Agricultural cooperatives' pooling operations to improve marketing efficiency in Korea

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1. Introduction

☐ **Agricultural market in Korea has significantly changed since the mid-1990s.**

- Due to URAA and FTAs, imports of agricultural products increased by about 260% from 1995 to 2014.

- Since the-early 2000s, a few large supermarkets' market power has been increasing.

☐ **Farmers have difficulty in overcoming these changes individually in the agricultural market.**

☐ **Thus, role of agricultural cooperatives is becoming more important.**

1. Introduction

☐ **Agricultural cooperatives' pooling contributes to an increase in farmers' economic benefits.**

- Cooperative-specialized marketing practice, including collecting, grading, packing, distributing, and paying on a group basis
- Increase in bargaining power against large scale supermarkets
- Reduction of marketing costs from collection to final sale
- Contribution to higher price on raw product delivered by farmers

☐ **Objective of this paper is to introduce cooperative pooling cases in Korea**

- Reviews advantages of pooling in terms of marketing efficiency
- Overviews recent efforts to activate the pooling operations in Korea
- Derives major factors for successful pooling operations
- Then, conclusions and implications are provided.

2. Advantages of agricultural cooperative's pooling

☐ Characteristics of agricultural market

- A large number of small scale farmers, a few large scale buyers
- Farmers are much weaker than buyers in terms of market power.
- Farmers usually receive lower price in the market than in competitive market.

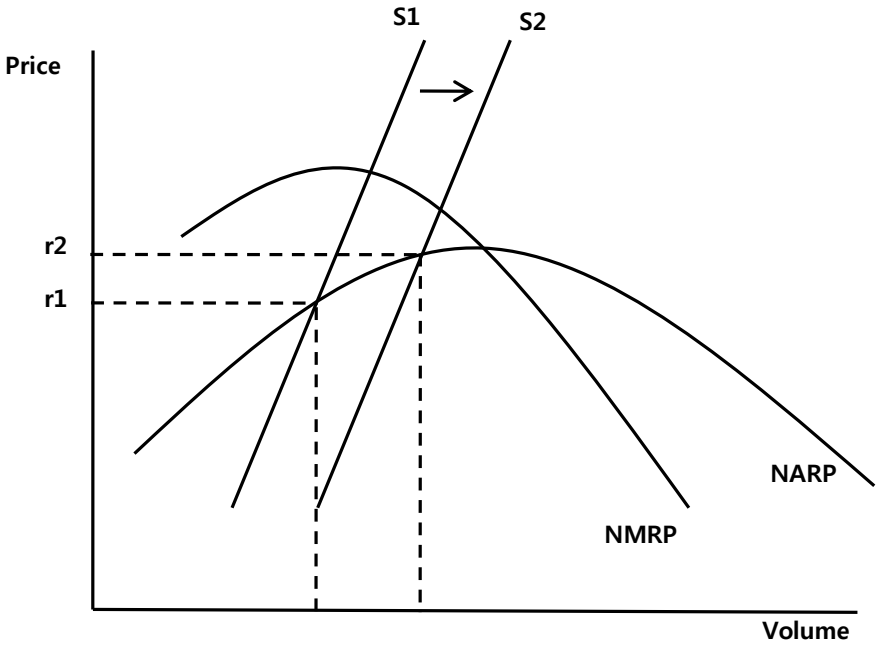
☐ Effects of cooperative's pooling operations

(1) Strong pooling system → purchasing competition of buyers → balancing cooperative's market power with buyers → higher market efficiency → higher price on raw product delivered by farmers

