soonhong Kang (60 persons 10 squads)

Group	Affiliation	Name
No. 1 Team	Tangerine Special Agriculture Dept.	Taewook Oh
	Tangerine Special Agriculture Dept.	Byungho Jung
	AC County Office	Seungman Kim
	Civilian	Youngwoo Hyun
	Civilian	Ilbong Yang
No. 2 Team	Daejeong Town Office	Seungho Kang
	Daejeong Town Office	Incheol Oh
	Daejeong AC	Hyunseok Kim
	CMSA – Daejeong Office	Junghwan Koh
	Civilian	Dongkyu Kang
	Civilian	Byungse Kim
No. 3 Team	Namwon Town Office	Moonok Kim
	Namwon Town Office	Myungja Oh
	Namwon AC	Taeho Kim

Group	Affiliation	Name
No. 5 Team	Namwon Town Office	Changryun Lee
	Namwon Town Office	Yunsik Koh
	Namwon AC	Moonsik Kim
	CMSA – Namwon Office	Yunhack Kim
	Civilian	Banghoon Oh
	Namwon Town Office	Yongkoo Kang
No. 6 Team	Namwon Town Office	Wonho Koh
	Namwon Town Office	Cheolwhan Koh
	Weemi AC	Kyungsook Han
	CMSA – Weemi Office	Changjoo Kim
	Civilian	Yongseok Kim
	Civilian	Youngmin Moon
No. 7 Team	Namwon Town Office	Jooha Kang
	”	Yuseon Lee

Group	Affiliation	Name
No. 8 Team	Seongsan Town Office	Beomsoo Koh
	Seongsan Town Office	Yunyoung Kang
	Seongsan AC	Seongil Jung
	CMSA – Seongsan Office	Seokwoo Kim
	Civilian	Changkyu Kim
	Civilian	Changgeon Koh
No. 9 Team	Andeok Township Office	
	Andeok Township Office	Taegwon Chung
	Andeok AC	Taekyu Yu
	CMSA – Andeok Office	Byunghoon Cho
	Civilian	Sangjin Lee
	Civilian	Kyeil Kim
No. 10 Team	Pyoseon Township Office	Kyungchan Ji
	Pyoseon Township Office	Pilwoo Kim

	CMSA – Namwon Office	Jaeho Heo
	Civilian	Seungmoon Kang
	Civilian	Kibong Moon
No. 4 Team	Namwon Town Office	Kyungbooh Kim
	Namwon Town Office	Changil Yang
	Namwon AC	Ilhak Koh
	CMSA – Namwon Office	Jinman Yang
	Civilian	Taegeon Kim
	Civilian	Seungil Oh

	Weemi AC	Beomcheol Yang
	CMSA – Weemi Office	Kyungsik Yun
	Civilian	Kyungman Moon
	Civilian	Cheolhee Koh

	Pyoseon AC	Cheolhee Ahn
	CMSA – Pyoseon Office	Seongjin Kang
	Civilian	Bonghoon Kang
	Civilian	Kwonbo Koh

B. Status of Guidance and Oversight

□ Status of Disclosed Contravention of Tangerine Marketing Order (Including Ordinance)

○ 450 cases of the disclosed contravention: Jeju 250 cases (55.6%), other areas 200 cases (44.4%)

-. Disclosed contravention by the type of violation: 336 cases (74.7%) of unsalable tangerine distribution, 42 cases of artificial coloring, 31 cases of non-compliance of quality management, 41 cases of other types

-. Disclosed contravention by the principal party: 347 cases (77.1%) by traders' groups, 42 cases (9.3%) by agricultural cooperatives and citrus marketing and shipping associations, 61 (13.6%) cases by corporate and/or individual

<Table Ⅱ-15> Disclosed Violations of Marketing Order (including Ordinance) and Violation Details by Principal Party (Number of Violations)

By City, County	No. of Disclosed Violations	Violation Details of Marketing order (Ordinance)				Violation Details by Principal Party			
		Distribution of Unsalable tangerine	Artificial Coloring	Non-compliance of Quality Mgmt	Other	AC, CMSA.	Traders' Assn.	Corporations	Individuals
Jeju City Area	58	28	12	3	15	4	54	-	2
Seoguipo City Area	123	84	20	19	-	9	112	1	1
Bukjeju-County	39	9	2	6	22	1	20	1	17
Namjeju-County	30	16	7	3	4	6	17	1	6

Area									
Jeju Subtotal	250	137	41	31	41	20	203	3	26
Non Jeju Subtotal	200	199	1	-	-	22	144	7	27
2004	450 (100.0)	336 (74.7)	42 (9.3)	31 (6.9)	41 (9.1)	42 (9.3)	347 (77.1)	10 (2.2)	51 (11.3)
2003	602 (100.0)	505 (83.9)	15 (2.5)	56 (9.3)	26 (4.3)	166 (27.6)	377 (62.6)	30 (5)	29 (4.8)

Remarks) Figures brackets of ( ) show percentage proportions.

Data: Jeju provincial internal data in the tangerine department

○ There was a major change in the composition of the violated principal parties where the combined number of the disclosed violations by agricultural cooperatives and citrus marketing and shipping associations (CMSA) merely mark 42 cases or 9.3% of the total disclosed violations, 450 cases. In comparison to the disclosed violations by the same parties in 2003, 166 cases out of the total 602 cases or 27.6%, it is a clear drop to nearly one third of the previous level. The phenomena is considered to be a result of the joint efforts between vigorous enforcement of administrative measures i.e. exclusion from the financial and administrative supports (e.g. box purchasing cost support) and the change in awareness of the chiefs and members of agricultural cooperatives and citrus marketing and shipping associations.

- In contrast, the number of violations committed by the trader groups turned out to be a total of 347 cases, 203 in Jeju and 144 in non Jeju areas, representing 77.1% of total violations, which calls for imminent countermeasures.

○ When recalling the total number of violations throughout the 6 year period from 1997 to 2002 was 967 cases (annual average violations of 161), the levels of violating the marketing orders (ordinance) in 2003 at 602 cases and 450 cases in 2004 revealed that the violations significantly rose approximately 3 to 4 times more than the previous records since the marketing orders were fully developed and enforced. The higher frequency in violations might be considered problematic, however, and be interpreted as a result of the active investigative and monitoring activities.

□Imposed Countermeasures against Violations of Tangerine Marketing Order (Including Ordinance Violations) as of April 30, 2005

○ Penalty Imposition

- 81.3% of penalty imposition ratio (366 cases of the total 450 violations)

□18.7% of warning & rectification ratio (84 cases)

- Penalty amount imposed on the violation of the order (including the ordinance): 243,088,000 won over 366 violations (660,000 won per violation)

□Cases transferred to the court: 7,700,000 won for 11 cases

- Penalty collection performance on the order (including the ordinance) violations

□Collection performance: 80,216,000 won for 140 cases (41.3% of the total imposed penalty amount)

□ The cases transferred to the court are included in the collection performance.

○ Countermeasures to the delinquency of the imposed penalties

- Countermeasures taken against the delinquency for 2004 products

□35 delinquent payers for 70 violations: under the process of seizing the delinquent's possessed vehicles

□9 delinquent payers: completed the investigation and the process of seizure of the delinquents' land

□10 persons: 10 delinquent payers: had applied for the investigation of the delinquent's bank deposit, but banking institutions have expressed difficulty to release information due to the Depositor Protection Law

- Countermeasures taken against the delinquency for 2003 products

□Delinquent amount: 121,100,000 won for 145 violations

□Property seizure: 97 violations for 81,400,000 won

□Not executed countermeasures: 48 violations for 39,700,000 won (resulted from the property investigation on the violators and delinquents without holding any properties)

○ For the two consecutive years of 2003 and 2004 when the marketing orders were enforced, the penalty imposing rates were well beyond 80% at 86.7% and 81.3% respectively in contrast to 19.4% (188 imposed to the total of 967 violations) of the previous 6 years' rate from 1997 to 2002.

○ There was a sweeping rise in the performance of the imposed penalty collection for the 2004 order violation at 41.3% as of the end of April compared to the performance of the 2003 order violation portion at 16.5% (with the total collection performance of 64.9%).

<Table Ⅱ-16> Penalty Imposed Performance

(Unit: case, 1,000 won)

Year	No. of Disclosed	Penalty Imposed		Warning/Caution Notice	Court Transfer		Collection Performance		
		No.	Amount		No.	Amount	No.	Amount	Rate (%)
Jeju City Area	58	44	35,300	14	-	-	10	3,900	22.7
Seoguipo City Area	123	104	61,662	19	-	-	31	21,257	29.8
Bukjeju County Area	39	15	6,250	22	-	-	6	1,650	35.3
Namjeju County Area	30	11	9,776	19	1	2,800	8	3,609	81.8
Jeju Total	250	176	112,988	74	1	2,800	55	30,416	31.8
Non Jeju Total	200	190	130,100	10	10	4,900	85	49,800	50.0
For 2004	450	366	243,088	84	11	7,700	140	80,216	41.3
For 2003	602	521	318,537	81	39	40,500	338	180,829	64.9

Source data: Internal material of Jeju Province Tangerine Department

Ⅲ Analysis of Survey Result in Production

1. Tangerine Farmers

A. Summary of Survey

The survey aims to provide base data to help establish tangerine policy through the assessment of awareness about the tangerine marketing order, the industry perspectives, production, and distribution among the tangerine farmers.

The applied survey method was one-on-one individual interview using systematically designed survey questionnaires on 1,000 tangerine farmers in Jeju. The chosen sampling method was a random selection method after making a zoning assignment. The survey period was 11 days from March 2 to March 12, 2005. The research was conducted with a confidence level of 95% with ±3.1% point from the interval.

The used analytical methods include: frequency count method, χ^2 verification that is 'verification of statistical independence' for the use of categorical scale method in survey conducting to verify the differences in opinion by crossed factors, and t-test and ANOVA methods for the use of sequential scale method in survey. The significance level is presented in the form of a table.

The statistical characteristics of population among survey respondents are presented by region, gender, age, education, income weight level, cultivation scale as shown in the below table. The average cultivating area among the surveyed 1,000 tangerine farm households in Jeju was approximately 4,343 pyeong. The 'average field tangerine cultivating area was approx. 3,941 pyeong which is comprised of approx. average 3,695 pyeong of 957 self-cultivating farms and approx. average 3,421 pyeong of 114 rental-cultivating farms. The average greenhouse cultivating area was about 1,878 with the average self-cultivating area of 1,832 pyeong.

<Table Ⅲ-1> Characteristics of Statistical Population on Surveyed Tangerine Farms

Classification		Frequency	Ratio	Classification		Frequency	Ratio
Area	Jeju City	132	(13.2)	Age	30 and under	89	(8.9)
	Seoguipo	237	(23.7)		40s	174	(17.4)
	East Bukjeju County	113	(11.3)		50s	228	(22.8)

	West Bukjeju County	118	(11.8)		60s	319	(31.9)
	East Namjeju County	321	(32.1)		70 and above	190	(19.0)
	West Namjeju County	79	(7.9)				
Income Weight Level	Up to 30%	79	(7.9)	Education	Up to Primary School	291	(29.1)
	Up to 50%	115	(11.5)		Middle School	207	(20.7)
	Up to 70%	161	(16.1)		High School	346	(34.6)
	71% and above	645	(64.5)		More than Community College	156	(15.6)
Cultivation Scale	Up to 2,000 pyeong	238	(23.8)	Gender	Male	716	(71.6)
	Up to 4,000 pyeong	257	(25.7)		Female	284	(28.4)
	Above 4,000 pyeong	505	(50.5)			1000	(100.0)

Note: 1 pyeong = 3.058 square meters = 3.954 square yards

<Table III-2> Tangerine Cultivating Size

Classification		Field Tangerine	Greenhouse Tangerine	Total Average
Self-cultivating	Avg. Size	3,695 pyeong	1,832.6 pyeong	4,046.2 pyeong
	No. of Farms	957 farms	217 farms	970 farms
Rental Cultivating	Avg. Size	3,421.4 pyeong	1,940 pyeong	3,469.8 pyeong
	No. of Farms	114 farms	10 farms	118 farms
Total	Avg. Size	3,940.8 pyeong	1,878.7 pyeong	4,343.3 pyeong
	No. of Farms	994 farms	222 farms	1,000 farms

The survey in terms of 'tangerine generated income weight to the total income' revealed that 64.5% of the respondents replied with the weight of more than 71% of the total income. The area based result showed that 70.5% of Seoguipo area farms responded while the highest level, 74.1% of the eastern part of farms in Namjeju County area, the major tangerine production area, responded their tangerine income weight at more than 71% of the total income. Looking at the income weight in terms of cultivating scale, the tendency shows that the larger the cultivating area size, the higher the tangerine income weight is.

B. Related to Tangerine Marketing Order

1) Content Awareness

The Jeju Tangerine farmers seemed to be relatively well aware of the 'Contents of the Tangerine Marketing Order Enactment' according to the survey result. 98.2% of the total tangerine farmers are well aware of the enactment details with the reply of 'No knowledge' at only 1.8% of the respondents.

It implies that almost all Jeju provincial farmers have knowledge about the contents of the 'Tangerine Marketing Order' enactment which was introduced and implemented since November 2003.

<Table III-3> Verification of Content Awareness in Tangerine Marketing Order Enactment

Classification	No. of cases	Absolutely Ignorant	Almost Ignorant	In Outline Knowledge	Well Aware of	Average	Statistical Value Significance Level
Total	(1000)	.2	1.6	36.8	61.4	3.59	
▩ By Area ▩							
Jeju City	(132)		.8	31.8	67.4	3.67	
Seoguipo	(237)	.4	2.5	43.9	53.2	3.50	
East Bukjeju County	(113)		3.5	40.7	55.8	3.52	F=4.918 P=0.000
West Bukjeju County	(118)			23.7	76.3	3.76	
East Namjeju County	(321)	.3	.9	38.0	60.7	3.59	
West Namjeju County	(79)		2.5	32.9	64.6	3.62	
▩ By Cultivating Scale ▩							F=6.400 P= 0.002
Up to 2,000 pyeong	(238)	.4	1.7	42.4	55.5	3.53	
Under 4,000 pyeong	(257)	.4	2.7	39.7	57.2	3.54	

4,000 pyeong and above	(505)		1.0	32.7	66.3	3.65	
▩ By Income Weight ▩							
Up to 30%	(79)		2.5	50.6	46.8	3.44	F=5.647
Up to 50%	(115)	.9	1.7	38.3	59.1	3.56	P= 0.001
Up to 70%	(161)		1.9	46.0	52.2	3.50	
71% and above	(645)	.2	1.4	32.6	65.9	3.64	
▩ By Gender ▩							t=2.576
Male	(716)	.1	1.6	34.8	63.5	3.62	P=0.010
Female	(284)	.5	1.5	44.8	53.2	3.51	
▩ By Age ▩							
Up to 30s	(89)			52.8	47.2	3.47	
40s	(174)		1.7	37.9	60.3	3.59	F=2.939
50s	(228)	.4	.9	28.5	70.2	3.68	P=0.020
60s	(319)		2.5	37.3	60.2	3.58	
70 and above	(190)	.5	1.6	37.4	60.5	3.58	

According to the area based survey, the farms in Jeju City, the western part of Bukjeju County are better aware of the 'Content of Tangerine Marketing Order Enactment' in contrast to part of the farms in Seoguipo and the eastern part of Namjeju County at the awareness level of 'Absolutely ignorant'.

The awareness by cultivating size revealed that the larger the cultivating size, the higher the awareness of the enactment content is.

The awareness by income weight presented that many farms in the higher income weight category responded with the survey answer of 'well aware of'.

It also shows that male respondents have relatively better knowledge of the contents of order enactment compared to female respondents.

The age group under 30 showed the lowest level of awareness while the 50s had the highest level of awareness.

2) Recognition of Change in Tangerine Generated Income

69.9% of the survey respondents felt the 'increase in tangerine generated income' through the enactment of the Tangerine Marketing Order in contrast to the 12.3% farmers feeling the 'decrease in income'. The implied analytical conclusion is that there has been a 'significant effect of income improvement through the Tangerine Marketing Order' in comparison with the tangerine income from the 2003 tangerine fiscal year production.

<Table III-4> Change in Tangerine Generated Income Caused by Tangerine Marketing Order

Classification	No. of cases	Significantly Decreased	Somewhat Decreased	Unchanged	Somewhat Increased	Significantly Increased	Average	Statistical Value Significance Level
Total	(1000)	1.0	11.3	17.8	63.6	6.3	3.63	
▩ By Cultivating Scale ▩								
Up to 2,000 pyeong	(238)	1.3	17.2	15.5	61.8	4.2	3.50	F=3.787 P= 0.023
Under 4,000 pyeong	(257)	.8	10.1	17.1	65.4	6.6	3.67	
4,000 pyeong and above	(505)	1.0	9.1	19.2	63.6	7.1	3.67	
▩ Gender ▩								
Male	(716)	1.0	10.6	17.0	64.2	7.1	3.66	t=2.305 P=0.021
Female	(284)	1.0	13.9	20.9	61.2	3.0	3.51	
▩ By Education ▩								
Up to Primary School	(291)		14.1	17.5	66.3	2.1	3.56	
Middle School Graduated	(207)	1.4	9.7	22.7	58.9	7.2	3.61	F=3.962 P=0.008
High School Graduated	(346)	1.7	11.6	18.2	61.3	7.2	3.61	
Community College and more	(156)	.6	7.7	10.9	69.9	10.9	3.83	

The survey result in terms of cultivating size showed that farmers who cultivated a larger scale of cultivating area recognized the ‘effect of income improvement caused by the marketing order enactment’ at a higher level.

In the gender based survey, there were more male respondents who replied with a higher level of recognition on the ‘effect of income improvement caused by the marketing order enactment’ compared to female respondents. In terms of education level, it revealed that the more the respondents were educated, the stronger they felt the effect of income improvement.

3) Recognition of Beneficiaries

Jeju tangerine farmers have a perception that the collectors (by 70.3%) in producer market enjoyed more benefits than themselves (by 24.5%). Particularly, there were three times more respondents who replied that the 'collectors in producer market' took a greater benefit than their shares as a 'tangerine farmer'.

In gender category, more female respondents rather than male respondents revealed a feeling that 'the collectors in producer market were the ones who benefit, while there were more male respondents who answered with the opinion that 'the tangerine farmers benefited the most'.

<Table III-5> Beneficiaries of Tangerine Marketing Order Enactment

Classification	No. of cases	Tangerine Farmers	Collectors in Producer Market	Distributors in Consumer Market	Consumers	Statistical Value Significance Level
Total	(1000)	24.5	70.3	1.8	3.4	
▩ Gender ▩						X^2=14.233 P=0.003
Male	(716)	26.8	67.6	1.9	3.8	
Female	(284)	15.4	81.1	1.5	2.0	

4) Recognition of Major Achievements

With the enactment of the Tangerine Marketing Order, the Jeju tangerine farmers recognized its effect in increased 'shipment of a higher quality tangerine (34.8%) through isolating unsalable tangerine product'. The order has also largely contributed to the 'shipment volume control (24.8%)' and the 'establishment of consensual understanding about the importance of self-supporting efforts to revive the tangerine industry'.

In the regional survey, there were more farmers in the western part of Bukjeju County (46.6%) and Seoguipo (37.1%) areas who expressed an opinion of increased 'shipment of higher quality tangerine product' while there were more farmers in the area of west Namjeju County weighing to their opinions to the side of the 'effect on the shipment control (32.9%)'. Unlike other regions, there were relatively higher numbers of farmers who expressed the 'effect of price rise' in the eastern part of Bukjeju County (21.2%) and the 'effect of establishing consensual understanding about the importance of self-supporting efforts to revive the tangerine industry' in the eastern part of Namjeju County (27.4%) and in the western part of Namjeju County (32.9%).

<Table III-6> Major Achievements of Tangerine Marketing Order

Classification	No. of Cases	Price Rise	Shipment Control	Higher Quality Shipment	Consensual Understanding about the importance of Self-supportive efforts	Statistical Value Significance Level
Total	(1000)	17.9	24.8	34.8	22.5	
▩ Area ▩						
Jeju City	(132)	18.2	28.8	33.3	19.7	
Seoguipo	(237)	19.4	23.6	37.1	19.8	
East Bukjeju County	(113)	21.2	26.5	36.3	15.9	
West Bukjeju County	(118)	14.4	22.0	46.6	16.9	X^2=29.656 P=0.013
East Namjeju County	(321)	17.8	22.4	32.4	27.4	
West Namjeju County	(79)	13.9	32.9	20.3	32.9	

5) Identifying Main Shippers of Low Quality Tangerine Product

The tangerine farmers thought that the presence of low-quality products in the market was mainly caused by the 'collectors in producer market (83.5%) despite the enactment of the Tangerine Marketing Order. There were only 8.4% of responses that 'the individual farmers might have shipped low-quality products.'

The regional based survey showed that farmers throughout the entire Jeju area recognized 'collectors in producer market' was the main party of distributing low-quality products. In particular, the farmers from the western part of Namjeju County area replied in that way (92.4%). However, unlike other area respondents, some of the farmers in Seoguipo (10.1%) and the eastern part of Bukjeju County (10.6%) areas pointed to the members of 'agricultural cooperatives (AC), Jeju Citrus Marketing & Shipping Association (JCMSA), and packing and marketing cooperatives (PMC)' as the main parties who circulated low-quality tangerine products, while there was a relatively higher opinion of pointing out 'individual farms' in Seoguipo area (11.0%).

<Table III-7> Main Distributor of Shipping Low-Quality Tangerine Product

Classification	No. of Cases	Members of AC, JCMSA, PMC	Distributor in Producer Market	Agricultural Management Corporation	Individual Farms	Statistical Value Significance Level
Total	(1000)	6.9	83.5	1.2	8.4	
▩ Area ▩						X^2=26.161
Jeju City	(132)	5.3	84.1	.8	9.8	P=0.036
Seoguipo	(237)	10.1	78.1	.8	11.0	
East Bukjeju County	(113)	10.6	80.5	2.7	6.2	

West Bukjeju County	(118)	9.3	83.1	2.5	5.1	
East Namjeju County	(321)	4.0	86.3	.9	8.7	
West Namjeju County	(79)	2.5	92.4		5.1	

6) Recognizing Level of Influence to Tangerine Distribution

The majority of tangerine farmers appeared to recognize the order's 'positive influence' on the distribution sector of tangerine (82.4%). Only 7.4% of farmers pointed out its negative influence. In general, it is revealed that the respondents acknowledged the tangerine marketing order's positive influence on the sector of tangerine distribution.

The scale of the Tangerine Marketing Order's influence on the sector of tangerine distribution was 3.82 point at average in a maximum scale point of 5, higher than the mid point, which also supported the positive assessment on the subject matter.

The age based survey resulted in the acknowledgement of the order's 'positive influence' throughout all age groups, while there were relatively higher positive responses of the farmers in the age group of up to 30 (scale point of 4) compared to other age groups.

<Table III-8> Tangerine Marketing Order's Influence on Distribution Sector

Classification	No. of Cases	Very Negative	Somewhat Negative	No Influence	Somewhat Positive	Very Positive	Average	Statistical Value Significance Level
Total	(1000)	.9	6.5	10.2	74.2	8.2	3.82	
▩ Age ▩								
Up to 30s	(89)		4.5	6.7	73.0	15.7	4.00	
40s	(174)	3.4	8.0	9.8	68.4	10.3	3.74	F=2.777 P=0.026
50s	(228)	.4	6.6	11.0	74.1	7.9	3.82	
60s	(319)	.6	7.5	11.0	75.2	5.6	3.78	
70s and above	(190)		4.2	10.0	78.4	7.4	3.89	

7) Year-to-Year Comparison

Tangerine farmers very highly recognized the 'improvement' of 'Tangerine Marketing Order' compared to the first order enactment in 2003 (82.4%) with only 7.4% of responses in the opinion of 'deteriorated', thus showing the overall positive recognition of an improvement in the marketing order compared to the one from the previous year.

In measuring the scale of the assessment of the Tangerine Marketing Order compared to the one from the previous year, the average scale point was 3.86, thus revealing a positive assessment with an above midpoint score on the subject matter. All age groups responded with an opinion of a more 'improved' order than the previous one, while a relatively higher point (3.95 scale point) was particularly given by the farmers' age group 70s or above.

<Table III-9> Year-to-Year Comparison of Tangerine Marketing Order

Classification	No. of Cases	Very Deteriorated	Somewhat Deteriorated	Neither so good Nor so bad	Somewhat Improved	Very Improved	Average	Statistical Value Significance Level
Total	(1000)	.2	1.1	19.8	70.5	8.4	3.86	
▩ Age ▩								
Up to 30s	(89)		4.5	6.7	73.0	15.7	3.90	
40s	(174)	3.4	8.0	9.8	68.4	10.3	3.78	F=2.812
50s	(228)	.4	6.6	11.0	74.1	7.9	3.80	P=0.024
60s	(319)	.6	7.5	11.0	75.2	5.6	3.88	
70s and above	(190)		4.2	10.0	78.4	7.4	3.95	

8) Areas of Improvement

Jeju tangerine farmers perceived that the 2004 Tangerine Marketing Order was improved compared to the 2003's in terms of 'the improved participatory mindset of the subject parties (52%) during the course of the order execution'. Many respondents acknowledged the 'accomplishment of the effective monitoring and oversight through the expanded scale of the order which covers the by-law wholesale markets' as well (25.4%). The by-law wholesale markets are established under the wholesale market law and the corresponding regional autonomous authority operates the market after obtaining approval from the Ministry of Agriculture and Forestry and the Ministry of Marine and Fishery.

In the regional survey, many expressed that 'there has been an improved participatory mindset' in every region. The respondents in Jeju City (31.8%) and Seoguipo City (34.2%) gave relatively higher marks on an opinion that the 'efficiency in monitoring' has been accomplished when compared to other regions. The respondents from the western part of Namjeju County replied with a relatively higher opinion in the 'stating quality standard' (19.0%) as a content of improvement. Meanwhile, it was the 'active participation of local autonomous agencies' that obtained relatively higher marks among

the survey respondents in both the eastern (18.6%) and western parts (16.1%) of Bukjeju County.

In the survey by age, while many of all age groups expressed that 'there has been an improved participatory mindset', the age group of up to 30s gave relatively high points (30.3%) to the accomplishment of 'efficient monitoring'.

The survey result by educational background also revealed that numbers of respondents expressed 'there has been an improved participatory mindset', though, the group of community college and higher had a relatively high opinion in accomplishing 'efficient monitoring' (26.3%).

<Table III-10> Areas of Improvement in Tangerine Marketing Order

Classification	No. of Cases	Efficient Monitoring	Expansion of Monitoring personnel	Active Participation of Local Autonomous Agencies	Improvement in Participatory Mindset	Stating Quality Standard	Statistical Value Significance Level
Total	(1000)	25.4	2.6	12.9	52.0	7.1	
▩ By Region ▩							
Jeju City	(132)	31.8	1.5	10.6	52.3	3.8	
Seoguipo	(237)	34.2	2.1	10.1	45.1	8.4	
East Bukjeju County	(113)	28.3	6.2	18.6	41.6	5.3	
West Bukjeju County	(118)	24.6	4.2	16.1	50.8	4.2	X^2=65.587 P=0.000
East Namjeju County	(321)	17.4	2.2	13.4	60.7	6.2	
West Namjeju County	(79)	17.7		10.1	53.2	19.0	
▩ By Age ▩							
Up to 30s	(89)	30.3	1.1	6.7	51.7	10.1	
40s	(174)	23.6	.6	14.4	53.4	8.0	
50s	(228)	28.5	4.4	15.4	41.7	10.1	X^2=36.418 P=0.003
60s	(319)	20.7	3.1	10.7	59.2	6.3	
70s and above	(190)	28.9	2.1	15.3	51.1	2.6	
▩ By Education ▩							X^2=25.096 P=0.014
Up to Primary School	(291)	25.4	3.1	13.7	55.0	2.7	
Middle School Graduated	(207)	25.1	4.3	13.0	48.8	8.7	

High School Graduated	(346)	25.1	2.0	14.7	48.6	9.5	
Community College and more	(156)	26.3	.6	7.1	58.3	7.7	

9) Handing Method of Unsalable Tangerine

The majority of Jeju tangerine farms responded that the entire volume of the numbers 1 and 9 size fruits were sold for the purpose of processed food (81.7%) while only 6.7% of them responded with the answer of 'shipped all products for sale'. 6.7% of the farmers replied with a choice of 'shipped the unsalable tangerine for sale' including all available methods of salable treatment.

In the regional survey, while many responded with 'all treated for the purpose of processed food' in all areas, there were relatively many respondents with 'all destroyed' in Jeju City (10.6%) and the western part of Namjeju County (10.1%) compare to other areas.

<Table III-11> Handling Method of Unsalable Tangerine

Classification	No. of Cases	All treated for processed food	All shipped for sale	50% and above treated for processed food	50% and above shipped for sale	All destroyed	Partially processed, Partially destroyed	Others	Refuse to respond	Statistical Value Significance Level
Total	(1000)	81.7	1.4	3.8	1.5	5.5	2.3	.6	3.2	
▩ By Region ▩										
Jeju City	(132)	67.4	1.5	4.5	1.5	10.6	6.8	.8	6.8	
Seoguipo	(237)	82.7	1.7	5.9	1.7	3.8	2.1	1.3	.8	
East Bukjeju County	(113)	87.6		3.5	1.8	1.8	.9	.9	3.5	
West Bukjeju County	(118)	79.7	1.7	1.7	3.4	9.3	3.4	.8		X^2=75.575 P=0.000
East Namjeju County	(321)	86.9	.9	2.8	.9	3.4	.9		4.0	
West Namjeju County	(79)	75.9	3.8	3.8		10.1	1.3		5.1	

10) Reasons of Handling Unsalable Tangerine for Sale

53.7% of 82 tangerine farms that treated the numbers 1 and 9 size fruits as salable product highly pointed to the reason of 'no arrangement of sales for the purpose of processing food in time'. 40.2% of them pointed to the reason of 'others ship them' despite the knowledge of shipment prohibition of numbers 1 and 9 size tangerine.

