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Two Essays of Consumers' Food Related Behavior in Agritourism

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Abstract

Two Essays of Consumers' Food Related Behavior in Agritourism

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As a sustainable strategy to conserve rural environment, agritourism has been gaining attention from many stakeholders and is expected to grow in the future. This study aims to investigate the consumers' food-related behavior in agritourism. Essay 1 examines the effect of agritourism experience on consumers' grocery purchase patterns. In order to achieve the aim of the research, the food expenditure data from consumer panel is analyzed by using Almost Ideal Demand System (AIDS). As a result, agritourism experience alters the consumers' grocery purchase patterns in grain, vegetable, fruit, meat, and fish. In essay 2, the effects of meal type and food preparation activity on food evaluation are investigated. The field experiments are conducted with 130 participants in the restaurant. The results indicate that the food type significantly affects the willingness to pay, in addition, this main effect is moderated by food preparation activity.

Keyword : Agritourism, Almost Ideal Demand System(AIDS), Grocery

Purchase Pattern, Meal Type, Food Preparation, Food Evaluation

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I. Essay 1: The effect of agritourism experience on consumers' future food purchase patterns

Chapter 1. Introduction

As a sustainable development strategy for rural communities, agritourism has been gaining increasing attention from policymakers, researchers, and regional governments alike (Sonnino, 2004). For the past few decades, rural communities have experienced several challenges, including migration, low commodity prices, and general economic decline (Hjalager, 1996; Lane, 1994), while targeted policies to facilitate development such as modernization of agricultural production, development of industrial clusters, or urbanization have demonsrated limited success. For example, studies claim that the modernization paradigm has reached its intellectual and practical limit (Van der Ploeg et al., 2000), that industry cluster strategy is generally not appropriate for rural communities (Barkley & Henry, 1997), or that urbanization often results in significant environmental costs such as climatic changes and habitat loss (Chen, 2007). On the other hand, agritourism is known for its significant ability to generate additional revenues, low investment from utilization of existing assets, and minimal impact on the local environment and heritage (Barbieri, 2013; McGehee, 2007). As a natural consequence, development of agritourism destinations and participation in agritourism have both increased noticeably and are expected to further grow

in the future (Arroyo, Barbieri, & Rich, 2013).

Consistent with theoretical predictions, a number of empirical studies on agritourism have reported that it creates economic as well as non-economic benefits (environmental and sociocultural: Barbieri, 2013) to farms, including sustainable agricultural production, enhancement of farmers' quality of life, and increased market accessibility (Kline, Barbieri, & LaPan, 2016). Nonetheless, a majority of the studies still focus on its economic benefits, attesting to the significance of its primary role in boosting regional, rural economies (Van Sandt & McFadden, 2016). By adding to and diversifying the income sources of traditional farm businesses, a favorable effect on the farm income is usually observed, and in general, empirical findings support that agritourism farms have been found to be more successful in increasing their income (Nickerson, Black, & McCool, 2001; Joo, Khanal, & Mishra, 2013; Choo & Petrick, 2014; Khanal & Mishra, 2014).

Despite the uncontested perspective of several researchers on the favorable economic impact of agritourism, however, variance exists in measurement and/or assessment of the magnitude of such impact to farms. While some believe that agritourism can be the main driver of the regional economy (Wilson, Thilmany, & Sullins, 2006), a more conservative opinion maintains that the financial contribution of agritourism to farms is at best moderate (McGehee & Kim, 2004). For example, Busby and Rendle (2000) stated that additional revenues gained by farms through agritourism is

minimal, while Bernardo, Valentin, and Leatherman (2004) reported that only 2% of the farms in Kansas reported any agritourism income. The observation of the rather limited role of agritourism for farms can be attributed to the issues of seasonality and inequality, as Yang (2012) finds that agritourists are usually highly concentrated during the vacation and holiday seasons and that only a small fraction of farms financially benefit from hosting guests and on-site purchases.

However, the net economic impacts of agritourism many not necessarily be short-lived. While many studies focus on the immediate increases in farmers' profits (Khanal & Mishra, 2014; Schilling, Attavanich, & Jin, 2014), potential long-term economic effects of agritourism on rural regions have also been suggested. In this regard, Tew and Barbieri (2012) analyze the perceived benefits of agritourism from the providers' side and report that respondents place more importance on agritourism as a marketing tool for product sales (such as increased direct sales) than on its on-site revenue generation ability. According to the mere exposure theory, repeated exposure to an object enhances its affective attitude (Zajonc, 1968). Thus, repeated exposures to agriproducts through agritourism may, in turn, lead to familiarity and even liking of the agriproducts. In this line of reasoning, if agritourism as a marketing tool is successfully implemented (Sonnino, 2004), tourists may shift their purchase patterns after the visit and purchase more agriproducts from the rural destinations they have visited, thus leading to a

sustained and more sizable improvement in the financial performance of farms. Naturally, similar questions have been frequently asked in the context of the wine and meat industries (Getz & Brown, 2006; Kline et al., 2016), where such benefit in marketing and distribution has been anticipated albeit the lack of empirical evidence.

Thus, a research gap is identified. The current assessment of agritourism by the academia on its economic impact is moderate at best, as only the direct contributions to farm revenues or profits generated on-site are considered. Such view is inevitable as previous studies often evaluate the impact using immediate, measurable profits that are necessarily short-term in nature (Schilling et al., 2014). Yet, if agritourism influences tourists' post-hoc agriproduct consumption in a prolonged fashion, however, the possibility of an understatement of the economic impact of agritourism exists. To fill this gap, the current study sets the objective of investigating the impact of agritourism on consumer's future agriproduct consumption patterns. By utilizing consumer data rather than provider data, this study addresses the question of whether agritourism experience significantly influences agritourists' future consumption of agriproducts, rather than examining changes in farm revenues. Specifically, the study aims to investigate the difference in agriproduct purchasing patterns between the consumers who participated in agritourism activities in the past and those who did not.

In order to achieve the research objective, data from a unique

consumer panel survey conducted by the Rural Development Administration (RDA) was utilized. The dataset includes information related to grocery purchases by consumer panels, which can be used to analyze agriproduct consumption patterns at the household level. Econometric analysis was done through nonlinear estimation of the Almost Ideal Demand System (AIDS), a flexible system of equations approach, which considers interdependence among expenditure categories (Li, Song, & Witt, 2004). As AIDS can also incorporate non-economic demand shifters in the model, this study examines the effect of agritourism jointly with the effects from household size and income levels on consumers' food purchase patterns by using the AIDS model.

Chapter 2. Literature Review

2.1. Economic Impact of Agritourism

Consistent with the growing academic interest on agritourism, several studies have examined various aspects of agritourism and agritourists. Several investigations have been conducted to analyze the attitude of stakeholders toward agritourism: Naidoo and Pearce (2016) discussed the economic contributions of agritourism compared to those of enclave tourism in island using a multi-faceted perspective. Using the perspectives of government, rural community, and business, the authors argued that income from tourism, development of tourism scale, and employment are the major impacts of agritourism. Arroyo et al. (2013) confirmed the necessary elements for defining agritourism across stakeholders. In defining agritourism, the authors concluded that agricultural setting and working farm is a vital environment, and its purposes are entertainment and education. Dubois, Cawley, and Schmitz (2017) examined the images perceived by stakeholders related to agritourism and found that realities of agritourism are slightly different from the expectations of stakeholders.

Carpio, Wohlgenant, and Boonsaeng (2008) identified the demographic characteristics of agritourists in America. They argue that the important determinants that influence the number of trips are the location of residence,

gender, and race. Park and Yoon (2009) segmented the agritourists according to the motivation to participate in agritourism in Korea. By using a factor-clustering method, they segmented the agritourist into four groups. Norby and Retallick (2012) investigated the interests of agritourists and found that the motivation and preferred activities of agritourists largely focus on purchasing local agriproducts. Choo and Petrick (2014) investigated the effects of social interactions of agritourists with service providers on agritourism evaluation and concluded that the relationships created in agritourism contribute to positive impacts on tourism evaluations. In summary, a review of the literature on agritourism stakeholders largely reveals the general premise on the expected economic effects of agritourism.

Meanwhile, studies that focus on the economic impact of agritourism have a consensus that agritourism has a favorable economic impact. Barbieri (2013) and Khanal and Mishra (2014) pointed out that agritourism as an income diversification strategy increases farms' income. In the same vein, Schilling, Attavanich, and Jin (2014) found that agritourism had a positive impact on farms as a revenue source after comparing between the farms that operate agritourism and those that do not. Joo, Khanal, and Mishra (2013) identified the farmers who participate in agritourism activities and assessed the influence of agritourism on farmers' profitability, such as return on assets, household income, and farm income. As a result, small farms that operate agritourism were found to earn the highest household incomes. George, Getz,

Hardesty, and Rilla (2011) investigated the overall states of agritourism in California and found that 75% of farms operate agritourism to enhance farm profitability.

Unlike the significance of the economic impact of agritourism on farms, however, the magnitude of agritourism's contribution to farms has been under increasing debate. Bernardo et al. (2004) reported the farms' income of eight United States Department of Agriculture regions to verify the revenue from agritourism. The farms reported that the income was only 2% of the nationwide range. Joo et al. (2013) classified the farms by size in order to assess the financial effect of agritourism, conditional on size. Insignificant results were yielded for all farms and large farms. Small farms had a significant impact but achieved only 0.4% higher return to asset than those who did not participate in agritourism. Wilson, Thilmany, and Sullins (2006) reported that farms in Colorado derived additional profit from recreation that amounted to approximately 13% of the total farm income. George et al. (2011) reported that only 21% of respondents who operate agritourism in California had revenues exceeding 100,000 dollars.

Prior studies have offered two major explanations for this phenomenon: seasonality and concentration of tourists on holidays. Yang (2012) found that most agritourists are concentrated in the summer and holiday seasons, thus yielding an unequal distribution of agritourism benefits across time. Dubois et al. (2017) claimed that due to the seasonality of

farming inherent in agriculture, the availability that could be given to agritourists is limited. To sum up, studies commonly report that the magnitude of short-term effects is quite limited. However, the current study suspects the possibility of long-term and sustainable effects of agritourism (Sharpley, 2007).

2.2. Effect of agritourism on consumers' future purchase

2.2.1. Mere exposure theory and product involvement

The current study proposes that agritourism experience can influence future purchase decisions of agritourists through two mechanisms: mere exposure and product involvement. According to Zajonc (1968), repeated exposure to an object may evoke emotions toward a stimulus. Moreover, Hekkert, Thurgood, and Whitfield (2013) have shown that the attractiveness of an object when an individual is exposed to a stimulus also increases with familiarity. Hence, exposing consumers to products in a repeated fashion may ensure that consumers formulate a positive attitude toward a product or brand. Such mere exposures are commonly utilized in advertising (Ruggieri & Boca, 2013).

According to mere exposure theory, repeated exposure to agriproducts during agritourism experience may evoke positive emotions among agritourists toward the products. Participating in agritourism, accordingly, is likely to influence the familiarity and attractiveness of

agriproducts to the agritourists. In turn, from the perspective of the agritourism service providers, the purpose of agritourism itself can be an effective promotion strategy of their agriproducts (Sonnino, 2004).

Meanwhile, product involvement is a perception of personal importance toward products (Zaichkowsky, 1985). The degree of involvement illustrated by the elaboration likelihood model is usually specified in a continuum ranging from low to high (Park & Keil, 2017). With low involvement, purchase behavior is usually determined by personal interest and minimal effort, while high involvement requires a relatively complex process of information processing (Schiffman, Kanuk, & Brewer, 2014). With high involvement, purchasing a product occurs after careful considerations and comparison to different brands, which indicates a motivation to process information; conversely, low-involvement purchasing does not involve such processes (Handriana, 2017).

Thus, involvement can shift agritourists' consumption behavior after an agritourism experience. Nostalgia can evoke the emotion associated with a particular person or event of the past (Belk, 1991). The consumption object that is related to the past directly or its substitute stir up nostalgic emotions and memory (Vignolles & Pichon, 2014). Such personal meaning leads to relatively high involvement toward the product (Laurent & Kapferer, 1985). Consequently, an increase in purchase intentions is expected. In this line of reasoning, agritourists would choose to consume more agriproducts related to

a past agritourism experience.

2.2.2. Effect of agritourism experience on agriproduct consumption

The long-term impact of agritourism has been acknowledged in previous studies. Kline et al. (2016) tried to examine the relationship between the meat purchase characteristic of consumers and the interest of agritourism related to meat. They argue that consumers have visiting intention to a farm that produces meat in a sustainable way, claiming that they intend to purchases meat from the farm. This serves as indirect evidence that agritourism experience has a positive effect on future sales of agriproducts. Other studies have also investigated the shifts in purchase behavior of agritourists toward agriproducts they have been involved with in the past. For example, Seo and Hwang (2014) study the factors that influence the agritourists' purchase of environment-friendly agriproducts, while Park and Park (2011) confirm the positive effect of agritourism on farm-to-consumer direct transactions.

Nevertheless, there is a scarcity of empirical studies at a more general level, insufficient to provide a conclusive evidence on the relationship between agritourism experience and shift in future purchases of agritourists. First, Kline et al. (2016) examined the purchase intention of the consumer and not the actual purchase behavior. Second, most studies focus on the purchases or consumption at the destination (Kim & Park, 2013) or on transaction type

for long-term impacts (Park & Park, 2011). For example, Kim and Park (2013) collected data from tourists who purchased local agriproducts in a direct market such as a local agricultural store or festival, while Park and Park (2011) only investigated the mode of transactions rather than the change in the volume of the transactions. Meanwhile, on-site spending and transaction mode represent only the fractional, short-term aspects of agritourists' behavior that influence farm profitability.