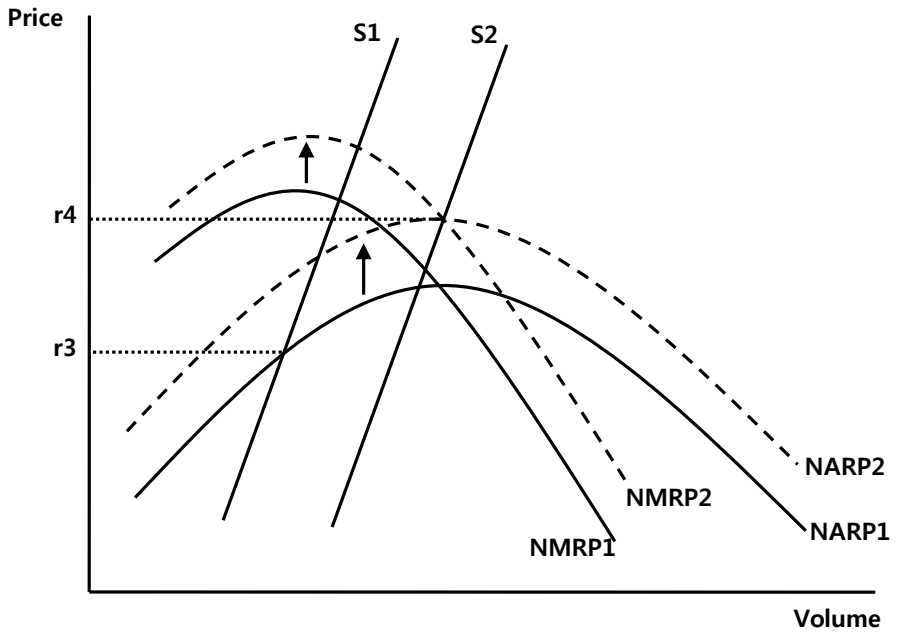
(2) Strong pooling system → improve efficiency of marketing-cost structure, by economies of scale and reduction of per unit of marketing cost → higher price on raw product delivered by farmers (Fig. 1 & 2)

2. Advantages of agricultural cooperative's pooling

(Fig. 1) Effects of cooperative's pooling in terms of 'economies of scale'



(Fig. 2) Effects of cooperative's pooling in terms of marketing-cost reduction



3. Cases of agricultural cooperative's pooling in Korea

3-1. Overview

☐ **In general, member-farmers have no obligation to deliver raw product to their cooperatives in Korea.**

- Thus, cooperative's pooling scale is not sufficiently large.

☐ **A number of local agricultural cooperatives have voluntarily established product-specific pooling organizations.**

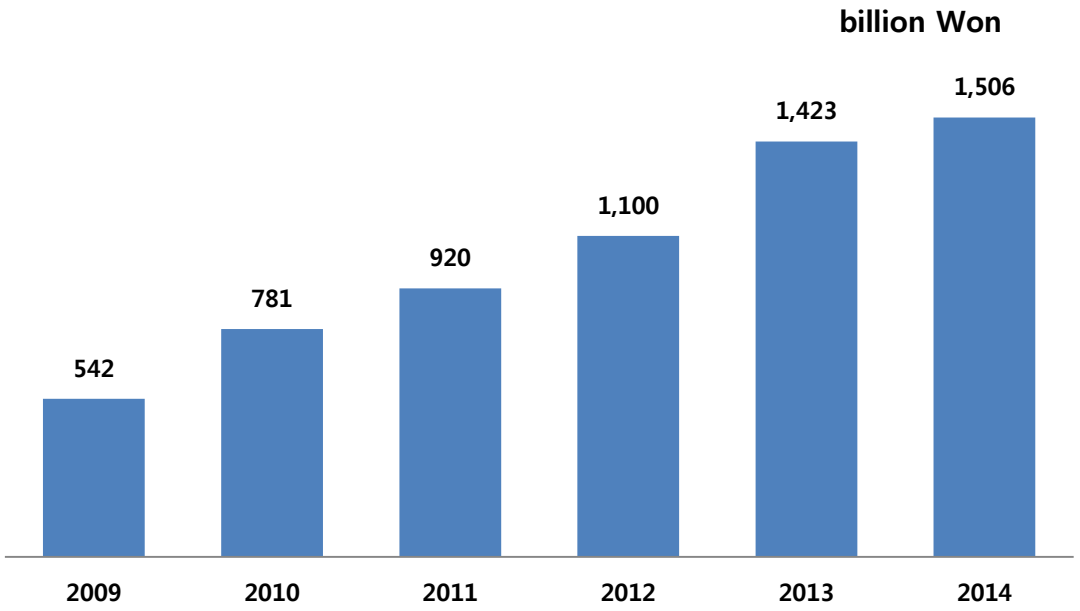
- They are operated by marketing agreements between member-farmers and cooperative.
- Usually, a local cooperative operates pooling organizations for more than one product.

  (Ex.) A cooperative operates grape, peach, and potato pooling organizations.
- In 2014, 1,900 pooling organizations are being operated nationwide in Korea.
- Sales of the pooling organizations increased by 178% from 2009 to 2014. (Fig. 3)

3. Cases of agricultural cooperative's pooling in Korea

3-1. Overview

(Fig. 3) Sales of pooling organizations in Korea from 2009~2014



3. Cases of agricultural cooperative's pooling in Korea

3-2. Major factors in successful pooling cases

<Operation of binding marketing agreement>

☐ **Marketing agreement between cooperative and farmers is important.**
- The agreement includes rights, duties, and responsibilities of both parties.