<Table III-12> Reasons of Handling Unsalable Tangerine for Sale

Classification	No. of Cases	Didn't know the shipment prohibition	Because others ship	No arrangement of processing food use in time	Statistical Value Significance Level
Total	(82)	6.1	40.2	53.7	
▩ By Education ▩					
Up to Primary School	(17)	29.4	47.1	23.5	
Middle School Graduated	(17)		41.2	58.8	X2=25.397 P=0.000
High School Graduated	(28)		28.6	71.4	
Community College and more	(20)		50.0	50.0	

In the survey by educational background, the respondents in all groups of education background largely chose the reason of 'no arrangement for processing food use in time'. There was high percentage of respondents that chose the reason for shipping for sale 'no knowledge on the shipment prohibition' of the size numbers of 1 and 9.

11) Recognition of Issues during Implementation Process

Jeju tangerine farmers recognized that it was the intermediary merchants who made shipment of unsalable products during the process of implementing the Tangerine Marketing Order. The 'insufficient activities of supervision and monitoring' and 'non-existence of penalty clause' were also pointed out as problematic.

In the primary selection of response, 'shipment of unsalable products by the intermediary merchants' was chosen by most respondents as the identified problem during the process of the order implementation, followed by 'lack of compliance mindset to the order' and 'criteria of unsalable selection size' in order. In the secondary selection of response, the respondents also indicated the most to 'shipment of unsalable products by the intermediary merchants' followed by 'insufficient activities of supervision and monitoring' and 'non-existence of powerful penalty clause'.

<Table III-13> Analysis of Issues during Implementation of Tangerine Marketing Order

Content of Response		Lack of Compliance Mindset	Insufficient P. R. and Education	Insufficient Role Activities of AC & CMSA	Mistrust of Agricultural Policy	Intermediary Merchant' Shipment of Unsalable	Size Criteria	Non-Existence of Penalty Clause	Insufficient Activities of Monitoring and Supervision	No Response
Primary Choice	Frequency	142	47	70	40	448	99	85	64	5
	Ratio	14.2	4.7	7.0	4.0	44.8	9.9	8.5	6.4	0.5
Secondary Choice	Frequency	82	38	32	50	246	112	191	231	18
	Ratio	8.2	3.8	3.2	5.0	24.6	11.2	19.1	23.1	18.0
Combined	Ratio	11.2	4.3	5.1	4.5	34.7	10.6	13.8	14.8	1.2

Accordingly, when combining results of the primary and secondary choices of responses, the most selected opinion was 'shipment of unsalable tangerine by the intermediary merchants', followed by 'insufficient supervision and monitoring', 'non-existence of powerful penalty clause', 'lack of compliance mindset', and teria of selection size'.

12) Conditions to Anchor Tangerine Marketing Order

In the primary choice of responses as the most essential condition for the successful anchorage of the Tangerine Marketing Order, the farmers revealed their stance by choosing the need for 'voluntary participation of farmers and merchants' (45.7%), 'stringent supervision and monitoring' (18.3%), 'criteria implementation of salable products based on the quality' (14.9%). The secondary choice of responses showed that it is necessary to obtain 'insertion of penalty clause for violation' (27.9%), 'stringent supervision and monitoring' (24.6%), and 'voluntary participation of farmers and merchants' (13.3%).

<Table III-14> Analysis of Conditions to Anchor Tangerine Marketing Order

Contents of Response		Voluntary Participation of Farmers and Merchants	Implementation of Quality Standard	Active Participation of AC & CMSA	Stringent Supervision and Monitoring	Insertion of Penalty Clause	Installation of Large Scale, Non-Destructive Packing House	No Response
Primary Choice	Frequency	457	149	81	183	83	47	0
	Ratio	45.7	14.9	8.1	18.3	8.3	4.7	0.0

Secondary Choice	Frequency	133	131	126	246	279	81	4
	Ratio	13.3	13.1	12.6	24.6	27.9	8.1	4.0
Combined	Ratio	29.5	14.0	10.4	21.5	18.1	6.4	0.2

When combining the primary and secondary choices, the survey result reveals the opinion of the respondents that 'there should be voluntary participation of farmers and merchants' along with their stance calling for the need for 'insertion of stringent penalty clause for violations'.

13) Pros and Cons for Reintroduction

The farmers appeared to be positive for subsequent reintroduction of the Tangerine Marketing Order in 2005. 89.4% of Jeju tangerine farmers were supportive of 'reintroduction of the order in 2005' while there were only 10.6% of farmers who opposed, according to the survey result. Such overwhelming support for the reintroduction of the order accounts for the improved participatory mindset among the related parties of the order, which was gained from their experience and observation and it is analyzed that a continuation of promoting the order is urged as the subsequent settling of the marketing order necessitates the voluntary participation of farmers and merchants.

<Table III-15> Pros and Cons for Reintroduction of the Tangerine Marketing Order In 2005

Classification	No. of Cases	Highly Opposed	Generally Opposed	Generally Supportive	Very Supportive	Average
Total	(1000)	3.3	7.3	68.5	20.9	3.07

14) Degree of Control for Reintroduction

In case of reintroducing the tangerine marketing order in 2005, more than a half responded that it is desirable to 'strengthen the degree of regulation from the previous one' (65.7%). This reveals that the farmers recognize the necessity of strengthened regulatory measures in order to resolve the problematic issues, such as the shipment of unsalable tangerine products by the intermediary merchants as it was identified during the process of the order implementation.

There are many opinions that it has to be 'strengthened from the previous year' in all areas of the regional base survey, the northern part of Mount Halla showed relatively higher in the opinion, Jeju City (33.3%), the eastern part of Bukjeju County (32.7%), and the western part of Bukjeju County (31.4%).

The survey of cultivating size revealed that all of the surveyed areas support the opinion to strengthen the degree of regulation more than the previous year. The lesser land farmers cultivate, the more they expressed an opinion of 'maintaining the level of the previous year.

The area of survey of income weight showed the same result as other survey categories with more opinions to strengthen the degree of regulation from the previous year. The survey of the income weight ranges from 51% to 70% replied more on 'to maintain the level at the previous year'.

In gender based category, more female respondents replied with 'to more strengthen than the previous year' than the male respondents. Relatively high numbers of female respondents chose 'to maintain the level at the previous year'.

The education based survey resulted in the same result as other categories throughout every category of educational background, high 'to more strengthen than the previous year'. Only the group of the educational background up to primary school selected more 'to maintain the level at the previous year' (37.1%) compared to other groups.

<Table III-16> Degree of Control for Reintroduction of Tangerine Marketing Order In 2005

Classification	No. of Cases	To Maintain the Previous Year	To Ease from the Previous Year	To Strengthen from the Previous Year	Others	Statistical Value Significance Level
Total	(1000)	26.4	6.5	65.7	1.4	
▩ By Area ▩						
Jeju City	(132)	33.3	4.5	61.4	.8	
Seoguipo	(237)	28.7	7.6	62.4	1.3	
East Bukjeju County	(113)	32.7	4.4	61.1	1.8	X2=32.781 P=0.005
West Bukjeju County	(118)	31.4	6.8	59.3	2.5	
East Namjeju County	(321)	20.6	8.7	69.2	1.6	
West Namjeju County	(79)	15.2		84.8		
▩ By Cultivating Size ▩						
Up to 2,000 pyeong	(238)	36.1	5.0	58.0	.8	X2=23.119 P= 0.001
Under 4,000 pyeong	(257)	23.7	5.8	67.3	3.1	
4,000 pyeong above	(505)	23.2	7.5	68.5	.8	

▩ By Income Weight ▩						
Up to 30%	(79)	31.6	3.8	64.6		X2=24.683
Up to 50%	(115)	32.2	5.2	62.6		P= 0.003
Up to 70%	(161)	36.0	4.3	56.5	3.1	
71% or above	(645)	22.3	7.6	68.7	1.4	
▩ By Gender ▩						
Male	(716)	21.8	6.5	70.2	1.5	X2=44.794 P=0.000
Female	(284)	44.8	6.5	47.8	1.0	
▩ By Education Background ▩						
Up to Primary School	(291)	37.1	4.8	57.0	1.0	
Middle School Graduate	(207)	19.3	4.8	75.4	.5	X2=34.084 P=0.000
High School Graduate	(346)	21.7	9.0	67.3	2.0	
Community College and more	(156)	26.3	6.4	65.4	1.9	

15) Pros and Cons for Implementation of Sweetness and Acidity as Quality Determinants

The respondents also showed their positive stance in ‘adding the quality ranks to include marking sweetness and acidity’ when reintroducing the tangerine marketing order in 2005. Only 18.2% of the respondents showed a negative opinion on the ‘addition of the quality ranks with markings of sweetness and acidity’, which appeared to have common understanding among farmers on the issue. It is analyzed that the tangerine farmers acknowledge that it is rather desirable to introduce ‘quality ranks’ instead of ‘standard by size’.

All surveyed areas were highly supportive of introducing quality ranks such as sweetness and acidity when ‘reintroducing the 2005 Tangerine Marketing Order, although, particularly the northern part of Mount Halla had many opposing opinions relative to other regions, Jeju City (22.2%), the eastern part of Bukjeju County (21.3%), and the western part of Bukjeju County (20.3%).

<Table III-17> Pros and Cons for Implementation of Sweetness and Acidity in Quality Determinants in 2005 Tangerine Marketing Order

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average	Statistical Value Significance Level
Total	(1000)	2.1	16.1	56.0	25.8	3.06	
▩ By Area▩							F=2.994
Jeju City	(132)		22.0	47.7	30.3	3.08	P=0.011

Seoguipo	(237)	4.2	11.8	52.7	31.2	3.11	
East Bukjeju County	(113)	1.8	19.5	64.6	14.2	2.91	
West Bukjeju County	(118)	.8	19.5	59.3	20.3	2.99	
East Namjeju County	(321)	2.2	17.1	56.7	24.0	3.02	
West Namjeju County	(79)	1.3	5.1	59.5	34.2	3.27	
▩ By Gender ▩							
Male	(716)	2.5	14.9	54.4	28.2	3.08	t=2.466 P=0.014
Female	(284)	.5	20.9	62.2	16.4	2.95	
▩ By Age ▩							
Up 30s	(89)	3.4	6.7	49.4	40.4	3.27	
40s	(174)	2.9	13.8	54.0	29.3	3.10	F=2.934
50s	(228)	3.5	18.0	55.3	23.2	2.98	P=0.020
60s	(319)	.9	17.2	59.6	22.3	3.03	
70s and above	(190)	1.1	18.4	55.8	24.7	3.04	
▩ By Education Background ▩							
Up to Primary School	(291)	1.0	23.7	59.1	16.2	2.90	F=6.751
Up to Middle School	(207)	1.4	14.5	58.0	26.1	3.09	P=0.000
Up to High School	(346)	2.3	12.7	56.4	28.6	3.11	
Community College and more	(156)	4.5	11.5	46.8	37.2	3.17	

In the gender survey, both male and female respondents were highly supportive of the 'introduction of quality ranks' with more female opponents than male.

Likewise, all age groups appeared to be supportive of the 'introduction of quality ranks' with a relatively more number of opponents in the 50s age group (21.5%).

The educational background based survey also resulted in supporting the 'introduction of quality ranks' throughout all age groups, whereas respondents with lower educational achievements were more opposed.

16) Pros and Cons of Salable Determination of Numbers 1 and 9 Fruits above Certain Quality Level

74.3% of the respondents were positive about selling the numbers 1 and 9 fruits with 'above certain level of quality', which could be determined by passing them through a non-destructive selecting machine. With only 25.7% opposing, it appears that the majority of tangerine farmers are supportive of introducing quality ranks and have a positive

understanding of determining numbers 1 and 9 products as salable products once they are qualified with 'above certain level of quality'.

All surveyed areas assessed positively, however, farmers in the southern area of Mount Halla, eg, Seoguipo (25.7%), the western part of Namjeju County (32.9%), and the eastern part of Namjeju County (28.0%), showed relatively high numbers in opposition compared to the farmers in the northern area of Mount Halla.

Many respondents, both male and female, chose the opinion of supporting 'numbers 1 and 9 size fruits to be salable when they pass above certain level of quality', while there were more male than female respondents among those who opposed.

All age groups appeared to vote for regularizing the qualified numbers 1 and 9 size fruits as salable products, whereas the younger groups tend to be less supportive to the idea.

The educational background based survey also revealed a similar result, supportive of the idea throughout all educational groups, though the farmers with higher education appeared to have more opinions in rejecting the idea.

<Table III-18> Pros and Cons of Salable Determination of Numbers 1 and 9 Fruits above Certain Quality Level

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average	Statistical Value Significance Level
Total	(1000)	7.5	18.2	36.9	37.4	3.04	
▩ By Area▩							
Jeju City	(132)	4.5	17.4	34.8	43.2	3.17	
Seoguipo	(237)	10.1	15.6	45.6	28.7	2.93	
East Bukjeju County	(113)	4.4	19.5	34.5	41.6	3.13	F=2.386 P=0.037
West Bukjeju County	(118)	5.9	14.4	33.9	45.8	3.19	
East Namjeju County	(321)	7.8	20.2	34.6	37.4	3.02	
West Namjeju County	(79)	10.1	22.8	31.6	35.4	2.92	
▩ By Gender ▩							
Male	(716)	8.6	20.3	36.9	34.2	2.97	t=-5.236 P=0.000
Female	(284)	3.0	10.0	36.8	50.2	3.34	
▩ By Age ▩							
Up 30s	(89)	10.1	28.1	37.1	24.7	2.76	
40s	(174)	9.2	21.3	38.5	31.0	2.91	F=6.012 P=0.000
50s	(228)	7.9	19.7	39.9	32.5	2.97	
60s	(319)	6.3	16.6	35.1	42.0	3.13	
70s and above	(190)	6.3	11.6	34.7	47.4	3.23	

▩ By Education Background ▩							
Up to Primary School	(291)	4.8	12.0	35.1	48.1	3.26	F=9.377 P=0.000
Up to Middle School	(207)	7.2	18.4	36.7	37.7	3.05	
Up to High School	(346)	8.7	21.7	37.9	31.8	2.93	
Community College and more	(156)	10.3	21.8	38.5	29.5	2.87	

17) Pros and Cons on Wax Coating Prohibition

Jeju tangerine farmers think positively about the 'addition of the clause to prohibit wax coating' when the tangerine marketing order is reintroduced for the 2005 product of field tangerine. While there were 78.8% of supportive opinions on the subject, only 21.2% of the farmers objected.

All areas showed many support the 'insertion of the wax coating prohibition clause', while there was relatively higher objection in Seoguipo (22.8%) and the eastern part of Bukjeju County (30.0%).

<Table III-19> Pros and Cons on Wax Coating Prohibition in Tangerine Marketing Order 2005

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average	Statistical Value Significance Level
Total	(1000)	8.0	13.2	25.7	53.1	3.24	
▩ By Area▩							
Jeju City	(132)	1.5	12.9	26.5	59.1	3.43	F=4.605 P=0.000
Seoguipo	(237)	11.4	11.4	24.1	53.2	3.19	
East Bukjeju County	(113)	15.0	15.0	31.0	38.9	2.94	
West Bukjeju County	(118)	8.5	14.4	22.9	54.2	3.23	
East Namjeju County	(321)	5.6	13.4	22.1	58.9	3.34	
West Namjeju County	(79)	7.6	13.9	40.5	38.0	3.09	

18) Pros and Cons on Scope Expansion to Include Consumption Areas

Jeju tangerine farmers think positively about the expansion of the order scope to include consumption areas in case of reintroduction of the tangerine marketing order in

2005. 90.1% of the tangerine farmers are supportive of the 'expansion of the order scope to include consumption areas'.

In the area of the cultivation scale of farmers, the farmers in all categories agreed to the expansion of the order implementation scope to consumption areas, nevertheless the farmers in the cultivating area of 4,000 pyeong and above had fewer opinions (9.3%) of supporting the idea compared to the farmers in other categories.

<Table III-20> Pros and Cons on Scope Expansion to Include Consumption Areas in the 2005 Tangerine Marketing Order

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average	Statistical Value Significance Level
Total	(1000)	1.5	8.4	48.8	41.3	3.30	
▩ By Cultivating Size ▩							
Up to 2,000 pyeong	(238)	1.3	8.4	54.6	35.7	3.25	F=3.382
Below 4,000 pyeong	(257)	1.6	9.7	52.1	36.6	3.24	P= 0.034
4,000 pyeong and above	(505)	1.6	7.7	44.4	46.3	3.35	

C. Related to Tangerine Industry Outlook

1) Jeju Tangerine Industry Outlook

The survey showed a slight inclination towards a gloomy outlook of the Jeju tangerine industry. The farmers with an optimistic outlook on the Jeju tangerine industry were 46.3% on the contrast to 53.7% of the farmers with a pessimistic outlook.

Bukjeju County including the western part (2.59 scale points) and the eastern part (2.52 scale points) showed more of a positive and optimistic view, while the western part of Namjeju County (2.19 scale points) had the most negative outlook.

<Table III-21> Outlook on Jeju Tangerine Industry

Classification	No. of Cases	Very Gloomy	Somewhat Gloomy	Somewhat Bright	Very Bright	Average	Statistical Value Significance Level
Total	(1000)	1.3	52.4	45.8	.5	2.46	
▩ By Area▩							F=7.455
Jeju City	(132)		54.5	45.5		2.45	P=0.000

Seoguipo	(237)	.8	57.4	40.9	.8	2.42	
East Bukjeju County	(113)	1.8	58.4	39.8		2.38	
West Bukjeju County	(118)	2.5	37.3	58.5	1.7	2.59	
East Namjeju County	(321)	1.6	44.9	53.3	.3	2.52	
West Namjeju County	(79)	1.3	78.5	20.3		2.19	
▩ By Income Weight▩							
Up to 30%	(79)	1.3	72.2	26.6		2.25	F=6.568
Up to 50%	(115)	2.6	59.1	38.3		2.36	P= 0.000
Up to 70%	(161)	2.5	50.3	46.6	.6	2.45	
71% and above	(645)	.8	49.3	49.3	.6	2.50	
▩ By Age▩							
Up to 30s	(89)	2.2	62.9	33.7	1.1	2.34	
40s	(174)	3.4	64.9	31.6		2.28	F=11.275
50s	(228)	1.8	54.4	43.0	.9	2.43	P=0.000
60s	(319)	.3	49.2	50.2	.3	2.51	
70s and above	(190)		38.9	60.5	.5	2.62	
▩ By Education Background ▩							
Up to Primary School	(291)		43.3	56.4	.3	2.57	F=8.096
Up to Middle School	(207)	1.4	51.2	46.4	1.0	2.47	P=0.000
Up to High School	(346)	1.4	57.8	40.5	.3	2.40	
Community College and more	(156)	3.2	59.0	37.2	.6	2.35	

The group of higher income weight tended to be more optimistic, while the farms in the income weight group of up to 50% turned out to have a negative outlook.

All groups tend to have an optimistic outlook. The age group of 40s showed the most negative outlook (2.28 scale points) of the industry.

The survey by educational background revealed that the farmers with up to a primary school education were the only group supporting an optimistic view (2.57 scale points).

2) Outlook on Future Price Tendency

Jeju tangerine farmers see a ‘falling future tangerine price’. In forecasting the price of tangerine, only 13.6% of farmers expected a ‘price rise’ in contrast to 46.6% of farmers forecasting ‘falling prices’. 39.8% of the farmers chose ‘maintaining the current level of prices’.

<Table III-22> Outlook on Future Price Tendency

Classification	No. of Cases	Sharp Fall	Somewhat Fall	Maintaining the Current Price	Somewhat Rise	Sharp Rise	Average	Statistical Value Significance Level
Total	(1000)	1.5	45.1	39.8	13.6	0.0	2.66	
▩ By Area▩								
Jeju City	(132)	.8	51.5	35.6	12.1		2.59	
Seoguipo	(237)	1.3	50.2	36.7	11.8		2.59	
East Bukjeju County	(113)		57.5	30.1	12.4		2.55	F=3.698
West Bukjeju County	(118)	2.5	26.3	50.8	20.3		2.89	P=0.003
East Namjeju County	(321)	1.9	42.7	40.5	15.0		2.69	
West Namjeju County	(79)	2.5	39.2	50.6	7.6		2.63	
▩ By Income Weight▩								
Up to 30%	(79)	3.8	51.9	38.0	6.3		2.47	F=3.598
Up to 50%	(115)	2.6	49.6	39.1	8.7		2.54	P= 0.013
Up to 70%	(161)	1.9	44.1	41.6	12.4		2.65	
71% and above	(645)	.9	43.7	39.7	15.7		2.70	
▩ By Age▩								
Up to 30s	(89)	4.5	56.2	31.5	7.9		2.43	
40s	(174)	3.4	54.6	32.2	9.8		2.48	F=8.882
50s	(228)	1.8	46.9	38.6	12.7		2.62	P=0.000
60s	(319)	.3	41.7	43.3	14.7		2.72	
70s and above	(190)		34.7	46.3	18.9		2.84	
▩ By Education Background ▩								
Up to Primary School	(291)		35.1	47.4	17.5		2.82	
Up to Middle School	(207)	1.4	42.5	45.4	10.6		2.65	F=8.475
Up to High School	(346)	1.7	52.9	32.9	12.4		2.56	P=0.000
Community College and more	(156)	3.8	50.0	33.3	12.8		2.55	

All surveyed areas predicted a price fall. The highest numbers for a price fall were found in the eastern part of Bukjeju County (2.55 scale points.

All age groups predicted a price fall in the future with a more pessimistic tendency among younger age groups.

There were more opinions of a price fall among the group of higher educational background.

D. Tangerine Production, Distribution, and Policies

1) Future Tasks for Field Unshiu Tangerine

The tangerine farmers chose ‘quality improvement (50.6%) as a primary choice and ‘optimal production (14.2%) as a secondary choice in responding to the survey question of the most urgent task to be accomplished for field Unshiu tangerine.

In the secondary answer choices as the most urgent future task, the respondents picked ‘optimal production’ (26.4%) as the top choice followed by ‘shipment control’ (16.3%) and ‘quality improvement’ (13.1%).

In the tertiary choices, ‘shipment control’ (21.4%) was the most preferred choice followed by ‘optimal production’ (14.4%) and ‘distribution improvement’ (12.6%).

<Table III-23> Future Tasks for Field Unshiu Tangerine

Content of Response		① Quality	② Cost Red.	③ Opt. Prod.	④ Ops. Scale	⑤ Alterna-ting years	⑥ Dist. Improve.	⑦ Shipment Control	⑧ Export Inc.	⑨ Dev. Of Proc. Prod.	⑩ Prod. Infra.	⑪ Labor Force	⑫ Securing Superior Seedlings	⑬ Env. Protect.	⑭ Others
Primary	Freq.	506	49	142	3	48	49	57	14	13	5	54	50	-	10
	Ratio	50.6	4.9	14.2	0.3	4.8	4.9	5.7	1.4	1.3	0.5	5.4	5.0	-	1.0
Secondary	Freq.	131	87	264	6	55	111	163	27	34	3	36	68	6	9
	Ratio	13.1	8.7	26.4	0.6	5.5	11.1	16.3	2.7	3.4	0.3	3.6	6.8	0.6	0.9
Tertiary	Freq.	88	55	144	12	42	126	214	59	103	14	42	77	6	18
	Ratio	8.8	5.5	14.4	1.2	4.2	12.6	21.4	5.9	10.3	1.4	4.2	7.7	0.6	1.8

① Quality Improvement ② Cost Reduction ③ Optimal Production ④ Expansion of Operation Scale ⑤ Fruit-bearing in Alternate Years ⑥ Distribution Improvement ⑦ Shipment Control ⑧ Export Increase ⑨ Development of Processing Product ⑩ Establishment of Production Infrastructure ⑪ Lack of Labor Force ⑫ Securing Superior Seedlings ⑬ Environment Protection ⑭ Others

The combined result data reveals that the Jeju tangerine farmers responded in the order of ‘quality enhancement’, ‘optimal production and ‘improvement of distribution structure’ as the most urgent future tasks to be pursued.

2) Future Tasks for Greenhouse Tangerine

128 greenhouse cultivating tangerine farmers responded in their primary choice that ‘quality improvement’ (40.6%) was the first priority task to be accomplished followed by ‘reduction of production cost’ (35.2%).

<Table III-24> Future Tasks for Greenhouse Tangerine

Content of Response		① Quality	② Cost Red.	③ Opt. Prod.	④ Ops. Scale	⑤ Alterna-ting years	⑥ Dist. Improve.	⑦ Shipment Control	⑧ Export Inc.	⑨ Dev. Of Proc. Prod.	⑩ Prod. Infra.	⑪ Labor Force	⑫ Securing Superior Seedlings	⑬ Env. Protect.	⑭ Others
Primary	Freq.	52	45	6	1	1	5	6	2	-	2	2	3	-	3
	Ratio	40.6	35.2	4.7	0.8	0.8	3.9	4.7	1.6	-	1.6	1.6	2.3	-	2.3
Secondary	Freq.	26	23	13	1	2	22	13	9	1	4	4	7	2	1
	Ratio	20.3	18.0	10.2	0.8	1.6	17.2	10.2	7.0	0.8	3.1	3.1	5.5	1.6	0.8
Tertiary	Freq.	8	9	10	4	2	23	26	18	1	6	5	11	3	2
	Ratio	6.3	7.0	7.8	3.1	1.6	18.0	20.3	14.1	0.8	4.7	3.9	8.6	2.3	1.6

① Quality Improvement ② Cost Reduction ③ Optimal Production ④ Expansion of Operation Scale ⑤ Fruit-bearing in Alternate Years ⑥ Distribution Improvement ⑦ Shipment Control ⑧ Export Increase ⑨ Development of Processing Product ⑩ Establishment of Production Infrastructure ⑪ Lack of Labor Force ⑫ Securing Superior Seedlings ⑬ Environment Protection ⑭ Others

In the response of the secondary choice answer, they also replied in the order of ‘quality improvement’, ‘reduction of production cost’, and ‘improvement of distribution structure’.

The survey result of tertiary answer choice revealed that ‘shipment control’, ‘improvement of distribution structure’, and ‘export increase’ were selected in the order of the most chosen category.

The combined result data indicates that the Jeju tangerine farmers responded in the order of ‘quality enhancement’, ‘reduction of production cost’, ‘shipment control’, and ‘improvement of distribution structure’ as the most urgent future tasks to be pursued.

3) Future Tasks for Canopy Cultivated Unshiu Tangerine

68 canopy cultivating tangerine farmers responded in their primary answer choice that ‘quality improvement’ (50.0%) was the most urgent task to be sought followed by ‘remedy for fruit-bearing in alternate years’ (16.2%).

In the secondary answer choice, the surveyed farmers selected in the order of ‘shipment control’ and ‘improvement of distribution structure’.

The tertiary answer choice was revealed that the most selected choices were ‘improvement of distribution structure’ and ‘shipment control’.

The combined above survey results indicate that the tangerine farmers of canopy cultivation responded in the order of ‘quality improvement’, ‘remedy for fruit-bearing in alternate years’, ‘shipment control’, and ‘improvement of distribution structure’ to pursue as the most urgent tasks.

<Table III-25> Future Tasks for Canopy Cultivated Unshiu Tangerine

Content of Response		① Quality	② Cost Red.	③ Opt. Prod.	④ Ops. Scale	⑤ Alterna-ting years	⑥ Dist. Improve.	⑦ Ship. Control	⑧ Export Inc.	⑨ Dev. Of Proc. Prod.	⑩ Prod. Infra.	⑪ Labor Force	⑫ Securing Superior Seedlings	⑬ Env. Protect.	⑭ Others
Primary	Freq.	34	5	6	-	11	4	1	1	-	1	1	2	2	-
	Ratio	50.0	7.4	8.8	-	16.2	5.9	1.5	1.5	-	1.5	1.5	2.9	2.9	-
Secondary	Freq.	7	8	5	2	6	11	13	6	1	3	2	2	1	1
	Ratio	10.3	11.8	7.4	2.9	8.8	16.2	19.1	8.8	1.5	4.4	2.9	2.9	1.5	1.5
Tertiary	Freq.	4	5	7	-	4	22	8	4	1	5	-	7	-	1
	Ratio	5.9	7.4	10.3	-	5.9	32.4	11.8	5.9	1.5	7.4	-	10.3	-	1.5

① Quality Improvement ② Cost Reduction ③ Optimal Production ④ Expansion of Operation Scale ⑤ Fruit-bearing in Alternate Years ⑥ Distribution Improvement ⑦ Shipment Control ⑧ Export Increase ⑨ Development of Processing Product ⑩ Establishment of Production Infrastructure ⑪ Lack of Labor Force ⑫ Securing Superior Seedlings ⑬ Environment Protection ⑭ Others

4) Future Tasks for Tangerine Cheonggyun

19 Cheonggyun, a variant of tangerine, cultivating farmers replied in their primary choice of survey answers that ‘quality improvement’ (73.7%) was the most urgent matter that the Cheonggyun product faces followed by ‘improvement of distribution structure’. In the response of the secondary choice, ‘improvement of distribution structure’ and ‘reduction of production cost’ were selected, while the selected responses in the tertiary answer choice were ‘optimal production’ and ‘improvement of distribution structure’.

The combined result of the above indicates that the Cheonggyun cultivating farmers considered ‘quality improvement’, ‘improvement of distribution structure’, ‘reduction of

production cost', and 'optimal production' as the most urgent tasks for the Cheonggyun product.

