

Increasing Value Delivery in Horticulture Sector in Indonesia

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Abstract

This paper addresses how to deliver more value in horticulture supply chain in Indonesia for consumers are demanding high quality product, healthier and environmentally friendly. Meeting such demand change is possible if all participants in the chain closely collaborate to develop new product and/or explore new market. Likewise, investment in research and development to improve crops quality, presentation, packaging and create market opportunities within existing outlets and new areas is deemed important.

Key words: horticulture supply chain, value, quality

Introduction

Today's consumer attitude and behavior are increasingly driven by quality, safety and health consciousness. To succeed in today's competitive market, one option available for horticulture supply chain: all participants in the chain have to deliver more value to customers. This also means that participants need to collaborate more closely and creatively to satisfy the more demanding consumers.

There is no conceptual clarity of value. According to Forsström (2005, p.47), studying value is delicate for two reasons: one is the relativity of the phenomenon of value is defined and understood differently depending the circumstances and two is the purpose of the study. Furthermore, the concept of value has been used in different research fields including economics, marketing, accounting, finance, strategy, organizational behavior, and psychology and social psychology (Payne & Holt, 2001). Moreover, there is also the issue of measuring value. Some forms of value are more tangible and easily measurable than others (Kaplan & Norton, 2004). This paper will address this topic on how to

deliver more value in horticultural supply chain in Indonesia.

Value delivery

One definition of value proposed by Fossen (2018) is a potential, singular benefit that an offering is perceived to hold. An offering is conceptualized as anything, tangible or intangible, that is offered to an intended end recipient. In the marketing field, referring to Kotler (1988, p.52) who explains marketing as “descriptive science involving the study of how transactions are created, stimulated, facilitated, and valued”, Vargo & Lusch (2014, p. 6) sees a firm as “the proactive actor” and play a central role as the “innovator, developer, producer, distributor, and promoter of goods.

This definition is quite similar in term of idea with value delivery definition proposed by Fossen (2018). According to her, value delivery encompasses the numerous activities that a firm undertakes to create, produce, trade and realize their value proposition. Furthermore, value delivery is not exclusively controlled by producers as it is both a supply and demand side phenomenon (Bowman &

Ambrosini, 2003; Massa, Tucci, & Afuah, 2017; Vargo, Maglio, & Akaka, 2008). Value is created not only by producers, but also by customers and other members of their value-creation ecosystems (Massa et al., 2017).

Translating this view on value delivery into a horticulture supply chain, it can be said that all actors in the supply chain are “a producer” and a “marketer” in the sense that they create value. This is done simply by arranging fresh produce in their proper time, places and forms.

This idea is not new but dated back to marketing discourse in 1950s. Marketing discourse prior to 1950 was shaped by three dominant schools: commodity, functional and institutional schools of thought (Meulenberg, 1986). The commodity school focused on the nature of the product as the basis of marketing, highlighting the importance of the terms necessary to bridge the gap in place, time and product form between the producer and consumer. The functional school was concerned with the three functions of exchange including buying, selling and negotiating a contract, physical functions such as transport storage and processing and the facilitating function which involved trade financing and market information. The institutional function looked at how institutions such as cooperatives, commodity exchanges, weights, measures and standards either facilitated or hindered the movement of the product from producer to consumer. Dixon (1990) indicates that marketing produces time and place value by adding properties to goods, “namely the property of being in the right place and of being there at the right time”.

How horticulture supply chain should respond?

In Asia in general and in Indonesia in particular, on one hand the recent rapid growth in production of higher value, more pesticide intensive, horticultural crops poses numerous environmental,

health and wider livelihood threats. On the other hand, consumers are seeking high quality produce while considering health and environmental issues. It has become apparent that with the current challenges in horticulture supply chain, value delivery exist by delivering more value based on product and/or market. Value delivery based on product means extending the range by new colors or flavors, pricing changes or updated packaging. Value delivery based on market means seeking new markets for the supply chain’s existing product portfolio.