☐ **Agricultural cooperatives that operate pooling organizations usually make the marketing agreement.**

☐ **Based on the agreement, farmers deliver all or part of their products.**
- Farmers cultivate a specific variety of a product.
- Farmers complete a study course for quality management.

☐ **Cooperative, also according to the agreement, instructs members' farming activities.**
- Variety choice, time control of sowing and harvesting, cultivation techniques, etc.

3. Cases of agricultural cooperative's pooling in Korea

3-2. Major factors in successful pooling cases

<Operation of binding marketing agreement>

☐ **Agreement usually set a penalty, to be applied if farmers violate the rules, especially pertaining to volume of delivery and criteria of quality**

- In many cases, if a farmer does violate the rules, he is dismissed from pooling organization directly or after a warning depending upon the marketing agreement.

☐ **Example of a local agricultural cooperative**

- In 2011, about 60 percent of farmers who belonged to a grape pooling organization violated a delivery rule by selling their grape to other merchants.
- The pooling organization held a general meeting and decided to disband itself.
- Then, the organization was newly established with the condition that if a farmer violates the rule even at one time, he is dismissed without any warning.
- Since then, the pooling organization has seen no violations of its rules.

3. Cases of agricultural cooperative's pooling in Korea

3-2. Major factors in successful pooling cases

<Strengthening quality management>

☐ **Providing good-quality products consistently with consideration of consumers' preferences is important for successful marketing.**

☐ **In successful cases, the pooling organizations tries to manage quality of products throughout all pooling stages, from cultivation to delivery.**

- Cultivation stage: cooperative instructs farmers to unify a variety of products, agricultural supplies, and cultivation techniques.
- After harvest: cooperative grades farmers' products following the selection standards including size, appearance, color, sugar content, etc.
- Grading is conducted in a marketing facility and any farmer is prohibited from being involved in the process of grading for fairness.
- After grading, the products that do not satisfy the selection standards are sold separately, being excluded from the pooled products.

3. Cases of agricultural cooperative's pooling in Korea

3-2. Major factors in successful pooling cases

<Strengthening quality management>

Example: quality management process of a local agricultural cooperative

Stage 1: Inspection in cultivation area

↓

Stage 2: Inspection if harvest timing is appropriate

↓

Stage 3: Inspection when raw products are delivered to marketing facility

↓

Stage 4: Grading the collected products in marketing facility

↓

Stage 5: Final inspection including packing status

3. Cases of agricultural cooperative's pooling in Korea

3-2. Major factors in successful pooling cases

<Fair pool-based payment to farmers>

☐ **Fair payment is a critical factor for successful pooling operations.**

- It prevents free-riders and increases the participation of better farmers in terms of product quality.

☐ **Successful cooperatives in the pooling operations emphasize fair payment.**

- In many cases, an incentive is paid to farmers who delivered higher-quality products.
- This is facilitated by member-farmers' consensus.
- The incentive-payment would be useful for overall quality enhancement of raw products, encouraging farmers to strive for quality management.

<Example>

Incentive payment applying scores by grades in a pepper-pooling organization

Suppose the deliveries of three member-farmers, A, B, and C. Each farmer delivers 13 boxes by grades, which are best, good, and usual.

Unit: box

Farmer A			Farmer B			Farmer C		
Best	Good	Usual	Best	Good	Usual	Best	Good	Usual
11	1	1	8	3	2	6	3	4

Assume the scores by grades are 100 for best, 70 for good, and 40 for usual, respectively. Then the scores by farmers are as follows:

Grades	Farmer A	Farmer B	Farmer C	total
Best	11boxes×100 = 1,100	8boxes×100 = 800	6boxes×100 = 600	2,500
Good	1boxes×70 = 70	3boxes×70 = 210	3boxes×70 = 210	490
Usual	1boxes×40 = 40	2boxes×40 = 80	4boxes×40 = 160	280
total	1,210	1,090	970	3,270

Then, the proportion of each farmer's score to the total is calculated as follows:

Farmer A	Farmer B	Farmer C
1,210÷3,270×100 = 37%	1,090÷3,270×100 = 33.33%	970÷3,270×100 = 29.67%

Finally, we can calculate the amount of payment to each farmer applying the score proportion. Suppose net revenue, total revenue less total marketing cost, is 1,010,000 Won.