<Table III-26> Future Tasks for Tangerine Cheonggyun

Content of Response		① Quality	② Cost Red.	③ Opt. Prod.	④ Ops. Scale	⑤ Alterna-ting years	⑥ Dist. Improve.	⑦ Shipment Control	⑧ Export Inc.	⑨ Dev. Of Proc. Prod.	⑩ Prod. Infra.	⑪ Labor Force	⑫ Securing Superior Seedlings	⑬ Env. Protect.	⑭ Others
Primary	Freq.	14	-	1	-	1	2	1	-	-	-	-	-	-	-
	Ratio	73.7	-	5.3	-	5.3	10.5	5.3	-	-	-	-	-	-	-
Secondary	Freq.	3	4	1	-	-	5	2	1	-	-	1	1	1	-
	Ratio	15.8	21.1	5.3	-	-	26.3	10.5	5.3	-	-	5.3	5.3	5.3	-
Tertiary	Freq.	1	-	5	-	-	5	2	1	-	2	-	3	-	-
	Ratio	5.3	-	26.3	-	-	26.3	10.5	5.3	-	10.5	-	15.8	-	-

① Quality Improvement ② Cost Reduction ③ Optimal Production ④ Expansion of Operation Scale ⑤ Fruit-bearing in Alternate Years ⑥ Distribution Improvement ⑦ Shipment Control ⑧ Export Increase ⑨ Development of Processing Product ⑩ Establishment of Production Infrastructure ⑪ Lack of Labor Force ⑫ Securing Superior Seedlings ⑬ Environment Protection ⑭ Others

5) Future Tasks for Hallabong

The survey result on the most urgently required tasks among 95 farmers cultivating Hallabong, a hybrid between tangerine and orange, showed that 'quality improvement' (61.5%) ranked as the top selection in the primary answer choice followed by 'reduction of production cost' (10.4%).

In the secondary answer choice, 'securing superior quality of seedlings', 'shipment control', and 'optimal production' were suggested.

The tertiary choices also resulted in selecting 'improvement of distribution structure', 'export increase', and 'securing superior quality of seedlings'.

<Table III-27> Future Tasks for Hallabong

Content of Response		① Quality	② Cost Red.	③ Opt. Prod.	④ Ops. Scale	⑤ Alterna-ting years	⑥ Dist. Improve.	⑦ Shipment Control	⑧ Export Inc.	⑨ Dev. Of Proc. Prod.	⑩ Prod. Infra.	⑪ Labor Force	⑫ Securing Superior Seedlings	⑬ Env. Protect.	⑭ Others
Primary	Freq.	59	10	7	-	2	3	1	-	-	2	6	4	1	1

	Ratio	61.5	10.4	7.3	-	2.1	3.1	1.0	-	-	2.1	6.3	4.2	1.0	1.0
Secondary	Freq.	6	12	16	1	1	18	8	4	2	4	2	19	1	1
	Ratio	6.3	12.6	16.8	1.1	1.1	18.9	8.4	4.2	2.1	4.2	2.1	20.0	1.1	1.1
Tertiary	Freq.	7	13	6	1	2	17	14	7	3	8	1	14	1	1
	Ratio	7.4	13.7	6.3	1.1	2.1	17.9	14.7	7.4	3.2	8.4	1.1	14.7	1.1	1.1

① Quality Improvement ② Cost Reduction ③ Optimal Production ④ Expansion of Operation Scale ⑤ Fruit-bearing in Alternate Years ⑥ Distribution Improvement ⑦ Shipment Control ⑧ Export Increase ⑨ Development of Processing Product ⑩ Establishment of Production Infrastructure ⑪ Lack of Labor Force ⑫ Securing Superior Seedlings ⑬ Environment Protection ⑭ Others

6) Recognizing Optimal Production Volume of Jeju Tangerine

42.0% of Jeju tangerine farmers appeared to consider the ‘optimal production volume of Jeju tangerine’ to be ‘up to 500,000 tons’. 23.9% of the farmers considered ‘up to 550,000 tons’ and it was quite surprising that 15.2% of the surveyed farmers chose with ‘up to 600,000 tons’ as the optimal production volume.

The weighted average optimal production volume based on the survey responses was estimated at 510,000 tons.

In gender category survey, ‘up to 500,000 tons’ was the most favored choice by both male (42.7%) and female (39.3%) respondents. While there were more male respondents (16.1%) replying with ‘up to 600,000 tons’, more of the female respondents replied with ‘up to 550,000 tons’.

In the overall survey by age, all age groups favored the choice category of ‘up to 500,000 tons’. The highest frequency in different choices differ by each age group: more in ‘up to 550,000 tons’ by the age groups up to 30s and 70s and above, ‘up to 450,000 tons’ by 40s, ‘up to 500,000 tons’ by 50s, and ‘up to 600,000 tons’ by 60s and 70s.

The survey by educational background had more opinions in ‘up to 500,000 tons’ throughout different groups. However, the groups with up to primary education and middle school graduates inclined to choose ‘up to 600,000 tons’, while the group of college and more educational background revealed high in ‘up to 550,000 tons’ and ‘up to 450,000 tons’ in relative terms.

<Table III-28> Optimal Production Volume of Jeju Tangerine

Classification	No. of Cases	Up to 400,000 tons	Up to 450,000 tons	Up to 500,000 tons	Up to 550,000 tons	Up to 600,000 tons	Up to 650,000 tons	Up to 700,000 tons	Above 700,000 tons	Statistical Value Significance Level
Total	(1000)	3.8	10.4	42.0	23.9	15.2	3.9	.5	.3	
▩ By Gender ▩										X2=27.410
Male	(716)	4.5	10.8	42.7	22.0	16.1	3.5	.1	.3	P=0.000
Female	(284)	1.0	9.0	39.3	31.3	11.4	5.5	2.0	.5	
▩ By Age ▩										
Up to 30s	(89)	4.5	12.4	41.6	27.0	12.4	2.2			
40s	(174)	6.3	13.8	39.1	25.3	6.9	7.5		1.1	X2=47.887
50s	(228)	4.4	11.8	45.2	21.1	13.2	2.6	1.3	.4	P=0.011
60s	(319)	2.8	9.1	42.3	22.3	19.4	3.8	.3		
70s and above	(190)	2.1	6.8	40.5	27.4	19.5	3.2	.5		
▩ By Educational Background ▩										
Up to Primary School	(291)	1.7	7.2	40.5	24.4	20.6	4.1	1.4		
Up to Middle School	(207)	1.9	13.0	45.4	22.7	14.5	2.4			X2=48.342 P=0.001
Up to High School	(346)	6.1	8.4	43.9	23.7	12.1	4.6	.3	.9	
Community College and more	(156)	5.1	17.3	35.9	25.0	12.8	3.8			

7) Competitive Agricultural Products in Jeju

In the survey question of 'the most competitive agricultural products in Jeju area for the future', most of the respondents selected 'citrus fruits'. 'Field Unshiu tangerine' took the top position with 25.3% in the primary choice followed by 'canopy cultivating Unshiu tangerine' (20.1%) and 'Hallabong' (19.5%).

The secondary choice answers included in the order of 'Hallabong', 'canopy cultivating Unshiu tangerine', 'hothouse Unshiu tangerine' while they were 'canopy cultivating Unshiu tangerine', 'field Unshiu tangerine', and 'hothouse Unshiu tangerine' in the tertiary choice.

<Table III-29> Competitive Agricultural Products in Jeju

Content of Reply		① Field Unshiu	② Hallabong	③ Hothouse	④ Canopy	⑤ Wintering Veg.	⑥ Greenhouse Veg.	⑦ Flowers	⑧ Green Tea	⑨ Kiwi	⑩ Others	Don't know
Primary	Frequency	253	195	114	201	19	20	10	43	50	89	6

	Ratio	25.3	19.5	11.4	20.1	1.9	2.0	1.0	4.3	5.0	8.9	6.0
Secondary	Frequency	91	212	163	195	22	43	15	43	41	47	128
	Ratio	9.1	21.2	16.3	19.5	2.2	4.3	1.5	4.3	4.1	4.7	12.8
Tertiary	Frequency	148	123	147	149	29	44	24	24	26	55	231
	Ratio	14.8	12.3	14.7	14.9	2.9	4.4	2.4	2.4	2.6	5.5	23.1

① Field Unshiu Tangerine ② Hallabong, a hybrid between tangerine and orange ③ Hothouse Unshiu Tangerine ④ Canopy cultivating Unshiu tangerine ⑤ Wintering Vegetables ⑥ Greenhouse Vegetables ⑦ Flowers ⑧ Green Tea ⑨ Kiwi ⑪ Deodeok root (*Codonopsis lanceolata)*, the root bark of *Acanthopanax sieboldianus* & etc.

8) Current Distribution System's Coping Capacity with Open Market Trend

The survey conducted the question on whether 'the current distribution system of Jeju tangerine' has the capacity to cope with the reality of the open market trend in agricultural products. The result includes that 56.3% of the farmers had an opinion of 'capable of appropriately coping with the current distributing system'; while there were 43.7% viewed in 'might be difficult to cope with'.

It appears that all areas considered as being capable of coping with the market openness in the distribution sector, except the western area of Namjeju County (2.34 scale points), in the regional base survey.

In gender survey, female respondents gave a higher score than males to the opinion of 'capable of coping with the open market trend in the distribution sector'.

The older age groups tend to incline to the opinion of 'capable of coping with the open market trend in the distribution sector' despite more negative opinions among the age groups of 40s (2.44 scale point) and up to 30s (2.45 scale point).

The survey based on educational category revealed that the more respondents with less educational background fell to the positive, 'capable of coping with…', however the group of college and more had more (2.43 scale point) on the side of 'difficult to cope with'.

<Table III-30> Awareness of Coping Capacity in Distribution Sector with Market Openness

Classification·	No. of Cases	Very Difficult	Difficult	Somewhat Capable of Coping	Very Capable of Coping	Average	Statistical Value Significance Level
Total	(1000)	2.8	40.9	52.0	4.3	2.58	
▩ By Area▩							F=4.295
Jeju City	(132)		45.5	47.7	6.8	2.61	P=0.001
Seoguipo	(237)	4.2	36.3	54.0	5.5	2.61	
East Bukjeju County	(113)	3.5	42.5	51.3	2.7	2.53	

West Bukjeju County	(118)	2.5	28.8	61.0	7.6	2.74	
East Namjeju County	(321)	2.2	42.7	52.3	2.8	2.56	
West Namjeju County	(79)	5.1	55.7	39.2		2.34	
▩ By Gender ▩							t=-2.012 P=0.045
Male	(716)	3.0	42.4	50.3	4.3	2.56	
Female	(284)	2.0	34.8	58.7	4.5	2.66	
▩ By Age ▩							
Up to 30s	(89)	7.9	44.9	41.6	5.6	2.45	
40s	(174)	4.6	50.0	42.0	3.4	2.44	F=4.454
50s	(228)	3.1	38.6	54.4	3.9	2.59	P=0.001
60s	(319)	.6	40.4	54.2	4.7	2.63	
70s and above	(190)	2.1	34.2	59.5	4.2	2.66	
▩ By Educational Background ▩							
Up to Primary School	(291)	.7	36.8	58.4	4.1	2.66	F=5.968 P=0.000
Up to Middle School	(207)	1.4	38.2	55.1	5.3	2.64	
Up to High School	(346)	3.5	42.5	50.9	3.2	2.54	
Community College and more	(156)	7.1	48.7	38.5	5.8	2.43	

9) Problems in Tangerine Market Distribution Structure

The survey conducted among tangerine farmers asked ‘what is the biggest problem of the tangerine distribution structure?’ It revealed that ‘insufficient measures to handle unsalable products’ took 37.3% of the respondents’ primary answer choice followed by 20.4% of ‘non-existence of measures to control the intermediary merchants’.

The respondents submitted high in the opinions of ‘non-existence of measures to control the intermediary merchants’ and ‘insufficient measures to handle unsalable products’ in the secondary answer choices.

In the tertiary choice, ‘excessive burden of logistics cost’ and ‘weak system of shipment control’ were pointed out.

The combined survey results indicated that the problems of the tangerine distribution structure lie in ‘insufficient measures to handle unsalable products’ and ‘non-existence of measures to control the intermediary merchants’ which arose during the execution of the tangerine marketing order. In addition, it also indicates that the appropriate control of shipment is as important as the reduction of production volume through the marketing order.

<Table III-31> Problems in Tangerine Market Distribution Structure

Content of Response		Individual Shipment System	Unsatisfactory system for shipment control	Insufficient measures for unsalable products	Non-existence of Measures to Control Intermediary Merchants	Triple Structure in Producer Market Distribution	Excessive Logistics Cost	No Answer
Primary	Freq.	148	147	373	204	54	72	2
	Ratio	14.8	14.7	37.3	20.4	5.4	7.2	0.2
Secondary	Freq.	53	160	246	282	131	121	7
	Ratio	5.3	16.0	24.6	28.2	13.1	12.1	0.7
Tertiary	Freq.	59	193	137	185	170	214	42
	Ratio	5.9	19.3	13.7	18.5	17.0	21.4	4.2

10) Pros and Cons on Conversion to Large Scale Packing House System

<Table III-32> Pros and Cons on Conversion to Large Scale Packing House System

Classification	No. of Cases	Aggressively Opposed	Somewhat Opposed	Somewhat supportive	Aggressively Supportive	Average (Max. 4 Scale Point)	Statistical Value Significance Level
Total	(1000)	1.0	24.7	60.1	14.2	2.88	
▩ By Income Weight ▩							
Up to 30%	(79)		11.4	72.2	16.5	3.05	F=3.79 P=0.010
Up to 50%	(115)	.9	26.1	57.4	15.7	2.88	
Up to 70%	(161)		17.4	69.6	13.0	2.96	
71% and above	(645)	1.4	27.9	56.7	14.0	2.83	
▩ By Gender ▩							
Male	(799)	1.0	23.5	58.8	16.6	2.91	t=3.56 P=0.000
Female	(201)	1.0	29.4	65.2	4.5	2.73	
▩ By Age▩							
Up to 30s	(89)		11.2	67.4	21.3	3.10	
40s	(174)	1.7	21.8	58.0	18.4	2.93	F=4.61 P=0.001
50s	(228)	.9	25.0	57.9	16.2	2.89	
60s	(319)	.9	27.9	61.1	10.0	2.80	
70s and above	(190)	1.1	27.9	59.5	11.6	2.82	
▩ By Educational Background ▩							
Up to Primary School	(291)	.7	33.7	58.8	6.9	2.72	F=12.17 P=0.000
Up to Middle School	(207)		23.2	63.8	13.0	2.90	
Up to High School	(346)	1.7	21.7	61.8	14.7	2.90	
Community College and more	(156)	1.3	16.7	53.8	28.2	3.09	

Most of the Jeju tangerine farmers were supportive of the idea 'converting to the large-scale packing house system'. While 74.3% of the tangerine farmers supported, only 25.7% of them showed a negative stance about 'converting to the large-scale packing house system'.

In the survey result by income weight, all survey groups had high opinions to support conversion to the large-scale packing house system with more supporting opinions among the farmers in the income weight category of up to 30% (3.05 scale point) relative to other income weight groups.

In gender survey, many male respondents showed their active support to the conversion.

The survey result by age showed a strong support by all age groups for the conversion to the large-scale packing house system, while the groups of 60s and above had relatively large numbers of opponents.

The respondents with higher education tended to be more supportive.

11) Pros and Cons in Introduction of Collective Selection-Shipment-Settlement

With more 'positive reaction' (67.6%) than 'negative reaction' (32.4%) on the issue of 'adopting collective selection – collective shipment – collective settlement system', the participants appeared to have a general acknowledgement on the issue.

<Table III-33> Pros and Cons in Introduction of Collective Selection-Shipment-Settlement

Classification	No. of Cases	Aggressively Opposed	Somewhat Opposed	Somewhat Supportive	Aggressively Supportive	Average (Max. 4 Scale Point)	Statistical Value Significance Level
Total	(1000)	1.6	30.8	58.7	8.9	2.75	
▩ By Gender ▩							t=4.49 P=0.000
Male	(799)	1.5	28.3	59.6	10.6	2.91	
Female	(201)	2.0	40.8	55.2	2.0	2.73	
▩ By Age▩							F=5.58 P=0.000
Up to 30s	(89)	2.2	19.1	64.0	14.6	2.91	
40s	(174)	2.3	24.7	60.9	12.1	2.83	
50s	(228)	1.3	28.5	56.6	13.6	2.82	
60s	(319)	1.3	36.4	58.0	4.4	2.66	
70s and above	(190)	1.6	35.3	57.9	5.3	2.67	
▩ By Educational Background ▩							F=9.64 P=0.000

Up to Primary School	(291)	1.0	41.2	54.0	3.8	2.60	
Up to Middle School	(207)	.5	30.0	62.3	7.2	2.76	
Up to High School	(346)	2.3	26.3	62.1	9.2	2.78	
Community College and more	(156)	2.6	22.4	55.1	19.9	2.92	

Although there were many supportive opinions among all respondents by males and females, the survey result also showed a meaningful number of opponents.

The survey result by age showed a strong support by all age groups, except relatively large numbers of opponents in the groups of 60s and above.

The respondents with higher education appeared to have an increasing tendency of supportive opinions.

12) Pros and Cons in Introducing Non-Destructive Selecting System

Jeju tangerine farmers expressed a positive opinion on 'the non-destructive selecting method to select quality fruits by taste'. 82.6% of tangerine farmers expressed in favor of the 'non-destructive fruit selection' while there were only 17.4% of opposing opinions.

<Table III-34> Pros and Cons on Introducing Non-Destructive Fruit Selection

Classification	No. of Cases	Aggressively Opposed	Somewhat Opposed	Somewhat Supportive	Aggressively Supportive	Average (Max. 4 Scale Point)	Statistical Value Significance Level
Total	(1000)	1.1	16.3	69.6	13.0	2.95	
▩ By Area▩							
Jeju City	(132)		15.2	73.5	11.4	2.96	
Seoguipo	(237)	.8	15.6	65.0	18.6	3.01	
East Bukjeju County	(113)	3.5	17.7	75.2	3.5	2.79	F=2.50 P=0.030
West Bukjeju County	(118)	.8	16.9	68.6	13.6	2.95	
East Namjeju County	(321)	1.2	18.1	67.0	13.7	2.93	
West Namjeju County	(79)		10.1	81.0	8.9	2.99	
▩ By Gender ▩							
Male	(716)	.9	14.8	69.5	14.9	2.98	t=4.26 P=0.000
Female	(284)	2.0	22.4	70.1	5.5	2.79	
▩ By Age▩							F=4.40

Up to 30s	(89)		13.5	65.2	21.3	3.08	P=0.002
40s	(174)	1.7	9.8	68.4	20.1	3.07	
50s	(228)	.9	20.2	66.7	12.3	2.90	
60s	(319)	1.3	17.9	71.2	9.7	2.89	
70s and above	(190)	1.1	16.3	73.7	8.9	2.91	
▩ By Educational Background ▩							
Up to Primary School	(291)	1.0	22.0	70.8	6.2	2.82	
Up to Middle School	(207)	1.4	15.9	74.4	8.2	2.89	F=11.49 P=0.000
Up to High School	(346)	.6	14.7	69.1	15.6	3.00	
Community College and more	(156)	1.9	9.6	62.2	26.3	3.13	

In the regional survey, the supportive opinions were high in favor of non-destructive fruit selection throughout Jeju. There was some degree of opposition in the eastern part of Bukjeju County (2.79 scale point) and in the eastern part of Namjeju County (2.93 scale point).

The gender survey resulted in general support among both male and female respondents despite a certain level of opposition among female respondents. There were relatively high opinions among male respondents favoring the adoption of non-destructive fruit selection.

The survey by age group also showed high in approval of the issue throughout the overall age group, except there were more opponents in the age group of 50s, compared to other groups.

All groups in the survey by educational background had high supportive opinions, while there tends to be more supportive among groups with a higher educational achievement.

E. Comparative Analysis of Products between 2003 and 2004 in Tangerine Farm Sector

1) Related to Tangerine Marketing Order

(1) Content Awareness

In comparison with the survey on the 2003 Tangerine Marketing Order, it is recognized that awareness of the enactment contents of the tangerine marketing order has been heightened. The survey respondents' opinion of 'well aware of' approximately doubled from the 2003 order at 37.6% to 61.4% in the survey for the 2004 Tangerine Marketing Order. The opinion of 'don't know well' decreased from 4.1% to 1.8%. Hence, the indication is that public information is disseminated at an appropriate level.

<Table III-35> Comparison of Content Awareness of Tangerine Marketing Order Enactment

Classification	No. of Cases	Absolutely Ignorant	Almost ignorant	Generally Understand	Well Aware of	Average
Survey on the 2003 Order	(1000)	.7	3.4	58.3	37.6	3.33
Survey on the 2004 Order	(1000)	.2	1.6	36.8	61.4	3.59

(2) Recognition of Tangerine Generated Income Change

The survey result compared to the survey on the 2003 order revealed that there has been income change due to the enactment of the tangerine marketing order. In the survey on the 2003 order, the opinion with 'increased tangerine income' was 43.5%, but it was 69.9% in the 2004 survey, an increase by 1.5 times. Accordingly, the opinion of 'decreased income' was largely reduced from 33.2% to 12.3%.

<Table III-36> Recognition of Tangerine Generated Income Change from Enactment of Tangerine Marketing Order

Classification	No. of Cases	Largely Reduced	Somewhat Reduced	No Change	Somewhat Increased	Largely Increased	Average
Survey on the 2003 Order	(1000)	4.6	28.6	23.0	41.8	1.7	3.09
Survey on the 2004 Order	(1000)	1.0	11.3	17.8	63.6	6.3	3.63

(3) Recognition on Beneficiaries

The comparative survey between the 2003 and the 2004 showed little difference in recognition of beneficiaries arising from the enactment of the tangerine marketing order. Without much change in the survey results from 71.1% to 70.3%, the 'collectors in producer market' were identified as the main beneficiaries of the order enactment.

However, the respondents submitted increased opinions from 17.4% to 24.5% pointing out tangerine farmers as beneficiaries of the order enactment. It reflects that the 2004 Tangerine Marketing Order was somewhat beneficial to the farmers compared to the 2003 order.

<Table III-37> Beneficiaries of Tangerine Marketing Order Enactment

Classification	No. of Cases	Tangerine Farmers	Collectors in Producer Market	Distributors in Consumption Market	Consumers	No Answer
Survey on the 2003 Order	(1000)	17.4	71.1	5.4	3.9	2.2
Survey on the 2004 Order	(1000)	24.5	70.3	1.8	3.4	-

(4) Recognition of Major Achievements

The survey result compared to the 2003 survey revealed little change in major achievements from the enactment of tangerine marketing order. The idea that the major accomplishment of the order is 'high quality product shipment' has not changed yet and is still highly supported. There was almost no change from 34.9% to 34.8% on the opinion that 'high quality shipment' is the major achievement of the order.

<Table III-38> Major Achievements of Tangerine Marketing Order

Classification	No. of Cases	Price Rise	Shipment Volume Control	High Quality Product Shipment	Consensual Understanding of Self-Relief	No Answer
Survey on the 2003 Order	(1000)	15.5	28.5	34.9	19.9	1.2
Survey on the 2004 Order	(1000)	17.9	24.8	34.8	22.5	-

(5) Identification of Main Shipper of Low Quality Tangerine

The survey result showed that more farmers recognized the 'collectors in producer market' as the main shipper of low quality tangerine products. 77.1% of the farmers pointed out the 'collectors in producer market' to be blamed for the market distribution of low quality products in the survey of the 2003 order. Such answer choice increased to 83.5% in the survey for the 2004 order. On the contrary, the response that 'the individual farmers might have shipped low quality products' was reduced from 11.8% to 8.4%.

The phenomena stems from the significant decrease in violations by the agricultural cooperatives and the citrus marketing & shipping associations thanks to reinforced

monitoring and inspection. There was an increase in shipping unsalable products by the collectors in producer market due to a lack of efficient measures to control them.

<Table III-39> Concerned Party of Low Quality Tangerine Shipment

Classification	No. of Cases	Members of AC, CMSA, PMC	Collectors in Producer Market	Agricultural Mgmt Corp. (AMC)	Individual Farms	No Answer
Survey on the 2003 Order	(1000)	8.7	77.1	.8	11.8	1.6
Survey on the 2004 Order	(1000)	6.9	83.5	1.2	8.4	-

(6) Recognizing Degree of Influence in Tangerine Distribution

There were 65.3% of respondents in the 2003 survey on the topic that the Tangerine Marketing Order 'had positively influenced' to the distribution of tangerine products, which rose to 82.4% for the 2004 order. The negative opinion fell to 7.4% from 34.6%.

<Table III-40> Tangerine Marketing Order's Influence to Tangerine Distribution

Classification	Very Negative	Somewhat Negative	No Influence	Somewhat Positive	Very Positive	Very Positive	Average	Comparative Average (100 points)
Survey on the 2003 Order	4.8	29.8	-	60.0	5.3	0.1	2.67 (on the full scale point of 4)	66.75
Survey on the 2004 Order	.9	6.5	10.2	74.2	8.2	-	3.82 (on the full scale point of 5)	76.40

A survey answer choice of 'No influence' was newly added in the 2004 survey, thus the survey results were converted to 100 point based numbers to make year-to-year comparison available. Consequently, the result showed a rise from 66.75 points to 76.40 points. It also revealed that the marketing order influenced the cultivating farmers who then positively affected the distribution of tangerine.

The recognition of the order's positive influence is also confirmed in the survey result that 78.9% of the cultivating farms responded there has been improvement in the 2004 Tangerine Marketing Order compared to the 2003's.

<Table III-41> Comparative Assessment of 2004 Tangerine Marketing Order

Classification	No. of Cases	Very Retrogressed	Somewhat Retrogressed	Not bad	Somewhat Improved	Very Improved	Average
Survey on the 2004 Order	(1000)	.2	1.1	19.8	70.5	8.4	3.86

(7) Identifying Problems in Implementing Tangerine Marketing Order

41.0% of the cultivating farms identified the 'shipment of unsalable products by the intermediary merchants' as the biggest problem through the execution of the order according to the 2003 survey. The farmers' awareness of the problems even further rose in the 2004 survey with 44.8% of the farmers' selection pointing out the intermediary merchants.

<Table III-42> Analysis of Problems in Implementing Tangerine Marketing Order

Content of Response		Lack of Compliance Mindset	Insufficient P. R. & Education	Insufficient Role Activities of AC & CMSA	Mistrust of Agricultural Policy	Intermediary Merchant' Shipment of Unsalable	Size Criteria	Non-Existence of Penalty Clause	Insufficient Activities of Monitoring and Supervision	No answer
Primary Choice	2003	17.8	4.6	13.1	4.9	41.0	7.5	6.7	4.0	0.4
	2004	14.2	4.7	7.0	4.0	44.8	9.9	8.5	6.4	0.5
Secondary Choice	2003	7.7	7.4	8.6	5.0	23.6	12.5	17.0	15.9	2.3
	2004	8.2	3.8	3.2	5.0	24.6	11.2	19.1	23.1	18.0
Combined	2003	12.8	6.0	10.9	4.9	32.3	10.0	11.9	9.9	1.4
	2004	11.2	4.3	5.1	4.5	34.7	10.6	13.8	14.8	1.2

In this point of view, the survey result suggests that there has been insufficient effort to resolve the problematic issue of 'shipment of unsalable products by the intermediary merchants' which has been raised since last year's survey.

In the analysis of the combined survey results, the issue of 'shipment of unsalable products by the intermediary merchants' has not been resolved yet. It also reveals that there are the rising complaints on the 'activities of monitoring and supervision' and 'penalty'. The survey choices on the topics of 'insufficient monitoring and supervision' and 'non-existence of penalty clause' rose from the last year's 9.9% and 11.9% to 14.8% and 13.8% respectively. On the contrary, the survey choice on the topic of 'insufficient role activities of the agricultural cooperatives (AC) & the citrus marketing & shipping associations (CMSA)' dropped to 5.1% from 10.9% in 2003's, which indicates that the role of AC and CMSA has been progressed to a degree.

(8) Conditions to Anchor Tangerine Marketing Order

There has been little difference in the 2004 survey in terms of the survey participants' opinions on the topic. The survey respondents chose 'voluntary participation of farmers and merchants', 'stringent monitoring and supervision', and 'insertion of penalty clause' to be the primary conditions to settle down the tangerine marketing order in the market. However, the combined based ratio of the 2003's 9.9% on the topic of 'introduction of quality standard' increased to 14%, while the 2003's 16.7% on 'aggressive participation of AC & CMSA' has decreased. In addition, the overall required conditions remained above 20% when combining the opinion of 6.4% on the installation of large-scale non-destructive packing house and 14% opinion on the adoption of quality standard.

Accordingly, the proper way to execute and implement the marketing order with consideration of the settlement of the tangerine marketing order includes: adopting an objective quality standard system by installing large-scale non-destructive packing houses under voluntary participation of AC and CMSA and adding a stringent monitoring and supervision system and penalty clause so that the economic participants who comply to the order would not be victimized.

<Table III-43> Analysis of Conditions to Anchor Tangerine Marketing Order

Content of Response		Voluntary Participation of Farmers and Merchants	Adoption of Quality Standard	Aggressive Participation by AC & CMSA	Stringent Monitoring and Supervision	Insertion of Penalty Clause	Installation of Large-Scale Non-Destructive Packing House	Others	No answer
Primary Choice	2003	52.9	7.3	12.6	17.9	8.6	-	0.3	0.4
	2004	45.7	14.9	8.1	18.3	8.3	4.7	-	0.0
Secondary Choice	2003	14.8	12.5	20.8	27.3	22.3	-	0.3	2.0
	2004	13.3	13.1	12.6	24.6	27.9	8.1	-	4.0
Combined	2003	33.9	9.9	16.7	22.6	15.5	-	0.3	1.2
	2004	29.5	14.0	10.4	21.5	18.1	6.4	-	0.2

(9) Reintroduction

In the aspect of reintroducing the tangerine marketing order, the 76.1% of the approval rating among the survey respondents in the 2003's increased to 89.4% in the 2004's. Meanwhile, the opposing opinions decreased from 23.9% to 10.6%, which indicates the increasing desire for the reintroduction of the tangerine marketing order.