Third, the subjects recruited in past studies largely consist of only agritourists and do not include the future purchases of consumers with no agritourism experience (Wilkinson, 2017; Kim & Park, 2013; Seo & Hwang, 2014), thus leading to weak support of the treatment effect. Kim and Park (2013) identified the structural relationship related to local agricultural products using agritourist-only data; Seo and Hwang (2014) derived the antecedent factors that affect the purchasing of eco-friendly agricultural product from the visitors; Wilkinson (2017) identified the variables affecting the on-site consumer purchase behavior at the agritourism site of Illlinois.

In this study, however, we analyze the actual purchase data of consumers after agritourism experience in order to estimate the shifts in consumers' food purchasing patterns. By analyzing the *ex post* consumers' food purchase patterns, implications of the long-term economic impact of agritourism can be effectively drawn. In addition, by utilizing the general dataset, which includes not only agritourist but also general food consumers,

the reliability of the estimated treatment effect (agritourism experience) can be improved.

2.3. Application of AIDS in relevant studies

Many expenditure models in tourism research have performed regression analysis that estimates parameters in single-equation models (Crouch, 1994). However, a system of equations approach can be effectively applied in examining expenditure patterns rather than a single equation due to the interdependence of expenditure budget allocations to respective categories. Among the various systems of equations approaches, the AIDS, developed by Deaton and Muellbauer (1980), is particularly useful, as it has a number of advantages, including its flexibility in functional form.

Accordingly, several studies in the tourism literature have applied the AIDS model in the study of expenditure data. A considerable share of these studies utilize data aggregated by destinations or specific locations (Mello, Pack, & Sinclair, 2002; O'Hagan & Harrison, 1984; Syriopoulos & Thea Sinclair, 1993). O'Hagan and Harrison (1984) modeled the expenditure of US tourists in Europe and determined the implications of said econometric approach to tourism research. Syriopoulos and Thea Sinclair (1993) used the AIDS model to estimate the tourism expenditures of the U.S., the UK, Germany, France, and Sweden among Mediterranean destinations such as Greece, Spain, Portugal, Italy, and Turkey. Mello et al. (2002) investigated

the tourism demand of the UK toward France, Spain, and Portugal by using expenditure data of the UK and found that changes in tourism demand occur while the destination develops.

On the other hand, only a handful of studies have analyzed the tourism expenditure at the individual or household level using the AIDS model (Fujii, Khaled, & Mak, 1985; Fuii, Khaled, & Mak, 2010; Chang, Chen, & Meyer, 2013; Lee, Jee, Funk, & Jordan, 2015;). Fujii et al. (1985; 2010) were the first to utilize individual-level data for AIDS estimation in tourism research. Using AIDS, Chang et al. (2013) estimated the expenditure of visitors in Taiwan and found that the effect of repeat visits was insignificant. More recently, Lee et al. (2015) examined the expenditure of attendees in annual events in Miami and confirmed the effects of attendance frequency and travel distance on shifts in expenditure patterns.

In food demand research, the application of the AIDS model has been much more common (Li et al., 2004) in analysis of food groups for price and expenditure elasticities. For example, Blanciforti and Green (1983) classified food into four groups, including meats, fruits and vegetable, cereal and bakery products, and miscellaneous foods, to estimate the incorporating habit effects. Using time series data, the authors examined the temporal changes of price and income elasticity. Fulponi (1989) classified food into five groups: meat, dairy, cereals, fruits and vegetables, and others. The AIDS model was used to analyze the food and meat expenditure in France. Tiffin and Arnoult (2010)

divided food into five groups, including milk and dairy; meat and fish; fats; carbohydrates, such as bread, cereals, and potatoes; and fruit and vegetables and estimated the relationship between demographic characteristics and dietary demand by utilizing the UK government's Expenditure and Food Survey.

Chapter 3. Data and Methodology

3.1. Data Collection

To conduct the empirical analysis, the food expenditure data collected by the Rural Development Administration (RDA), the central government organization for overall agricultural research, development, and service in Korea, was used. The data was collected from consumer panel who were randomly selected using a stratified sampling method. At the outset, the panel initially selected as 1,000 households from 200 districts of the Greater Seoul Metropolitan Area (GMAP: Seoul, Gyeonggi, Incheon). Thereafter, adjustment was made on the sample from GMAP and the sampling frame expanded to other major, small-, and medium-sized cities in South Korea. As of January 2015, a total of 1,704 households were included in the consumer panel (Rural Development Administration, 2017).

The panel respondents were asked to attach all daily food purchase receipts to the housekeeping book and write down information related to the purchases, including price, purchase amount, and place of purchase. RDA has been keeping the monthly records since 2011. The purchase data was merged with a supplemental questionnaire data on agritourism experience, which was distributed in 2015. Therefore, in this analysis, the purchase data collected from January 2016 to December 2016 was used. The questionnaire included questions regarding the frequency of experiencing agritourism, date and

region of recent experience, and reasons of travel.

The following procedures describe how the merged dataset was prepared for econometric analysis. In the first step, food purchase data from a total of 1,502 households was collected. Panel members who did not respond to the auxiliary questionnaires were removed from the sample, thus yielding 1,131 households samples. In this process, unusable observations that contained missing values (20 households) were also removed. As a result, the final dataset consisted of 1,111 households, where the expenditures were aggregated into monthly figures for further matching with the price data. The demographic characteristics of the panel are shown in Table 1.

Table 1. Demographic Characteristics of Panels

	Profile Category	*(1) Panels who participated in agritourism (n=554)*		*(2) Panels who did not participate in agritourism (n=557)*		*(3) Overall (n=1111)*	
		N	**%**	**N**	**%**	**N**	**%**
Age	**23-29**	12	2.2%	15	2.7%	27	2.4%
	30-39	57	10.3%	68	12.2%	125	11.3%
	40-49	187	33.8%	182	32.7%	369	33.2%
	50-59	149	26.9%	180	32.3%	329	29.6%
	60 or higher	149	26.9%	112	20.1%	261	23.5%
Income	**Less than 2,000,000 KRW**	73	13.2%	81	14.5%	154	13.9%
	2,000,000-2,990,000 KRW	83	15.0%	83	14.9%	166	14.9%
	3,000,000-3,990,000 KRW	93	16.8%	97	17.4%	190	17.1%
	4,000,000-4,990,000 KRW	90	16.2%	107	19.2%	197	17.7%
	5,000,000-5,990,000 KRW	83	15.0%	88	15.8%	171	15.4%
	6,000,000-6,990,000 KRW	45	8.1%	44	7.9%	89	8.0%
	7,000,000-7,990,000 KRW	29	5.2%	26	4.7%	55	5.0%
	8,000,000-8,990,000 KRW	28	5.1%	14	2.5%	42	3.8%
	9,000,000 KRW or higher	30	5.4%	17	3.1%	47	4.2%
Job	**Clerical**	81	14.6%	69	12.4%	150	13.5%
	Technical	5	0.9%	12	2.2%	17	1.5%
	Labor	28	5.1%	33	5.9%	61	5.5%
	Sales	79	14.3%	101	18.1%	180	16.2%
	Housewife	253	45.7%	230	41.3%	483	43.5%
	Others	108	19.5%	112	20.1%	220	19.8%
Household	**1**	59	10.6%	75	13.5%	134	12.1%
Size	**2**	128	23.1%	121	21.7%	249	22.4%
	3	121	21.8%	139	25.0%	260	23.4%
	4	197	35.6%	170	30.5%	367	33.0%
	5	37	6.7%	39	7.0%	76	6.8%
	6 or higher	12	2.2%	13	2.3%	25	2.3%

For the prices of groceries, The South Korea Consumer Price Index (CPI) was used. CPI is managed by Statistics Korea and is calculated monthly by an actual price survey of items. In this step, the categories of interest should satisfy the following: (1) Average household spending per capita of national households is greater than a certain percentage; (2) items that represent the price of the same species group; and (3) items that can be continuously priced in the market. Pertinent with the CPI indices, the food purchase data was grouped into six categories: grain, vegetables, fruit, meat, fish, and processed food. Examples or descriptions for each category are listed in Table 2. Table 3 indicates the descriptive statistics of panels' expenditure data for the six categories. From a simple observation, it is clear that the budget shares of panel members who have participated in agritourism do not differ greatly from those who did not. The real expenditures of panels who have experienced agritourism, however, were somewhat greater. Nevertheless, the effect of agritourism on expenditure patterns should be tested using the demand model along with appropriate control variables.

Table 2. Definition of expenditure categories in CPI.

No.	CPI classification	Examples or description
1	grain	rice, brown rice, barley etc.
2	vegetables	lettuce, carrots, onion, garlic etc.
3	fruit	apples, pears, peach etc.
4	meat	beef, pork, poultry etc.
5	fish	aquatic products such as pollack, mackerel, squid, crab
6	processed food	Food that produced by processing raw ingredients

Source of CPI categories: Statistics Korea

Table 3. Descriptive statistics of panels' expenditures.

Expenditure category	*(1) Panels who participated in agritourism (n=554)*		*(2) Panels who did not participate in agritourism (n=557)*		*(3) Overall (n=1111)*	
	Mean Expenditure	St. dev. Of expenditure	Mean Expenditure	St. dev. Of expenditure	Mean Expenditure	St. dev. Of expenditure
Grain	14,334	26,397	13,530	25,102	13,932	25,760
	(0.040)	(0.071)	(0.042)	(0.076)	(0.041)	(0.073)
Vegetable	40,305	39,020	36,559	36,928	38,432	38,033
	(0.119)	(0.098)	(0.123)	(0.103)	(0.121)	(0.100)
Fruit	46,556	51,165	38,259	43,708	42,407	47,761
	(0.134)	(0.110)	(0.127)	(0.115)	(0.130)	(0.113)
Meat	59,534	64,326	52,549	56,591	56,041	60,680
	(0.160)	(0.134)	(0.160)	(0.133)	(0.160)	(0.134)
Fish	26,135	40,447	20,939	38,680	23,537	39,657
	(0.068)	(0.088)	(0.060)	(0.085)	(0.064)	(0.087)
Processed food	160,737	114,824	141,616	104,025	151,176	109,970
	(0.479)	(0.201)	(0.488)	(0.210)	(0.484)	(0.206)

(Budget Shares in parentheses)

3.2. Methods

The equation for estimation of the AIDS model, where a system of budget share equations is specified by an n-product demand system with exogenous demand shifters, is as follows: (i, j=1,…,n)

$$w_i = \alpha_i + \sum \gamma_{ij} \ln P_j + \beta_i \ln\left(\frac{X}{P}\right) + \theta_i AGRITOURISM + \lambda_i FAMILY + \pi_i INCOME + \varepsilon_i \quad (1)$$

In the equation, w_i is the budget share of the *i*th product, P_j is the price of the *j*th product, and *X* is the total expenditure of all food products. Exogenous demand shifters are as follows: *AGRITOURISM* is a binary variable that indicates respondents' participation in agritourism, *FAMILY* is the number of family members in the respondents' households, and *INCOME* is the monthly household

income of respondents. α_i, γ_{ij}, β_i, θ_i, λ_i, π_i, and ε_i are parameters to be estimated. It is noteworthy that the variables of *FAMILY* and *INCOME* are used as control variables, as the number of family members and household income are expected to affect budget allocations (Bawa & Ghosh, 1999; Rankin et al., 1998), while the variable *AGRITOURISM* is the main interest of the study. *P* is the translog price index defined as follows:

$$\text{Log}\, P = \alpha_0 + \sum_{i=1}^{n} \alpha_i \log p_i + \frac{1}{2}\sum_{i}^{n}\sum_{j}^{n} \gamma_{ij} \ln P_i \ln P_j \quad (2)$$

In order to comply with demand theory, the following parametric restrictions are also applied. Satisfying the following restriction is needed to comply with demand theory.

Adding up restriction: $\sum_{i=1}^{n} \alpha_i = 1, \sum_{i=1}^{n} \gamma_{ij} = 0, \sum_{i=1}^{n} \beta_i = 0$ (3)

Homogeneity restriction: $\sum_{j=1}^{n} \gamma_{ij} = 0$ (4)

Symmetry: $\gamma_{ij} = \gamma_{ji}$ (5)

Chapter 4. Results and Discussion

4.1. Parameter and elasticity estimates

Estimation of the parameters of the demand system for consumers' budget share of food categories was conducted through nonlinear estimation of the AIDS equations (1) and (2), with restrictions (3)–(5). For consistency, nonlinear estimation methods with an iterative procedure rather than linearized estimation of the AIDS model are preferred (Buse, 1994). The entirety of parameter estimates is shown in Table 4. Among the 36 parameters that estimate own- and cross-price effects on budget shares (γ_{ij}), twenty-nine are statistically significant. Regarding the estimated parameters of real expenditure effects on budget shares (β_i), six expenditure categories were all statistically significant.

To analyze the net effect of changes in total expenditure on spending for each category, the means of data were used to estimate the expenditure. The expenditure elasticities are calculated using the following formula (Green & Alston, 1990) and presented in Table 5:

$$\eta_i = 1 + \beta_i / \overline{w_i}$$

wherein the equation, η_i is the expenditure elasticity of *i*th category, and $\overline{w_i}$ is the average of budget share for the *i*th category. The expenditure elasticity coefficients are all positive, which indicates that all categories are normal goods. Processed food (0.803) is relatively less elastic when the consumer changes the

total expenditure. However, grains (1.200), meat (1.240), and fish (1.302) are more elastic as consumers change the total expenditure. It is found that as consumers increase food-related expenditure, more of the budget is allocated to grain, meat, and fish, while the budget for processing food decreases. This result is consistent with a prior study by Jin and Oh (2016), who found that the expenditure elasticity of fresh food items, including grain, vegetable, fruit, meat, and fish were 1.252 and that of processed food was 0.840 for general households in Korea.