Unit: Korean won

Farmer A	Farmer B	Farmer C	Total
1,010,000×37% = 373,700	1,010,000×33.33% = 336,633	1,010,000×29.67% = 299,667	1,010,000

Let's compare the incentive payment with the average payment. Average payment applying per-box price is as follows:

Assume per-box price by grades is 28,640 Won for best, 25,857 Won for good, and 16,143 Won for usual. Amount of payment to each farmer is as follows:

Unit: Korean Won

Grades	Farmer A	Farmer B	Farmer C	Total
Best	11 boxes×28,640 = 315,040	8 boxes×28,640 = 229,120	6 boxes×28,640 = 171,840	716,000
Good	1 box×25,857 = 25,857	3 boxes×25,857 = 77,571	3 boxes×25,857 = 77,571	180,999
Usual	1 box×16,143 = 16,143	2 boxes×16,143 = 32,286	4 boxes×16,143 = 64,572	113,001
total	357,040	338,977	313,983	1,010,000

Then we can see that farmer A, who delivers higher-quality products, receives more returns in the incentive payment system than in the average payment system as follows:

Unit: Korean won

	Incentive payment system	Average payment system
Farmer A	373,700	357,040
Farmer B	336,633	338,977
Farmer C	299,667	313,983
Total	1,010,000	1,010,000

3. Cases of agricultural cooperative's pooling in Korea

3-2. Major factors in successful pooling cases

<***Systematic education for farmers***>

☐ **Member-farmers' positive participation is important for sustainable development of the cooperative's pool marketing.**

- Pooling effects become greater if member-farmers try to deliver high-quality products with a shared philosophy on pooling and a firm belief in cooperative's pool marketing.

- Thus, the cooperative needs to operate an effective education system to pursue an increase in farmers' understanding on pooling and thereby induce positive participation.

Example: A six-step education of a local agricultural cooperative

Education courses	Target groups and main contents
Basic quality education	· Target group: new members (Two-time education) · Main contents: necessity of pooling, method of pool-based payment, marketing agreements and penalties, etc.
Understanding of pooling	· Target group: all members · Main contents: pooling system, present business status, major buyers, government's marketing policies, etc.
Cultivation techniques	· Target group: all members · Main contents: advanced farming techniques to produce high-quality products
Cultivation Consulting	· Target group: members who want · Main contents: cultivation-related consulting by experts
Leadership	· Target group: representatives of pooling organizations · Main contents: enhancement of leadership for successful operations of pooling organization
Operation of research group By commodities	· Target group: representatives of pooling organizations · Main contents: study on optimal sowing and delivering time, sharing of cultivation techniques, study on commodity adjustment to prevent damages by repeated cultivation, etc.

3. Cases of agricultural cooperative's pooling in Korea

3-2. Major factors in successful pooling cases

<Joint-funding for stable pool marketing>

☐ **Price of agricultural products sometimes fluctuate sharply.**

- Sometimes, cooperatives need to hedge against some unexpected changes, like a sharp price fall.

☐ **In some successful cases, cooperative and member-farmers belonging to pooling organization raise funds jointly to hedge against the risk like unexpected price-fall.**