<Table III-44> Reintroduction of Tangerine Marketing Order in 2005

Classification	No. of Cases	Very Opposed	Generally Opposed	Generally Supportive	Very Supportive	Average
Survey on the 2003 Order	(1000)	6.4	17.5	56.1	20.0	2.90
Survey on the 2004 Order	(1000)	3.3	7.3	68.5	20.9	3.07

(10) Degree of Control for Reintroduction

The opinion to 'further strengthen' was 56.3% in the 2003 survey, while it increased to 65.7% in the 2004 survey. The opinion to 'maintain the previous level' was increased from 22.5% of the 2003's to 26.4% in the 2004 survey, while there was a large drop in the opinion to 'mitigate the level from the previous one' from 20.9% to 6.5%.

It indicates that the recognition of the order's contribution to improve product quality and farmers' income increasingly continued. Consequently, the survey result supports the idea that the order needs to be either strengthened or maintained the current level instead of easing it.

<Table III-45> Degree of Control for Reintroduction of Tangerine Marketing Order in 2005

Classification	No. of Cases	Maintain the Previous Level	Mitigate from the Previous Level	Strengthen the Level	Others	No Response
Survey on the 2003 Order	(1000)	22.5	20.9	56.3	.2	.1
Survey on the 2004 Order	(1000)	26.4	6.5	65.7	1.4	0.0

(11) Adopting Sweetness, Acidity, and Quality Ranks

The survey results on the 'addition of quality ranks to include sweetness and acidity' both in 2003 and 2004 did not show much difference, 77.7% and 78.8% of the approval ratings respectively. However, the steadily increasing approval ratings necessitate a review to adopt a quality ranking system.

<Table III-46> Adopting Sweetness, Acidity, and Quality Ranks in Tangerine Marketing Order

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	No Response	Average
Survey on the 2003 Order	(1000)	3.2	18.6	54.0	23.7	.5	3.02
Survey on the 2004 Order	(1000)	2.1	16.1	56.0	25.8	0.0	3.06

(12) Adopting Wax Coating Prohibition

In the survey results on the topic of 'adding wax coating prohibition clause' also showed little difference in 2003 and 2004 with approval ratings of 72.8% and 78.8% respectively. However, like the adoption of a quality rank system, a review to adopt a policy to ban wax coating should be considered as the approval ratings have not been falling.

In Japan where the cultivating species are similar, there is a tendency not to apply wax coating on most of tangerine products except hothouse tangerine, thus Jeju tangerine industry also needs to comply with the wax coating banning clause of the ordinance of tangerine production and distribution which begins to be effective as of July 1, 2007.

<Table III-47> Adopting Wax Coating Prohibition in Reintroduction of Tangerine Marketing Order in 2005

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	No Response	Average
Survey on the 2003 Order	(1000)	7.7	19.2	26.8	46.0	.3	3.13
Survey on the 2004 Order	(1000)	8.0	13.2	25.7	53.1	-	3.24

(13) Scope Expansion

The survey question on the scope expansion of the order in 2003 was about the nationwide coverage of the order and in 2004, the question was about including consumption areas.

The approval ratings in the 2003 survey on the question of the 'nationwide expansion of the order scope' reached 88.4%. In 2004 survey, 90.2% of the respondents were in favor of the 'expansion of the order scope to consumption areas'.

Accordingly, it shows that the cultivating farmers have a positive mindset on the scope expansion of the marketing order implementation.

<Table III-48> Scope Expansion of Tangerine Marketing Order in 2005

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	No Response	Average
Survey on the 2003 Order	(1000)	2.1	9.3	44.8	43.6	.2	3.31
Survey on the 2004 Order	(1000)	1.5	8.4	48.8	41.3	-	3.30

(14) Handling Method of Unsalable Field Tangerine

In the survey result of 'handling unsalable numbers 1 and 9 size fruits' upon the implementation of the Tangerine Marketing Order, the answer choice of 'all sold for processing material' was 77.6% in the 2003 survey and 81.7% in the 2004 survey, which reveals the increased ratio of selling the unsalable for the use of processing material. The choice of 'disposal at the production site' decreased from 14.1% to 5.5%.

The survey also reveals that there has been little change in the ratio of those who shipped them as salable products, even a partial amount, at 8.0% in the 2003 survey and 6.7% in the 2004's.

<Table III-49> Handling Method of Field Tangerine Number 1 and 9

Classification	No. of Cases	All Used for Processing Material	All Shipped as salable product	Half for Processing and Partly Shipped as salable product	Half Shipped as salable product and Partly sold for processing material	Disposal at Production Site	Partial Processing, and Partial Disposal	Others	No Response
Survey on the 2003 Order	(1000)	77.6	2.6	4.1	1.3	14.1	-	-	.3
Survey on the 2004 Order	(1000)	81.7	1.4	3.8	1.5	5.5	2.3	.6	3.2

(15) Reasons of Unsalable Field Tangerine Shipment

The survey conducted among the farms who once experienced selling unsalable size number 1 & 9 fruits' despite the enactment of the order showed that 4.9% in the 2003 survey and 4.4% in the 2004's pointed out the reason of 'non-existence of timely arrangement for processing sales' without much change.

<Table III-50> Reasons of Unsalable Field Tangerine Shipment

Classification	No Knowledge on the Shipment Prohibition	Because others do	Non-existence of timely arrangement for processing sales	Other Price	Not Applicable
Survey on the 2003 Order	0.3	2.5	4.9	0.3	92.0
Survey on the 2004 Order	0.5	3.3	4.4	-	91.8

2) Related to Tangerine Industry Outlook

(1) Jeju Tangerine Industry Outlook

The 2003 survey on the Jeju tangerine industry outlook showed a very gloomy outlook at 90.8%; however, the pessimistic outlook was greatly reduced to 53.7% among the respondents of the 2004 survey.

This shows that the tangerine farmers began to positively assess the tangerine industry since the price stabilization started to take place through the implementation of the tangerine marketing order.

<Table III-51> Jeju Tangerine Industry Outlook

Classification	No. of Cases	Very Gloomy	Somewhat Gloomy	Somewhat Good	Very Good	Average
Survey on the 2003 Order	(1000)	16.1	74.7	8.8	.4	1.93
Survey on the 2004 Order	(1000)	1.3	52.4	45.8	.5	2.46

(2) Tangerine Price Forecast

The farmers who responded with an anticipation of a price fall reached 76.5% in the 2003 survey, though, the number fell to 46.6% in the 2004 survey. The anticipation for a price rise increased from 2.3% to 13.6%. These facts indicate that tangerine cultivating farmers now possess a positive idea on the future of tangerine pricing.

<Table III-52> Tangerine Price Forecast

Classification	No. of Cases	Sharp Drop	Somewhat Drop	Maintain the Current Price	Somewhat Rise	Sharp Rise	Don't know	Average
Survey on the 2003 Order	(1000)	11.1	65.4	21.0	1.9	.4	.2	2.16
Survey on the 2004 Order	(1000)	1.5	45.1	39.8	13.6	0.0	-	2.66

3) Tangerine Production, Distribution, and Policy

(1) Future Tasks for Field Unshiu Tangerine

The survey questioning on the future tasks resulted in selecting the opinions in the order of 'quality improvement', 'optimal production', 'shipment control', and 'improvement of distribution structure' in both the 2003 and 2004 survey. However, looking into the response ratio of the primary answer choices, the opinion of 'quality improvement' rose

from 43.2% to 50%, but the 'production cost reduction' fell from 9.9% to 4.9% and the 'optimal production' also fell from 17.5% to 14.2%. In the secondary and tertiary choices of answers, the ratios of the necessity for shipment control and securing superior seedlings showed increases.

<Table III-53> Future Tasks for Field Unshiu Tangerine

Content of Response		① Quality	② Cost Red.	③ Opt. Prod.	④ Ops. Scale	⑤ Alternating years	⑥ Dist. Improve.	⑦ Shipment Control	⑧ Export Inc.	⑨ Dev. Of Proc. Prod.	⑩ Prod. Infra.	⑪ Labor Force	⑫ Securing Superior Seedlings	⑬ Env. Protect.	⑭ Others
Primary Choice	2003	43.2	9.9	17.5	0.3	1.6	7.7	6.9	1.0	1.6	0.2	6.5	3.4	0.1	-
	2004	50.6	4.9	14.2	0.3	4.8	4.9	5.7	1.4	1.3	0.5	5.4	5.0	-	1.0
Secondary Choice	2003	14.5	12.8	25.2	0.5	3.3	14.2	12.3	3.2	4.1	0.5	5.8	3.4	0.2	-
	2004	13.1	8.7	26.4	0.6	5.5	11.1	16.3	2.7	3.4	0.3	3.6	6.8	0.6	0.9
Tertiary Choice	2003	9.8	6.8	13.1	0.5	5.2	14.5	19.7	6.5	8.3	1.3	9.6	4.3	0.7	-
	2004	8.8	5.5	14.4	1.2	4.2	12.6	21.4	5.9	10.3	1.4	4.2	7.7	0.6	1.8

① Quality Improvement ② Cost Reduction ③ Optimal Production ④ Expansion of Operation Scale ⑤ Fruit-bearing in Alternate Years ⑥ Distribution Improvement ⑦ Shipment Control ⑧ Export Increase ⑨ Development of Processing Product ⑩ Establishment of Production Infrastructure ⑪ Lack of Labor Force ⑫ Securing Superior Seedlings ⑬ Environment Protection ⑭ Others

(2) Recognizing Optimal Production Volume of Jeju Tangerine

Jeju tangerine farmers considered 'up to 500,000 tons' to be the optimal volume for Jeju tangerine production. The choice was rated at 31.4% in the 2003 survey and 42.0% in the 2004's without much change year to year among the respondents' estimates.

<Table III-54> Jeju Tangerine's Optimal Production Volume

Classification	No. of Cases	Up to 400,000 tons	Up to 450,000 tons	Up to 500,000 tons	Up to 550,000 tons	Up to 600,000 tons	Up to 650,000 tons	Up to 700,000 tons	Above 700,000 tons	No Response
Survey for the 2003 Order	(1000)	6.6	9.4	31.4	27.8	17.3	4.0	1.1	.7	1.7

Survey for the 2004 Order	(1000)	3.8	10.4	42.0	23.9	15.2	3.9	.5	.3	-

(3) Coping Capacity of Current Distribution System with Market Openness

The result of survey question whether 'the current Jeju tangerine distribution system' is equipped to appropriately cope with the virtual trend' of openness in the agricultural and fishery product market showed an optimistic view. 66.4% of the 2003's responded with an opinion of the 'inappropriateness coping capacity of the current distribution system for the trend' and it was down to the 43.7% in the survey of 2004.

<Table III-55> Awareness of Coping Capacity with Trend of Openness

Classification	No. of Cases	Very Difficult	Might Be Difficult	Moderately Competent	Highly Competent	Average
Survey for 2003 Order	(1000)	9.9	56.5	32.1	1.5	2.25
Survey for 2004 Order	(1000)	2.8	40.9	52.0	4.3	2.58

On the contrary, the opinion of 'capable to cope with the trend' increased to 56.3% in the 2004 survey from 33.6% of the 2003's, which indicates the increasing confidence on the trend of openness among the farmers.

(4) Problems of Tangerine Market Distribution Structure

The results of both 2003 and 2004 surveys questioning about problems of tangerine distribution structure pointed out 'insufficient measures to handle unsalable tangerine products', 'non-existence of measures to control the intermediary merchants', and 'unsatisfactory system for shipment control', thus calls for countermeasures to deal with this problem.

<Table III-56> Problems of Tangerine Market Distribution Structure

Content of Response		Individual Shipment System	Unsatisfactory system for shipment control	Insufficient measures for unsalable products	Non-existence of Measures to Control Intermediary Merchants	Triple Structure in Producer Market Distribution	Excessive Logistics Cost	Others	No Answer
Primary	2003	8.7	18.7	31.2	29.9	5.1	5.9	0.3	0.2

Choice	2004	14.8	14.7	37.3	20.4	5.4	7.2	-	0.2
Secondary	2003	3.7	14.6	30.2	29.8	11.9	8.0	0.3	1.5
Choice	2004	5.3	16.0	24.6	28.2	13.1	12.1	-	0.7
Tertiary	2003	8.9	19.1	14.0	15.5	19.0	15.5	0.4	7.6
Choice	2004	5.9	19.3	13.7	18.5	17.0	21.4	-	4.2

(5) Pros and Cons on Conversion to Large-Scale Packing House System

The majority of Jeju tangerine farmers appeared to be very positive on 'the conversion of the packing house system to a large-scale system' as they expressed their highly supportive opinions through the survey results at 73.2% and 74.3% in the surveys of 2003 and 2004 respectively.

<Table III-57> Pros and Cons on Conversion to Large-Scale Packing House System

Classification	No. of Cases	Aggressively Opposed	Somewhat Opposed	Somewhat Supportive	Aggressively Supportive	Average
Survey for the 2003 Order	(1000)	2.5	23.7	57.9	15.3	2.87
Survey for the 2004 Order	(1000)	1.0	24.7	60.1	14.2	2.88

(6) Adopting Collective Selection – Shipment – Settlement System

Tangerine farmers have shown their supportive reaction for the issue of adopting a system for collective selection – shipment – settlement, which was evident by the survey results of 2003 and 2004 at 62.3% and 67.8% respectively.

<Table III-58> Adopting Collective Selection-Shipment-Settlement System

Classification	No. of Cases	Aggressively Opposed	Somewhat Opposed	Somewhat Supportive	Aggressively Supportive	Average
Survey for the 2003 Order	(1000)	2.3	35.0	53.1	9.2	2.69
Survey for the 2004 Order	(1000)	1.6	30.8	58.7	8.9	2.75

(7) Adopting Non-destructive Selection System

Jeju tangerine farmers also showed a very positive attitude on the issue of whether to adopt a 'non-destructive selection system' which provides a method to select quality fruits

based on taste. The surveyed farmers responded with 81.6% of supportive opinions in the 2003 survey and 82.6% in the 2004's.

<Table III-59> Whether to Adopt Non-destructive Selecting System

Classification	No. of Cases	Aggressively Opposed	Somewhat Opposed	Somewhat Supportive	Aggressively Supportive	Average
Survey for the 2003 Order	(1000)	1.3	16.9	65.6	16.0	2.96
Survey for the 2004 Order	(1000)	1.1	16.3	69.6	13.0	2.95

2. Collectors (Merchants) in Producer Market

A. Summary of Survey

The survey aims to provide fundamental data for the establishment of a tangerine policy by capturing the awareness and assessment about the tangerine marketing order, the assessment on the tangerine related policies, prospect on the tangerine industry, and commercial activities among the collectors in the producer market.

The utilized survey method was through one-on-one interviews based on the prepared systematic survey questions with 50 residential collectors of the producer market in Jeju Province. The survey was conducted for 13 days from February 28, 2005 to March 12, 2005.

A frequency analysis was utilized to capture sample characteristics and, in verification of crossed factor differences, the 'independent verification method' of χ^2 verification was used for categorical scale measures; and t-test and ANOVA table were utilized for serial scale measures suggesting only the case of significance level.

The characteristics of statistical population of the respondents were presented by region, gender, experience, occupation, age, and education as shown in the table below.

<Table III-60> Characteristics of Statistical Population of Survey Respondents, Collectors in Producer Market

Classification	Total Respondents	No. of Cases	%	Classification	Total Respondents	No. of Cases	%
	Total	50	(100.0)		Total	50	(100.0)
Region	North of Mount Halla	26	(52.0)	Gender	Male	45	(90.0)

	South of Mount Halla	24	(48.0)		Female	5	(10.0)
Age	30s	7	(14.0)	Education	Middle School Graduate	4	(8.0)
	40s	9	(18.0)		High School Graduate	14	(28.0)
	50s	18	(36.0)		College Graduate	27	(54.0)
	60s	15	(30.0)		More than University Graduate	5	(10.0)
	70s and above	1	(2.0)				
Occupation	Tangerine Fruit And Vegetable Association of Tax Payers (TFVATP)	3	(6.0)	Experience	Up to 10 years	16	(32.0)
	Northern Sales Association (NSA)	21	(42.0)		Up to 20 years	21	(42.0)
	Southern Sales Association (SSA)	26	(52.0)		21 years and more	13	(26.0)

B. Related to Tangerine Marketing Order

1) Content Awareness

The Jeju tangerine producer market collectors (PMC) appeared to have knowledge about most parts of the enacted 'tangerine marketing order'. 100.0% of the PMCs in Jeju replied having the knowledge of the enactment without anyone who responded in the column of 'don't know'.

According to the survey by gender, the male respondents have a better knowledge about the order enactment than the female respondents do.

<Table III-61> Content Awareness Test on Enactment of Tangerine Marketing Order

Classification	No. of Cases	Absolutely No Knowledge	Bare Ideas	Roughly Know	Knowledge Well Acquired	Average	Statistical Value Significance Level
Total	(50)	0.0	0.0	32.0	68.0	3.68	
▩ Gender ▩							
Male	(45)	-	-	24.4	75.6	3.76	t=3.852 P=0.000
Female	(5)	-	-	100.0	-	3.00	

2) Recognition of Tangerine Income Change upon Tangerine Marketing Order Enactment

34.0% of the producer market collectors (PMC) acknowledged the 'increased tangerine income of the farmers' via the execution of the tangerine marketing order, while there were 18.0% of PMCs having an idea of the 'decreased farmer's income'.

In the survey by region, the PMCs from the southern part of Mount Halla gave a positive assessment that the tangerine income of farmers increased, whereas the PMCs from the northern part of Mount Hall negatively assessed saying that the farmers' income from tangerine decreased.

<Table III-62> Change in Tangerine Income from Tangerine Marketing Order

Classification	No. of Cases	Largely Decreased	Somewhat Decreased	No Change	Somewhat Increased	Largely Increased	Average	Statistical Value Significance Level
Total	(50)	6.0	12.0	48.0	30.0	4.0	3.14	
▩ By Region ▩								
North of Mount Halla	(26)	11.5	11.5	53.8	23.1		2.88	t=-2.156 P=0.036
South of Mount Halla	(24)		12.5	41.7	37.5	8.3	3.42	

3) Recognition of Beneficiaries

The Jeju PMCs recognized that they benefited the most (42.0%) from the enactment of the tangerine marketing order followed by an opinion of pointing out the 'consumer market distributors (CMD) (24.0%) as the second most benefited party. Yet, 16% of the respondents expressed that there was 'no benefit to PMCs'.

<Table III-63> Beneficiaries of Tangerine Marketing Order Enactment

Classification	No. of Cases	Tangerine Farmers	PMCs	CMDs	Consumers	None
Total	(50)	16.0	42.0	24.0	2.0	16.0

4) Recognition of Major Achievements

The recognized achievements of the order enactment by the Jeju tangerine producer market collectors include the 'effect of establishing empathy for self-relieving efforts to revive the tangerine industry' (34.0%) and 'shipment of high quality tangerine' (18.0%), while there were 24% of respondents without recognizing any achievement from the order enactment.

The survey result based on the residential area revealed that ‘no achievement’ (38.5%) was the most favored opinion in the northern part of Mount Halla and the ‘formation of empathy for self-relieving efforts to revive the tangerine industry’ prevailed in the southern part of Mount Halla.

Many female responded with an opinion of ‘no achievement’ whereas there are many male respondents with an opinion of the ‘formation of empathy for self-relieving efforts to revive the tangerine industry’ in the gender survey.

In the survey by education, the groups of middle school graduates (42.9%) and more than college education (60.0%) selected ‘formation of empathy for self-relieving efforts to revive the tangerine industry’, while the high school graduate group (25.9%) were with ‘shipment control’. 100% of the group of up to primary school education selected ‘no achievement’.

In the survey by occupation, the opinion of ‘no achievement’ was largely selected by Tangerine Fruit and Vegetable Association of Tax Payers (TFVATP) (66.7%) and Northern Sales Association (NSA) (38.1%) but the Southern Sales Association (SSA) had more in the opinion of ‘formation of empathy for self-relieving efforts to revive the tangerine industry’.

<Table III-64> Major Achievements of Tangerine Marketing Order

Classification	No. of Cases	Price Rise	Shipment Control	Shipment of High Quality Products	Formation of Empathy for Self-relieving Efforts	None	Statistical Value Significance Level
Total	(50)	8.0	16.0	18.0	34.0	24.0	
▩ By Region ▩							
North of Mount Halla	(26)		23.1	19.2	19.2	38.5	X2=14.270 P=0.006
South of Mount Halla	(24)	16.7	8.3	16.7	50.0	8.3	
▩ By Gender ▩							
Male	(45)	8.9	17.8	17.8	37.8	17.8	X2=10.494 P=0.033
Female	(5)			20.0		80.0	
▩ By Education▩							
Up to Primary School	(4)					100.0	
Middle School Graduates	(14)	7.1		21.4	42.9	28.6	X2=21.205 P=0.047
High School Graduates	(27)	11.1	25.9	18.5	29.6	14.8	
More than College	(5)		20.0	20.0	60.0		

▩ By Occupation▩							X2=17.847 P=0.022
TFVATP	(3)				33.3	66.7	
NSA	(21)		28.6	14.3	19.0	38.1	
SSA	(26)	15.4	7.7	23.1	46.2	7.7	

5) Identifying Main Shipper of Low Quality Tangerine Products

The producer market collectors (PMC) admitted that they (68.0%) are the main shippers of the low quality tangerine shipment. There were responses at 12.0% pointing out 'individual farms' and the 'members of agricultural cooperatives and citrus marketing & shipping associations' as the main shipper of low quality tangerine products.

<Table III-65> Main Party for Low Quality Tangerine Shipment

Classification	No. of Cases	Members of ACs and CMSAs	PMCs	Agricultural Management Corp.	Individual Farms	None
Total	(50)	12.0	68.0	0.0	12.0	8.0

6) Recognizing Degree of Influence of Tangerine Marketing Order

More producer market collectors (PMC) had opinions of 'negatively affected' (46.0%) and 34.0% of them expressed the orders 'positive influence'.

While there were more respondents with recognition of positive consequences in the southern part of Mount Halla (3.42 scale points), the respondents from the north of Mount Halla (1.88 scale points) viewed more with the negative influence according to the residential area based survey.

With many responses, both male and female, choosing the order's negative influence, female respondents tended to acknowledge a more negative side.

In the occupation based survey, the Southern Sales Association (3.23 scale point) had more in the opinion of the order's positive opinion, whereas there were more opinions in a negative assessment among the respondents from the Northern Sales Association (2.00 scale point) and the Tangerine Fruit and Vegetable Association of Tax Payers (TFVATP) (1.67 scale points).

<Table III-66> Influence of Tangerine Marketing Order to Tangerine Distribution

Classification	No. of Cases	Very Negative	Somewhat Negative	No Influence	Somewhat Positive	Very Positive	Average	Statistical Value Significance Level
Total	(50)	30.0	16.0	20.0	30.0	4.0	2.62	
▩ By Region ▩								t=-5.080

North of Mount Halla	(26)	50.0	19.2	23.1	7.7		1.88	P=0.000
South of Mount Halla	(24)	8.3	12.5	16.7	54.2	8.3	3.42	
▩ By Gender ▩								t=3.180
Male	(45)	22.2	17.8	22.2	33.3	4.4	2.80	P=0.003
Female	(5)	100.0					1.00	
▩ By Occupation▩								F=7.612
TFVATP	(3)	33.3	66.7				1.67	P= 0.001
NSA	(21)	47.6	14.3	28.6	9.5		2.00	
SSA	(26)	15.4	11.5	15.4	50.0	7.7	3.23	

7) Year-to-Year Comparative Assessment

The producer market collectors (PMC) expressed their positive recognition of the overall improvement in the tangerine marketing order. They chose 'comparatively improved from the 2003's order' at 44.0%, yet it was only 6.0% of choices on the opinion of 'deteriorated'.

The survey result on the comparative assessment of the tangerine marketing order with the 2003's, given the full scale score of 5, revealed that the respondents gave a positive assessment by giving the average of 3.42 scale point, above medium level

<Table III-67> Year-to-Year Comparative Assessment of Tangerine Marketing Order

Classification	No. of Cases	Very Deteriorated	Somewhat Deteriorated	Moderately Acceptable	Somewhat Improved	Very Improved	Average
Total	(50)	2.0	4.0	50.0	38.0	6.0	3.42

8) Areas of Improvement

In the survey of identifying the improved areas of the order, many of the producer market collectors (PMC) chose 'improvement in participatory mindset by the order's principal bodies' (42.0%), and there was a fair level of choices with the 'accomplishment of effective monitoring and supervision' through the expansion of the order to nationwide by-law wholesale markets (18.0%).

<Table III-68> Improved Areas in Tangerine Marketing Order

Classification	No. of Cases	Efficient Monitoring and Supervision	Expansion of Monitoring Squad in Number	Aggressive Participation of Autonomous Groups	Improvement in Participatory Mindset	Stating Quality Standard	None
Total	(50)	18.0	10.0	12.0	42.0	8.0	10.0

9) Handling Methods of Unsalable Tangerine Products

Many of the producer market collectors responded that they sold the entire numbers of 1 & 9 size field tangerine for processing materials (46.0%), while those who confessed that the 'entire volume of the size numbers 1 & 9 fruits' was shipped as salable products by themselves even reached 18.0%.

<Table III-69> Handling Methods of Unsalable Tangerine Products

Classification	No. of Cases	All Treated For Processing Materials	All Shipped for Sale	More than 50% Treated for Processing Materials	More than 50% Shipped for Sale
Total	(50)	46.0	18.0	28.0	8.0

10) Reasons Treating Unsalable Products for Sale

The 27 collectors in the producer market who shipped numbers 1 & 9 fruits as salable products ignoring the failure in the selection process largely pointed to the reasoning of 'no knowledge about the shipment prohibition' at 40.7%, while 33.3% of them described the reasoning to be 'as others ship them so did I even with the knowledge about the shipment prohibition'.

<Table III-70> Reasons Treating Unsalable Products for Sale

Classification	No. of Cases	No Knowledge About Shipment Prohibition	As Others Ship so did I	Lost timing to treat them for processing materials	Refuse to Respond
Total	(27)	40.7	33.3	11.1	14.8

11) Identification of Problems in Implementation of Tangerine Marketing Order

The collectors in the producer market pointed out 'mistrust of the province's agricultural policy', 'unsalable product criteria by selection size', and 'lack of publicity and education' as problems exposed during the process of implementing the tangerine marketing order. There were also relatively meaningful levels of responses identifying 'shipment of unsalable products by the intermediary merchants' at 10.0% in the primary answer choice and 12.0% in the secondary choice as the exposed problems.

<Table III-71> Problem Analysis in Implementing Tangerine Marketing Order

Content of Response	Lack of Compliance Mindset	Insufficient Publicity and Education	Insufficient Role Activities of AC & CMSA	Mistrust of Agricultural Policy	Intermediary Merchant' Shipment of Unsalable products	Criteria by Size	Non-Existence of Penalty Clause	Insufficient Activities of Monitoring and Supervision	No Response

Primary Choice	Ratio	8.0	14.0	12.0	34.0	10.0	18.0	2.0	0.0	2.0
Secondary Choice	Ratio	0.0	10.0	12.0	18.0	12.0	26.0	8.0	4.0	10.0
Combined	Ratio	4.0	12.0	12.0	26.0	11.0	22.0	5.0	2.0	6.0

12) Conditions to Anchor Tangerine Marketing Order

In the primary answer choice on the survey question asking about the most important condition to anchor the tangerine marketing order in the market, the tangerine collectors in the producer market demonstrated their stance with opinions of 'voluntary participation of farmers and merchants' (66.6%) and 'implementation of product standard by not only size but also quality' (18.0%).

The secondary choices of the respondents also urged 'implementation of product standard by not only size but also quality' (46.0%) and 'voluntary participation by farmers and merchants' (20.0%). Overall, in the combined surveys, the producer market collectors continued to emphasize 'voluntary participation of farmers and merchants' along with 'implementation of product standard by size and quality' as the conditions for the order to settle down in the market.

<Table III-72> Analysis of Conditions to Anchor Tangerine Marketing Order

Contents of Response		Voluntary Participation of Farmers and Merchants	Implementation of Quality Standard	Active Participation of AC & CMSA	Stringent Supervision and Monitoring	Insertion of Penalty Clause	Installation of Large Scale, Non-Destructive Packing House	No Response
Primary Choice	Ratio	66.0	18.0	0.0	8.0	2.0	2.0	4.0
Secondary Choice	Ratio	20.0	46.0	12.0	4.0	6.0	8.0	4.0
Combined	Ratio	43.0	32.0	6.0	6.0	4.0	5.0	4.0

13) Pros and Cons on Reintroduction

It appeared to have more collectors in producer market (PMC) have an opposing opinion to the reintroduction of the order in 2005. 78.0% of the PMCs opposed the 'reintroduction of the tangerine marketing order' while there was only 22% of supportive opinions.

In the survey by residential area, the PMCs from the northern part of Mount Halla (1.54 scale point) had more of opposing opinions compared to the PMCs from the southern part of Mount Halla (2.08 scale point) with relatively supportive opinions.

<Table III-73> Pros and Cons for Reintroduction of Tangerine Marketing Order in 2005

Classification	No. of Cases	Very Opposing	Generally Opposing	Generally Supportive	Very Supportive	Average	Statistical Value Significance Level
Total	(50)	44.0	34.0	20.0	2.0	1.80	
▩ By Region ▩							
North of Mount Halla	(26)	57.7	30.8	11.5		1.54	t=-2.423 P=0.019
South of Mount Halla	(24)	29.2	37.5	29.2	4.2	2.08	

14) Degree of Control for Reintroduction

The producer market collectors expressed that it is desirable to either ‘abrogate’ the order (38.0%) or ‘weaken’ the law from the last year’s order (24.0%) in case of reintroduction of the tangerine marketing order in 2005. 22% of them responded with an opinion to ‘strengthen’ the order from the previous year’s order.