Table 4. Nonlinear Estimation Results for the AIDS Model.

Budget shares	α	β	θ	λ	π	γ_{i1}	γ_{i2}	γ_{i3}	γ_{i4}	γ_{i5}	γ_{i6}
Grain	-0.080***	0.011***	-0.003**	-0.002***	0.000***	-0.077**	-0.029***	0.170***	0.070**	-0.061*	-0.073
	(0.012)	(0.001)	(0.001)	(0.001)	(0.000)	(0.027)	(0.007)	(0.032)	(0.031)	(0.035)	(0.076)
Vegetables	0.086***	0.006***	-0.003*	-0.006***	0.000**		-0.052***	-0.044***	-0.019*	0.061***	0.083***
	(0.016)	(0.001)	(0.002)	(0.001)	(0.000)		(0.008)	(0.011)	(0.011)	(0.009)	(0.019)
Fruits	0.062***	0.006***	0.006**	-0.006***	0.000***			-0.029	0.296***	-0.168***	-0.226**
	(0.018)	(0.002)	(0.002)	(0.001)	(0.000)			(0.068)	(0.042)	(0.050)	(0.104)
Meats	-0.258***	0.031***	-0.005**	0.009***	0.000***				0.187***	-0.215***	-0.318***
	(0.021)	(0.002)	(0.002)	(0.001)	(0.000)				(0.048)	(0.038)	(0.089)
Fish	-0.269***	0.029***	0.004***	-0.009***	0.000***					0.055	0.328***
	(0.014)	(0.001)	(0.001)	(0.001)	(0.000)					(0.077)	(0.114)
Processed food	1.459***	-0.083***	0.002	0.015***	0.000***						0.205
	(0.033)	(0.003)	(0.003)	(0.002)	(0.000)						(0.266)

(Standard errors in parentheses)
R-squared: 0.6101; ***, **, * indicate significance at 1%, 5%, 10% levels, respectively.

Table 5. Expenditure elasticities of six categories.

	Coefficient	Standard error	t-value
Grain	1.200	0.019	63.259
Vegetable	1.036	0.009	119.820
Fruit	1.044	0.011	93.545
Meat	1.240	0.014	88.869
Fish	1.302	0.012	108.571
Processed Food	0.803	0.007	123.101

The Hicksian (compensated) own- and cross-price elasticities were calculated using the following formula (Green & Alston, 1990):

$$\varepsilon_{ij} = \eta_i \bar{W}_j + \delta_{ij} + \frac{\gamma_{ij} - \beta_i(\bar{\alpha}_j + \sum_k \gamma_{ik}\, ln\bar{p}_k)}{\bar{W}_i}$$

wherein this equation, ε_{ij} is the cross-price elasticity (when $i \neq j$) or the own-price elasticity (when $i=j$), and δ is the Kronecker delta (taking the value of one when $i=j$, and otherwise zero).

The own-price elasticities, shown on the diagonals of Table 6, show significant results in four categories. Grain, vegetable, and fruit have negative signs, while meat has a positive sign. In terms of magnitude, the price elasticities of the grain, vegetable, and fruit categories were greater than unity. The own-price elasticity for grain (-2.127) was much higher than that of vegetable (-1.212) and fruit (-1.099), which indicated that the Korean people are price sensitive to grain products. Grains such as rice have traditionally been "necessities" for Koreans; however, Westernization of the food culture (Yoon, 2005) has led to changes in dietary norms. According to Statistics Korea, Korean daily grain intake steadily decreased from 222.8g in 2010 to 195.1g in 2016. Contrary to this trend, the consumption of meat is increasing (Lee & Cho, 2012). This situation indicates that the grain category is more sensitive to price changes than other categories. In addition, the positive own-price

elasticity of meat denotes the Veblen status of meat products in Korea.

Cross-price elasticities are also presented in Table 6, on the off-diagonals. All categories of expenditure had a significant cross-price effect with some other food categories of expenditure. For example, the compliments of meat are fish and processed food, while the substitutes are grain and fruit (Lee & Cho, 2012). Among the coefficients that have significance, the rate of positive and negative coefficients is similar. Substitution and complementary relationships between food categories were diverse. These relationships appear to be different among countries and even among the same categories. For instance, the relationship between grain and meat is complementary in France and Spain (Fulponi, 1989; Molina, 1994). In the United States, however, a substitution effect is reported (Okrent & Alston, 2012).

Table 6. Hicksian own- and cross-price elasticities.

Budget shares	Prices					
	Grain	Vegetable	Fruit	Meat	Fish	Processed Food
Grain	-2.367***	-0.372***	3.352***	1.519***	-0.977	-1.156
	(0.514)	(0.125)	(0.603)	(0.574)	(0.649)	(1.418)
Vegetable	-0.125***	-1.163***	-0.132*	0.021	0.491***	0.908***
	(0.042)	(0.049)	(0.071)	(0.067)	(0.055)	(0.117)
Fruit	1.284***	-0.151*	-1.065**	2.274***	-1.092***	-1.250*
	(0.231)	(0.081)	(0.491)	(0.300)	(0.361)	(0.748)
Meat	0.625***	0.027	2.440***	0.665*	-1.475***	-2.281***
	(0.236)	(0.082)	(0.322)	(0.373)	(0.290)	(0.689)
Fish	-0.535	0.806***	-1.563***	-1.970***	-0.224	3.487***
	(0.356)	(0.091)	(0.516)	(0.388)	(0.793)	(1.176)
Processed Food	-0.146	0.341***	-0.412*	-0.699***	0.802***	0.114
	(0.179)	(0.044)	(0.246)	(0.212)	(0.270)	(0.630)

(Standard errors in parentheses)
***, **, * indicate significance at 1%, 5%, 10% levels, respectively.

4.2. Effects of experience of agritourism

In order to test the effects of agritourism experience on consumption pattern, a series of Likelihood Ratio (LR) tests were performed. This procedure statistically confirms whether agritourism significantly alters the food purchasing behavior of agritourists. The results are presented in Table 7.

As shown in the table, Model 2, with parameters related to the effects of number of family, shows a better fit than Model 1, which is the baseline model. Model 3, the alternative model that includes the control variables of FAMILY and INCOME dominates Model 2 significantly at the $p < 0.01$ level. Finally, Model 4 (the full model), which includes all the variables, FAMILY, INCOME, and AGRITOURISM, dominates Model 3. The results indicate that the full model is significantly dominant to all other alternatives at $p<0.01$. In summary, through the joint significance of the thetas it is found that the effect of agritourism does alter the food consumption behavior of agritourists after the experience. This effect was consistently observed even after controlling for family size and household income.

Table 7. Result of LR tests among alternative models

Models	Log-likelihood	LR test	Conclusion
Model 1: $\sum_{i=1}^{n}\theta_i = 0, \sum_{i=1}^{n}\lambda_i = 0, \sum_{i=1}^{n}\pi_i = 0$	59,904		
Model 2: $\sum_{i=1}^{n}\theta_i = 0, \sum_{i=1}^{n}\lambda_i \neq 0, \sum_{i=1}^{n}\pi_i = 0$	60,140	2 vs 1: 471.31 ***	FAMILY is significant.
Model 3: $\sum_{i=1}^{n}\theta_i = 0, \sum_{i=1}^{n}\lambda_i \neq 0, \sum_{i=1}^{n}\pi_i \neq 0$	60,239	3 vs 2: 198.69 ***	FAMILY and INCOME are significant.
Model 4: $\sum_{i=1}^{n}\theta_i \neq 0, \sum_{i=1}^{n}\lambda_i \neq 0, \sum_{i=1}^{n}\pi_i \neq 0$	60,253	4 vs 3: 29.022 ***	FAMILY, INCOME, and AGRITOURISM are significant.

*** indicate significance at 1%.

Regarding examination of the category-specific changes in food consumption after agritourism, the theta coefficients can be used from Table 4. The experience of agritourism significantly alters food expenditure patterns in five categories: grain, vegetable, fruit, meat, and fish. In other words, participation in agritourism influences the consumption of all agriproduct for the tourists, except for processed food. This is intuitive, as agriproducts are usually food ingredients and/or an individual category of fresh food; meanwhile, processed foods are moved through the processing stage and are not agriproducts commonly offered in agritourism destinations. While visiting the agritourism destinations, consumers would have been steadily exposed to the agriproducts (fresh food) and shifted their attitude toward agriproducts. On the other hand, processed unique to the destination is not likely to be exposed to tourists. Based on this line of reasoning, Jin and Oh (2016) also categorize processed food separately in their study.

It is noteworthy that the effects of agritourism vary among the five food categories. Consumers who have had the agritourism experience increased their budget shares of fruit (0.006) and fish (0.004), while decreasing the budget shares of grain (-0.003), vegetable (-0.003), and meat (-0.005). The results are not surprising, as among all the agricultural festivals, the main driver of Korean agritourism, the two most frequently held were fish-related

(36% in 2015 and 40% in 2016), and fruits-related (18% in 2015 and 15% in 2016) in 2015 and 2016 (Ministry of Culture, Sports and Tourism of Korea, 2015; 2016). It can be intuitively deduced that relatively more agritourists have been exposed to fruit and fish agriproducts within the data timeframe. In addition, it can be inferred that agricultural festivals can serve as effective marketing tools for agritourism destinations.

Chapter 5. Conclusion

Agritourism has been gaining attention from several different stakeholders including academics, farm owners, and local governments. Although the economic benefits of agritourism are evident and widely agreed, its magnitude has been regularly questioned. The stream of studies in this field is only at an early stage (Kline et al., 2016), and the majority of empirical research is largely focused on the short-term economic impact of agritourism, such as farms' immediate income or revenue increases. Despite the possibility of long-run economic impacts of agritourism through change in agritourists' purchase patterns through mere exposure and product familiarization has been raised by extant studies, there is still a lack of empirical evidence, rendering under-estimation of the economic contribution of agritourism.

Although some studies have discussed the possibility of prolonged economic impacts of agritourism through changes in agritourists' purchase patterns through mere exposure and product familiarization, there is still a lack of empirical evidence, which causes underestimation of the economic contribution of agritourism.

In order to resolve this issue, the current study examined the effect of agritourism on agritourists' food purchase patterns after their trip by using actual consumer expenditure data on all food purchases of the six categories

according to the CPI definition and a nonlinear, econometric estimation of the AIDS model developed by Deaton and Muellbauer (1980). From the empirical analysis, it was found that the agritourism experience significantly influences the food purchase patterns in five agriproduct categories of grain, vegetable, fruit, meat, and fish, while consumption of processed food was unaffected by the experience. The category-wise effects of agritourism were positive for fruit and fish and were negative for grain, vegetable, and meat, which signaled the importance of agricultural festivals as marketing tools for agritourism destinations.

For the academic audience, the findings of this study contribute to the stream of agritourism research in two meaningful ways. First, to the best of our knowledge, the present study is the first study to empirically examine the long-term effect of agritourism experiences on food purchase patterns, rather than investigating the short-term cash flows of agritourism service providers. By utilizing household-level consumer data, the relationship between agritourism experiences and the later behaviors of consumers was confirmed. Second, by jointly estimating the effects of income and household size through a system of equations approach, we controlled for any potential confounding effects that might have been correlated with, allowing for estimation of the unbiased effect of agritourism on consumer behavior.

On a practical level, our findings offer strategies for agritourism

service providers and/or aspiring farmers in promoting and marketing their products through agritourism. Based on these findings, agritourism service providers may consider agritourism services as a marketing channel rather than a profit-generating tool. In this regard, when planning, service providers should be mindful of how to expose agritourists to agriproducts in more meaningful ways during their experience. Also, offering various activities that increase consumers' involvement with agriproducts might enhance the post hoc effect on consumption of agriproducts. For a continued emotional attachment, promoting agriproducts to visitors through social networks or other online media could be useful after the trip is over.

Despite its findings, the study had some limitations. The data is collected from a relatively homogeneous group in terms of food purchase patterns and behavior regarding agritourism experience. The questionnaire used by RDA does not contain detailed information about the type of agritourism, and therefore the effects of agritourism experiences were estimated using only one parameter, implying an 'average' effect among the different types of agritourism. In addition, the relatively short time span of the dataset does not allow for evaluation of the total impact on consumption behavior in cases where additional lagged effect might be expected. Thus, caution should be used when generalizing the results. Nevertheless, the study significantly contributes to the understanding of agritourism and its economic

significance by theoretically extending the sustainability of the business model. Promoting iconic, regional agriproducts will facilitate tourists' development of destination images, help attract visitors, and foster the region's economic sustainability (Sims, 2009). Future studies may consider using longitudinal data of greater length, scope, and depth to deepen understanding of this issue, including evaluation of the long-run term effects of agritourism on agritourists' food consumption behavior. Collection and use of a more detailed dataset that includes data on agritourism type (e.g., grain, meat, fish, etc.) and agritourism characteristics (e.g., duration, accommodation, purchases) would also facilitate a more sophisticated identification of the effects of agritourism on agriproduct consumption, including the relationship between spending at agritourism destinations and general consumption of agriproducts.