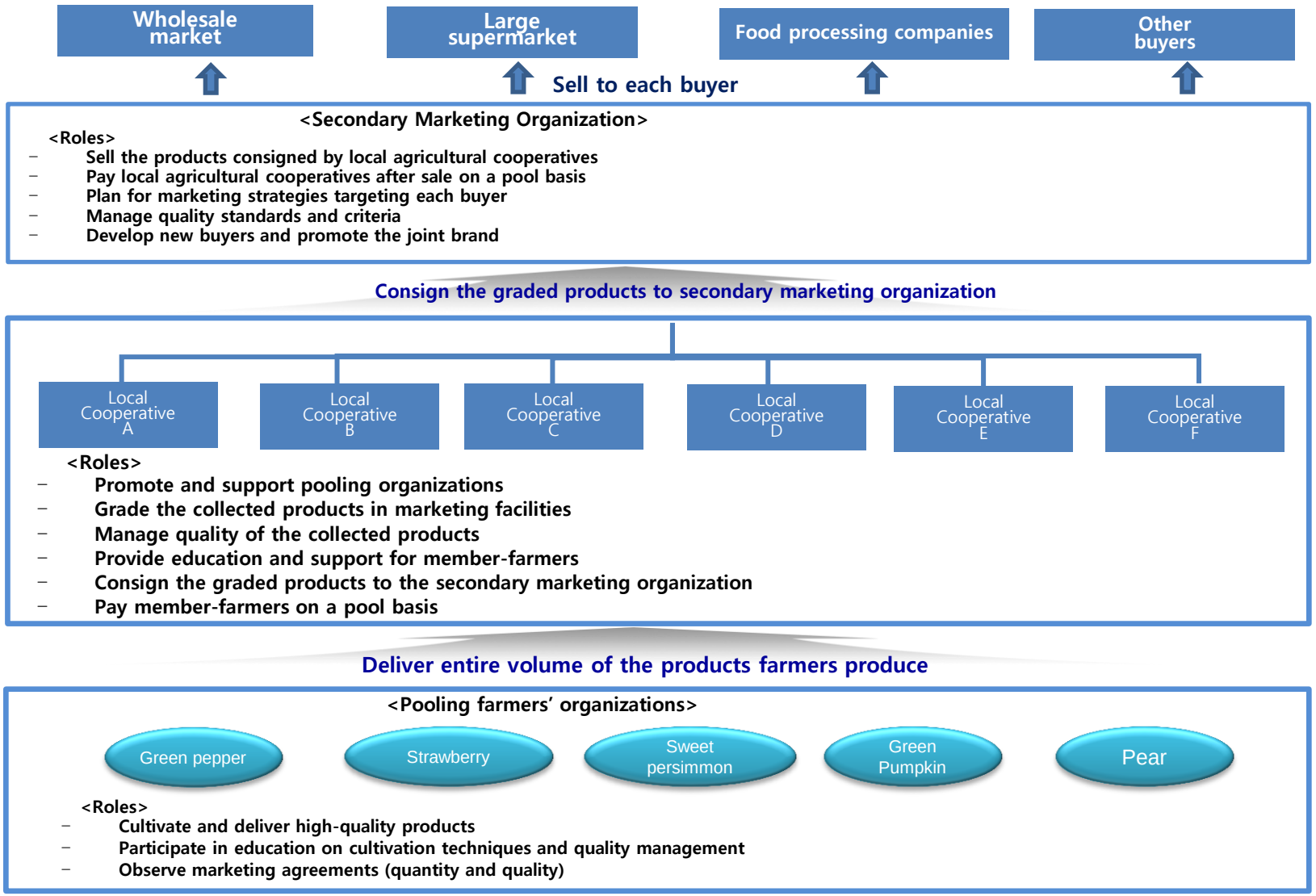
<Joint marketing among local agricultural cooperatives>

☐ **Joint marketing among local agricultural cooperatives → increasing market power, reducing marketing cost → increasing farmers' economic benefit**

☐ **Some local agricultural cooperatives established secondary marketing organizations through joint investment, mostly county and city levels.**

- Systemization among the primary pooling organizations, the local cooperatives, and the secondary marketing organization is constructed with each having its role assignment.

Example: A case of linkage among pooling organizations, local agricultural cooperatives, and secondary marketing organization



4. Conclusion

☐ **The main objective of agricultural cooperatives is to maximize member-farmers' economic benefits.**

- This can be achieved by providing member-farmers with greater returns on raw products through the cooperative's marketing business.
- It is important that the cooperatives try to achieve a balance in market power with the buyers by establishing a large-scale pooling system.

☐ **Agricultural cooperatives can increase bargaining power with a sufficiently large pooling system and thereby induce the buyers' purchasing competition.**

- This makes the agricultural market more efficient, which is known as cooperative's 'competitive-yardstick' role.
- Cooperatives ultimately provide member-farmers with more returns on raw products.

☐ **Pooling system can also lead to a reduction of marketing costs in each volume unit of the products by spreading out the cost over the collected products.**

- This also contributes to providing member-farmers with greater returns.

4. Conclusion

☐ **Effectively operating a stable pooling system is more important than simply constructing the system.**

- To consistently distribute a sufficient volume of high-quality products to the buyers is a key factor for a successful pooling operation.
- Successful pooling cases operate marketing agreements b/w farmers & cooperatives.
- Quality management and fair payment is important in terms of increase in participation of farmers with good-quality products.
- Education of member-farmers is also important because they need to understand cooperative's identity and how its pooling system operates.

☐ **How to construct the pooling program usually depends upon agricultural market characteristics of each country.**

- Cooperative's pooling program would be applied differently depending on characteristics of product, composition of farmers, market situation of each product.
- However, it can be an effective measure for member-farmers' economic benefits, considering current market changes.

Thank you.