The survey by region showed more on the opinion of ‘abrogation’ of the order (61.5%) among the PMCs in the northern part of Mount Halla in contrast to the opinion to ‘strengthen’ it from the previous year’s in the southern part of Mount Halla (45.8%). Although, in general, the PMCs in the southern part of Mount Halla opposed the reintroduction of the tangerine marketing order, if the reintroduction takes place in 2005, they suggested that it would be desirable to strengthen the degree of the order’s regulatory power from the level of the previous year.

For the opinion to ‘weaken the order’ from the previous year’s order, the groups with educational background up to primary school (100%) and middle school graduates (50.0%) called for ‘abrogation of the order’. In comparison, the group of high school graduates (37.0%) inclined to the opinion to ‘weaken from the previous one’ whereas the group of college and more education (60.0%) showed a strong support on the opinion to ‘maintain the same level as the previous one’.

Among the surveyed opinions by occupation, the opinion of ‘abrogation of the order’ was supported by the Tangerine Fruit and Vegetable Association of Tax Payers (66.7%)

and the North Sales Association (61.9%) while the South Sales Association (42.3%) supported the opinion to 'strengthen from the previous order'.

<Table III-74> Degree of Control for Reintroduction of Tangerine Marketing Order in 2005

Classification	No. of Cases	Maintain Previous Year's Order Level	Weaken from the Previous Order	Strengthen from the Previous Order	Abrogation	Statistical Value Significance Level
Total	(50)	16.0	24.0	22.0	38.0	
▩ By Region ▩						
North of Mount Halla	(26)	11.5	26.9		61.5	X2=20.681 P=0.000
South of Mount Halla	(24)	20.8	20.8	45.8	12.5	
▩ By Education ▩						
Up to Primary School	(4)				100.0	
Middle School Graduates	(14)	7.1	14.3	28.6	50.0	X2=20.818 P=0.013
High School Graduates	(27)	14.8	37.0	25.9	22.2	
College and More	(5)	60.0			40.0	
▩ By Occupation ▩						
TFVATP	(3)		33.3		66.7	X2=18.267 P= 0.006
NSA	(21)	14.3	23.8		61.9	
SSA	(26)	19.2	23.1	42.3	15.4	

15) Pros and Cons on Adoption of Sweetness, Acidity, Quality Ranks

The producer market collectors appeared to be rather unsupportive to the idea of 'adopting quality ranks' with 52.0% of the opposing opinion compared to 48.0% of supportive opinion.

<Table III-75> Pros and Cons on Adoption of Sweetness, Acidity, and Quality Ranks in Tangerine Marketing Order

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
Total	(50)	20.0	32.0	38.0	10.0	2.96

16) Pros and Cons of Salable Determination of Numbers 1 and 9 Fruits above Certain Quality Level

The producer market distributors inclined to the negative opinion (58.0%) on the idea of 'determining number 1 & 9 size fruits with certain level of quality for salable products' in case reintroduction of the tangerine marketing order takes place in 2005.

<Table III-76> Pros and Cons of Salable Determination of Numbers 1 and 9 Fruits above Certain Quality Level

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
Total	(50)	40.0	18.0	24.0	18.0	2.20

17) Pros and Cons on Wax Coating Prohibition

The survey result indicates that the PMCs negatively thought (80.0%) of the idea to 'add a clause of wax coating prohibition' for the order reintroduction in 2005.

<Table III-77> Pros and Cons on Wax Coating Prohibition for 2005 Tangerine Marketing Order

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
Total	(50)	50.0	30.0	10.0	10.0	1.80

18) Pros and Cons on Nationwide Scope Expansion

The PMCs appeared to have a negative thought about expanding the scope of the order which is to include consumption area (66.6%) in case of reintroducing the tangerine marketing order in 2005.

In the survey result by residential region, there exists a difference in opinion with more of PMCs in the north of Mount Halla expressing 'negatively' (1.77 scale point) compared to 54.1% of 'positive' opinion to support the idea in the south of Mount Halla (2.58 scale point).

<Table III-78> Pros and Cons on Nationwide Scope Expansion of Tangerine Marketing Order in 2005

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average	Statistical Value Significance Level
Total	(50)	36.0	30.0	16.0	18.0	2.16	
▩ By Region▩							
North of Mount Halla	(26)	53.8	30.8		15.4	1.77	t=-2.751 P=0.008
South of Mount Halla	(24)	16.7	29.2	33.3	20.8	2.58	

C. Related to Tangerine Industry Outlook

1) Jeju Tangerine Industry Outlook

The survey result indicated that the PMCs felt 'generally favorable on the industry outlook of Jeju tangerine'. 54.0% of the total PMCs looked at the 'tangerine industry hopeful' while 46.0% of them had a 'gloomy outlook' on the industry, which reflects the general optimism for the industry outlook among the PMCs.

<Table III-79> Jeju Tangerine Industry Outlook

Classification	No. of Cases	Very Gloomy	Pretty Gloomy	Good	Very Good	Average
Total	(50)	6.0	40.0	54.0	-	2.48

2) Tangerine Price Forecast

The producer market collectors (PMC) forecasted that 'tangerine price will decline in coming years'. The PMCs who forecasted 'declining price trend' reached 48.0% of all PMCs while there were only 10.0% of the PMCs who forecasted a trend of 'price rise'. The PMCs who viewed 'maintaining the current level of price' in forecasting was 42.0%.

<Table III-80> Tangerine Price Forecast

Classification	No. of Cases	Sharp Decline	Somewhat Decline	Maintain Current Price	Somewhat Rise	Sharp Rise	Average
Total	(50)	2.0	46.0	42.0	10.0	.0	2.60

D. Tangerine Production, Distribution and Policy

1) Recognition of Optimal Production Volume of Jeju Tangerine

36.0% of the producer market collectors (PMC) showed their choice with 'up to 500,000 tons' for the optimal production volume of Jeju tangerine' and 32.0% of them chose a little higher level, 'up to 550,000 tons' according to the survey result.

In the survey by educational background, 50% of the group with primary education selected 'up to 550,000 tons' as the optimality in production volume, the highest support for the choice among all groups. The optimal levels selected by other groups were 'up to

500,000 tons' by 72.4% of the middle school graduates and 'up to 550,000 tons' by 40.7% of the high school graduates.

The weighted average optimal production among PMCs was estimated to be 500,000 tons based on the survey.

<Table III-81> Jeju Tangerine's Optimal Production Volume

Classification	No. of Cases	Up to 400,000 tons	Up to 450,000 tons	Up to 500,000 tons	Up to 550,000 tons	Up to 600,000 tons	Up to 650,000 tons	Statistical Value Significance Level
Total	(50)	4.0	14.0	36.0	32.0	8.0	6.0	
▩ By Education ▩								
Up to Primary School	(4)		25.0		50.0		25.0	
Middle School Graduates	(14)		7.1	71.4	14.3	7.1		X2=27.160 P=0.027
High School Graduates	(27)	7.4	11.1	29.6	40.7	3.7	7.4	
College and More	(5)		40.0		20.0	40.0		

2) Current Distribution System's Coping Capacity with Open Market Trend

The survey on the issue whether the current Jeju tangerine's distribution system has the ability to appropriately cope with the virtual trend of the openness in the agricultural product market resulted in a negative opinion. 70.0% of the PMCs held the opinion of 'incapable of appropriately coping with the current distribution system' while the 30% of them viewing 'possible to cope with'. The producer market collectors observed that the current distribution system is not well equipped to appropriately deal with the trend of market openness on account of the existing problems in the system.

<Table III-82> Recognition of Coping Capacity with Open Market Trend in Distribution System

Classification	No. of Cases	Absolutely Incapable	Might be Difficult	Possible to cope with	Well-equipped to cope with	Average
Total	(50)	22.0	48.0	28.0	2.0	2.10

3) Problems in Tangerine Market Distribution System

On the survey question asking 'the biggest problem in tangerine market distribution system', the producer market collectors responded with the concentrated opinions of

'unsatisfactory system to control shipments', 'lack of measures to handle unsalable tangerine products', 'individual shipment structure', and 'triple structure in producer market's distribution'.

<Table III-83> Problems in Tangerine Market Distribution System

Content of Response		Individual Shipment System	Unsatisfactory system for shipment control	Insufficient measures for unsalable products	Triple Structure in Producer Market	Triple Structure in Producer Market Distribution	Excessive Logistics Cost	Other	No Answer
Primary Choice	Ratio	28.0	28.0	22.0	2.0	4.0	14.0	2.0	0
Secondary Choice	Ratio	4.0	30.0	24.0	16.0	4.0	16.0	0.0	6.0
Tertiary Choice	Ratio	6.0	14.0	20.0	34.0	2.0	12.0	0.0	12.0
Combined	Ratio	12.7	**24.0**	**22.0**	**17.3**	3.3	14.0	0.7	6.0

4) Pros and Cons on Adopting Non-destructive Selection System

The survey on the issue resulted in more opposing opinion (60.0%) on the 'non-destructive selection method that is to determine product quality by taste' rather than the supporting opinions (40.0%).

<Table III-84> Pros and Cons on Adopting Non-destructive Selection System

Classification	No. of Cases	Aggressively Opposed	Tend to Oppose	Tend to Support	Aggressively Supportive	Average (with 4 Full Scale Points)
Total	(50)	18.0	42.0	40.0	0.0	2.22

E. Commercial Activities of Collectors in Producer Market

1) Reasons of Tangerine Farmers for Shipping Products through Collectors in Producer Market

The producer market collectors considered the reasons for product shipment through them instead of 'agricultural cooperatives or citrus marketing & shipping associations' to be 'a good pricing' at the tangerine farmers' judgment and 'an accessibility to lump sum amount of money at once'.

<Table III-85> Reasons of Shipment through PMCs

Content of Response		Future Contract Deposit	Provision of Harvesting Labor	Good Pricing	Acquaintanceship and Accumulated Credit Record	Provision of Lump Sum Amount of Money	Others	No Answer
Primary Choice	Ratio	4.0	18.0	52.0	8.0	12.0	6.0	0.0
Secondary Choice	Ratio	2.0	22.0	20.0	12.0	28.0	4.0	12.0

2) Experience of Applying Artificial Coloring for Tangerine Sales

On the survey question asking whether they have ever applied 'artificial coloring' on tangerine fruit for the purpose of sales, 68.0% of the PMCs responded with 'yes' answer.

In regional details, the north of Mount Halla area showed a higher number (80.8%) relating the artificial coloring experience than in the south of Mount Halla area (54.2%).

<Table III-86> Experience of Applying Artificial Coloring for Tangerine Sales

Classification	No. of Cases	Yes	No	Statistical Value Significance Level
Total	(50)	68.0	32.0	
▩ By Region ▩				X2=4.059 P=0.044
North of Mount Halla	(26)	80.8	19.2	
South of Mount Halla	(24)	54.2	45.8	

2-1) Reasons of Artificial Coloring for Tangerine Sales

Among distributors in the producer market, 54% of them revealed that they had applied the 'artificial coloring' to tangerine fruit before selling them in the market mainly for higher prices while 14% expressed 'as requested by transaction partners'.

In terms of the survey by education, the age groups of 40s (55.6%) and 50s (66.7%) were considerably higher in the choice of reasoning for 'high prices' whereas the 30s (42.9%) mostly selected 'as requested by transaction partners'. The 60s (60.0%) were high in 'had never done artificial coloring to fruits'.

<Table III-87> Reasons of Artificial Coloring for Tangerine Sales

Classification	No. of Cases	For High Prices	As Requested By Transaction Partners	Never Done Artificial Coloring	Statistical Value Significance Level
Total	(50)	54.0	14.0	32.0	
▩ By Age ▩					X2=17.368 P=0.026
Up to 30s	(7)	42.9	42.9	14.3	
40s	(9)	55.6	33.3	11.1	
50s	(18)	66.7	5.6	27.8	
60s	(15)	40.0		60.0	
70s and above	(1)	100.0			

3) Method to Secure Volume for Sales

The survey revealed that the collectors in producer market (PMC) utilized a 'method of immediate direct purchase from tangerine orchards upon harvest' (61.1%) to secure 2003 product volume for sales.

In 2003, the secured tangerine volume per PMC was estimated at 49,743 boxes in 15 Kg package or 746 tons.

<Table III-88> Method to Secure Tangerine Product for Sale (2003 Products)

Classification	Future Purchase Contract by Field Unit	Immediate & Direct Purchase from Orchard Upon Harvest	Storage Unit Purchase After Harvest	Others	Total
No. of Cases	15	32	18	2	35
Volume(BOX)	272,335	1,063,666	311,666	93,333	1,741,000
Ratio	15.6%	61.1%	17.9%	5.4%	100.0%

For the 2004 products, PMCs' purchases were made through the methods of 'immediate and direct purchase from orchard upon harvest' (51.7%) and 'purchase by storage unit after harvest' (35.2%).

In 2004, the secured tangerine volume per PMC was estimated at 52,154 boxes in 15 Kg package or 782 tons.

<Table III-89> Method to Secure Tangerine Product for Sale (2004 Products)

Classification	Future Purchase Contract by Field Unit	Immediate & Direct Purchase from Orchard Upon Harvest	Storage Unit Purchase After Harvest	Total
No. of Cases	16	35	20	36
Volume(BOX)	267,499	1,051,502	714,999	2,034,000
Ratio	13.2%	51.7%	35.2%	100.0%

4) Performance by Shipping Destination

The collectors in producer market (PMC) shipped their 2003 products mainly to the 'by-law wholesale markets'. Their shipments to the 'by-law wholesale markets' took the highest portion of 45.0% followed by the 'wholesale markets in kind' at 31.3% level and 'agricultural cooperatives' joint markets' at 20.0%. The 2004 shipment per PMC was estimated to be 52,452 boxes in 15 Kg package or 787 tons.

<Table III-90> Performance by Shipping Destination (For 2003 Products)

Classification	ACs' Joint Markets	By-law Wholesale Markets	In-kind Wholesale Markets	Mass Consumers	Total

No. of Cases	14	18	19	1	31
Volume(BOX)	325,000	731,333	509,667	60,000	1,626,333
Ratio	20.0%	45.0%	31.3%	3.7%	100.0%

For the 2004 products, the producer market collectors (PMC) made the largest volume of shipments to 'by-law wholesale markets and in-kind wholesale markets' according to the survey results. The shipment to 'by-law wholesale markets' took the biggest portion of 42.4% followed by 27.7% of 'shipment to the in-kind wholesale markets' and 24.8% of 'shipment to the agricultural cooperatives' joint markets'. The estimated shipment per PMC was 52,364 boxes in 15 Kg package or 786 tons.

The combined shipment ratio to the institutionalized market (wholesale market and agricultural cooperatives' joint markets) was more than 65% of the total shipments.

<Table III-91> Performance by Shipping Destination (for 2004 Products)

Classification	ACs' Joint Markets	By-law Wholesale Markets	In-kind Wholesale Markets	Mass Consumers	Total
No. of Cases	15	18	20	2	33
Volume(BOX)	428,666	733,336	479,331	86,666	1,727,999
Ratio	24.8%	42.4%	27.7%	5.0%	100%

5) Problems Arising from Sales Methods

On the problems arising from the sales methods, the producer market collectors (PMCs) suggested that 'uncontrollable supply in the market as the main cause of price decline (2 PMCs)' and 'delayed payment collection (1 PMC)' were problematic in the joint markets of the agricultural cooperatives.

For the problems in the by-law wholesale markets, the PMCs also suggested 'uncontrollable supply in the market as the main cause of price decline (2 PMCs)' with an additional point of 'price reduction unless artificial coloring is applied (1 PMC)'.

'Difficulties of payment collection' (3 PMCs) was suggested as a problem in the in-kind wholesale markets.

6) Reasons for Favoring In-Kind Wholesale Markets

The collectors in producer market pointed out 'exchange of information and interaction through acquaintanceship' and 'simple procedure for product shipment' as reasons for favoring the use of 'in-kind wholesale markets' instead of by-law wholesale markets. The in-kind wholesale markets refer to the markets mainly operate as a wholesaler under the

approval of the mayor in accordance with the Wholesale and Retail Businesses Promotion Act, and currently 38 markets are available.

<Table III-92> Reasons for Favoring In-Kind Wholesale Markets

Content of Reply		Guaranteed Undisclosure of Transaction Volume	Simple Procedure for Product Shipment	Access to use Future Contract Deposit	Immediate Payment Settlement	Information Exchange, Interaction	Others (Combined Reasons)	No Answer
Primary Choice	Ratio	2.0	14.0	8.0	8.0	28.0	28.0	12.0
Secondary Choice	Ratio	8.0	22.0	6.0	6.0	14.0	4.0	40.0

F. Comparative Analysis in Producer Market Collectors' Sector between 2003 and 2004

1) Related to Tangerine Marketing Order

(1) Content Awareness

The survey results in both 2003 and 2004 verified that the majority of the collectors in producer market (PMC) were well aware of the tangerine marketing order; 94% of the 2004 surveyed PMCs and 100% in 2004 responded positively in terms of the knowledge of the order contents.

<Table III-93> Verification of Content Awareness of Tangerine Marketing Order Enactment

Classification	No. of Cases	Absolutely Ignorant	Almost No Knowledge	Bare Knowledge	Well Understood	Average
For 2003's	(50)	2.0	4.0	46.0	48.0	3.40
For 2004's	(50)	0.0	0.0	32.0	68.0	3.68

(2) Recognition of Change in Tangerine Generated Income

The recognition of the increased tangerine income as a result of the order enactment increased among the surveyed collectors in producer market when comparing the survey responses of 2003 and 2004. 28% of the 2003 survey respondents recognized the 'increase in farmers' income from tangerine cultivation' while there were more respondents in 2004 at 34.0% who responded in the same manner. However, the

respondents' opinion of 'the decreased income' also rose from 14% in the 2003 survey to 18.0% in 2004.

Hence, it indicates that there were more tangerine farmers who experienced the changes in tangerine generated income either to the direction of decrease or increase in 2004 than in 2003.

<Table III-94> Change in Tangerine Generated Income Arising from Tangerine Marketing Order

Classification	No. of Cases	Largely Decreased	Somewhat Decreased	No Change	Somewhat Increased	Largely Increased	Average
For 2003's	(50)		14.0	58.0	28.0		3.14
For 2004's	(50)	6.0	12.0	48.0	30.0	4.0	3.14

(3) Recognition of Beneficiaries

The collectors in the Jeju producer market expressed that in 2003 that they had little benefit from the order enactment by responding only 2.0% of them recognizing their benefits in the survey. However, the benefit recognition surged to 42.0% in the 2004 survey response. On the contrary, the distributors in consumer market in the 2003 survey responded with an opinion of having benefited at 56.0% level, however, such positive perception dropped to 24.0% in the 2004 survey. The recognition among tangerine farmers and consumers showed the same pattern as it was in the distributors in consumer market; the farmers' responses acknowledging benefits fell to 16.0% in 2004 from 24.0% in 2003 while the downward change in consumers' benefit perception was from 10.0% in 2003 to 2.0% in 2004.

<Table III-95> Beneficiaries of Tangerine Marketing Order Enactment

Classification	No. of Cases	Tangerine Farmers	Collectors in Producer Market	Distributors in Consumer Market	Consumers	None
For 2003's	(50)	24.0	2.0	56.0	10.0	8.0
For 2004's	(50)	16.0	42.0	24.0	2.0	16.0

(4) Recognition of Major Achievements

In the survey for the 2003 products, the collectors in producer market (PMC) appeared to recognize achievements from the enactment of the order: obtaining 'the effect of drawing a sense of empathy for the need of self-relieving efforts to revive the tangerine industry' and 'shipment of high quality tangerine' (14.0%).

The 2004 survey results also revealed the recognition of 'effect of establishing a sense of empathy for self-relieving efforts to revive the tangerine industry' and the increased recognition of 'effect of high quality product shipment' from 8.0% to 18.0%. However, 24% of the respondents answered with a negative opinion of the order's achievements in the 2004 survey, which suggests that some of the collectors in producer market had a negative assessment on the tangerine marketing order enactment.

<Table III-96> Major Achievements of Tangerine Marketing Order

Classification	No. of Cases	Price Rise	Shipment Volume Control	High Quality Product Shipment	Sense of Empathy for Self-relieving Efforts	None	No Answer
For 2003's	(50)	.0	14.0	8.0	74.0	-	4.0
For 2004's	(50)	8.0	16.0	18.0	34.0	24.0	-

(5) Recognizing Main Bodies of Low Quality Tangerine Shipment

28.0% of the 2003 survey respondents among the collectors in producer market identified themselves as the main body of making low quality shipments, which later in 2004 surged to 68.0%.

<Table III-97> Main Bodies Making Low Quality Shipments

Classification	No. of Cases	Members of ACs and CMSAs	PMCs	Agricultural Management Corp.	Individual Farmers	None	No Answer
For 2003's	(50)	28.0	28.0	20.0	16.0	-	8.0
For 2004's	(50)	12.0	68.0	0.0	12.0	8.0	-

The survey conducted among the tangerine cultivating farmers had shown the same result which points out that the collectors in producer market as the main body making low quality shipments of the 2004 products.

(6) Recognition of Influence in Tangerine Distribution

There was a marginal increase of the surveyed results among the producer market collectors on the recognition of 'positive influence of the order' in the tangerine distribution system, from 42.0% in 2003 to 50.0% in 2004. However, there were some notable changes in the opinions of a very negative perception from 2.0% to 30.0% and of a very positive perception from 0.0% to 30.0%. These significant changes suggested an obvious split in the collectors' perception of recognizing the order's influence in the tangerine distribution system.

<Table III-98> Influence of Tangerine Marketing Order to Distribution System

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
For 2003's	(50)	2.0	56.0	42.0	.0	2.4
For 2004's	(50)	30.0	16.0	20.0	30.0	4.0

(7) Identifying Issues during Implementation of Tangerine Marketing Order

The collectors in producer market suggested 'lack of compliance mindset', 'insufficient publicity and education', and 'insufficient role activities among agricultural cooperatives (AC) and citrus marketing & shipment associations (CMSA)' as the problems identified during the process of the order implementation in the 2003 survey.

<Table III-99> Analysis of Problems Identified from Implementation of Tangerine Marketing Order

Content of Response		Lack of Compliance Mindset	Insufficient Publicity and Education	Insufficient Role Activities of AC & CMSA	Mistrust of Agricultural Policy	Intermediary Merchant' Shipment of Unsalable products	Criteria by Size	Non-Existence of Penalty Clause	Insufficient Activities of Monitoring and Supervision	No Response
Primary Choice	2003	34.0	34.0	18.0	10.0	.0	4.0	.0	.0	0.0
	2004	8.0	14.0	12.0	34.0	10.0	18.0	2.0	0.0	2.0
Secondary Choice	2003	20.0	18.0	18.0	20.0	8.0	12.0	2.0	2.0	2.0
	2004	0.0	10.0	12.0	18.0	12.0	26.0	8.0	4.0	10.0
Combined	2003	27.0	26.0	18.0	15.0	4.0	8.0	1.0	1.0	1.0
	2004	4.0	12.0	12.0	26.0	11.0	22.0	5.0	2.0	6.0

In the 2004 survey, they pointed out 'mistrust in agricultural policy', 'unsalable product criteria by selection size', and 'insufficient publicity and education' as problems.

The 2004 result showed a strong mistrust of the collectors in Jeju producer market about the Jeju provincial agricultural policies when it was compared to the 2003's. It provides an insight that the main causes of their mistrust lies in the issues of 'unsalable product criteria by selection size' and 'insufficient publicity and education'.

It could be inferred that there were considerable levels of conflicts between the collectors and the monitoring squads in the process of monitoring and supervising the order compliance which led to the collectors' mistrust of the provincial policies.

(8) Conditions to Anchor Tangerine Marketing Order

The matters requested by the collectors in the 2003 survey included 'voluntary participation in complying to the order among farmers and merchants', 'active participation of agricultural cooperatives and citrus shipping & marketing associations' which were also requested by the wholesalers in the consumption area.

The change in circumstantial conditions to anchor the tangerine marketing order in the market emerged in the process of applying a compliance monitoring during the implementation of the 2004 order. It is evident that the level of monitoring and supervision of the order compliance was heightened. For instance, the Caps, a private security company was hired to install surveillance cameras in the packing houses where the operation is managed by highly suspicious merchants for violations of the order. On the other side, the agricultural cooperatives and citrus marketing and shipment associations actively participated in the order implementation through strict adherence to the order. Consequently, the merchants' voluntary participation in the tangerine marketing order along with a proper adoption of quality standards should be able to expedite the accommodation of the order in the market.

<Table III-100> Analysis of Conditions for Tangerine Marketing Order's Settlement in Market

Contents of Response		Voluntary Participation of Farmers and Merchants	Implementation of Quality Standard	Active Participation of AC & CMSA	Stringent Supervision and Monitoring	Insertion of Penalty Clause	Installation of Large Scale, Non-Destructive Packing House	Others	No Response
Primary Choice	2003	60.0	6.0	24.0	8.0	2.0	.0	.0	.0
	2004	66.0	18.0	0.0	8.0	2.0	2.0	2.0	4.0
Secondary Choice	2003	4.0	28.0	38.0	20.0	4.0	2.0	2.0	4.0
	2004	20.0	46.0	12.0	4.0	6.0	8.0	8.0	4.0
Tertiary Choice	2003	32.0	17.0	31.0	14.0	3.0	1.0	1.0	2.0
	2004	43.0	32.0	6.0	6.0	4.0	5.0	5.0	4.0

(9) Reintroduction

It is noticeable that the negative trend among the collectors in producer market expanded; the collectors in producer market opposed to the order reintroduction to the market were 64.0% and 78.0% in 2003 and 2004 respectively.

However, 42% of the producer market collectors responded that they benefited through the tangerine marketing order, but nonetheless, the merchants increasingly complained about losing freedom in commercial activities. Among the appealed complaints, the merchants are dissatisfied with the Jeju Province's tangerine policies due to the current standard to isolate unsalable products by size instead of quality criteria.

<Table III-101> Reintroduction of Tangerine Marketing Order in 2005

Classification	No. of Cases	Highly Opposed	Generally Opposed	Generally Supportive	Highly Supportive	Average
For 2003's	(50)	10.0	54.0	28.0	8.0	2.34
For 2004's	(50)	44.0	34.0	20.0	2.0	1.80

(10) Degree of Control for Reintroduction

36.0% of the collectors in producer market requested to 'ease the regulatory strength' in case of reintroduction of the subsequent year in the 2003 survey whereas 38.0% of the 2004 survey respondents insisted on 'abrogation of the order'.

It indicates the increasing voice of the collectors insisting on the abrogation of the tangerine marketing order.

<Table III-102> Degree of Control for Reintroduction of Tangerine Marketing Order

Classification	No. of Cases	To Maintain the Previous Year's	To Ease from the Previous Year's	To More Strengthen than the Previous Year's	Other Abrogation	No Answer
For 2003's	(50)	22.0	36.0	30.0	6.0	6.0
For 2004's	(50)	16.0	24.0	22.0	38.0	-

(11) Introduction of Sweetness and Acidity in Quality Rank

On the issue of 'implementing quality ranks', the surveyed collectors in producer market had opposed to the issue at 64.0% level in the 2003 survey while the opposing level was 52.0% in the 2004 survey. The supporting opinions increased from 36.0% to 48.0%, which shows the increasing positive recognition on the issue of implementing a system of quality ranks.

<Table III-103> Introduction of Sweetness and Acidity in Quality Rank of Tangerine Marketing Order

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
For 2003's	(50)	14.0	50.0	32.0	4.0	2.26
For 2004's	(50)	20.0	32.0	38.0	10.0	2.96

(12) Adopting Wax Coating Prohibition in Tangerine Marketing Order

The opposing levels of the surveyed collectors in producer market were 58.0% in the 2003's and 80.0% in the 2004's. Such results suggest that the consumers do not want tangerine with wax coating and it is against the no wax-coating trend in Japan where similar species are cultivated; hence it is opposed from the collectors' viewpoint.

<Table III-104> Adopting Wax Coating Prohibition in Tangerine Marketing Order in 2005

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
For 2003's	(50)	16.0	42.0	24.0	18.0	2.44
For 2004's	(50)	50.0	30.0	10.0	10.0	1.80

(13) Scope Expansion

The survey questioned about the expansion scope of the order up to 'nationwide coverage' in the 2003 survey and 'inclusion of consumption areas' in the 2004 survey. There was no noticeable change in the negative approach of the collectors in producer market on the issue as it was substantiated through the survey results of opponents at 64.0% in 2003 and at 66.0% in 2004.

<Table III-105> Scope Expansion of Tangerine Marketing Order in 2005

Classification	No. of Cases	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
For 2003's	(50)	24.0	40.0	26.0	10.0	2.22
For 2004's	(50)	36.0	30.0	16.0	18.0	2.16

(14) Handling Method of Unsalable Field Tangerine

According to the survey results, the respondents who replied that 'the entire volume of unsalable ranks were sold for processing foods' were at 24.0% in 2003 and 46.0% in 2004. Those who responded that all of unsalable products were treated as ordinary product shipment for sales also increased from 4.0% to 18.0%.

<Table III-106> Methods of Handling Numbers 1 & 9 Field Tangerine

Classification	No. of Cases	All Sold For Processing Foods	All Sold as Ordinary Shipment For Sale	Half For Processing Foods and Partial Shipment for Sale	Half Shipped for Sale and Partially Sold For Processing Foods	Disposal At Production Site
For 2003's	(50)	24.0	4.0	58.0	8.0	6.0
For 2004's	(50)	46.0	18.0	28.0	8.0	-

The survey result indicates some changes in the treatment method for unsalable products. A changing trend is noticed that many opted moving from the method of 'half for processing foods and partial shipment for sale' to the 'all for processing foods'. The trend also indicates that some of them rather chose the option of 'all for ordinary shipment'.