Ⅱ. Essay 2: The effect of meal type and involvement on Consumers' evaluation in Agritourism

Chapter 1. Introduction

1.1. Study Background

Dining at tourist destinations not only serves a functional purpose, such as satisfying hunger or thirst, but also provides tourists with various benefits that are different from general restaurant experiences (Chang, Kivela, & Mak, 2011). For instance, dining out during travel offers a pleasant experience that helps tourists fulfill their holiday or traveling expectations, satisfying all five senses (J. Kivela & Crotts, 2006). By consuming food related to the travel region, a "sense of place" is created, thereby differentiating visitors' experience from routine (Haven-Tang & Jones, 2006). Furthermore, travel dining gives visitors an opportunity to engage with the cultural experience of their destination (Chang et al., 2011; J. Kivela & Crotts, 2006; T.-H. Lee & Crompton, 1992). Such cultural experiences enable tourists to acquire some knowledge of local gastronomy by exploring and/or eating local meals that are not frequently encountered in their daily cuisine (Fields, 2003). For this reason, dining experiences in tourism destinations are regarded as "peak touristic" experience (Hall & Sharples, 2004; Quan & Wang, 2004).

Agritourism is defined as a type of tourism related to agriculture that is sustainable for rural communities (Naidoo & Pearce, 2016). Agritourism thus is utilized as a way to diversify agricultural business and enables farmers to attract tourists to their farms (Barbieri, 2013). Considering that one of the ultimate purposes of agritourism is the promotion of a region's agricultural products (Sonnino, 2004), it is clear that the food and meals that are presented during agritourism trips play a major role in creating additional income for service providers such as farmers. Therefore, it is necessary to explore agritourists' dining experiences.

Previous academic studies on food consumption at tourism sites, including dining experiences, have largely focused on local food (Frisvoll, Forbord, & Blekesaune, 2016; Kim, Eves, & Scarles, 2009), particularly its authenticity (Sims, 2009; Sthapit, 2017) or uniqueness (J. Kivela & Crotts, 2006) of local food. However, other facets, such as the unfamiliarity of local gastronomy, pose considerable impediments to travel (Cohen & Avieli, 2004). Seo, Kim, Oh and Yun (2013) have contended that the familiarity of local food has a significant influence on tourist evaluations of its image and consumption. Therefore, some discussion of the effects of meals served at tour sites, particularly focusing on meal type, is necessary.

Agritourism provides various activities related to services and

products associated with agriculture and rural areas, including food-related activities (Sznajder & Przezborska, 2004). Food-related activities, which make participants involved in food, play as central a role in attracting tourists as the local gastronomy itself (J. J. Kivela & Crotts, 2009). This type of participant involvement can also make meal experiences feel extraordinary rather than ordinary (Hanefors & Mossberg, 2003b). Previous studies have shown that participating in the production process, such as by preparing food, positively affects consumer evaluations of the food itself due to their increased involvement with the food (Dohle, Rall, & Siegrist, 2014). In sum, food-related activities which increase tourists' involvement with their food will eventually have a positive impact on tourists' evaluations of food at tourism sites. However, the effects of food-related activities on evaluations of dining experiences have not yet been studied in the specific context of agritourism.

1.2. Purpose of Research

The primary goal of this study is to investigate dining experiences in agritourism situations by exploring how agritourists evaluate their meals. Using an experimental design, current study attempts to examine (1) the effects of ordinary vs. extraordinary meals on agritourists' evaluations of their food, and (2) how food-related activities—specifically, whether or not

agritourists participate in meal preparation—affect agritourists' evaluations of their food. To increase external validity, the experiments were conducted at a restaurant to fully immerse participants in the dining experience. Moreover, in order to provide empirical implications for agritourism service providers, the experiment was then replicated in a general restaurant situation unrelated to tourism. Linear regressions were used to examine the impacts of food type and related experiences.

Chapter 2. Theoretical Framework

2.1. Involvement and consumer behavior

Consumer involvement with a product can be defined as the consumer's perceived relevance and importance of, or interest in, the product (Zaichkowsky, 1985). A consumer's level of involvement, which is determined by individual, object, and situation (Zaichkowsky, 1985), is measured on a spectrum ranging from high to low (S. C. Park & Keil, 2017). Different people and situations can lead to various degrees of involvement. In addition, the physical characteristics of a product or object are factors to determine a consumer's level of involvement (Zaichkowsky, 1985). The degree of involvement in turn influences consumer behavior, which includes information processing and decision-making processes (Gross & Brown, 2006). High involvement levels require complex information processing and analytical, careful decision-making processes, while low involvement levels only require the interests, minimal effort, and simpler decision-making process (Chinburapa et al., 1993; Schiffman, Kanuk, & Brewer, 2014).

The issue of the involvement by consumers under participating and consuming food has been a central one in the field of marketing (Vargo &

Lusch, 2004; Wolf & McQuitty, 2011). Traditional marketing perspectives hold that consumers are passive buyers (Fuat Firat, Dholakia, & Venkatesh, 1995; Xie, Bagozzi, & Troye, 2008); however, consumers occasionally participate in the process of production using tools and materials in order to produce services, meals, and entertainment for themselves (Lusch & Vargo, 2006). Xie et al. (2008) illustrated that consumers proceed with physical activities such as classifying, moving, and combining materials when they produce products for their consumption. In addition, mental involvement and socio-psychological experience are required with physical process. Mental involvement consists of planning, assessing, and monitoring, indicating high involvement levels. Socio-psychological experience assesses the overall process, its output, and its effects. This combination of physical processes, mental involvement, and socio-psychosocial experience has been termed a "prosumption" activity (Xie et al., 2008). Moreover, Kotler (1986) predicted that consumers would be attracted to prosumption activities, and marketers have to provide against this prediction.

Since a meal requires that food ingredients be combined, reconstructed, mixed, and presented, food preparation is a typical example of a prosumption activity (Xie et al., 2008). In academia, previous studies have indeed focused on food preparation activities (e.g. Dohle et al., 2014; Dohle,

Rall, & Siegrist, 2016; Mochon, Norton, & Ariely, 2012; Norton, Mochon, & Ariely, 2011; Wolf & McQuitty, 2011). More specifically, Dohle et al. (2014) found that food preparation had a positive effect on consumer evaluations of milkshakes; they confirmed that participants assessed a milkshake more favorably when there were involved in its preparation Similarly, van der Horst, Ferrage and Rytz (2014) found that children's involvement in meal preparation increased their intake of vegetables, and Dohle et al. (2016) found that women's preparation behaviors positively influenced their evaluations of healthy food, although they did not influence their evaluations of unhealthy food.

In sum, consumers are said to be highly involved when they create a product for their own consumption (Xie et al., 2008). In addition, higher consumer involvement levels have a positive effect on consumer product evaluations. However, research on consumer involvement in food preparation, and consequent evaluations of the prepared food, has been limited (Dohle et al., 2016). In addition, consumer involvement in food preparation has not been studied in the context of agritourism, but it is possible that tourists' involvement in tourism positively influences the behaviors and intentions of tourists (J. Lee & Kwon, 2009). Hence, more research on food preparation in the context of agritourism is necessary.

2.2. Extraordinary and Ordinary food

In order to examine the effects of food type on consumer evaluations in agritourism, we divided food into two dimensions: ordinary and extraordinary food. Sussman and Alter (2012) define extraordinary goods as items that are perceived as special or unusual and are infrequently purchased. In contrast, ordinary goods are items that are perceived as common and are frequently purchased. Bhattacharjee and Mogilner (2014) further defined extraordinary experience as infrequent, uncommon, and beyond everyday boundaries, while ordinary experience are frequent, common, and within everyday boundaries. Their definitions are distinct in that they do not refer to any intrinsic value (e.g., inferiority or superiority) and only consider its relative frequency. These are the definition used by the present study. Extraordinary food refers to food that is infrequent, uncommon and is rarely experienced during daily routines, while ordinary food refers to food that is frequent, common and is routinely experienced.

Previous research has largely focused on extraordinary experiences (Arnould & Price, 1993; Bhattacharjee & Mogilner, 2014; Goolaup, Solér, & Nunkoo, 2017; Sthapit, 2017). Arnould and Price (1993) found that extraordinary experiences are triggered by complex interactions between various factors such as unusual events and strong emotions during unusual

experiences such as river rafting. Of greater relevance to the present study, Goolaup et al. (2017) investigated extraordinary food experiences for tourists, specifically those relating to “surprising” elements. They found that the primary factor in extraordinary food experiences was an encounter with rare and extraordinary food products, leading to extraordinary experiences that prompted feelings of surprise and intense pleasure (Arnould & Price, 1993; Goolaup et al., 2017). These emotions were derived from personal cognitive or emotional reactions to using or experiencing an extraordinary product or event (Goolaup et al., 2017).

Such extraordinary and rare experiences can affect the overall wellbeing of an individual (Bhattacharjee & Mogilner, 2014). In particular, memories of extraordinary experiences can help to build an individual’s self-definition, wellbeing and life satisfaction. In addition, extraordinary experiences can cause positive emotions such as happiness (Bhattacharjee & Mogilner, 2014).

In previous studies, the concept of “extraordinary” has been largely used in the context of experiences, and research on extraordinary products or items is still limited. As Goolaup et al. (2017) noted, however, one of the necessary preceding factors in an extraordinary food experience is an encounter with a rare and extraordinary food. Accordingly, the present study

has tried to shed light on the effects of extraordinary food using experimental approaches. We have applied the concept of extraordinary and ordinary goods to food in order to assess the effects of food type on consumers' evaluations of their agritourism experience.

Chapter 3. Hypotheses Development

As food itself can be agritourism product and is related to the overall facet of the destination environment, the significance of food is emphasized in agritourism (Frisvoll et al., 2016). This study focused on the effects of food type which specified in to extraordinary vs. ordinary foods on agritourists' food evaluations. Bhattacharjee and Mogilner (2014) previously found that extraordinary experiences generated greater happiness than ordinary experiences. Thus, we hypothesized that extraordinary foods in agritourism would have more positive impacts than ordinary foods, and we sought to confirm that agritourists will value extraordinary foods more highly than ordinary foods. Based on the findings of previous research, we proposed the following hypotheses:

H1-a: Agritourists will express a greater preference for extraordinary food than ordinary food.

H1-b: Agritourists will be willing to pay more for extraordinary food than ordinary food.

Previous literature has also indicated that food preparation activities in agritourism can increase the perceived value of the food (Dohle et al., 2014,

2016; van der Horst et al., 2014). In addition, agritourists may be more aware of the ingredients in their food when they prepare food by themselves (Dohle et al., 2016), which may in turn increase their perceptions of the food's extraordinariness. Following this reasoning, food preparation may therefore increase the perceived value of extraordinary food due to greater awareness of its extraordinariness. Based on this assumption, we proposed the following hypotheses:

H2-a: For extraordinary food, food preparation will lead to an increase in food preference in agritourism.

H2-b: For extraordinary food, food preparation will lead to an increased willingness to pay more for food in agritourism.

According to both H2 hypotheses, agritourists will most highly evaluate their overall agritourism experiences when they are provided with extraordinary food in whose preparation they have participated. However, attitudes toward the product may differ depending on the exact situations (Quester & Smart, 1998). Therefore, this study offers one group of participants the chance to prepare and consume extraordinary food in a restaurant environment, allowing for a comparison of consumer evaluations of food between agritourism and restaurant scenarios. The following hypotheses were

established:

H3-a: Even when consumers participate in the preparation of extraordinary food, their preferences will differ in restaurant vs agritourism situation.

H3-b: Even when consumers participate in the preparation of extraordinary food, their willingness to pay more for the food will differ in restaurant vs agritourism situation.

Chapter 4. Research Methodology

4.1. Experiment Design

The purpose of this study was to examine the impact of food type and self-preparation on food evaluations in agritourism. Food type (ordinary vs. extraordinary) and food preparation (self-prepared vs. prepared by others) therefore served as independent variables. To test our hypotheses, we used current research to create a factorial experimental design, which used a 2 (type of food: extraordinary food vs. ordinary food) x 2 (preparation: self-prepared vs. prepared by others) between-subject design. Preference (using a 7-point Likerts scale where 1 = never favorable and 7 = very favorable) and willingness to pay for food (open-ended) were used as the dependent variables. Regression analyses were conducted to investigate the effects of food type and preparation.

The food that utilized as a stimulus in this study is “Sanchae Bibimbap.” Bibimbap is a Korean food comprised of several vegetables over rice (K.-H. Park, Lee, & Kim, 2011). Current study chose to use Sanchae Bibimbap for the following reasons: (1) it is commonly available in routine life but is also recognized as a food sold at agritourism sites; (2) it was possible

for participants to be involved in preparing it themselves; and (3) it could be prepared by participants without hazards such as the use of sharp kitchen utensils and or the potential to be burned. The recipe was primarily comprised of five kinds of vegetables and one sauce. A soup and side dish were also provided

The experiment took place in a restaurant located near a college to increase the study's external validity. In order to help participants feel immersed in an agritourism scenario, participants were provided with a description explaining the dining situation in a typical farmhouse during an agritourism excursion. Participants were also provided with a description of a dining scenario at a typical Korean restaurant, and were asked to imagine that they were having a meal at a typical restaurant.

In order to assess consumer evaluations, our study used their preferences and willingness to pay as dependent variables. Previous research about the effects of food self-preparation used a similar measure, "liking," as a dependent variable to measure participant evaluations (e.g. Dohle et al., 2014, 2016). Using similar reasoning, the present study investigated participants' preference for the stimulus food by adapting Dohle et al.'s (2016) question "Do you like the food you ate?" Responses were compared using the 7-point Likert scale, where 1 = never favorable and 7 = very favorable. In addition,

willingness to pay for the food they had consumed was used as another dependent variable. Participants were asked to answer the question "How much would you be willing to pay for this food?" Responses were open-ended in order to fully measure participants' valuation of the food.