Value delivery based on product

Creating more value based on product typically means providing more product features. Some features worth considering as long as fresh fruit and vegetable concerned including:

Flavor

One of the overriding factors crucial to the success of any product is a good flavor. The typical Indonesian consumer generally prefers fruit with a (very) sweet flavor and those with a strong flavor are more likely to be accepted. Those with these features gain acceptance more easily. Arum Manis, Manalagi, Gedong Gincu mangoes are examples of this category.

Eye Appeal

Eye appeal is a probably one key factor that contribute to the success of a crop. If it looks good it will sell well. Thus, unusual skin coloring or coarse texture is not likely to encourage consumers to purchase. Red, yellow and orange Garifta, Agri Gardina, Agri Mania Mangoes, and red Longan are included into this group. The vast number of “old” Indonesia varieties of fruits and vegetables may offer potential for “new” crops. If the product does not have natural eye appeal, or good positive associations, then special packaging and promotion is required.

Ease of Preparation

Products which can be eaten without preparation, or with a minimum of preparation, rank highly with the consumer, compared to those which require considerable effort to make them edible. Seedless Water Melon, seedless Srikaya, Non Spiky skin Zalacca or mini Jackfruit come into this category.

Texture

A hard, firm, crunchy texture is considered to be more acceptable to the consumer than soft produce. Crunchy jackfruits are more acceptable than soft ones.

Product Size

The charming cultural characteristics of Indonesian that love family gathering means that a large fruit is preferable than small one. This is particularly relevant for some fruits such as Rambutan, Durian, Longan or Water Melon. It can therefore be easy to promote a product when its size appears to offer big portions. Thus, there are opportunities in marketing products in the size that appeals to specific segments of the population.

However, big size may pose a problem to different segment. For example baby sweetcorn has expanded in sales on the basis of its size as well as its texture and delicate flavor appealing to the more affluent and professional. Normal sweetcorn has not had the same appeal even though texture and flavor are probably superior.

When these produce features can be achieved the chances for success are considerably enhanced. The following discussion explores these themes in the context of product diversification.

The quality of fresh produce

From all of these possible routes for expanding produce features, maintaining quality is of paramount importance and must be the goal of all involved in the fresh produce supply chain. Many experts mention that the

future for all crops, not just the traditionally expensive crops, lay in the direction of producing top quality produce.

Quality in term of fresh produce is "the sum total of all attributes which combine to make fruit and vegetables acceptable, desirable and nutritionally valuable as human foods" (Duckworth, 1966). It is a composite concept broken down into - size, shape, taste, flavor, color and texture. Quality for fresh produce is thus a series of minimum requirement such as:

- healthy and sound, fresh from blemishes, liable to affect natural powers of resistance, composition, bruises or unhealed cracks.
- clean, whole, practically free from extraneous matter, foreign taste or smell, without abnormal surface moisture.
- of appropriate size and appearance having regard to variety, season, production area.
- should have reached a degree of maturity which having regard to the normal duration of journey, will ensure the arrival of the produce in good condition especially taste.

To achieve this, improved grading and tighter specifications have to be adopted by actors in the chain toward more efficient and professional methods of growing and become more market and consumer orientated. Increased consumers attention to fresh produce has provided new market niches for many crops. Growers are therefore should grow top quality produce. A reduction in quality could have severe consequences such as losing outlets for all crops.

Food consumers are particularly sensitive to changes in their food environment. Consumers have immediate reactions to what they eat: satisfaction, disgust, healthy, etc. (Fossen, 2018). It is only through the ability to supply fruit of high quality with volume that enables growers to remain competitive. Product

quality is therefore a limiting factor for growers and numerous examples were given, highlighting the problems of producing crops of poor quality.

Value delivery based on market

Creating more value based on market provides opportunities for the industry as a whole. Two main markets in which produce can diversify into are: healthy and environmental market and institutional market.