(15) Reasons for Handling Unsalable Field Tangerine for Sales

The survey responses on questioning why they had treated the unsalable products as ordinary shipment for sale call for the necessity to reinforce the educational sector about the subject issue. The respondents pointed out 'no arrangement to sell the unsalable rank products for processing materials' by 28% in the 2003 survey and 'no knowledge on the shipment prohibition' by 40.7% in the 2004's for the reasons of shipping unsalable products for sales.

<Table III-107> Methods of Handling Numbers 1 & 9 Field Tangerine

Classification	No. of Cases	No Knowledge on the Shipment Prohibition	Had Known the Prohibition but Because others do	Non-existence of timely arrangement for processing	As Requested by the parties in the mainland	Higher Price Offer	No Answer
For 2003's	(50)	-	14.0	28.0	8.0	16.0	34.0
For 2004's	(50)	40.7	33.3	11.1	-	-	14.8

2) Related to Tangerine Industry Outlook

(1) Jeju Tangerine Industry Outlook

The 'gloomy outlook for the Jeju tangerine industry' among the collectors in producer market drastically dropped to 46.0% in the 2004 survey from 98.0% of 2003. With that, the surge in the opinion of a positive industry outlook from 2.0% to 54.0% suggested that the order's influence would continue to the trend of rising prices for the 2005 products, as well.

<Table III-108> Jeju Tangerine Industry Outlook

Classification	No. of Cases	Very Gloomy	Generally Gloomy	Generally Good	Very Good	Average
For 2003's	(50)	32.0	66.0	2.0	-	1.70
For 2004's	(50)	6.0	40.0	54.0	-	2.48

(2) Outlook on Future Trend of Tangerine Price

According to the 2003 survey result, 90% of the responded collectors in producer market forecasted 'falling future tangerine price', however, such a view dropped to 48.0% in the 2004 survey. On the contrary, a forecast of the future prices 'to maintain the current level' sharply rose from 10.0% to 42.0% while 10% of the respondents predicted a rising future price trend.

<Table III-109> Outlook on Future Trend of Tangerine Price

Classification	No. of Cases	Sharply Fall	Somewhat Fall	Maintain Current Price	Somewhat Rise	Sharply Rise	Average
For 2003's	(50)	14.0	76.0	10.0	.0	.0	1.96
For 2004's	(50)	2.0	46.0	42.0	10.0	.0	2.60

3) Tangerine Production, Distribution, and Policies

(1) Recognizing Optimal Production Volume of Jeju Tangerine

The survey respondents who chose 'up to 500,000 tons' to be the optimal production volume were at 44.0% in the 2003's and 36.0% in the 2004's. The choice of up to 450,000 tons largely decreased from 26.0% to 4.0%. The choice of 'up to 550,000 tons' almost doubled from 18.0% to 32.0%, which implies the collectors' expectation for a small scale increase in production volume.

<Table III-110> Optimal Production of Jeju Tangerine

Classification	No. of Cases	Up to 400,000 tons	Up to 450,000 tons	Up to 500,000 tons	Up to 550,000 tons	Up to 600,000 tons	Up to 650,000 tons	Up to 700,000 tons
For 2003's	(50)	-	26.0	44.0	18.0	4.0	2.0	6.0
For 2004's	(50)	4.0	14.0	36.0	32.0	8.0	6.0	-

(2) Current Distribution System's Coping Capacity with Open Market Trend

The survey question was about whether the 'current Jeju tangerine distribution system' can appropriately cope with the reality of an openness trend in the agricultural product market. 66% of the collectors in producer market showed an opinion in the 2003 survey with 'not able to appropriately cope with the current distribution system'. There was a slight rise to 70.0% in the 2004 survey. The observation indicates that the level of

apprehensions about the issue went up and the capacity of the current distribution was increased.

<Table III-111> Awareness of Coping Capacity with Trend of Openness

Classification	No. of Cases	Never be able to counteract	Difficult to counteract	Would be capable to counteract	Well able to counteract	Average
For 2003's	(50)	8.0	58.0	34.0	.0	2.26
For 2004's	(50)	22.0	48.0	28.0	2.0	2.10

(3) Problems in Tangerine Market Distribution Structure

In the 2003 survey question asking about 'the biggest problem in the tangerine market distribution structure' among the collectors in producer market, the highlighted opinions included: 'individual shipment system', 'unsatisfactory system for shipment control', and 'insufficient measures to handle unsalable products'.

The choices of responses in the 2004 survey included 'individual shipment system', 'unsatisfactory system for shipment control', 'insufficient measures to handle unsalable products', and a newly emerging problem of 'triple structure in producer distribution market'.

<Table III-112> Problems in Tangerine Market Distribution

Content of Response		Individual Shipment System	Unsatisfactory system for shipment control	Insufficient measures for unsalable products	Non-existence of Measures to Control Intermediary Merchants	Triple Structure in Producer Market Distribution	Excessive Logistics Cost	Others	No Answer
Primary Choice	2003	44.0	24.0	20.0	.0	4.0	8.0	0	.0
	2004	28.0	28.0	22.0	4.0	2.0	14.0	2.0	0
Secondary Choice	2003	16.0	40.0	22.0	10.0	4.0	8.0	.0	.0
	2004	4.0	30.0	24.0	4.0	16.0	16.0	0.0	6.0
Tertiary Choice	2003	8.0	16.0	32.0	4.0	10.0	12.0	.0	18.0
	2004	6.0	14.0	20.0	2.0	34.0	12.0	0.0	12.0

(4) Introduction of Non-destructive Fruit Selection System

In the 2003 survey, the supportive opinions (56.0%) were slightly higher than the opposing opinions (44.0%) for the introduction of 'non-destructive selection system'. The 'non-destructive selection system' allows fruit selection based on taste. However, the result of the 2003 survey showed a reversing trend with the increase in the opposing opinions to 60.0%, indicating the expansion of opposing opinions.

However, the opposition to the adoption of non-destructive selection system seems to be somewhat contradictory as the respondents recognized ‘unsalable selection criteria’ as one of the problems identified from implementing the tangerine marketing order and insisted ‘adoption of quality standards’ as a condition for long term accommodation of the marketing order in the market.

<Table III-113> Introduction of Non-destructive Fruit Selection System

Classification	No. of Cases	Aggressively Opposed	Generally Opposed	Generally Supportive	Aggressively Opposed	Average
For 2003’s	(50)	2.0	42.0	52.0	4.0	2.58
For 2004’s	(50)	18.0	42.0	40.0	0.0	2.22

4) Commercial Activities of Collectors in Producer Market

(1) Reasons for Tangerine Farmers’ Shipment through Collectors in Producer Market

According to the 2003 survey result, the collectors in producer market considered ‘for good price offer’, and ‘access to lump sum amount of money at once’ as the reasons for the tangerine farmers’ use of the collectors instead of agricultural cooperatives and citrus marketing and shipping associations. The 2004 survey result also pointed out the same reasons as they were in the 2003’s.

<Table III-114> Reasons of Shipping through Collectors in Producer Market

Content of Response		Future Contract Deposit	Provision of Harvesting Labor	Good Pricing	Acquaintanceship and Accumulated Credit Record	Provision of Lump Sum Amount of Money	Guaranteed Price	Others	No Answer
Primary Choice	2003	6.0	14.0	60.0	4.0	8.0	6.0	-	2.0
	2004	4.0	18.0	52.0	8.0	12.0	-	6.0	0.0
Secondary Choice	2003	8.0	18.0	10.0	16.0	36.0	2.0	-	10.0
	2004	2.0	22.0	20.0	12.0	28.0	-	4.0	12.0

(2) Experience of Applying Artificial Coloring for Tangerine Sales

The collectors in producer market who responded with experience of ‘artificial coloring’ for tangerine sales was 94.0% in the 2003 survey. Yet, there was a visible decrease to 68.0% in the 2004 survey, indicating the decreasing trend of artificial coloring among the collectors.

<Table III-115> Experience of Applying Artificial Coloring for Tangerine Sales

Classification	No. of Cases	Have experienced	Never experienced
For 2003's	(50)	94.0	6.0
For 2004's	(50)	68.0	32.0

(2-1) Reasons for Artificial Coloring for Tangerine Sales

Among the collectors in producer market who answered that they had applied 'artificial coloring' for the sales of tangerine, a high portion of the respondents (44.0%) pointed out their reasoning for 'a higher price' in the 2003 survey, then it went up to 54.0% in the 2004's. This indicates that the main reason for artificial coloring is to benefit from higher pricing.

<Table III-116> Reasons of Artificial Coloring for Tangerine Sales

Classification	No. of Cases	For Higher Pricing	As Requested by Trading Partners	Never Applied Artificial Coloring	Both	No Answer
For 2003's	(50)	44.0	46.0	-	6.0	4.0
For 2004's	(50)	54.0	14.0	32.0	-	-

Ⅴ. Assessment and Analysis of Effects on Tangerine Marketing Order

1. Theory of Effect Analysis on Tangerine Marketing Order Enactment[8]

A. General Effects

The positive and negative effects on the enactment of the tangerine marketing order can be generalized as below; however, it is not an easy task to measure accurate effects of the program.

The positive effects of the order enactment include the effect of: ① market and price stabilization by lowering the uncertainties through market supporting activities, thus stabilizing the market and price, ② steady increase in income and price[9], ③ establishing an enhanced order in the agricultural distribution system, ④ transferring the market power from distributors to producers, ⑤ increasing market information and market efficiency, ⑥ quality enhancement by stimulating producers to produce higher quality agricultural products and providing guaranteed high quality agricultural products to consumers, ⑦ demand expansion via research and development of market and products and publicity campaign.

The negative effects include: ① consumer price inflation, ② reduced product choices for consumers, ③ free rider problem, ④ excessive administrative, monitoring, and supervision expenses, ⑤ difficulties to resolve the differences in interests among farmers and regions, ⑥ impediment of quality enhancement, and amelioration of species due to complacency within the established system. In particular, the free rider issue arises from the difficulties to completely control the volume of distribution in the market. This

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8 Kim, Byungryul, et al. 『Implementation Methods of Agricultural Marketing Agreement and Marketing Order 』, Korea Rural Economic Institute, 1999. partly cited and edited from pp.11 ~ 24

9 Effect of increase in price and income is expected to be limited because absolute control of produce is practically impossible.

problem could either cut the positive effects to a half or write them off. Therefore, the importance to minimize the free rider issue can not be over emphasized to achieve the successful implementation of the order.

B. Volume Control Effects

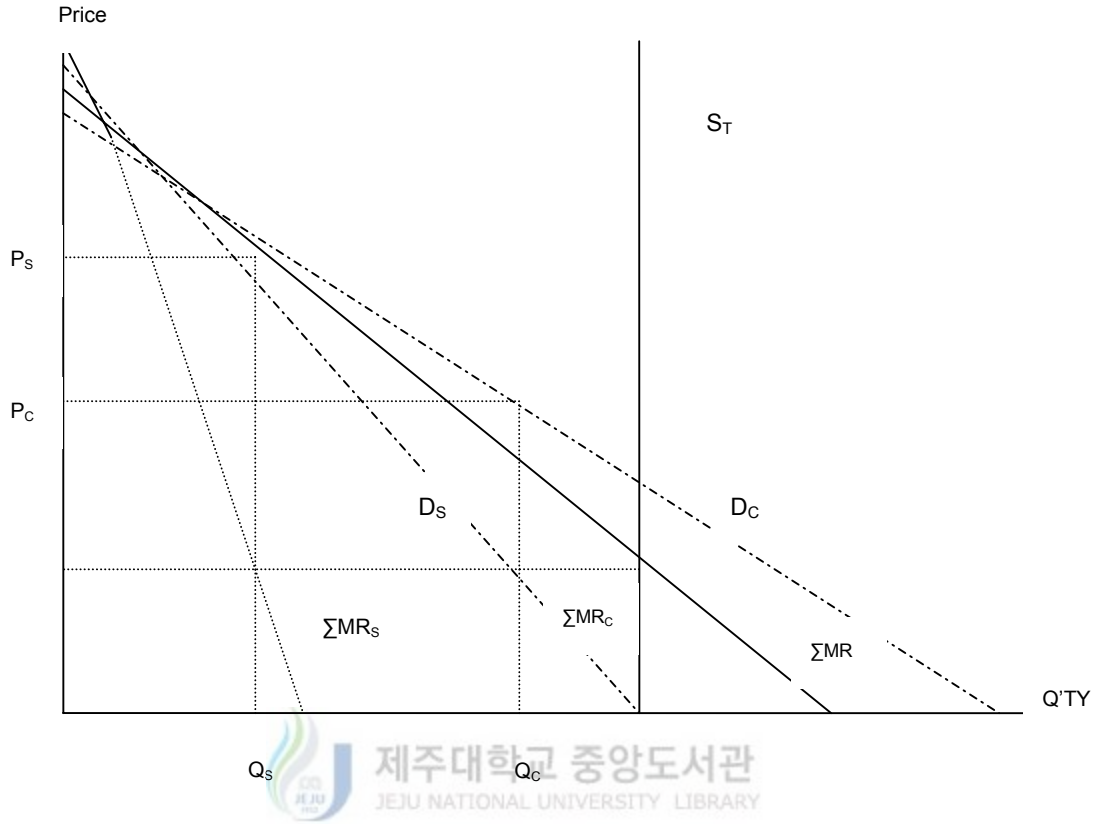
Price and income are affected by the level of quality control and income maximization is directly influenced by pricing and supply allotment among markets. The higher the volume proportion of the order's targeted area or the handled volume by the main transacting bodies to the total volume of the entire market, the bigger the level of effects caused by price or volume control on farmers' sales price or income.

The base theory of the price or volume control program is the theory of price differentiation. The methods of price differentiation and market allotment refer to a strategy to maximize the suppliers' income by limiting supply in the less elastic market while expanding supply in the highly elastic market under the circumstance of markets with two different levels of price elasticity. Normally, the regulation to control supply is not based on the price differentiation; nevertheless, it could interlink with the price differentiation method.

For instance, a hypothesis is set up that an administrative institution assigns supply volume for fresh and processing materials. It is assumed that the demand for fresh agricultural product is at Ds and the demand for agricultural product for processing is at Dc, while production volume is fixed at Q_T. When the strategy of price differentiation is utilized to maximize income in two different markets, the marginal cost lies on the supply curve ($MC = S_T$) because the supply is fixed and the optimal supply volume is determined at the point where the marginal income and marginal cost are met, thus the supply volume becomes Q_T.

Accordingly, the profit maximization can be achieved by selling at the price level of Ps for the sales volume of Qs in the fresh agricultural market and by selling at the price of Pc for the sales volume of Qc in the processing material market.

< Picture Ⅴ-1> Quantity Control Effect by Marketing Order

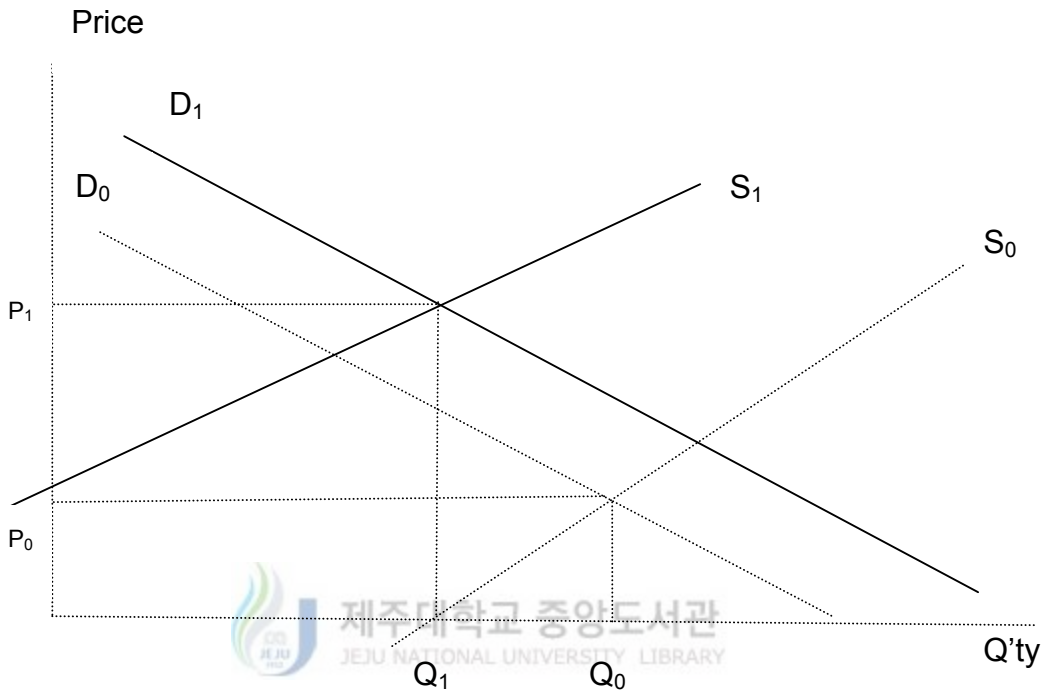


C. Quality Control Effect

The mechanism of quality control effect works in the flow that once the quality control is raised, market distribution of products with quality below a certain level will be restrained, thus reduces the quantity circulation in market, which then leads to rising production costs (due to additional labor and fertilizer input and use of better seeds, etc.), thereby results in supply reduction ($S_0 \rightarrow S_1$).

Meanwhile, once the quality standard is raised, the quality of agricultural products will be enhanced, which induces rising prices, while the consumers' perception of the enhanced products becomes better to increase demand for agricultural products ($D_0 \rightarrow D_1$). When quality control is executed, price would rise; however the circulation volume in individual markets would differ depending on the portion of increase in demand and supply as well as the slope of each curve.

< Picture Ⅴ-2> Quality Control Effect by Marketing Order



2. Qualitative Assessments and Effect Analysis of Tangerine Marketing Order

A. Qualitative Assessment of 2004 Tangerine Marketing Order

1) Content Awareness

All of the related parties appeared to know relatively well about the contents of the 'tangerine marketing order enactment'.

<Table Ⅴ-1> Content Awareness of Tangerine Marketing Order Enactment

Classification		Absolutely Ignorant	Almost Ignorant	General Knowledge	Well Acknowledged	Average
For 2003's	Tangerine Farms	.7	3.4	58.3	37.6	3.33
	Collectors in Producer Market	2.0	4.0	46.0	48.0	3.40

	Wholesaler in Consumption Area	20.0	19.0	50.0	11.0	2.52
For 2004's	Tangerine Farms	.2	1.6	36.8	61.4	3.59
	Collectors in Producer Market	0.0	0.0	32.0	68.0	3.68
	Wholesaler in Consumption Area	3.5	7.0	57.5	32.0	3.18

Amid the increase in the average degree of awareness of the order enactment compared to the 2003 survey, particularly the large increase among the wholesalers in consumption area from 2.52 points to 3.18 points indicates that public relations efforts were at an appropriate level.

2) Recognition of Changes in Tangerine Generated Income Arising from Tangerine Marketing Order Enactment

All group of respondents perceived the increase in farmers' income thanks to the enactment of the tangerine marketing order. The degree of perception for increased income was highest among the groups of 'wholesalers in consumption area' and 'tangerine cultivating farmers', though, it was relatively low among the 'collectors in producer market'. In comparison with the 2003 survey result on the issue, such perception largely rose among the groups of wholesalers in the consumption area and tangerine farmers, whereas there was little change among the collectors in producer market.

<Table Ⅴ-2> Changes in Tangerine Generated Income Arising from Tangerine Marketing Order Enactment

Classification		Largely Decreased	Somewhat Decreased	No Change	Somewhat Increased	Largely Increased	Don't know	Average
For 2003's	Tangerine Farmers	4.6	28.6	23.0	41.8	1.7	0.3	3.09
	Collectors in Producer Market	-	14.0	58.0	28.0	-	-	3.14
	Wholesalers in Consumption Area	2.4	16.2	14.8	36.2	1.9	28.6	3.27
For 2004's	Tangerine Farmers	1.0	11.3	17.8	63.6	6.3	-	3.63
	Collectors in Producer Market	6.0	12.0	48.0	30.0	4.0	-	3.14

	Wholesalers in Consumption Area	3.5	11.5	7.0	52.0	26.0	-	3.86

3) Recognition of Beneficiaries

On the survey question to identify beneficiaries of the order enactment, the tangerine farmers mainly pointed out the collectors in producer market. The collectors also identified themselves as the biggest beneficiaries. The survey result among the wholesalers in consumption area provided similar proportions between the choices of 'tangerine farmers' and 'collectors in producer market' as beneficiaries. In comparison with the 2003 survey, the consumers' perception of the wholesalers in consumption area as the biggest beneficiaries in 2003 was significantly down, while the collectors' recognition of themselves as the most benefited party greatly increased.

The changes in the survey groups' perception is inferred to come from the increase in consumer spending for tangerine purchases due to the rising price which began in January. The tangerine prices doubled from the previous years' prices.

<Table Ⅴ-3> Beneficiaries of Tangerine Marketing Order Enactment

Classification		Tangerine Farmers	Collectors in Producer Market	Distributors in Consumption Area	Consumer	None	No Answer
For 2003's	Tangerine Farmers	17.4	71.1	5.4	3.9	-	2.2
	Collectors in Producer Market	24.0	2.0	56.0	10.0	8.0	
	Wholesalers in Consumption Area	26.7	24.3	12.9	33.3	-	2.9
For 2004's	Tangerine Farmers	24.5	70.3	1.8	3.4	0.0	-
	Collectors in Producer Market	16.0	42.0	24.0	2.0	16.0	-
	Wholesalers in Consumption Area	46.5	46.0	3.5	4.0	0.0	-

4) Recognition of Major Achievements

The recognized choices of achievements from the enactment of the tangerine marketing order were: 'high quality tangerine shipment' and 'shipment volume control' by the group of tangerine farmers, 'high quality tangerine shipment' and 'price rise' by the wholesalers in consumption area, and 'formation of self-relieving efforts to revive the tangerine industry' and 'no achievement' by the collectors in the producer market. The noticeable changes are the increase in selection for 'price rise' by the wholesalers in the consumption area and 'no achievement' by the collectors in the producer market is a noticeable change compared to the survey result for the 2003 products.

<Table Ⅴ-4> Major Achievements of Tangerine Marketing Order

Classification		Price Rise	Shipment Volume Control	High Quality Tangerine Shipment	Self-relieving efforts	None	No Answer
For 2003's	Tangerine Farmers	15.5	28.5	34.9	19.9	-	1.2
	Collectors in Producer Market	-	14.0	8.0	74.0	-	4.0
	Wholesalers in Consumption Area	12.4	17.6	54.3	13.8	-	1.9
For 2004's	Tangerine Farmers	17.9	24.8	34.8	22.5	0.0	-
	Collectors in Producer Market	8.0	16.0	18.0	34.0	24.0	-
	Wholesalers in Consumption Area	27.0	16.5	42.0	13.0	1.5	-

5) Recognition of Influence on Tangerine Distribution System

The tangerine farmers and the wholesalers in the consumption market appeared to recognize the positive effects of the order on the tangerine distribution system. However, the collectors in the producer market strongly expressed their negative views on the survey question of the order's impact in the general tangerine distribution system. When the result is compared to 2003's, the tangerine farmers gave nearly 4 scale points to the positive side with more than a 1 point increase in the 5 full scale points survey, whereas, there was only a little increase in the collectors' scale point assessment.

<Table Ⅴ-5> Influence of Tangerine Marketing Order to Distribution System

Classification		Very Negative	Somewhat Negative	No Influence	Somewhat Positive	Very Positive	No Answer	Average
For 2003's	Tangerine Farmers	4.8	29.8	-	60.0	5.3	.1	2.67

	Collectors in Producer Market	2.0	56.0	-	42.0	-	-	2.40
	Wholesalers in Consumption Area	-	14.8	-	68.6	14.3	2.4	3.00
For 2004's	Tangerine Farmers	.9	6.5	10.2	74.2	8.2	-	3.82
	Collectors in Producer Market	30.0	16.0	20.0	30.0	4.0	-	2.62
	Wholesalers in Consumption Area	2.5	13.0	11.5	54.5	18.5	-	3.74

6) Year-to-Year Comparative Assessment

There were many respondents who acknowledged the improvement in the 2004 order relative to the 2004 order throughout all respondent groups: 82.4% by tangerine farmers, 38.0% by collectors in the producer market, 64.0% by wholesalers in the consumption area.

<Table Ⅴ-6> Year-to-Year Comparative Assessment of Tangerine Marketing Order

Classification	Very Deteriorated	Somewhat Deteriorated	Neither Good Nor Bad	Somewhat Improved	Very Improved	Average
Tangerine Farmers	.9	6.5	10.2	74.2	8.2	3.86
Collectors in Producer Market	2.0	4.0	50.0	38.0	0.0	3.42
Wholesalers in Consumption Area	.5	2.5	33.0	47.5	16.5	3.77

7) Areas of Improvement

When asked to identify the improved areas of the order, all groups including farmers, collectors and wholesalers expressed a high opinion of 'improvement in the participation of the related parties to the order'. Concurrently, 'improvement in effective monitoring and supervision through the expansion of the order scope to include nationwide wholesale markets' was selected as the second choice by the wholesalers in the consumption area followed by the tangerine farmers. This result is bespoken by the fact that the participatory mindset was heightened as it was evidenced with a mere 42 violations, or 9.3%, of the total 450 disclosed violations perpetrated by agricultural cooperatives and

citrus marketing & shipping associations. At the same time, 354 monitoring squad members, a 2.6 times increase from the previous year, were mobilized to enforce stricter monitoring and supervision activities thanks to the aggressive participation of the local authorities. All of these convinced the respondents' selection as above.

<Table Ⅴ-7> Improvements of Tangerine Marketing Order

Classification	Effective Monitoring & Supervision	Increase in Monitoring Members	Aggressive Participation of Local Authorities	Improvement of Participatory Mindset	Clarification of Quality Standards	None
Tangerine Farmers	25.4	2.6	12.9	52.0	7.1	0.0
Collectors in Producer Market	18.0	10.0	12.0	42.0	8.0	10.0
Wholesalers in Consumption Area	28.5	1.5	14.5	31.0	11.0	13.5

8) Recognition of Improved Product Qualities

Both consumers and wholesalers in the consumption area showed a positive reaction that 'product qualities (to include a decrease in the number of decomposed fruits and consistency in quality) improved compared to the previous years' products'.

<Table Ⅴ-8> Recognition of Improved Product Qualities

Classification		Very Weakened	Somewhat Weakened	Similar Level	Somewhat Improved	Very Improved	Average
For 2003's	Consumers	.5	11.5	46.1	39.4	2.5	3.32
	Wholesalers in Consumption Area	1.4	10.0	22.9	57.1	8.6	3.61
For 2004's	Consumers	1.4	12.0	46.6	36.8	3.2	3.28
	Wholesalers in Consumption Area	1.0	1.5	30.5	58.5	8.5	3.72

9) Recognition of Low Quality Tangerine Shippers

All of the survey respondents including tangerine farmers, wholesalers in consumption area, and even collectors in producer market identified the collectors in producer market as the shippers of low quality tangerine products. Contrarily, the proportion of agricultural cooperatives and packing and marketing cooperatives as shipper of low quality products was lowered.

<Table Ⅴ-9> Main Body of Low Quality Tangerine Product Shipment

Classification		Members of ACs, CMSAs, and PMs	Collectors in Producer Market	Agricultural Corp.	Individual Farms	None	No Answer
For 2003's	Tangerine Farmers	8.7	77.1	.8	11.8	-	1.6
	Collectors in Producer Market	28.0	28.0	20.0	16.0	-	8.0
	Wholesalers in Consumption Area	14.3	54.3	10.0	20.5	-	1.0
For 2004's	Tangerine Farmers	6.9	83.5	1.2	8.4	0.0	-
	Collectors in Producer Market	12.0	68.0	0.0	12.0	8.0	-
	Wholesalers in Consumption Area	11.5	64.5	3.0	20.0	1.0	-

10) Methods of Handling Unsalable Tangerine Products

Both tangerine farmers and collectors in producer market favored a method of handling unsalable tangerine products of 'all for processing materials' the most. The collectors turned out to be the main body that circulated the unsalable products in the market according to the survey result; 18% of them answered with 'all shipped for sale' and 8% of them with 'more than 50% unsalable products were shipped for sale'.

<Table Ⅴ-10> Methods of Handling Unsalable Tangerine Products

Classification		All for Processing Materials	All Shipped for Sale	More than 50% for Processing Materials	More than 50% Shipped for Sale	All Disposal	Partly for Processing, Partly Disposal	Others	Refuse To Answer
For 2003's	Tangerine Farmers	77.6	2.6	4.1	1.3	14.1	-	-	-
	Collectors in PM	24.0	4.0	58.0	8.0	-	-	6.0	-
For 2004's	Tangerine Farmers	81.7	1.4	3.8	1.5	5.5	2.3	.6	3.2
	Collectors in PM	46.0	18.0	28.0	8.0	0.0	0.0	0.0	0.0

11) Reasons for Circulating Unsalable products for Sales

There were many tangerine farmers who chose the reason for shipping the unsalable products as 'no timely arrangement to sell them for processing materials'. However, the collectors in producer market (40.7%) responded high with a reason of 'due to no-

knowledge of shipment prohibition', which contradicts to their responses on the survey question asking about 'content awareness of the order enactment'.