Since participants filled out their evaluations after tasting the food, it is possible that their degree of hunger and weight concerns affected the study's results. Dohle et al. (2016) accounted for this possibility by using hunger and weight concerns as control variables; we did the same in the present study. The measure for weight concerns was adopted from (Chernev (2011), and asked participants to answer "I am concerned with managing my weight"; responses were compared using the 7-point Likert scale where 1 = never concerned and 7 = extremely concerned. To assess participants' degree of hunger, they were asked to answer the question "How hungry are you?"; responses were again compared using the 7-point Likert scale, where 1 = never hungry and 7 = extremely hungry (Tal & Wansink, 2013). Demographic factors such as gender, age, and household income per month were also used as control variables. To confirm the manipulation, participants were asked to "Check the degree of ordinariness or extraordinariness of the food," using the 7-point Likert scale, where 1 = very ordinary and 7 = very extraordinary, which was revised and adapted from Bhattacharjee & Mogilner (2014). The original

version for survey is depicted in Appendix C. To control for the effect of the quality of the food itself on the evaluation, all participants received the same food. In order to manipulate the food type, however, participants in the ordinary and extraordinary groups received different descriptions of their food. To prevent any unwanted impacts from participants' prior attitudes toward existing brands or regions (Cobb-Walgren, Ruble, & Donthu, 1995), virtual farm was utilized in the description.

This study was reviewed by the Institutional Review Board (IRB) of Seoul National University (IRB No. 1801/002-014).

4.2. Field Experiment Process

Participants were recruited using advertisements on an online website seeking participants for food-tasting events. As evaluations submitted by food and restaurant experts were likely produce biased results, the study excluded participants with expertise in these fields. In addition, the participant recruitment process included a question about allergies to specific foods in order to exclude participants who could experience health problems. In total, 141 participants, including those in the restaurant scenario group, were spontaneously recruited via this online recruitment system.

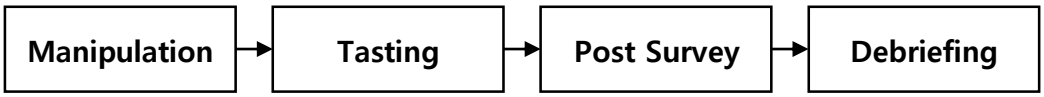

Figure 1. Experiment process

The experiment process is presented in Figure 1. Before the experiment, food (Figure 2) and descriptions were provided to participants. Participants in the self-preparation experimental group were provided with rice, one vegetable for self-preparation, sauce ingredients, and four other kinds of pre-prepared vegetables, along with a soup and side dishes. In the other-preparation experimental group, the ingredients were the same but all were fully prepared in advance.

Figure 2. Foods that were offered in the self-preparation group (left) and in the preparation by others group (right)

Before manipulating, participants were asked to imagine that they were participating in an agritourism event (or having a meal in Korean

restaurant in case for restaurant situation) and were asked about their degree of hunger. In order to manipulate participants' perceptions that their food was ordinary or extraordinary, they were required to read a description of the food. The description provided to those in the ordinary food group described the food as being commonly available, and only general details of its ingredients were provided. In the description provided to those in the extraordinary food group, the food was described as being only rarely available. Further details are given in Table 8, and the original descriptions are provided in Appendix C.

Table 8. Examples of the descriptions used for food type manipulation.

	Ordinary Condition	**Extraordinary Condition**
Description 1	Ingredients are sold in a number of places, ranging from traditional markets to supermarkets, and are easily available.	All ingredients were grown in 'region A' (imaginary region). (…) Due to the geographic features of this region, the ingredients are especially rich in vitamins and minerals. The average annual yield of produce from this region is only 50 kg.
Ingredient 1 (*Chwinamul*)	*Chwinamul* is usually seasoned or steamed.	This *chwinamul* has a particularly vivid leaf color and long-lasting scent due to its extraordinary cultivation methods.
Ingredient 2 (Bracken)	Bracken is usually dried, steamed, fried, or seasoned for meals.	This bracken is soft, not tough, due to harvesting only young bracken that grows in a clean area.
Ingredient 3	Radish is utilized in various ways, such as in kimchi,	This radish is a newly developed variety with a

(Radish)	kakdugi, and vegetable broths.	denser fibrous structure. It is rich in minerals because it grows in mineral-rich soil.
Ingredient 4 (Dried radish leaves)	Dried radish leaves are from the green part of a radish, which is used as a side dish or soup.	These dried radish leaves are dried with sea breeze. It is abundant in vitamins and minerals, especially iron.

Participants in the self-preparation group were instructed to prepare Sanchae Bibimbap according to a given recipe; they put sauce onto a vegetable, mixed it, and served it and other vegetables over rice. To increase the consistency of their results compared with those who received a pre-prepared meal, participants in the self-preparation group were given a picture of the completed dish and were told to emulate it (Figure 3). Finally, participants mixed their meal completely prior to tasting. In the group that received meals pre-prepared by others, participants were only asked to mix their pre-prepared Sanchae Bibimbap completely prior to eating.

Figure 3. Depiction of completely assembled “Sanchae Bibimbap”

Participants were instructed not to eat their soup and side dishes in order to more precisely evaluate their Sanchae Bibimbap. They were instructed only to taste it and then complete the evaluation questions pertaining to the Sanchae Bibimbap. Finally, participants were asked to complete a series of demographic questions. After debriefing participants, they were all offered a $6 restaurant coupon.

Chapter 5. Data analysis and Results

5.1. Data collection

Data was collected using an experimental approach. The food-tasting experiments and related surveys were conducted in a restaurant located near the university campus. A summary of the number of participants allocated to each group is shown in Table 9. A total of 164 participants were initially recruited; 24 were excluded for being restaurant professionals, and 10 participants had unusable data. Overall, the study analyzed responses from 130 participants.

Table 9. Number of Final Responses.

Situation	Agritourism				Restaurant
Food type	Extraordinary		Ordinary		Extraordinary
Preparation	Self	Other	Self	Other	Self
N	25	25	28	26	26
Group	Group 1	Group 2	Group 3	Group4	Group 5

5.2. Demographic information

Participants' demographic information is shown in Table 10. Men and women represented 43.1% and 56.2% of the study population, respectively. The majority of participants (56.2%) were 21~30 years old.

Table 10. Participants' Demographic Information.

		N	%
Gender	Male	56	43.1
	Female	73	56.2
	No answer	1	0.8
Age	~20	20	15.4
	21~30	70	53.8
	31~40	24	18.5
	41~50	13	10.0
	51~	3	2.3
Education	High school graduate or less	4	3.1
	Undergraduate	52	40.0
	College degree	47	36.2
	Graduate student	17	13.1
	Graduate degree	10	7.7
Occupation	Specialized	18	13.8
	Clerical	13	10.0
	Technical	2	1.5
	Sales	5	3.8
	Public official	6	4.6
	Owner	7	5.4
	Student	62	47.7
	No job	5	3.8
	Housewife	1	.8
	Other	11	8.5
Monthly Household income	Less than 1,810	22	16.9
	1,810–2,720	21	16.2
	2,720–3,630	19	14.6

(USD*)	3,630–4,540	13	10.0
	4,540–5,450	17	13.1
	5,450–6,360	10	7.7
	6,360–7,270	9	6.9
	7,270 or higher	17	13.1
	No answer	2	1.5

USD*: Approximately 1,100 KRW was calculated as 1 USD for convenience of calculation.

5.3. Manipulation Check

Participants' perceived degree of their food's ordinariness (1 = very ordinary, 7 = very extraordinary) was collected to confirm food type manipulation according to the two groups (ordinary vs. extraordinary food); this information is shown in Table 11. The mean values of the ordinary and extraordinary foods were 2.868 and 3.306, respectively; this difference was significant ($t = 1.670$, $p < 0.05$), meaning that participants did perceive differences between the ordinary and extraordinary foods.

Table 11. Manipulation check for perceived ordinariness of food.

	Number of participants	Mean	Standard deviation	*F*-value
Ordinary food	53	2.868	1.2715	$T = -1.670$, $df = 122.773$ $p < 0.05$
Extraordinary food	72	3.306	1.6584	

5.4. Hypothesis Test

To analyze the effect of food type and self-preparation on food evaluation, a regression analysis was performed as follows:

$$Y = a + b1 * X_{food\ type} + b2 * X_{preparation} + b3 * X_{Food\ type*preparation} + b4 * X_{Gender} + b5 * X_{age} + b6 * X_{household\ income} + b7 * X_{Hunger} + b8 * X_{weight}$$

The variables utilized in the model are shown in Table 12.

Table 12. Description of Variables.

Variables			**n/ mean**	**%/ SE**
Dependent Variables	Preference	7-point Likert scale (1 = no preference, 7 = strong preference)	5.23	1.08
	Willingness to pay	Open-ended (USD*)	6.191	1.212
Independent Variables	Food type	Ordinary = –1	52	51.0
		Extraordinary = 1	50	49.0
	Preparation	Other-preparation = –1	50	49.0
		Self-preparation = 1	52	51.0
	Food type* Preparation	Ordinary* Other-preparation = 1	25	24.5
		Ordinary* Self-preparation = –1	27	26.5
		Extraordinary* Other-preparation = –1	25	24.5
		Extraordinary* Self-preparation = 1	25	24.5
Control variables	Gender	Male = 1	46	44.1
		Female = 2	57	55.9
	Age	Open-ended	27.62	8.08
	Monthly Household income (USD*)	Less than 1,810	17	16.7
		1,810–2,720	17	16.7
		2,720–3,630	13	12.7
		3,630–4,540	10	9.8
		4,540–5,450	13	12.7
		5,450–6,360	8	7.8
		6,360–7,270	8	7.8
		7,270 or higher	16	15.7
	Degree of Hunger	7-point Likert scale (1 = not hungry at all, 7 = very hungry)	4.95	1.24
	Degree of Weight Concern	7-point Likert scale (1 = no concern at all, 7 = very concerned)	4.49	1.51

USD*: Approximately 1,100 KRW was calculated as 1 USD.

5.4.1. Preference

The mean preferences of the four groups are illustrated in Figure 4. The preference for extraordinary food was highest when agritourists participated in the preparation of their food.

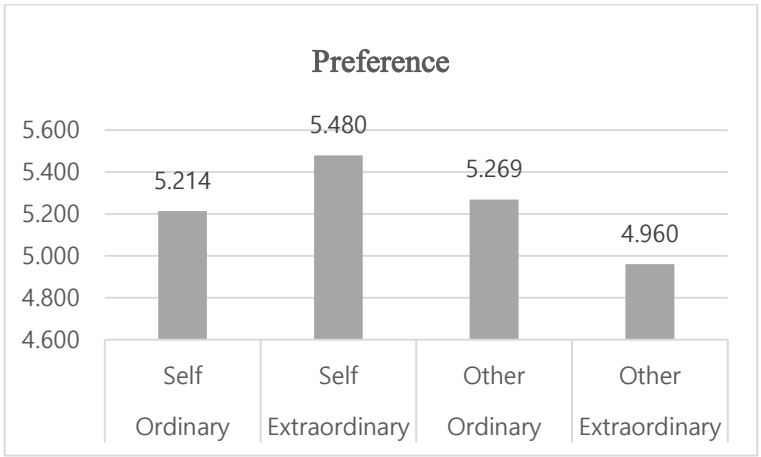

Figure 4 Mean preferences of the four groups (unit: Score)

The results of the regression analysis for food preference are shown in Table 13. There was no significant difference in food preference among the independent variables.

Table 13. Regression Analysis Results (*y* = preference).

	Coefficient				
	B	S. E.	Stand. B.	*t*	*p*-value
(Intercept)	5.691	.817		6.964	0.000
Food type	.021	.109	.020	.197	0.422
Preparation	.108	.106	.100	1.016	0.156
Food type* preparation	.121	.110	.112	1.102	0.137

Gender	–.215	.228	–.099	–.941	0.174
Age	–.030	.014	–.223	–2.152	0.017**
Household income	–.067	.044	–.151	–1.509	0.067 **
Degree of hunger	.126	.089	.144	1.416	0.080 *
Degree of weight concern	.081	.073	.114	1.112	0.135
$R^2 = 0.125$, adj $R^2 = 0.050$					

** and * indicate significance at 5% and 10% levels, respectively.

5.4.2. Willingness to pay

The mean values of willingness to pay according to the four groups are depicted in Figure 5. Willingness to pay for extraordinary food prepared by oneself was the highest, consistent with the food preference results.

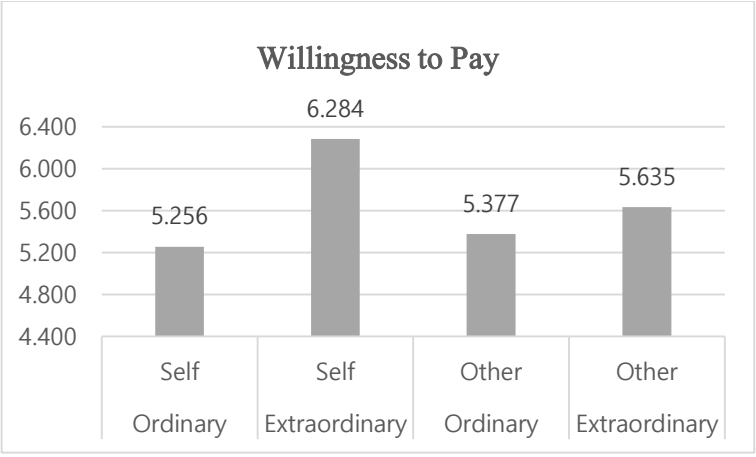

Figure 5 Mean willingness to pay among the four groups (unit: USD)

The results of the regression analysis for willingness to pay are summarized in Table 14. The mean willingness to pay for extraordinary food

was about 29.8% higher than the mean for ordinary food (H1-b, one-tailed test, $p < 0.01$). In addition, the interaction effect between food type and preparation was significant (H2-b, one-tailed test, $p < 0.05$).