The Healthy and Environmental Market

The healthy food context is special. Healthy food consumption is intertwined with individual biology, complicated psychology, pleasure of eating, personal identity and health status, which most people consider personal information (Fossen, 2018). Consumption of fresh produce been so slow to improve especially in light of efforts made by health educators and medical officials to promote the positive aspects of fresh produce. One answer may be that the consumer considers vegetables are not interesting commodities. Thus, even in the light of increasing awareness about health, fresh produce is not capitalizing. In the other, the pleasure of eating comes with short-term benefits. Those short-term benefits may aggregate into long-term problems, but it is hard to have that foresight in the moment of pleasure. Therefore, more campaign is needed to exploit the current interest in health. The campaigns and marketing efforts need to be centered on promotion in terms of taste, choice and quality.

Furthermore, fruits and vegetables can be marketed on the healthy attributes of: high dietary fiber; low saturated fatty acids and cholesterol levels; low calorific density; and high vitamin and mineral contents. These components are involved in a variety of diseases, some of which have significant economic consequences on the economy of a nation such as coronary heart disease, cancer and obesity.

While improvements of fruits and vegetables through genetic engineering, breeding, culture and post-harvest environment control are possible, breeding a crop for higher nutritional quality may not contribute significantly to improved human nutrition. This is because it is seldom that one crop has such a significant contribution to specific nutrient intakes, such as in the case of sweet potato in Africa (Okwadi, 2015). Breeding crops that are more attractive in taste and appearance and stimulating increased consumption of a wide variety of horticultural products is likely to have a far more lasting effect.

The environmental market embraces a diversity of concepts but all of which combine to create a market that is concerned about the impact on the biological and sociological ecosystem. The development of health and environmental markets lead to decreased fat and sugar consumption and improved dietary fiber intakes, increased concern over food additives in processed foods and the growing awareness of pesticide and agrochemical residues in food and pollution of the environment. Moreover, this market means growing regimes which do not create pollution, or economic or dietary hardship for growers of third world nations, or cause destruction of the rural infrastructure. One example is organic produce and farming methods.

Institutional Market

The second market opportunity for creating value based on market is industry market and institutional sector, catering markets for fresh produce, restaurants and take-away trade, hotel. The institutional sector includes hospital, schools and higher education, factory canteens and specialist caterers and restaurants.

The role of *Puslitbanghorti* (Indonesian Centre for Horticulture Research and Development)

New crops do not automatically mean success. New crops do not appear

automatically either. Timing, in addition to the product and consumer factors are important to the success for horticulture supply chain. Moreover, any new product requires investment for research and development.

Puslitbanghorti should coordinate research activities so that new crop varieties development match consumer demand. The *Puslitbanghorti* should also devised a detailed organizational model to operate all phases of agricultural activities which include crop production, post-harvest treatments and handling and transportation so that fresh produce reach end consumer in a good condition.

The *Puslitbanghorti* may devise a process which can allow new scientific knowledge to be applied on a large scale within practical agriculture. This provides the possibility of introducing new varieties in a relatively short time scale, not only in terms of their production but in the catching up with new market opportunities. An overall master Plan for development aims to continuously produce new varieties instead of relying on maintaining traditional crops is needed.

It is understandable if the majority of independent growers concentrate on crops that have already gained acceptance. The development costs of new crops are very high and may not be met out of the small volume of revenue generated. Thus sales volume is crucial. The major constraint on development work is cost and recoup potential. Thus, detailed investigative research, a market intelligence system to provide accurate and up to date information and close co-operation from all actors in the supply chain are required. Empirical evidences show the success of a country like the Netherlands in stimulating and creating market niches. Much of this success can be traced back to her progressive and extensive research investment .

Conclusion

One of the underlying themes running through this paper has been the premise that consumers are demanding more value in term of healthier product, better quality and adhere to environmental concerns. This change in demand should be met by horticulture supply chain to remain competitive. One possible route to meet this demand is delivering more value based on product variety and/or market diversity. This requires all actor in the horticulture supply chain from growers to retailers as well as supporting institutions such as *Puslitbanghorti* to maintain close collaboration, investment in new technology to improve crops quality, presentation, packaging and create market opportunities within existing outlets and new areas.

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