<Table Ⅴ-11> Reasons of Circulating Unsalable Products for Sales

Classification		Ignorant of shipment prohibition	Because others shipped	No timely arrangement for processing material treatment	Did not sell the unsalable products	Others Price	Not Applicable	No Answer
For 2003's	Tangerine Farmers	0.3	2.5	4.9	-	0.3	92.0	-
	Collectors in PM	14.0	28.0	8.0	-	16.0	34.0	-
For 2004's	Tangerine Farmers	6.1	40.2	53.7	0.0	-	-	0.0
	Collectors in PM	40.7	33.3	11.1	0.0	-	-	14.8

12) Recognition of Problems Arising from Implementation

The tangerine farmers indicated 'intermediary merchants' shipment of the unsalable products' as an identified problem in the process of the order implementation. They also pointed out problems of 'insufficient monitoring and supervision activities', 'non-existence of stringent penalty clause', 'lack of compliance mindset', and 'criteria for unsalable product by size'. The levels of such choices were higher than they were in the 2003 survey. The wholesalers in consumption areas also identified 'unsalable product shipment by intermediary merchants', 'not enough education and P. R.', and 'lack of compliance mindset' as problems. Meanwhile, the collectors in producer market recognized 'mistrust of agricultural policies' as the biggest problem followed by other problems to include 'criteria for unsalable product by size', 'not enough education and P. R.', and 'insufficient efforts by agricultural cooperatives (ACs) and citrus marketing and shipping associations (CMSAs)'. The perception of 'insufficient efforts by ACs and CSMAs' was weakened among all related economic parties in the market compared to the 2003 survey. For the perception of 'lack of compliance mindset', the collectors chose significantly lower than they did in the 2003 survey.

Conclusively, the survey respondents identified the problems of the order implementation as: 'unsalable product shipment by intermediary merchants', 'criteria for unsalable product by size', 'not enough education and P. R.', 'non-existence of strong

penalty clause', 'insufficient monitoring and supervision activities', and 'lack of compliance mindset'.

<Table Ⅴ-12> Analysis of Problems in Tangerine Marketing Order Implementation

Classification		Lack of Compliance Mindset	Lack of Education & P. R.	Lack of ACs & CMSAs' efforts	Mistrust of Agricul-tural Policies	Unsalable shipment by Intermediary Merchants	Criteria by Size	Non-existence of Penalty Clause	Insufficient Monitoring and Supervision	Others	No Answer
For 2003's	Tangerine Farmers	12.8	6.0	10.9	4.9	32.3	10.0	11.9	9.9	-	-
	Collectors in PM	27.0	26.0	18.0	15.0	4.0	8.0	1.0	1.0	-	-
	Wholesalers in Consumption Area	13.1	23.1	15.5	10.7	13.6	11.4	7.7	3.8	-	-
For 2004's	Tangerine Farmers	11.2	4.3	5.1	4.5	34.7	10.6	13.8	14.8	-	1.2
	Collectors in PM	4.0	12.0	12.0	26.0	11.0	22.0	5.0	2.0	6.0	-
	Wholesalers in Consumption Area	16.7	22.5	6.3	2.4	22.8	9.0	9.0	7.9	.3	3.2

B. Reintroduction of Tangerine Marketing Order and Search for Improvement Direction

1) Conditions to Anchor Tangerine Marketing Order

'Voluntary participation by farmers and merchants' was selected by all of the economic parties as a condition for the settlement of the tangerine marketing order in the market. The farmers selected in the order of 'powerful monitoring and supervision of the order compliance', 'insertion of penalty clause', and 'implementation of quality standard'. The wholesalers in consumption area and collectors in producer market suggested 'implementation of quality standard' and 'powerful monitoring and supervision' as conditions for the order settlement in the market. The area of 'aggressive participation by ACs and CMSAs' was down from 16.7% to 10.4%, while 'quality standard implementation' was up from 9.9% to 14% in the comparative analysis with the 2003 survey. Including

6.4% for the opinion of 'installation of large scale non-destructive packing houses', the overall quality related conditions for long term accommodation of the order in the market remained above 20% level.

Accordingly, the market anchorage of the order can be accomplished by satisfying the necessary conditions as shown in the survey results. It is necessary to install large scale non-destructive packing houses with voluntary participation of farmers, merchants, ACs and CMSAs in the process of the order implementation. At the same time, an objective quality standard needs to be adopted. The order execution should be managed by implementing powerful monitoring and supervision activities with the insertion of a strengthened penalty clause that guarantees all of those order complying economic parties not to be victimized.

< Table Ⅴ-13> Analysis of Conditions to Anchor Tangerine Marketing Order

Classification		Voluntary Participation by Farmers, Merchants	Adoption of Quality Standard	Aggressive Participation by ACs & CMSAs	Powerful Monitoring & Supervision	Insertion of Penalty Clause	Installation of Large Scale Non-destructive Packing Houses	Others	No Answer
For 2003's	Tangerine Farmers	33.9	9.9	16.7	22.6	15.5	-	0.3	1.2
	Collectors in PM	32.0	17.0	31.0	14.0	3.0	-	1.0	2.0
	Wholesalers in Consumption Area	27.1	31.5	20.0	13.1	6.7	-	1.0	0.7
For 2004's	Tangerine Farmers	29.5	14.0	10.4	21.5	18.1	6.4	-	.2
	Collectors in PM	43.0	32.0	6.0	6.0	4.0	5.0	-	4.0
	Wholesalers in Consumption Area	32.6	20.1	13.6	15.4	11.2	3.9	-	3.1

2) Pros and Cons on Reintroduction

The level of supportive opinions for the reintroduction of the order was similar to the 2003's survey among tangerine farmers and wholesalers in the consumption area,

whereas the opposing opinion among collectors in the producer market rose. Although the collectors' group acknowledged that they benefited from the order, they opposed the order reintroduction. They complained about 'inappropriateness of product criteria by size' and the strict monitoring and supervision activities that employed 'expansion of the monitoring members by 2.6 times', and 'Caps' CCTV installation'. It indicates that the collectors' mistrust of agricultural policies was exacerbated, which then led them to reject the reintroduction of the order.

< Table Ⅴ-14> Pros and Cons on Reintroduction of Tangerine Marketing Order in 2005

Classification		Very Opposed	Generally Opposed	Generally Supportive	Very Supportive	No Answer	Average
For 2003's	Tangerine Farmers	6.4	17.5	56.1	20.0	-	2.90
	Collectors in PM	10.0	54.0	28.0	8.0	-	2.34
	Wholesalers in Consumption Area	.5	7.6	66.7	23.3	1.9	3.15
For 2004's	Tangerine Farmers	3.3	7.3	68.5	20.9	0.0	3.07
	Collectors in PM	44.0	34.0	20.0	2.0	0.0	1.80
	Wholesalers in Consumption Area	1.5	12.5	53.0	31.0	2.0	3.16

3) Degree of Control for Reintroduction

The respondents were questioned about the degree of regulatory power when the tangerine marketing order is reintroduced. In the 2004 survey, the farmers and the wholesalers in consumption areas became more supportive for the opinion that 'the order should be more strengthened from the previous year's'. However, the collectors in producer markets strongly opposed the order reintroduction and highly supported to 'abrogate the order'.

<Table Ⅴ-15> Degree of Control for Reintroduction of Tangerine Marketing Order in 2005

Classification		To Maintain Previous Level	To Ease from Previous Level	To Strengthen from Previous Level	To Abrogate	Others	No Answer
For 2003's	Tangerine Farmers	22.5	20.9	56.3	-	.2	.1
	Collectors in PM	22.0	36.0	30.0	6.0	-	6.0
	Wholesalers in Consumption Area	30.0	10.5	58.6	-	0.5	.5
For 2004'	Tangerine Farmers	26.4	6.5	65.7	0.0	1.4	-

s	Collectors in PM	16.0	24.0	22.0	38.0	0.0	-
	Wholesalers in Consumption Area	29.0	5.0	61.5	0.0	1.0	-

4) Pros and Cons to Adopt Sweetness, Acidity in Quality Ranks

On the matter of adopting a quality rank system, the wholesalers in consumption areas and farmers were highly supportive. More than 85% of them responded positively. In the responses among collectors, the scale points rose from 2.26 of the 2003's survey to 2.96 (in 4 full point scale survey), which indicates that they became more positive in the 2004 survey despite the sharp division between supportive and opposing opinions.

< Table Ⅴ-16> Pros and Cons to Adopt Sweetness, Acidity in Quality Ranks of Tangerine Marketing Order in 2005

Classification		Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	No Answer	Average
For 2003's	Tangerine Farmers	3.2	18.6	54.0	23.7	.5	3.02
	Collectors in PM	14.0	50.0	32.0	4.0	-	2.26
	Wholesalers in Consumption Area	.5	7.10	45.2	47.1	-	3.39
For 2004's	Tangerine Farmers	2.1	16.1	56.0	25.8	-	3.06
	Collectors in PM	20.0	32.0	38.0	10.0	-	2.96
	Wholesalers in Consumption Area	0.0	11.1	48.5	40.4	-	3.29

5) Pros and Cons on Qualifying Unsalable Size No. 1 & 9 Fruits above Certain Quality Level as Salable Fruits

Among the survey respondents, tangerine farmers and wholesalers in the consumption area appeared to have more positive opinions on the subject issue, whereas there were more negative opinions among the surveyed collectors in producer market.

< Table Ⅴ-17> Pros and Cons on Qualifying Unsalable Size No. 1 & 9 Fruits above Certain Quality Level as Salable Fruits

Classification	Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	Average
Tangerine Farmers	7.5	18.2	36.9	37.4	3.04
Collectors in PM	40.0	18.0	24.0	18.0	2.20
Wholesalers in Consumption Area	21.7	22.7	43.9	11.6	2.45

6) Pros and Cons on Adopting Wax Coating Prohibition

According to the survey result, tangerine farmers and wholesalers in the consumption market aggressively supported the idea to include a wax coating prohibition in the tangerine marketing order. However, the group of collectors in the producer market showed opposition to the idea. It is also a general trend in Japan, where similar species are cultivated, not to apply wax coating and moreover, domestic consumers do not prefer a wax coated tangerine. Therefore, it is reasonable to prohibit market circulation of a wax coated tangerine. It is also necessary to comply with the wax coating prohibition clause in the Tangerine Production and Distribution Ordinance which is scheduled to be effective as of July 1, 2006.

< Table Ⅴ-18> Pros and Cons on Adopting Wax Coating Prohibition in 2005 Tangerine Marketing Order

Classification		Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	No Answer	Average
For 2003's	Tangerine Farmers	7.7	19.2	26.8	46.0	.3	3.13
	Collectors in PM	16.0	42.0	24.0	18.0	-	2.44
	Wholesalers in Consumption Area	8.1	18.1	38.6	35.2	-	3.01
For 2004's	Tangerine Farmers	8.0	13.2	25.7	53.1	-	3.24
	Collectors in PM	50.0	30.0	10.0	10.0	-	1.80
	Wholesalers in Consumption Area	12.6	19.7	38.4	29.3	-	2.84

7) Pros and Cons on Scope Expansion to Include Consumption Area

The responses from the tangerine farmers and wholesalers in consumption areas consisted of very positive opinions to include consumption areas under the order, while collectors were highly opposed to the idea. The survey result suggested that the inclusion of consumption areas into the order is highly necessary to overcome the massive circulation of unsalable products in the neighboring in-kind wholesale markets to the large cities where the intermediary merchants shipped unsalable products. The current problem remained mainly due to the limited order scope to include only up to nationwide wholesale markets.

< Table Ⅴ-19> Pros and Cons on Scope Expansion of Tangerine Marketing Order to Include Consumption Area

Classification		Very Negative	Somewhat Negative	Somewhat Positive	Very Positive	No Answer	Average
For 2003's	Tangerine Farmers	2.1	9.3	44.8	43.6	.2	3.31
	Collectors in PM	24.0	40.0	26.0	10.0	-	2.22
	Wholesalers in Consumption Area	2.4	9.5	14.3	38.6	35.2	3.95
For 2004's	Tangerine Farmers	1.5	8.4	48.8	41.3	-	3.30
	Collectors in PM	36.0	30.0	16.0	18.0	-	2.16
	Wholesalers in Consumption Area	9.2	5.6	41.3	43.9	-	3.20

3. Quantitative Assessments and Effect Analysis on Tangerine Marketing Order

A. Effects on Tangerine Price and Gross Income Increase Using Statistical Data

It is realistically difficult to accurately measure the effect of the order enactment using metrics because the current year's tangerine price is affected by the current year's complex elements such as the levels of sweetness and acidity, other qualitative elements, production volume, production volume and quality of fruits in complementary relationship, import volume, and so on. The overall production of fruits, particularly those with high complementary relationship to tangerine, such as apples, pears, and persimmons, increased by 8% from the poor harvest in 2003 due to Typhoon Maeme. Moreover their overall quality was improved that the level of sweetness was up by more than 1 Brix with better shapes and colors. In consequence, the degree of consumer satisfaction on quality of those fruits was high according to a survey. The pear production in 2004 was exceptionally large compared to other fruits and increased by 35% from the previous year. The tangerine production is estimated to be at around 540,000 tons, down by 50,000 tons from the expected production volume of 590,000 tons. Although sweetness was not improved compared to the previous harvest, the ratio between sweetness and acidity that determines the taste of tangerine was increased by more than 1.0 degree.

Accordingly, it is not easy to clearly distinguish the cause of the price increase for the 2004 field tangerine whether it is from the order enactment or other fruits' proper arbitration of production volume or the overall fruit price increase from the quality

improvement. Nevertheless, this research paper attempted to measure the effects from the tangerine marketing order implementation using the most available methodology for the given problems. Two methods were employed in the research to measure the effects of the order implementation as follows:

First, the estimates of gross income between the past years and 2004 were compared and the differences were determined to be the effect of the marketing order under the given production volume and quality. Second, the changes in shipment volume is calculated by applying the order's unsalable product regulation in various ways under the given production volume and quality. Then the effect of the calculated changes on the tangerine gross income is calculated by using econometric models.

First, to explain about the method of utilizing field tangerine gross income, the difference between the average past gross income and the estimated 2004 field Unshiu tangerine gross income is determined as the effect of the order implementation. However, it would not be justified to simply consider the entire difference in gross income from the previous year's as the effect of the marketing order. The improved sweetness to acidity ratio in the 2004 harvest field tangerine by more than 1 degree and the reduced production volume to 540,000 tons as a result of the Jeju government's strong effort to close down and reduce certain number of tangerine orchards were all merged into the overall gross income effect. As a first step, the average or the previous year's gross income is deducted from the 2004 field tangerine gross income. Then, the quantitative effect of the quality improvement and production reduction of field tangerine is eliminated from the above calculated gross income difference. The result is determined to be the effect of the order implementation.

What comes next in the calculation of the effect is to estimate the relationships of gross income to production volume and gross income to sweetness to acidity ratio. The result from a regression equation method with 8 sets of available data collected since 1997 until 2004 is as below:

Equation to estimate field tangerine gross income upon changes in production volume and sweetness and acidity

TR= 28025 + 30973 SAR - 0.40459Q
(1.01) (2.27)* (-1.414)

Except,

Figures in parenthesis are t-values. *: 10% significance level

According to the estimation equation, the significance level of each coefficient showed insignificant except 10% of the sweetness and acidity's significance level. However, the determinant coefficient level, which describes the overall explanatory power of the tested equation, is at the satisfactory level of 0.8[10], thus it would be no problem to use the equation result for analytical data. The result of the equation estimated that the tangerine gross income would increase by 30.9 billion won per every 1 point increase of the sweetness to acidity ratio, a critical taste determinant of tangerine, and production reduction of 1 ton would increase 400,000 won of gross income.

The recent 4 straight years of massive close-downs of tangerine orchards were accelerated due to the price slump since 1999 until 2002 and made a definite contribution to production reduction in an absolute number. In addition, the marginal tangerine orchards that used to produce somewhat low quality tangerine also followed the trend of close-down, which led to quality improvement of field tangerine product in terms of an average concept. Both the production reduction and the quality improvement through the orchards' close-down effect are considered to contribute to tangerine price rise.

The total size of the closed-down orchards merely reached 700ha from 1997 to 2002. In comparison, the continued sagging prices from 1999 to 2002 accelerated the trend of orchard close-down. Consequently, the reduced cultivating areas were 1,323ha (with budget spending of 38 billion won) in 2003, 2.559ha (with budget spending of 74.7 billion won) in 2004. As a result the field tangerine cultivating area as of April 2005 is dramatically reduced to 19,789ha.

Overall, any tangerine related problems due to the industry structure in Jeju can only be resolved within the tangerine industry; hence the efforts to improve quality and to renovate the distribution system need to be continued.

<Table Ⅴ-20> Annual Status of Field Tangerine Cultivating Area and Close-down

Year	Field Tangerine Cultivating Area	Close-down Orchards	Budget Amount

[10] Due to the limited availability of data, the degree of freedom could not be secured at the satisfactory level.

	(ha)	(ha)	(100 million won)
1997	24,816	31.4	9.0
1998	24,681	31.1	8.9
1999	24,500	20.7	6.0
2000	24,394	31.0	9.0
2001	23,841	377.7	107.8
2002	23,495	208.6	59.9
2003	22,471	1,323	379.8
2004	19,789	2,559	747.1
Accumulated Total		4,582.5	1,327.5

Date: Internal Data in Jeju Tangerine Department

The data for the past average gross income was based on 2002's data when the tangerine marketing order was yet to be introduced. For sweetness and acidity data, 'scenario A' employed the recent 6 years' data up to 2002 data from 1997 when the data began to be available, and 'scenario B' employed 4 years' data from 1999 to 2002 products when the tangerine industry was in the worst doldrums.

<Table Ⅴ-21> Gross Income Change upon Sweetness to Acidity Ratio and Production Volume

Year	Sweetness(Brix) (a)	Acidity (Degree) (b)	S/A Ratio (a/b)	Field Tangerine Production Volume (ton)	Filed Tangerine Gross Income (million won)
1997	11.5	1.25	9.2	659,121	315,785
1998	11.4	1.03	11.1	511,014	453,866
1999	9.1	1.43	6.4	603,294	260,966
2000	9.3	0.97	9.6	525,069	302,563
2001	10.5	1.2	8.8	600,140	251,082
2002	9.4	1.2	7.8	739,266	205,620
2003	9.8	1.1	8.9	596,732	337,932
2004	9.8	1.0	9.8	537,359	428,046
Avg.(97-02)A	10.2	1.2	8.6	606,317	298,314
Avg.(99-02)B	9.6	1.2	8.0	616,942	255,058
2004-A	-0.4	-0.2	1.2	-68,958	129,732
2004-B	0.2	-0.2	1.8	-79,583	172,988
2004-2003	0.0	-0.1	0.9	-59,373	90,114

To calculate the effect of the 2004 field tangerine marketing order, first the change in tangerine gross income was calculated from the difference between the 2004 field tangerine products and the gross income for the scenario period (without the order

introduction). Then, the sweetness to acidity ratio and the effect from the production change were calculated by utilizing the estimated data from equations. The sum of these two calculated results was deducted from the above calculated change in field tangerine gross income to come up with the effect of the order. As a result, the calculated effects of the tangerine marketing order were estimated to be 55.58 billion won (with scenario A) and 69.86 billion won (with scenario B).

In the mean time, the overall fruit prices rose nearly two times of the previous years' since the initial price surge that started from apples and persimmons in November 2004 then followed by tangerine in January 2005 except in the case of pears.

<Table Ⅴ-22> Price Change Ratio of 2004 Harvest Fruits

Classification	November		December		January		February	
	Price	Ratio	Price	Ratio	Price	Ratio	Price	Ratio
Tangerine	13,433	0.97	15,481	1.20	26,710	1.95	30,850	2.02
Apple	41,019	1.72	45,370	1.76	51,620	1.82	55,762	1.96
Pear	24,288	1.28	28,923	1.18	29,407	1.11	31,120	1.12
Persimmon	33,615	1.79	34,426	1.59	43,200	1.79	51,786	2.12

Data: Seoul Metropolitan City Korea Agricultural Trade Information

Although the effect of the price rise in tangerine is generally interpreted as a result of quality improvement in the overall fruit sector compared to previous years', the price increasing pressure from price competition among different fruits is also considered to lead the subsequent ballooning effect of the price rise. In addition, not only the domestic situation in the fruit sector but also the external circumstances including the raised safety issue about the imported U. S. oranges, from septoria citri fungus detection and the reduction of imported U. S. oranges due to the applied import ban, might have contributed to the tangerine price increase.

The measurement of such special effects for the 2004 harvest was calculated by deducting the effects of sweetness improvement and production reduction of the 2004 harvest from the 2003 harvest which was controlled by the tangerine marketing order for the first time. When considering the survey results of the respondents' perception that the controlling degree of the 2004 order execution was comparatively heightened from the 2003 order, the measured 2004 effect of the order, as above, should be interpreted to include such heightened effect of the order.

Consequently, the measured effects of the order for the 2004 harvest on tangerine gross income were estimated to be in the range of 55.58 billion won to 69.86 billion won, including the special effects, but in the range of 25.87 billion won to 40.15 billion won excluding the 2004 special effect.

<Table Ⅴ-23> Analysis of Tangerine Marketing Order's Effects

Classification	Gross Income Difference (million won)	S/A Ratio* (Degree)	Production Volume (ton)	Special Effect in 2004	Effects of Tangerine Marketing Order (million won)	
Scenario A	129,732	41,674	32,475	29,705	25,877	55,583
Scenario B	172,988	65,646	37,479	29,705	40,158	69,863

*Sweetness/Acidity Ratio

The price trend of the 2004 harvest field tangerine remained strong. The average bid-off price per 15 kilogram box of field Unshiu tangerine was 18,920 won in 2004, which was increased by 5,309 won or 39% from the 2003's 13,611 won and at 2.4 times higher than the 2002's 7,968 won.

When the 2004 trend was compared to the past price trends, it rose by 10,263 won or 84.4% from the past 5 years' average price (from 1999 to 2003) and was higher by 11,158 won or 69.6% from the past 7 years' average price (from 1997 to 2003). In the price trend of month to month comparison with the past 5 years' average prices, the least price increase was 23% in October and the most increase was more than 180% in February. Compared to the past 7 years' average prices, the least increase was in November at 21% and the most increase was at more than 140% in February.

The recent month to month price trend showed that there is a tendency of a severer price falling compared to the past pricing trend in the period from October to November when less matured tangerine is shipped to the market. The excessive production of tangerine and other fruits also contributed to the comparatively lower range of pricing in the same period. The pricing pattern was seen not only in tangerines but also in overall fruit pricing. The findings in the price trend brings out a strong message that the conventional shipment practice that the less ripened fruits were harvested, then artificially ripened to a vivid tangerine color can no longer be tolerated in the consumer market. The fruits that are fully ripened on the trees will receive a treatment of competitive pricing.

<Table Ⅴ-24> Month to Month Average Bid-off Price (won/15kg) Trend in Field Unshiu Tangerine

Year	October	November	December	January	February	March	April	Average
For 1997's	14,767	9,967	8,591	10,150	12,113	15,720	20,007	10,463
For 1998's	14,206	13,771	13,714	19,355	22,188	19,741	25,337	16,331
For 1999's	17,148	10,811	9,068	7,766	6,472	7,006	8,343	9,078
For 2000's	15,423	11,835	10,539	10,025	10,367	16,738	21,753	11,126
For 2001's	10,577	7,563	7,877	10,527	14,397	16,486	17,873	9,531
For 2002's	9,809	8,954	8,607	7,180	6,637	6,411	7,116	7,968
For 2003's (A)	20,142	13,598	11,598	12,985	16,076	20,061	26,266	13,611
For 2004's (B)	18,061	13,307	15,438	24,666	30,301	33,904	18,200	18,920
Past 5 years' Avg.(C)	14,620	10,552	9,538	9,697	10,790	13,340	16,270	10,263
Past 7 years' Avg.(D)	14,582	10,928	9,999	11,141	12,607	14,595	18,099	11,158
B/C	1.235	1.261	1.619	2.544	2.808	2.541	1.119	1.844
B/D	1.239	1.218	1.544	2.214	2.403	2.323	1.006	1.696
B/A	0.897	0.979	1.331	1.900	1.885	1.690	0.693	1.390

Note) The past 5 year average refers to the average of 1999-2003.

The past 7 year average refers to the average of 1997-2003.

Data: Jejudo Citrus Marketing & Shipment Association, 『Analysis of Tangerine Distribution Status 』, annual version

B. Estimation of Increase in Tangerine Prices and Gross Income Using Econometrics Model

1) Estimation of Unsalable Proportion to Total Products and Appropriateness of Product Criteria

In order to estimate the ratio of the unsalable tangerine product to the total product volume, first, the fruits that were harvested from the trees cultivated by the Jeju Agricultural Technology Institution were categorized based on the selection criteria. Then various combinations of fruits determined as unsalable by the marketing order were established to build different scenarios. In addition, the ratio of fruits with serious defects in the salable groups of No. 2 to 8 size fruits was added for further scenario assumption.

<Table Ⅴ-25> Proportions of Tangerine by Selection Criteria Size and Ratio of Seriously Defective Fruits for 2004 Field Tangerine

Proportion of Fruits by Selection Criteria Size among Selected Unsalable fruits (%)					Ratio of Seriously Defective Fruits (%)
No. 0	No. 1	No. 9	No. 10	Sub total	
0.7	6.4	9.0	3.7	19.8	5.5

Data: Jeju Agricultural Technology Institution, ■■ Tangerine Production Observation Report for 2004 Harvest ■■, 2005

Five unsalable product ratios on field tangerine were established based on the determination of unsalable groups as regulated in the Ordinance for Tangerine Production and Distribution. First scenario 1 was established by adding the ratios of No. 0 and 10 fruits to assume the unsalable product ratio at 4.4%. Then sum of No. 0, 10, 1 fruits' ratios at 10.8% was assumed for scenario 2, sum of No. 0, 10, 9 fruits' ratios at 13.4% for the scenario 3, sum of No. 0, 10, 1, 9 fruits' ratios at 19.8% for the scenario 4. Finally 5.5% of the seriously defective ratio was added to the scenario 4 ratio, 19.8%, to make 25.3% for Scenario 5.

<Table Ⅴ-26> Unsalable Tangerine's Ratio Scenarios

Classification	Contents	Unsalable Ratio
Scenario 1	Unsalable products upon Tangerine Ordinance, No. 0 & 10's Ratio	4.4%
Scenario 2	Scenario 1 + No. 1 Fruit Ratio (incl. No. 0, 10, 1 ratios)	10.8%
Scenario 3	Scenario 1 + No. 9 Fruit Ratio (incl. No. 0, 10, 9)	13.4%
Scenario 4	Scenario 3 + No. 1 Fruit Ratio (incl. No. 0, 10, 1, 9)	19.8%
Scenario 5	Scenario 4 + Seriously Defective Ratio (from No. 2 to No. 8 fruits)	25.3%

Some people criticize that the tangerine marketing order is designed to benefit only the tangerine farmers. The volume reduction by the criteria to determine salable and unsalable groups only by size is said to be collusion to only benefit the tangerine farmers. It is true that the tangerine marketing order determines the criteria solely by size. However, the criteria determination by size was validated in the fruit quality research by selection size for the past years' products.

As it is seen in the fruit quality research (the average for 1999 ~ 2004), smaller size fruits were sweeter but they were also high in the degree of acidity, which led to a low sweetness to acidity ratio (sweetness/acidity). Due to relatively high acidity, the No. 0 & 2 fruits showed the sweetness to acidity ratio at below 8.2. The National Agricultural Products Quality Management Service under the Ministry of Agriculture and Forestry also determined small size fruits as unsalable products in the criteria. Another aspect to validate the credibility of size based criteria is about the quality characteristic of small fruits. When consumers peel the skin of small size tangerine, the internal flesh of the fruit comes off together with skin, which ends up leaving stains on the hands. One of tangerine's

advantages that appeals to consumers is the convenience to eat the fruit but this image could be ruined by such characteristics of the small size fruits.

<Table Ⅴ-27> Quality of Field Tangerine by Selection Criteria (1999 ~ 2004 Average)

Selection Criteria	Sweetness (Brix)	Acidity (Degree)	S/A Ratio
No. 0 Fruit	9.8	1.24	8.0
No. 1 Fruit	9.8	1.20	8.2
No. 2 Fruit	9.7	1.15	8.5
No. 3 Fruit	9.7	1.10	8.8
No. 4 Fruit	9.7	1.09	8.9
No. 5 Fruit	9.7	1.08	9.0
No. 6 Fruit	9.6	1.05	9.1
No. 7 Fruit	9.6	1.07	9.0
No. 8 Fruit	9.5	1.02	9.3
No. 9Fruit	9.3	1.04	9.0
No. 10 Fruit	9.2	0.99	9.4

Data: Jeju Agricultural Technology Institution, 『Tangerine Production Observation Report』, Annual version for each year

On the contrary, despite the higher sweetness to acidity ratio in large size No. 9 & 10 fruits, the sweetness level is inferior to No. 0 fruits by more than 0.5 brix. They lack in the consumers' desirable quality with a certain degree of sweetness and its corresponding ratio to the degree of acidity. The research also reveals the aspect of production technique among farmers. The farmers with a superior technique showed significantly less proportions of small and large size fruits to the total production than the other farmers' harvests. There is another fact that 'quality consistency' of tangerine is one of the requests for quality improvement by the wholesalers in the consumption area. All findings seem to validate the reasonableness of the set criteria to determine unsalable products in the current Tangerine Marketing Order.

The correlations among sweetness (S), acidity (A), S/A ratio, production volume of field tangerine, gross income from field tangerine were tested by using the data collected from 1997 to 2004. The correlation coefficient between the gross income and the S/A ratio was 0.783 and it was 0.62 between the gross income and the sweetness, which showed that the gross income is highly and positively correlated with both S/A ratio and acidity level. The results of correlation coefficient test in the relationship of the gross income with the field tangerine production volume (-0.71) and with the acidity level (-0.477) showed a negative relationship to each other. One interesting result is that the acidity

and the field tangerine production volume are positively correlated at the coefficient of 0.583, whereas the acidity level with S/A ratio showed a highly negative correlation coefficient at -0.836. The results indicate that large production volume will likely generate more small size fruits, which will lead to a higher acidity level. Consequently, the large production volume will be highly likely to cause the overall quality deterioration.