Table 14. Regression Analysis Results (*y* = Consumers' Willingness to Pay).

	Coefficient				
	B	St. Err	Stand. B.	*t*	*p*-value
(Intercept)	6,232.687	906.916		6.872	0.000
Food type	359.224	120.866	.298	2.972	0.002***
Preparation	137.073	117.976	.114	1.162	0.124
Food type *Preparation	227.264	121.728	.188	1.867	0.033 **
Gender	–33.788	253.505	–.014	–.133	0.447
Age	9.880	15.605	.065	.633	0.264
Household income	–15.278	49.019	–.031	–.312	0.378
Degree of hunger	–49.987	98.370	–.051	–.508	0.306
Degree of weight concern	13.154	80.932	.016	.163	0.436
$R^2 = 0.144$, adj $R^2 = 0.070$					

*** and ** indicate significance at 1% and 5% levels, respectively.

5.4.3. Restaurant vs. Agritourism

The mean values of preference and willingness to pay according to the restaurant scenario and agritourism scenario are depicted in Figure 6

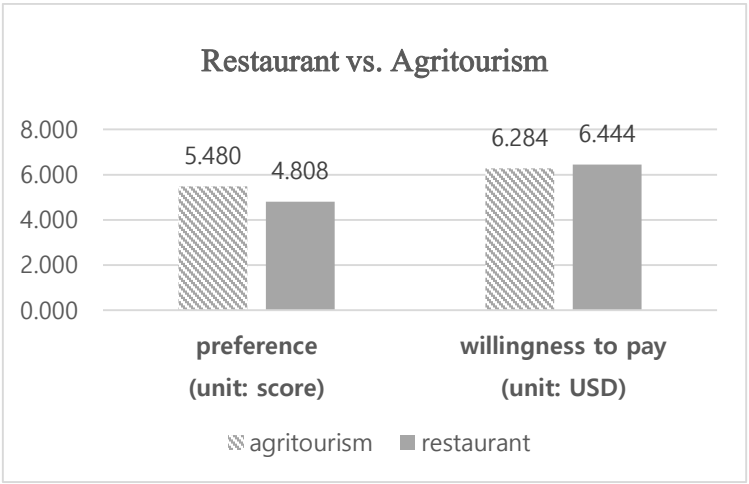

Figure 6 Mean preference and willingness to pay among restaurant and agritourism

A *t*-test was conducted to investigate the difference between participants experiencing the restaurant scenario and those in the agritourism scenario (Table 15). The mean difference of the preference results between the two groups was significant (H3-a, $t = 1.949$, $p < 0.1$). The mean difference of willingness to pay between participants in the restaurant and agritourism scenarios was not significant.

Table 15. Mean Differences of Preference and Willingness to Pay Between Participants in the Restaurant and Agritourism Scenarios.

DV	Scenario	Mean	SD	N	t-value
Preference (unit: score)	Agritourism	5.480	1.005	25	1.949*
	Restaurant	4.808	1.415	26	
Willingness to pay (unit: USD)	Agritourism	6.284	1.136	26	0.587
	Restaurant	6.444	1.284	25	

* indicates significance at 10% levels.

Chapter 6. Discussion

6.1. Summary of Findings

The main purpose of this study was to investigate the effects of food type and meal preparation and the interaction effects of two variables on consumer behavior. To verify our hypotheses, a 2x2 between-subject design experiment was conducted, and 130 responses were utilized in analysis. The data were analyzed using regression analyses. The results showed that there was no main effect of self-preparation for willingness to pay, but the food type affects consumers' willingness to pay. In addition, this was moderated by a food preparation activity. Main effects which of food type, food-preparation and their interaction effects were not significant on preference. Participants' preference for extraordinary food that they prepared by themselves differed depending on the scenario. Table 2.9 illustrates the results of the hypotheses tests.

Table 16. Hypotheses Test Results.

	Hypothesis	**Support**
H1-a	*Agritourists will express a greater preference for extraordinary food than ordinary food.*	Not Support
H1-b	*Agritourists will be willing to pay more for extraordinary food than ordinary food.*	**Support**

H2-a	*For extraordinary food, food preparation will lead to an increase in food preference in agritourism.*	Not Support
H2-b	*For extraordinary food, food preparation will lead to an increased willingness to pay more for food in agritourism.*	**Support**
H3-a	*Even when consumers participate in the preparation of extraordinary food, their preferences will differ in restaurant vs agritourism situation.*	**Support**
H3-b	*Even when consumers participate in the preparation of extraordinary food, their willingness to pay more for the food will differ in restaurant vs agritourism situation.*	Not Support

H1-a and H1-b are related to the effects of food type on consumers' evaluation of food. As shown in Table 10, food type had a significant effect on participants' willingness to pay, but the hypothesis related to preference (H1-a) was not supported. Due to the extraordinariness of the ingredients, consumers might be willing to pay more for extraordinary food regardless of their preference.

H2-a and H2-b are connected to the interaction effects of food type and food preparation. There was no significant interaction effect on preference. For willingness to pay for food, however, there was a significant interaction effect. The results showed that participants' willingness to pay for ordinary food was higher when it was prepared by others, but their willingness to pay for extraordinary food was higher when they prepared it themselves. This suggests that for ordinary food, consumers regarded preparing the food as a

desirable service for which they might pay more. However, in the case of extraordinary food, participants seemed to consider food preparation as a tour program activity. According to Sidali, Kastenholz and Bianchi (2015), since satisfaction from local specialties is only available in a specific region, tourists are willing to pay more for local specialties and related experiences. Although the hypothesis "For extraordinary food, food preparation will lead to an increase in preference" was not supported based on the mean preference of participants, preference usually tends to be aligned with willingness to pay.

H3-a and H3-b related to the question of whether participants' preferences and willingness to pay were affected by being in an agritourism scenario or in a general restaurant scenario. The results indicated that consumers valued extraordinary food that they prepared by themselves more favorably when they were in an agritourism than in a restaurant. As previously mentioned, consumers might consider food preparation as a tourism activity in an agritourism, but not in a restaurant. It can be inferred that consumers prefer food preparation when they perceive it as a tourism activity.

6.2. Contributions and Limitations

The findings of the current study contribute to both academic and

practical fields. First, by confirming the moderating effect of food preparation, it offers a different perspective to previous literature on meal preparation. Prior research on meal preparation has been focused on the positive impacts of the preparation activity (e.g. Chu, Storey, & Veugelers, 2014; Dohle et al., 2014; van der Horst et al., 2014). The present study also found that consumers have the highest willingness to pay for extraordinary food that they prepared themselves; however, consumers valued ordinary food more when it was prepared by others. This finding thus confirms previous research that experiences related to food preparation have the potential to generate both satisfaction and dissatisfaction (Rimmington & Yüksel, 1998). Second, the current study extends previous research related to extraordinariness by applying the "extraordinary" concept to food. Prior research into extraordinariness has focused on experiences (Bhattacharjee & Mogilner, 2014; Goolaup et al., 2017; Hanefors & Mossberg, 2003a; Sthapit, 2017) or items (Sussman & Alter, 2012). The present study confirmed that extraordinary and ordinary foods have different influences on consumer evaluations and that the effect of self-preparation varies depending on the food type. This highlights the importance of offering appropriate foods and related activities. Finally, this study provided external validity by conducting the experiment in an existing restaurant environment. In contrast, previous studies have been conducted in controlled laboratory environments (Dohle et al., 2014,

2016).

On a practical level, this study can help agritourism practitioners to understand the effects of food-related activities on agritourism dining experiences. In particular, this study found that food-related activities have more positive effects in agritourism dining than in general restaurant. This suggests that the development of food-related activities in agritourism should be encouraged to make tourists feel more involved in local specialties, such as by utilizing regional foods rather than ordinary foods. For example, one plausible activity would be for agritourists to participate in a harvest followed by cooking their self-harvested agriproduct using traditional local recipes.

In addition, as self-preparation increases consumers' enjoyment of food ingredients (Dohle et al., 2016), such an activity is expected to have a positive impact on the sales and popularity of local foods and specialties. As repeated exposure to agriproducts has the potential to increase consumers' familiarity with agriproducts and their perceived attractiveness (Zajonc, 1968), long-term impacts from offering dining experiences with food-related activities are also expected.

Despite these findings, the present study also had some limitations which can provide guidance for further research. First, about half of the participants

were students and twenties, due to the experimental location and the limited funds. Second, this study used Bibimbap, which is a traditional Korean food; caution should be used when generalizing its results to other foods. In addition, there is a possibility that the participants were not strongly manipulated by the experiment conditions in the extraordinary group because Bibimbap is a traditional and familiar meal for Koreans. Third, as previously mentioned, this study investigated the effects of food type and food preparation by using an experimental approach. It is possible that exogenous factors were not sufficiently controlled for because the experiments were conducted in an actual restaurant. Future research should focus on increasing internal rather than external validity. Finally, although the current study found some mediating effects of meal preparation on food type, further research should investigate the mechanisms and boundary conditions of food preparation on consumer evaluations in more detail.

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Appendix A. IRB Documents

심의결과 통보서

수신

책임연구자	**이름**: 김수민	**소속**: 농업생명과학대학 농경제사회학부	**직위**: 석사과정
지원기관	해당없음		

과제정보

승인번호	IRB No. 1801/002-014		
연구과제명	농촌관광에서의 식사 종류와 관여가 소비자의 평가에 미치는 영향		
연구종류	학위 논문 연구, 설문조사, 관찰연구		
심의종류	재심의		
심의일자	2018-01-08		
심의대상	연구계획서(재심의), 연구참여자용 동의서 또는 동의서 면제 사유서, 재심의 답변서		
심의결과	승인		
승인일자	2018-01-08	**승인유효기간**	2019-01-07
정기보고주기	12개월		
심의의견	1. 심의결과 제출하신 연구계획에 대해 승인합니다. 2. 연구자께서는 승인된 문서를 사용하여 연구를 진행하시기 바라며, 만일 연구진행 과정에서 계획상에 변경사항 (연구자 변경, 연구내용 변경 등)이 발생할 경우 본 위원회에 변경신청을 하여 승인 받은 후 연구를 진행하여 주십시오. 3. 유효기간 내 연구가 끝났을 경우 종료 보고서를 제출하여야 하며, 승인유효기간 이후에도 연구를 계속하고자 할 경우, 2018-12-08까지 지속심의를 받도록 하여 주십시오.		
검토의견	**계획서 검토 의견** **동의서 검토 의견** **기타 검토 의견**		

2018년 01월 08일

서울대학교 생명윤리위원회 위원장

본 위원회가 승인한 연구를 수행하는 연구자들은 다음의 사항을 준수해야 합니다.

1. 반드시 계획서에 따라 연구를 수행해야 합니다.
2. 위원회의 승인을 받은 연구참여자 동의서를 사용해야 합니다.

3. 모국어가 한국어가 아닌 연구참여자에게는 승인된 동의서를 연구참여자의 모국어로 번역하여 사용해야 하며 번역본은 인증 및 위원회의 승인을 거쳐야 합니다.
4. 연구참여자 보호를 위해 불가피한 경우를 제외하고는 연구 진행중의 변경에 대해서는 위원회의 사전 승인을 받아야 합니다. 연구참여자의 보호를 위해 취해진 응급상황에서의 변경에 대해서는 즉각 위원회에 보고해야 합니다.
5. 위원회에서 승인 받은 계획서에 따라 등록된 연구참여자의 사망, 입원, 심각한 질병에 대하여는 위원회에 서면으로 보고해야 합니다.
6. 임상시험 또는 연구참여자의 안전에 대해 유해한 영향을 미칠 수 있는 새로운 정보는 즉각 위원회에 보고해야 합니다.
7. 위원회의 요구가 있을 때에는 연구의 진행과 관련된 사항에 관하여 위원회에 보고해야 합니다.
8. 연구참여자 모집광고는 사용 전에 위원회로부터 승인을 받아야 합니다.
9. 강제 혹은 부당한 영향력이 없는 상태에서 충분한 설명에 근거하여 연구참여자로부터 동의를 받아야 하며, 잠재적인 연구참여자에 대해서 연구 참여 여부를 숙려할 수 있도록 충분한 기회를 제공해야 합니다.

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

연구참여자용 설명문
(만 18세 이상 성인용)

연구 과제명 : 간단한 로컬 식재료 메뉴에 대한 시식회
연구 책임자명 : 김수민(서울대학교 농업생명과학대학 Food Business Lab. 연구원)

이 시식회는 간단한 로컬 식재료 메뉴에 대한 시식회를 로컬 식재료 메뉴에 대한 소비자 반응을 보기 위해 진행되는 시식회입니다. 귀하는 실험시간(약 30분)동안 제공하는 식품을 섭취하고 설문조사를 응답할 수 있는 만 18세 이상 성인이기 때문에 이 연구에 참여하도록 권유받았습니다. 이 시식회를 수행하는 서울대학교 소속의 김수민 연구원(연락처: 010-9246-0725)이 귀하에게 이 시식회에 대해 설명해 줄 것입니다. 이 연구는 자발적으로 참여 의사를 밝히신 분에 한하여 수행 될 것이며, 귀하께서는 참여 의사를 결정하기 전에 본 연구가 왜 수행되는지 그리고 연구의 내용이 무엇과 관련 있는지 이해하는 것이 중요합니다. 다음 내용을 신중히 읽어보신 후 참여 의사를 밝혀 주시길 바라며, 필요하다면 가족이나 친구들과 의논해 보십시오. 만일 어떠한 질문이 있다면 담당 연구원이 자세하게 설명해 줄 것입니다.