<Table Ⅴ-28> Correlations among sweetness (S), acidity (A), S/A ratio, production volume of field tangerine, gross income from field tangerine

Classification	Sweetness	Acidity	S/A Ratio	Field Tangerine Production Volume	Field Tangerine Gross Income
Sweetness	1.000				
Acidity	-0.106	1.000			
S/A Ratio	0.619	-0.836	1.000		
Field Tangerine Production Volume	-0.109	0.582	-0.601	1.000	
Field Tangerine Gross Income	0.620	-0.477	0.783	-0.709	1.000

In the meantime, there should be separate research in the future to find out consumers' preferences, e.g. degree of sweetness and S/A ratio, in order to satisfy consumers' needs, particularly towards higher quality tangerine.

2) Composition of Base Scenarios and Effect Analysis

The base scenario to compare with other scenarios was composed using the following elements: the estimated 2004 tangerine product volume of 537,359 tons, the scenario 5 assumption for the unsalable product ratio as mentioned above (25.3%), the assumption of export volume at 5,000 tons, and the estimated farmers' selling price and tangerine gross income under the assumption that all available unsalable products are sold to processing factories for 100 won per kilogram.[11]

The assumptions used in scenario 1 included the unsalable product ratio of 4.4% and the controlling regulation is only the tangerine related ordinance without implementation of the tangerine marketing order. The effect of the order implementation was estimated by

[11] Interpretation of Correlation Coefficient: '0.2~0.4 insignificantly correlated' '0.4~0.6 correlation exists' '0.6~0.8' highly correlated' '0.8~1.0' significantly correlated'

obtaining the difference between the calculated estimations of scenario 1 and the base scenario, scenario 5. As a result, the estimated effect of the order showed the increases in the farmers' selling price by 300 won per kilogram and in the gross income by 58.91 billion won.

The estimated effects when scenarios 2 to 4 were utilized resulted in the increasing effects of farmers' selling price by 137 won ~ 240 won per kilogram and gross income by 34.46 billion won ~ 48.89 billion won.

<Table Ⅴ-29> Effect Analysis of Tangerine Marketing Order Using Econometric Model

Classification	Price(won/kg)	Gross Income(100 million won)	Product Volume Control Effect *	
			Price(won/kg)	Gross Income(100 mil. won)
Scenario 1	711	3,691.1	300	589.1
Scenario 2	772	3,791.3	240	488.9
Scenario 3	801	3,845.0	211	435.2
Scenario 4	874	3,935.7	137	344.6
Scenario 5 (Base Scenario)	1,012	4,280.2	-	-

Note) * Product Volume Control Effect = Base scenario – Each scenario from 1 to 4

Ⅵ. Conclusion and Policy Suggestion

1. Summary and Conclusion

The tangerine marketing order for the 2003 field tangerine product was enacted for the first time in Korea with Jeju as the only area affected by the order enactment. The order achieved a considerable success in its own capacity, which brought hope to the Jeju economy as it functioned to deter 4 straight years of sagging prices of tangerine products from 1999 until 2000. However, the covered area was limited to Jeju only in the 2003 order, which caused controversies over the order's efficiency. A complement to the law was made and the Tangerine Marketing Order Promotion Committee was founded to include consumers, producers, and experts. After this, the 2004 marketing order was enacted with expanded scope to include nationwide wholesale markets.

Accordingly, this research aims first, to analyze and assess the achievements and problems arising from the introduction and implementation of the 2004 Field Tangerine Marketing Order. The order included the nationwide market for the first time in Korea since the first order enactment in 2003 was limited to Jeju only. Secondly, it aims to add efficiency in the future reintroduction of the marketing order through the reflection of the assessed contents to complement the order.

Hereafter, the important research results are reviewed in terms of qualitative assessment of the order, quantitative effect analysis using statistics and econometric models, and the direction of improvements for the future order reintroduction.

The compliance monitoring and supervision team adopted a dual system composed of the teams to cover the nationwide wholesale markets and the production areas in Jeju. The total team consisted of 354 members in 89 squads, which was strengthened by 2.6 times from the level of monitoring for the 2003 order compliance at the total of 134 members. The total disclosed violations of 450 cases include 250 cases in Jeju (55.6%) and 200 cases outside Jeju (44.4%). The types of violations were: 336 cases (74.7%) of unsalable tangerine product circulation, 42 cases of artificial coloring, non-compliance of quality management 31 cases, and others 41 cases. The details of violations by the perpetrating parties include 347 cases (77.1%) by merchants' groups, 42 cases (9.3%) by

agricultural cooperatives and citrus marketing & shipping associations, and 61 cases (13.6%) by corporations and individuals.

A big change in the details of violations by the perpetrators was the total violations committed by agricultural cooperatives and citrus marketing & shipping associations with only 42 cases, 9.3%, of the total violations of 450 cases. This is a significant drop to about one third of the level of the previous year's violations, 166 cases, 27.6%, from the total violations of 602 cases. It is attributed to the enforcement of strong administrative measures to include exclusion of the violators from a box cost subsidy and other administrative and financial supports as well as the change in mindset of the chiefs, members, and staff of agricultural cooperatives and citrus marketing & shipping associations. On the contrary, the violations committed by merchants' groups leveled at 77.1%, or 347 cases including 203 cases in Jeju and 144 cases outside Jeju, which calls for immediate countermeasures.

When considering that the total violations of ordinances for 6 years from 1997 to 2002 were 967 cases (annual average of 161 cases), the violations in 2003 and 2004 when the marketing order (ordinance) was implemented on a full scale were 602 and 450 cases respectively, which rose 3 to 4 times higher than the previous level. The high booking rate of violations might be a concern for some; on the other hand, it could be interpreted as the result of the active inspection activities by the monitoring and supervision teams.

The final figures of the penalized order (including ordinance) violations was 81.3% of the fine imposing rate (366 of total 450 violations) with the total fined amount of 243,088,000 Won (average 660,000 Won per case). In comparison with the fine imposing rate of 19.4% for 6 years from 1997 to 2002 (188 cases of fines to the total 967 violations), the fine imposing rates in the years of 2003 and 2004, when the marketing order was in effect, were at 86.7% and 81.3% respectively. This trend of a higher fine imposing rate executed through the past two years may largely contribute to heighten the practical effects of the marketing order and ordinance and its settling down in the market as an institutionalized system.

The qualitative effects obtained through the enactment of the marketing order are summarized below:

First, a general view is established that there is an increase in tangerine generated income derived from the order enactment. Second, the beneficiaries of the order enactment were identified as collectors in producer market, tangerine farmers, and

distributors in consumption area in the order of the total obtained responses. However, the comparatively high tangerine price to 2003's resulted in the low level of responses to recognize consumers as part of the beneficiaries. Third, the major achievements from the order were recognized: 'high quality tangerine shipment', 'shipment volume control', 'tangerine price rise', and 'formation of self-relieving efforts to revive the tangerine industry'. Fourth, the tangerine farmers and distributors in the consumption area showed a more positive reaction than they did in the 2003 survey about the degree of the order's influence to the tangerine distribution system, except for the collectors in the producer market. Fifth, both consumers and wholesalers in the consumption areas gave a positive reaction on the issue of product quality improvement (to include a decrease in the numbers of decomposed fruits and consistency in quality) compared to the past years' product quality. Sixth, the survey respondents assessed the overall improvement of the 2004 tangerine marketing order compared to the 2003 order. Seventh, the respondents highly praised the improvement of the tangerine marketing order. In particular, many of them pointed out the improvement of 'participatory mindset of the concerned parties to the marketing order', while they also recognized the achievement of effective monitoring and supervision of the order compliance with the expanded scope of the order to include nationwide wholesale markets.

This could be ascribed to the active participation of the members from agricultural cooperatives, citrus marketing and shipping associations, packing and marketing associations, and local authorities who provided 354 monitoring members, 2.6 times more monitoring members from the previous level. Therefore, the strengthened monitoring and supervision team was able to contribute to a stricter compliance monitoring activities. It is realistically difficult to accurately measure the effect of the order enactment using metrics because the current year's tangerine price is affected by the current year's complex elements such as the levels of sweetness and acidity, other qualitative elements, production volume, production volume and quality of complementary fruits, and import volume, and so on. The overall production of fruits, particularly those with high complementary relationship to tangerine, such as apples, pears, and persimmons, increased by 8% from the poor harvest in 2003 due to Typhoon Maeme. Moreover their overall quality was so improved that the level of sweetness was up by more than 1 Brix with better shapes and colors. Consequently, the degree of consumer satisfaction on quality of those fruits was high according to a survey. The pear production in 2004 was exceptionally large compared to other fruits and increased by 35% from the previous year.

The tangerine production is estimated to be at around 540,000 tons, down by 50,000 tons from the expected production volume of 590,000 tons. Although sweetness was not improved compared to the previous harvest, the ratio between sweetness and acidity that determines the taste of tangerine was increased by more than 1.0 degree.

Accordingly, it is not easy to clearly distinguish the cause of the price increase for 2004 field tangerine whether it is from the order enactment or other fruits' proper arbitration of production volume or the overall fruit price increase from the quality improvement. Nevertheless, this research paper attempted to measure the effects from the tangerine marketing order implementation using the most available methodology under the consideration of the given problems. Two methods were employed in the research to measure the effects of the order implementation. First, the estimates of gross income between the past years and the 2004's were compared and the differences were determined as the effect of the marketing order under the given production volume and quality. Second, the changes in shipment volume is calculated by applying the order's unsalable product regulation in various ways under the given production volume and quality. The effect of the calculated changes on the tangerine gross income is then calculated by using econometric models.

First, to explain about the method of utilizing field tangerine gross income, the difference between the average past gross income and the estimated 2004 field Unshiu tangerine gross income is determined as the effect of the order implementation. Accordingly, the average or the previous year's gross income is deducted from the 2004 field tangerine gross income. Then, the quantitative effect of the quality improvement and production reduction of the field tangerine is eliminated from the above calculated gross income difference. The result is determined to be the effect of the order implementation. The research revealed that the increase of sweetness to acidity ratio by 1 caused the increase in tangerine gross income by 30.9 billion won and production reduction by 1 ton increased gross income by 400,000 won.

The data for the past average gross income was based on 2002's data when the tangerine marketing order was yet to be introduced. For sweetness and acidity data, the 'scenario A' employed the recent 6 years' data up to 2002 data since 1997 when the data began to be available, and the 'scenario B' employed 4 years' data from 1999 to 2002 products when the tangerine industry was in the worst doldrums.

To calculate the effect of the 2004 field tangerine marketing order, first the change in tangerine gross income was calculated from the difference between the 2004 field tangerine products and the gross income for the scenario period (without the order introduction). Then, the sweetness to acidity ratio and the effect from the production change were calculated by utilizing the estimated data from equations. The sum of these two calculated results was deducted from the above calculated change in field tangerine gross income to come up with the effect of the order. As a result, the calculated effects of the tangerine marketing order were estimated to be 55.58 billion won (with scenario A) and 69.86 billion won (with scenario B).

In the mean time, the overall fruit prices rose nearly two times of the previous years' since the initial price surge that started from apples and persimmons in November 2004 then followed by tangerine in January 2005 except in the case of pears. Although the effect of the price rise in tangerine is generally interpreted as a result of quality improvement in the overall fruit sector compared to the previous years', the price increasing pressure from price competition among different fruits is also considered to lead the subsequent ballooning effect of price rise. In addition, not only the domestic situation in the fruit sector but also the external circumstances including the raised safety issue in the imported U. S. oranges, from septoria citri fungus detection and the reduction of imported U. S. oranges due to the applied import ban, might have contributed to the tangerine price increase.

The measurement of such special effects for the 2004 harvest was calculated by deducting the effects of sweetness improvement and production reduction of the 2004 harvest from the 2003 harvest which was controlled by the tangerine marketing order for the first time. When considering the survey results of the respondents' perception that the controlling degree of the 2004 order execution was comparatively heightened from the 2003 order, the measured 2004 effect of the order, as above, should be interpreted to include such heightened effect of the order.

Consequently, the measured effects of the order for the 2004 harvest on tangerine gross income were estimated to be in the range of 55.58 billion won to 69.86 billion won including the special effects but in the range of 25.87 billion won to 40.15 billion won excluding the 2004 special effect.

Second, the research attempted to analyze the effects of the order through composition of various scenarios to measure the effect of price rise and gross income

increase using econometrics models. The utilized base scenario was scenario No. 5 which assumed 25.3% of the unsalable fruit category with the fruit size numbers of 0, 1, 9, 10 and with major deficiencies from the total of 537,359 tons of field tangerine harvest in 2004, and 5,000 tons for export, and the unsalable category product to be purchased by processing factories at the price of 100 won per kilo. Under those assumptions, the farmers' selling prices and gross income from field tangerine were calculated. The scenario No. 1 includes the assumptions that unsalable product ratio to the total production is 4.4% and there is no tangerine marketing order, but only tangerine ordinance. The difference between the calculated figures with the base scenario No. 5 and with the scenario No. 1 could be determined as the effect of the tangerine marketing order implementation. The estimated effects by different aspects included 300 won per kilo increase in farmers' selling price and 58.91 billion won of gross income increase.

The problems and changes of the distribution environment in the tangerine industry are as follows. First, the respondents pointed out the problems which were identified during the implementation process of the order to include: 'shipment of unsalable products by intermediary merchants, 'product standard by size', 'non-existence of strict penalty clause', 'insufficient monitoring and supervision activities', and 'lack of compliance mindset'. Second, 'lack of arrangement for shipment control system', 'insufficient measures offered to handle unsalable tangerine products', 'individual shipment system', and 'non-existence of measures to control intermediary merchants' are pointed out as the problems of the tangerine distribution system. Third, the suggested problems in the field Unshiu tangerine sector include: 'quality improvement', 'optimal volume production', 'shipment control', and 'improvement in distribution system' in the order of the respondents' choice. Fourth, the packing houses lacked in the functions of quality management and shipment control because there are too many packing houses (734 places). Fifth, The current ceiling of fine with maximum up to only 5,000,000 won is not forceful enough to stop the numerous violations of the order. Sixth, the consumers did not prefer the wax-coated tangerine but the wax-coating is still in practice because intermediate merchants and part of the consumption area favored wax coating. Seventh, unsalable product listing in the by-law wholesale markets appeared to be blockaded; however there were very little monitoring activities performed in the in-kind wholesale markets. Eighth, consumers using large scale discount markets and supermarkets have rapidly increased. Ninth, consumers demand fresh, delicious, and safe tangerines without artificial coloring.

The following summarizes the reintroduction, improvements, and efforts of the tangerine marketing order. First, the order's settling down in the market can be accomplished by satisfying the necessary conditions as shown in the survey results. It is necessary to install large-scale non-destructive packing houses with voluntary participation of farmers, merchants, agricultural cooperatives, and citrus marketing & shipping associations in the process of the order implementation. At the same time, an objective quality standard needs to be adopted. The order execution should be managed by implementing powerful monitoring and supervising activities with the insertion of a strengthened penalty clause that guarantees all of those order complying economic parties not to be victimized. Second, the reintroduction of the tangerine marketing order generally received a supportive opinion. However, the regulatory power of the order needs to be strengthened; 'adoption of quality rank system with sweetness to acidity', 'installation of non-destructive large scale packing houses', and 'wax coating prohibition in the order' should be concurrently enforced with the order reintroduction. Most importantly, the scope of the order needs to be expanded to include the consumption areas so that the operation of monitoring and supervising can be empowered to control the neighboring in-kind wholesale markets to the large cities where the intermediary merchants shipped unsalable products.

Based on the comprehensive review of the research result and assessment, the implementation of the tangerine marketing order for two consecutive years provided the opportunity for Jeju to overcome the past 4 years' stagnant economy. The marketing order was first adopted and implemented for the 2003 field tangerine harvest and only Jeju was the affected area by the order implementation. Then, the second tangerine marketing order for the 2004 harvest was implemented to affect nationwide distribution and markets. To better vitalize the Jeju economy, it is important not to miss the given opportunity and to ensure the reintroduction of the tangerine marketing order for the 2005 field tangerine product. The direction of the reintroducing tangerine marketing order should be as follows: The order needs to be complemented to guarantee 'consistent, fresh, high quality tangerine product' to satisfy the consumers' preference and an efficient blockade of unsalable product shipment. Therefore, the tangerine marketing order should be revised to enforce a more powerful operation than was in the 2004 order, which calls for many prerequisite actions. The related parties to the distribution cycle (agricultural cooperatives, citrus marketing and shipping associations, farmers, collectors in producer market) should aggressively participate in the order compliance. The order

needs to embrace: adoption of product criteria by size and quality, insertion of a strict penalty clause on violators, prohibition of wax coating, the order's scope expansion to include nationwide consumption areas or addition of wholesale markets (to include wholesale markets + in-kind wholesale markets + transportation companies + shipping companies + door-to-door express delivery service companies).

In the process of order implementation, a powerful oversight should be applied to the violators who then will be fined more heavily than the current level, e.g. from the current 5,000,000 won to 10,000,000 won. Such measures will fundamentally break off the incentives earned from circulating the unsalable tangerine products in the market. Concurrently, the goal to provide a sound protection for the order complying farmers and merchants will be accomplished. All these chain reactions will facilitate to enhance the real effects of the marketing order. In addition, the existing Ordinance for Tangerine Production and Distribution can be revised to supplement the implementation of the tangerine marketing order.

Instead of the drum type, small scale, pre-modern packing house with annual output volume of 700 tons, large scale base distribution centers in the producing areas should be built. The new distribution center should be equipped with non-destructive selection machines that provides quality fruit selection with the minimum annual output of 200,000 tons. The fruit tree support project within the FTA fund can finance the construction of the new distribution center. There are expected contribution effects from the new distribution center. The efficiency in shipment control will be raised and brand management under the consolidated standard will be available, which provides the ability to meet the request of large scale discount distributors for timely supply of the designated product with precise quantity. This will enhance the bargaining power of the new Jeju distribution center which will function to reduce the distribution cost by achieving economy of scale in distribution. Establishment of a system for the estimation of tangerine production volume is very critical because the estimation provides a fundamental element for base information. Establishment of a system for tangerine shipment control is also an important tactical measure to maximize the order's effect in the distribution sector. The system will help determine the markets and areas for market circulation of the selected tangerine products upon the product criteria in the order.

For a long term prospect, the demand and supply control will have to be managed in the direction of an autonomous control method by producers' groups. For the purpose, it is desirable for the producers to systematically belong to the organizations of packing and

marketing cooperatives, associations by production area, and citrus marketing & shipping committees/associations to share different roles in demand and supply control.

At first, producers are to join the base unit of the organization, a packing and marketing cooperative. The desirable role sharing among the organizations are: the packing and marketing cooperatives to be focused on producing activities, e.g. exchange of producing information and collective production. The associations by producing area or distribution centers in producing area are to be in charge of sales activities. In addition, in order to pursue nationwide marketing activities and autonomous demand and supply control, a comprehensive producers' organization to embrace all Jeju producers is essential. It would be appropriate to assign the roles related to a self-supporting fund system to local organizations in Jeju, e.g. self-supporting fund collection and execution of the fund.

The Jeju Tangerine Committee based on the agricultural cooperatives is not properly functioning as the main body for demand and supply control due to the inadequate coalition system among the participating cooperatives. The organization needs to be transformed to become a stronger association. "Jeju Tangerine Marketing & Shipping Association (tentative name)" should adopt the format of an associated incorporation under the Agricultural Cooperative Law and be equipped with a strong organization to perform such functions as Sunkist in the U. S.

When effective and controllable producers' organizations are completed, the marketing agreement with more voluntary participation from the producers' organizations, merchants, and producers would be more desirable instead of implementing the government's enforced marketing order.

A shipment system which is operated by agricultural cooperatives and distribution centers in producing areas is required to empower producers' organizations to perform the function of autonomous demand and supply control. It is important that the future distribution/collection in producing areas should be led by distribution centers in producing areas. The centers need to establish a foundation for demand and supply control e.g. production via advance contract. The centers should be managed by offering a membership to all members of cooperatives and making an agreement for the use of the center with them to achieve its functional purposes.

For the successful systemization of the tangerine cultivating farmers, a method to embrace the producers in the center's operation through a membership system and marketing agreement is recommended. The marketing agreement needs to contain the details such as species, quality, quantity, product delivery period, and payment method.

The center should establish a system to handle the entire volume as it was described in the marketing agreement.

Making agreements with users of the center is an important task because it will mitigate the free rider problem and secure stable supply of production volume to the distribution center in producing areas. Farmers who do not comply with the agreement should be penalized e.g. limiting use of the center's services and facilities. The marketing agreement includes the corresponding products' pricing method, payment settlement method, and whether to apply collective selection/accounting methods. The marketing agreement may contain an agreement on procurement of common expenses and collection of a self-supporting fund for the efficiency of the center's sales business.

2. Policy Suggestions

□ To heighten the level of P. R. and educational activities for the stakeholders (cultivating farmers, merchants, wholesalers in consumption areas)

○ P. R. activities

- Newspaper advertisement, TV Caption Ads, etc.
- P. R. Banner attachment and loud speaker broadcasting at village level
- Direct mailing with a letter calling for the order compliance and P. R. leaflet to each farm
- Intensified P. R. activities in wholesale markets (intermediary wholesalers) in consumption area

○ Educational Activities

- Arrangement and guidance of resolution meetings at cooperative level and packing & marketing cooperative level
- Arrangement of an educational program for all chiefs of packing & marketing cooperatives and tangerine producing farmers

□ To review the policy to strengthen the operations of monitoring and supervision activities for compliance of the tangerine marketing order

○ Reinforcement of monitoring members: To replace the current civil workers' dual task system to a privately managed system

○ Continuous operation of random, unscheduled, and night time monitoring in packing houses

- Reinforcement of monitoring activities through contracting with a private security company (ex. Caps, etc.)

○ Introduction of 3 Outs System: For the packing houses that commit 3 violations of the tangerine marketing order, to apply measures such as ‘assigning all-time monitoring staff’, ‘cancel quality inspection mark’, and ‘submission of business performance records to the corresponding tax office.

○ To establish and operate inspection teams in the consumption areas (including by-law wholesale markers, in-kind wholesale markets, etc.)

○ To replace ‘quality inspector system’ by combining the current ‘quality management administrator and tangerine marketing order instructor’ and assign 2 or 3 packing houses per inspector to be exclusively responsible. In addition, to adopt a pool system in each city and country for stricter management of packing houses and quality control.

□ To lift the current ceiling of the penalty fine to the order violators and to increase the number of persons with authority to impose penalty fines

○ Suggestion for revision of the clause related to 『penalty fine』 in article number 90 of the Agricultural Stabilization Act

- The current penalty imposition standard in accordance with the Enforcement Ordinance of the Agricultural Stabilization Act is lower than 5,000,000 won as per the Jeju Tangerine Marketing Order Ordinance. Consequently, the Agricultural Stabilization Act provides an atmosphere to instigate violation of the marketing order.

- Suggestion to lift up the imposing base by 2 times from the current level (from up to 5,000,000 won ⇒ to up to 10,000,000 won)

○ To increase the number of 『persons with fine imposing authority』 stated in article No. 191 of the Agricultural Stabilization Act.

- from the current ‘major and governor or mayor’ ⇒ to ‘addition of country mayor’

□ Prohibition of wax coated tangerine from distribution

○ To make sure the prohibition clause is executed as of July 1, 2006 as it is stipulated in the Ordinance for Tangerine Production and Distribution

○ To continuously educate consumers about the quality excellence of tangerine without wax coating

□ To fix unsalable tangerine selection sizes with numbers 0, 10, 1, 9

○ To regulate unsalable products size in the ordinance to help eliminate any misunderstanding e.g. ‘an accusation of price boosting behaviors through volume control’ by the Fair Trade Commission

○ To induce a technology adoption in the production area that reduces the size difference between small and large fruits and to produce more consistent quality of tangerine fruit

□ Adoption of registration system for packing houses

○ Size of packing house and its handing scale

○ Approved and reported building upon the Construction Act

○ Execution of the system as of July 1, 2006 in accordance with the Ordinance for Tangerine Production and Distribution

□ Simplification of the marketing order implementation procedure

○ To revise the current 2/3 of the registered members of the producer group to 2/3 of the registered representatives

○ To make a stipulation of 5 year order enactment term unless no special reasons exist instead of the current 1 year order enactment term (or until the tangerine production volume is reduced to less than 500,000 tons per year) as the case was seen in the United States

□ Revision of the article No. 38 of the Agricultural Stabilization Act, 【Prohibition of Trust Rejection, etc. 】

○ It is difficult to prohibit auctioning of the shipped unsalable products in the wholesale markets under the current law.

○ To add the following exceptional clause after the sub-article ① of the clause, (Prohibition of Trust Rejection, etc.) in the current article No. 38 of the Act.

② Prohibition of distribution ordered by other law(s) and/or prohibition of sales empowered through a separate marketing order by the Minister of

Agriculture and Forestry is excluded from the clause of 'Prohibition of Trust Rejection' of the Act.

□ To request for loss compensation due to the compliance of the marketing order

○ Part of the 2003 tangerine harvest was initially planned to be disposed of at the production sites as a project of the marketing agreement under the Agricultural Stabilization Act. However, the government financing was not provided for the implementation of the project, which led to the reservation of project implementation. Consequently, grievances among tangerine farmers arose and the credibility of the government's agricultural affairs deteriorated.

○ When there is a plan for a disposal of part of field tangerine at the production sites upon a marketing agreement of the Agricultural Stabilization Act or a marketing order, farmers' loss is expected and unavoidable. Hence, the government's prior supporting program and its realization are requested.

○ To revise article No. 12 [Supports for compliance of marketing order, etc.] of the Agricultural Stabilization Act. Ministers of Agriculture and Forestry or Maritime Affairs & Fisheries may compensate for the loss occurrence upon implementation of either a marketing agreement or a marketing order with the Agricultural and Fishery Product Stabilization Fund in accordance with article No. 54 of the Act. → To revise to "…should support for the compensation of the loss…"

□ To expand the support scope for the creation of a self-supporting fund or subsidy fund

○ The creation of a self-supporting fund at the current support level of 'within 1% of the annual shipment (amount)' has its limitations to support business expansion, to pursue demand and supply control, and price stabilization of agricultural products. (The annual self-supporting fund for tangerine is about 2 billion won level according to the current law.)

○ To expand the support scope to pursue the self-supporting fund organization's business expansion

- From the current level of 'within 1% of the annual shipment (amount) ⇒ To increase 'maximum up to 3%'

○ To increase the government support fund for self-supporting funds and to differentiate the level of support

- From the current 100% (matching fund) ⇒ to expand up to ‘200% ~ 300%’

□ To expand the coverage of order in terms of the related parties and markets

○ To add the related parties to the order

- Transportation companies
- Shipping companies
- Express door-to-door delivery companies

○ To include markets in the order coverage

- In-kind wholesale markets
- Large scale discount (distribution) companies

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Attachment

<Terminology>

ad valorem duty,從價稅	종가세
a joint market	공판장
a self-supporting fund raising organization	자조금조성단체
Accountability tracking system	지역책임제
agricultural administration	농정
Agricultural and Fishery Products Distribution and Price Stabilization Act	농수산물유통및가격안정에관한법
agricultural cooperatives	농협
agricultural cooperatives' joint market	농협공판장
Agricultural Management Corporation	영농조합법인
Agricultural Technology Center	농업기술센터
an appreciation plaque	감사패
artificial coloring	강제착색
Association of Tax payers	납세조합
bid-off price	경락가
cabbages from High-altitude-cold-region	고랭지배추
canopy	비가림
Collectors in producer market, producer market collectors	산지유통인
Compliance Guidance Team	이행점검 지도확인반
Compliance inspection team	이행점검반
condensed milk	연유
Consumers Korea, (former CACPK)	소비자 문제를 연구 하는 시민의모임
consumer market	소비지
corporate judicial person	사단법인
correlation coefficient	상관계수
degree of freedom	자유도
dry skim milk	탈지분유
econometric model	계량경제모델

econometrics	계량경제학
elasticity of demand	수요탄력성
evaporated milk	농축우유, 무가당 연유
farm closedown	농가폐원
field tangerine	노지감귤
fluid milk	시유
fruit culling	적과
Future Purchase Contract by Unit of Field	밭떼기
General Situational Briefing Office	종합상황실
government procurement	수매
gross income	조수입
highland	고냉지
Jeju Citrus Marketing & Shipping Association	제주도감귤협의회(감협)
Korea Rural Economic Institute (KREI)	한국농촌경제연구원
Korea Supermarkets Alliance	한국슈퍼마켓 협동조합연합회
legally approved wholesale markets	법정도매시장
market allocation	시장배분
market flow regulation	출하시기조절
matching fund	대응보조금
mathematical technique	수리기법
National Agricultural Cooperative Federation	농협중앙회
National Council of Homemakers Classes	전국주부교실중앙회
Non-destructive Selecting Machine	비파괴선과기
non-sellable tangerine	비상품감귤
Northern Sales Association	북부판매조합
packer	(미) 식료품 포장출하업자 (정육, 과일 등을 포장하여 시장에 출하하는 도매업자)
Packing and Marketing Cooperative	작목반
packing house	선과장
post-guidance team	지도확인반
price differentiation	가격차별화

producer allotment	생산자 판매할당
qualitative assessment	정성적 평가
quantitative assessment	정량적 평가
reserve pool	판매유보
sales gross income	판매조수익
seriously defected fruit	중결점과
Shipment association	출하연합회
significance level	유의수준
Southern Sales Association	남부판매조합
Storage Unit Purchase	창고떼기
Tangerine Fruit and Vegetable Tax Payers' Association	감귤납세조합
Tangerine Marketing Order	감귤유통조절명령제
Tangerine Marketing Order Implementation Committee	감귤유통명령이행추진단
Wholesale Market In Kind	유사도매시장
Wholesalers in consumer market, consumer market wholesalers	소비지 도매인