1. 이 시식회는 왜 실시합니까?

본 연구의 목적은 로컬 식재료 메뉴에 대한 소비자 반응을 살펴보기 위한 목적으로 진행되는 것입니다.

2. 얼마나 많은 사람이 참여합니까?

실험시간(약 30분)동안 제공하는 식품을 섭취하고 설문조사를 응답할 수 있는 만 18세 이상의 성인 약 180명의 사람이 참여 할 것입니다.

3. 만일 시식회에 참여하면 어떤 과정이 진행됩니까?

실험 장소에서 간단한 설명을 들은 후, 개별 세팅된 각자의 자리에서 메뉴를 시식한 후 만족도를 조사하는 형식입니다. 시식 이후, 간단한 설문에 응답하도록 설문지가 배부될 예정입니다. 설문조사는 귀하의 만족도와 생각에 대한 전반적인 질문들이 포함됩니다. 실험 소요시간은 약 30분 정도 소요될 것입니다. 이 모든 과정은 '소로리 월향' 에서 진행될 예정입니다.

만일 귀하가 참여의사를 밝혀 주시면 다음과 같은 과정이 진행될 것입니다.

1) 귀하는 장소에 도착하시면 제품에 대한 소개(메뉴의 특징, 시식방법 등)를 간단히 듣게 될 것입니다.
2) 설명을 들은 이후, 개별 세팅된 각자의 자리로 이동해 새롭게 출시될 메뉴를 받고, 시식방법에 따라 신제품을 시식하게 됩니다.
3) 시식 이후, 귀하는 신제품에 관련된 설문조사를 하게 될 것이며 설문조사에는 약 15분

소요될 것입니다.

모든 과정은 '소로리 월향'에서 이루어 질 것입니다. 단, 본 시식회의 장소를 제공하는 '소로리 월향'과 본 시식회는 아무런 관련성이 없음을 밝힙니다.

4. 참여 기간은 얼마나 됩니까?

약 30분이 소요될 것입니다.

5. 참여 도중 그만두어도 됩니까?

예, 귀하는 언제든지 어떠한 불이익 없이 참여 도중에 그만 둘 수 있습니다. 만일 귀하가 연구에 참여하는 것을 그만두고 싶다면 담당 연구원이나 연구 책임자에게 즉시 말씀해 주십시오. 중도 탈락 시 수집된 자료는 즉시 폐기됩니다.

6. 부작용이나 위험요소는 없습니까?

본 연구는 아무런 신체적/정신적 부작용을 야기하지 않습니다. 본 연구에서 사용되는 신제품은 허용된 식품을 이용하여 제조된 것입니다.

7. 이 시식회에 참여시 참여자에게 이득이 있습니까?

귀하가 이 연구에 참여하는데 있어서 직접적인 이득은 없습니다. 그러나 귀하가 제공하는 정보는 식품 섭취와 소비자 행동에 대한 이해를 증진하는데 도움이 될 것입니다.

8. 만일 이 시식회에 참여하지 않는다면 불이익이 있습니까?

귀하는 본 연구에 참여하지 않을 자유가 있습니다. 또한, 귀하가 본 연구에 참여하지 않아도 귀하에게는 어떠한 불이익도 없습니다.

9. 시식회에서 얻은 모든 개인 정보의 비밀은 보장됩니까?

개인정보관리책임자는 서울대학교의 김수민 (010-9246-0725, 02-880-4746)입니다. 수집하는 개인식별정보는 성명, 나이, 이메일 주소, 핸드폰 번호이며 연락처는 사례 지급 목적 및 연구의 정확도를 높이는 용도로 수집됩니다. 참여 신청 과정의 응답과 시식회 중 실시된 설문조사의 응답을 일치시킨 이후, 즉시 폐기할 예정입니다. 또한, 연구를 목적으로 수집되는 비식별정보는 성별, 나이, 최종학력, 직업, 월평균 가구소득입니다. 해당 정보에 대한 개인정보관리책임자 및 개인정보접근자는 연구책임자인 김수민이며 이외의 사람은 접근할 수 없습니다. 연구자료는 연구책임자의 암호가 걸려있는 컴퓨터에 연구종료 후 최소 5년 이상 보관, 코딩된 데이터파일은 서울대학교 연구윤리 지침에 따라 영구보관 될 예정입니다. 동의서는 관련 법령에 따라 연구책임자 연구실 내 잠금장치가 달린 캐비닛에 연구 종료 후 3년간 보관 될 예정이며, 보관한 후 폐기할 예정입니다. 저희는 이 연구를 통

해 얻은 모든 개인 정보의 비밀 보장을 위해 최선을 다할 것입니다. 이 연구에서 얻어진 개인 정보가 학회지나 학회에 공개 될 때 귀하의 이름 및 기타 개인 정보는 사용되지 않을 것입니다. 그러나 만일 법이 요구하면 귀하의 개인정보는 제공될 수도 있습니다. 또한 모니터 요원, 점검 요원, 생명윤리심의위원회는 연구참여자의 개인 정보에 대한 비밀 보장을 침해하지 않고 관련규정이 정하는 범위 안에서 본 연구의 실시 절차와 자료의 신뢰성을 검증하기 위해 연구 결과를 직접 열람할 수 있습니다. 귀하가 본 동의서에 서명하는 것은, 이러한 사항에 대하여 사전에 알고 있었으며 이를 허용한다는 동의로 간주될 것입니다.

10. 이 시식회에 참가하면 사례가 지급됩니까?

귀하의 연구 참여시 감사의 뜻으로 6,000원 상당의 외식점 쿠폰이 지급될 예정입니다.

11. 시식회에 대한 문의는 어떻게 해야 됩니까?

본 시식회에 대해 질문이 있거나 연구 중간에 문제가 생길 시 다음 연구 담당자에게 연락하십시오.

이름: 김 수 민 전화번호: 010-9246-0725

만일 어느 때라도 연구참여자로서 귀하의 권리에 대한 질문이 있다면 다음의 서울대학교 생명윤리위원회에 연락하십시오.
서울대학교 생명윤리위원회 (SNUIRB) 전화번호: 02-880-5153

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

동 의 서 (연구참여자 보관용)

연구 과제명 : 간단한 로컬 식재료 메뉴에 대한 시식회
연구 책임자명 : 김수민(서울대학교 농업생명과학대학 Food Business Lab. 연구원)

1. 나는 이 설명서를 읽었으며 담당 연구원과 이에 대하여 의논하였습니다.
2. 나는 위험과 이득에 관하여 들었으며 나의 질문에 만족할 만한 답변을 얻었습니다.
3. 나는 이 연구에 참여하는 것에 대하여 자발적으로 동의합니다.
4. 나는 이 연구에서 얻어진 나에 대한 정보를 현행 법률과 생명윤리위원회 규정이 허용하는 범위 내에서 연구자가 수집하고 처리하는 데 동의합니다.
5. 나는 담당 연구자나 위임 받은 대리인이 연구를 진행하거나 결과 관리를 하는 경우와 법률이 규정한 국가 기관 및 서울대학교 생명윤리위원회가 실태 조사를 하는 경우에는 비밀로 유지되는 나의 개인 신상 정보를 확인하는 것에 동의합니다.
6. 나는 언제라도 이 연구의 참여를 철회할 수 있고 이러한 결정이 나에게 어떠한 해도 되지 않을 것이라는 것을 압니다.
7. 나의 서명은 이 동의서의 사본을 받았다는 것을 뜻하며 연구 참여가 끝날 때까지 사본을 보관하겠습니다.

연구참여자 성명	서 명	날짜 (년/월/일)
연구책임자 성명	서 명	날짜 (년/월/일)

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

동 의 서(연구자보관용)

연구 과제명 : 간단한 로컬 식재료 메뉴에 대한 시식회

연구 책임자명 : 김수민(서울대학교 농업생명과학대학 Food Business Lab. 연구원)

1. 나는 이 설명서를 읽었으며 담당 연구원과 이에 대하여 의논하였습니다.
2. 나는 위험과 이득에 관하여 들었으며 나의 질문에 만족할 만한 답변을 얻었습니다.
3. 나는 이 연구에 참여하는 것에 대하여 자발적으로 동의합니다.
4. 나는 이 연구에서 얻어진 나에 대한 정보를 현행 법률과 생명윤리위원회 규정이 허용하는 범위 내에서 연구자가 수집하고 처리하는 데 동의합니다.
5. 나는 담당 연구자나 위임 받은 대리인이 연구를 진행하거나 결과 관리를 하는 경우와 법률이 규정한 국가 기관 및 서울대학교 생명윤리위원회가 실태 조사를 하는 경우에는 비밀로 유지되는 나의 개인 신상 정보를 확인하는 것에 동의합니다.
6. 나는 언제라도 이 연구의 참여를 철회할 수 있고 이러한 결정이 나에게 어떠한 해도 되지 않을 것이라는 것을 압니다.
7. 나의 서명은 이 동의서의 사본을 받았다는 것을 뜻하며 연구 참여가 끝날 때까지 사본을 보관하겠습니다.

연구참여자 성명	서 명	날짜 (년/월/일)
연구책임자 성명	서 명	날짜 (년/월/일)

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

디브리핑 동의서

연구 책임자명 : 김수민(서울대학교 농업생명과학대학 Food Business Lab. 연구원)

먼저, 연구에 참여해주셔서 감사드립니다.

오늘 진행된 시식회는 간단한 로컬 식재료 메뉴에 대한 시식회를 로컬 식재료 메뉴에 대한 소비자 반응 연구가 아닌, 식품의 종류(일반적인/일반적이지 않은 식품)와 자가 준비 여부(자가 준비/타인 준비)에 따른 소비자들의 식품에 대한 평가를 확인하기 위한 연구였습니다. 또한, 여러분이 오늘 선호도 조사를 위해 시식한 메뉴는 타기관으로부터 의뢰를 받아 개발한 메뉴가 아닙니다. '나빛농원' 은 실험을 위해 만들어진 가상의 농원임을 밝힙니다.

따라서 실시된 설문조사는 식품의 종류와 자가 준비 여부가 소비자들의 식품에 대한 평가에 미치는 영향에 대한 연구에 사용될 예정입니다. 이에 동의하지 않으시면 기존의 동의를 철회하실 수 있습니다.

여기까지가 저희가 준비한 실험이며 질문 있으시면 질문해주시면 됩니다. 또한, 본 실험은 당분간 진행될 실험이므로, 오늘 진행된 실험에 대해서 외부에 유출이 되지 않도록 간곡히 부탁드립니다.

본래의 연구 목적대로 데이터를 사용하는 점에 대해 동의하시면 아래의 서명 부탁드립니다.

감사합니다.

연구참여자 성명	서 명	날짜 (년/월/일)
연구책임자 성명	서 명	날짜 (년/월/일)

Appendix B. Recruitment Document

IRB No. 1801/002-014 **유효기간: 2019년 1월 7일**

제목: 간단한 로컬 식재료 메뉴에 대한 시식회 참여자 모집합니다!

내용:

가볍게 공짜밥 한 끼 하시고, 설문참여하시고 쿠폰 받아가세요!

안녕하세요, 서울대학교 농업생명과학대학 푸드비즈니스랩에서는 1월 __일( )부터 1월__일( )까지 이틀에 걸쳐 간단한 로컬 식재료 메뉴에 대한 시식회와 시장조사 설문을 진행하고 있습니다. 간단한 로컬 식재료 메뉴를 시식한 이후 설문조사에 참여하는 데 관심 있는 분들의 많은 참여 부탁드립니다.

<모집 대상 및 참가자격>
- 만 18세 이상의 성인
- 시식시간(약 30분)동안 간단한 활동 및 제공하는 식품을 섭취하고 설문조사를 응답할 수 있는 건강한 참가자
- 조사의 성격 상 외국인은 이번 실험에 참가할 수 없습니다.

<일시 및 장소>
- 장소: 소로리 월향 (주소: 서울 마포구 와우산로29바길 11-4)
- 소요 시간: 약 30분
- 사례비: 6,000원 상당의 외식점쿠폰(외식상품권)

<신청방법>

조사에 참여하실 분은 다음의 시간표를 참고하시고, 아래의 링크를 통해 조사 참여를 신청해 주시기 바랍니다.

신청 후, 귀하가 기입하신 이메일 혹은 문자로 확인 내용이 전달 될 것입니다.

사전 설문을 완료해야만 예약이 완료됩니다. 이메일 혹은 문자를 꼭 확인바랍니다.

	1월 __일( )	1월 __일( )
13:00~13:30	1	9
14:00~14:30	2	10
15:00~15:30	3	11
16:00~16:30	4	12
17:00~17:30	5	
18:00~18:30	6	
19:00~19:30	7	
20:00~20:30	8	

예약 링크:

추가적인 질문 사항은 아래의 담당자에게 연락해 주시기 바랍니다.

메일: suminkim0725@snu.ac.kr
연락처:010-9246-0725

모집 시 질문 문항

1. 외식업 종사자 screening

* 필수항목

당신은 외식업 관련 직종에 종사하고 계십니까? *

- (●) 예
- ( ) 아니오

- 예를 선택할 경우 연구에 참여할 수 없음
- 아니오를 선택할 경우 다음 설문 진행

2. Control variable

① 요리하는 행동을 좋아하는 정도

간단한 로컬 식재료 메뉴에 대한 시식회 예약에 앞서, 몇 가지 간단한 설문에 응답해주세요.
설문의 수는 총 5문항입니다.

나는 평상시 요리하는 것을 좋아한다 *

- ( ) 전혀 그렇지 않다
- ( ) 그렇지 않다
- ( ) 보통이다
- ( ) 그렇다
- ( ) 매우 그렇다

② 평상시 비빔밥, 나물에 대한 선호 정도

나는 평상시 비빔밥을 좋아한다 *

- ( ) 전혀 그렇지 않다
- ( ) 그렇지 않다
- ( ) 보통이다
- ( ) 그렇다
- ( ) 매우 그렇다

나는 평상시 나물을 좋아한다 *

- ( ) 전혀 그렇지 않다
- ( ) 그렇지 않다
- ( ) 보통이다
- ( ) 그렇다
- ( ) 매우 그렇다

3. fake 질문

나는 평상시 지역 식자재에 관심이 많다 *

- ○ 전혀 그렇지 않다
- ○ 그렇지 않다
- ○ 보통이다
- ○ 그렇다
- ○ 매우 그렇다

4. 특정 식품에 대한 알레르기 반응 질문

알레르기 반응이 있는 식품에 모두 체크해주세요. *

- ☐ 해당사항 없음
- ☐ 달걀
- ☐ 우유
- ☐ 콩
- ☐ 땅콩
- ☐ 밀가루
- ☐ 생선
- ☐ 고기
- ☐ 과일
- ☐ 채소 및 야채류

- 채소 및 야채류를 선택할 경우, 연구에 참여할 수 없음

Appendix C. Manipulation Material (Agriculture Situation)

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

CALS 서울대학교 농업생명과학대학 College of Agriculture and Life Sciences

FoodBiz LAB MARKETING & INFORMATION MANAGEMENT

안 내 문

식별번호: 1-_____

먼저 <신메뉴에 대한 소비자 반응 조사>에 참여해주셔서 감사합니다.
오늘 귀하가 시식하게 될 음식은 '서울대학교 푸드비즈니스 랩'에서 농촌관광 프로그램 개발을 의뢰받아 농가 레시피 및 메뉴 개발을 위해 진행되는 조사이며, 공동연구의 목적은 신메뉴 출시에 앞서 소비자 반응을 조사하는 것입니다.

다음 설명과 지시를 꼼꼼하게 읽고 따라주시기 바랍니다.
밑줄을 치거나 작게 소리 내며 읽어, 다음의 설명에 대해 꼼꼼하게 읽으셔야 합니다.

다음은 A지자체에서 진행하는 농촌관광 프로그램입니다.

관 광 주 요 일 정

▲ 나빛 농원의 외부

▲ 농가 내 식당 내부 모습

왼쪽의 사진은 나빛 농원의 외부 사진입니다. 나빛 농원은 A지역에 위치한 농원입니다.
오른쪽 사진은 식사를 하게 될 농가 내 식당 내부의 모습입니다.

… 10:00	**A 지역 도착** **산나물 박물관** – A지역의 향취를 느낄 수 있는 산나물에 대해 알아볼 수 있는 시간!
… 11:30	**점심식사(농가밥상 체험)** – 나빛산채비빔밥
… 13:30	**산길따라 산나물 산책** – 산길을 걸으며, 곳곳에 있는 산나물을 배우는 시간
… 15:30	**A지역 주요 관광지 방문** – A지역의 역사와 흔적을 찾아 떠나는 여행
… 17:30	**서울로 출발**

농촌관광 프로그램 중, 점심식사(농가밥상체험)를 하기 위해 한 농가에 와 있습니다.
당신이 오늘 먹을 음식은 농가의 한 메뉴입니다.
다음 페이지의 메뉴에 대한 설명을 읽어주세요.

Appendix C. Manipulation Material (Restaurant Situation)

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

CALS 서울대학교 농업생명과학대학 College of Agriculture and Life Sciences

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안 내 문

식별번호: 2-_____

먼저 <신메뉴에 대한 소비자 반응 조사>에 참여해주셔서 감사합니다.
오늘 귀하가 시식하게 될 음식은 '서울대학교 푸드비즈니스 랩'에서 서울 시내에 위치한 외식업체로부터 의뢰받아 레시피 및 메뉴 개발을 위해 진행되는 조사이며, 공동연구의 목적은 신메뉴 출시에 앞서 소비자 반응을 조사하는 것입니다.

다음 설명과 지시를 꼼꼼하게 읽고 따라주시기 바랍니다.
밑줄을 치거나 작게 소리 내며 읽어, 다음의 설명에 대해 꼼꼼하게 읽으셔야 합니다.

다음은 B한식당에 대한 설명입니다.

정겨운 시골의 맛을 담다

▲B한식당 외부 모습

▲B한식당 내부 모습

저희 B한식당은 화려하진 않아도 여유와 소박함이 느껴지는 시골의 밥상을 구현하였습니다.
시골의 정겨움과 따뜻함. 그리고 정취를 그대로 담고자 노력하였습니다.
서울 도심 한복판에서 시골의 따스함을 느껴보세요.

각종 산지로부터 온 좋은 식재료와 정겨운 시골 음식들을 행복하게 즐기시고,
잠시나마 여유 있는 그리고 소중한 시간을 가지시길 바랍니다.

당신은 오늘 점심식사를 하기 위해 B한식당에 와 있습니다.
당신이 오늘 먹을 음식은 해당 한식당의 메뉴입니다.
다음 페이지의 메뉴에 대한 설명을 읽어주세요.

Appendix C. Manipulation Material (Ordinary)

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

CALS 서울대학교 농업생명과학대학 College of Agriculture and Life Sciences

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*** 메뉴의 구성은 다음과 같습니다.**

나빛농원 산채비빔밥, 나빛농원 시래기된장국, 그 외 반찬

*** 메뉴의 재료의 특징은 다음과 같습니다.**

본 메뉴(**나빛농원 산채비빔밥, 나빛농원 시래기된장국**)는 A지역에 위치한 나빛농원에서 재배되는 식재료를 주재료로 하여 만들어진 것입니다. 나빛농원의 주된 생산물은 나물류입니다.

나빛 농원의 나물류는 전통시장부터 마트까지 다양한 경로를 통해 판매되고 있으며, 손쉽게 구하실 수 있습니다.

아래는 오늘 시식할 비빔밥에 이용되는 나물류에 대한 설명입니다.

취나물
취나물은 주로 갖은 양념에 무치거나 볶아서 먹습니다.

고사리
고사리는 주로 마른 고사리를 삶아서 볶거나 양념을 해 먹습니다.

무
무는 김치, 깍두기, 무말랭이 등 그 이용이 다양하고, 육수로도 자주 이용됩니다.

도라지
도라지는 주로 마른 도라지를 삶아서 우린 다음 양념으로 무쳐먹습니다.

새싹
새싹은 각종 음식의 장식으로도 사용되며, 비빔밥 등의 고명으로도 사용됩니다.

시래기
시래기는 푸른 무청을 건조시킨 것으로, 묵 삶아 반찬 혹은 국으로 요리해 먹습니다.

1. 다음은 귀하의 현재 상태에 대한 질문입니다. 해당하는 상태에 동그라미를 표시해주세요.

	매우 그렇지 않다	그렇지 않다	조금 그렇지 않다	보통이다	조금 그렇다	그렇다	매우 그렇다
나는 현재 배가 고픈 상태이다.	1	2	3	4	5	6	7

현재 페이지를 다 읽으시면, 잠시 기다려 주세요.

Appendix C. Manipulation Material (Extraordinary)

IRB No. 1801/002-014 유효기간: 2019년 1월 7일

CALS 서울대학교 농업생명과학대학 College of Agriculture and Life Sciences

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*** 메뉴의 구성은 다음과 같습니다.**

나빛농원 산채비빔밥, 나빛농원 시래기된장국, 그 외 반찬

*** 메뉴의 재료의 특징은 다음과 같습니다.**

본 메뉴(**나빛농원 산채비빔밥, 나빛농원 시래기된장국**)는 A지역에 위치한 나빛농원에서 재배되는 식재료를 주재료로 하여 만들어진 것입니다. 나빛농원의 주된 생산물은 나물류입니다.

나빛 농원의 산지는 A지역에 위치해 있습니다. A지역은 서쪽에는 강이, 북쪽에는 △△산이, 서쪽에 흐르는 강이 남쪽의 바다로 연결되어 있다는 지형적 특징을 가지고 있습니다. 독특한 지형의 영향을 받아, **나빛농원의 나물류는 비타민, 무기질 등이 풍부하고 신선**합니다. 나빛농원의 나물류는 **1년 수확량 평균은 각각 50kg** 밖에 되지 않습니다.

아래는 오늘 시식할 비빔밥에 이용되는 나물류에 대한 설명입니다.

취나물
나빛농원의 취나물은 특수재배로 빛깔이 더 선명하고, 향긋힘이 오래갑니다.

고사리
나빛농원의 고사리는 어린 고사리만 채취하여 질기지 않고 더 부드럽습니다.

무
나빛농원의 무는 미네랄이 풍부한 땅에서 자라 더 단단하며 비타민이 풍부합니다.

도라지
나빛농원의 도라지는 야생에서 채취하여 비타민과 무기질이 풍부합니다.

새싹
나빛농원의 새싹은 무기질강화배양액을 이용하여 재배하여, 미네랄이 풍부합니다.

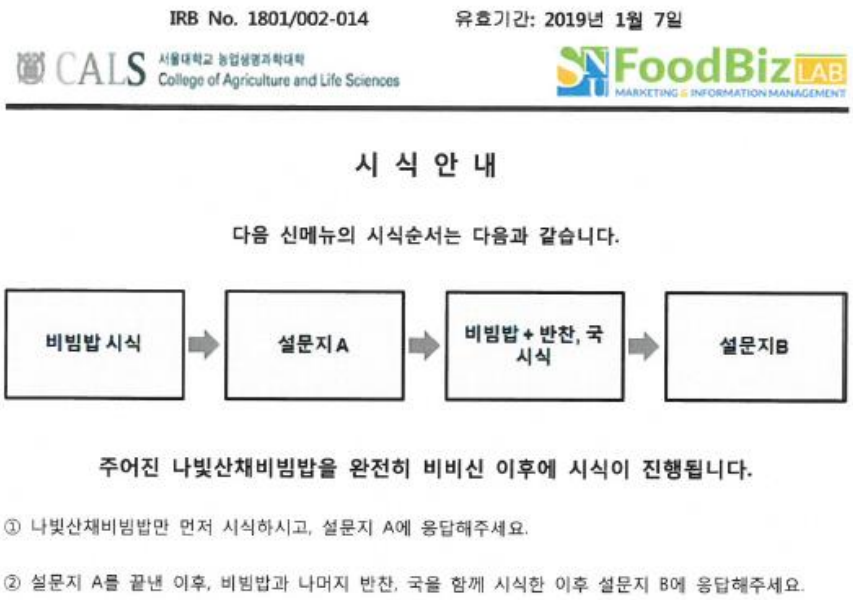
시래기
해풍건조를 한 나빛농원의 시래기는 비타민과 미네랄이 풍부하며 특히 철분이 풍부합니다.

1. 다음은 귀하의 현재 상태에 대한 질문입니다. 해당하는 상태에 동그라미를 표시해주세요.

	매우 그렇지 않다	그렇지 않다	조금 그렇지 않다	보통 이다	조금 그렇다	그렇다	매우 그렇다
나는 현재 배가 고픈 상태이다.	1	2	3	4	5	6	7

현재 페이지를 다 읽으시면, 잠시 기다려 주세요.

Appendix C. Manipulation Material (Other-preparation)



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시 식 안 내

다음 신메뉴의 시식순서는 다음과 같습니다.

비빔밥 시식 → 설문지A → 비빔밥 + 반찬, 국 시식 → 설문지B

주어진 나빛산채비빔밥을 완전히 비비신 이후에 시식이 진행됩니다.

③ 나빛산채비빔밥만 먼저 시식하시고, 설문지 A에 응답해주세요.

② 설문지 A를 끝낸 이후, 비빔밥과 나머지 반찬, 국을 함께 시식한 이후 설문지 B에 응답해주세요.

Appendix C. Manipulation Material (Self-preparation)

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CALS 서울대학교 농업생명과학대학 College of Agriculture and Life Sciences

FoodBiz LAB MARKETING & INFORMATION MANAGEMENT

시 식 안 내

다음 신메뉴의 시식순서는 다음과 같습니다.

시식은 비빔밥이 다 만들어진 이후에 진행됩니다.

<비빔밥 만들기>

① 먼저 준비된 취나물 양념장 전부를 취나물에 골고루 뿌린 후, 위생장갑을 끼고 버무려주세요.

② 준비된 밥 위에 버무린 취나물을 올려주세요.

③ 이 후, 준비된 고사리, 무채, 도라지 전부를 밥 위에 순서대로 올려주세요.

준비가 완료되면, 주어진 나빛산채비빔밥을 완전히 비비신 이후에 시식이 진행됩니다.

<시식순서>

① 나빛산채비빔밥만 먼저 시식하시고, 설문지 A에 응답해주세요.

② 설문지 A를 끝낸 이후, 비빔밥과 나머지 반찬, 국을 함께 시식한 이후 설문지 B에 응답해주세요.

Appendix D. Survey

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설문지 A [다음은 나빛농원 산채비빔밥에 대한 평가 문항입니다]

1. 귀하가 시식하신 **나빛농원 산채비빔밥**이 얼마나 **일반적**으로 혹은 얼마나 **일반적이지 않은 음식**이라고 생각하셨습니까?

일반적						일반적이지 않음
매우 일반적임	일반적임	조금 일반적임		조금 일반적이지 않음	일반적이지 않음	매우 일반적이지 않음
1	2	3	4	5	6	7

2. 다음은 오늘 시식한 **나빛농원 산채비빔밥**에 대한 평가입니다.

나에게 있어 오늘 시식한 나빛농원 산채비빔밥은 ( ) 메뉴이다.								
(1)	관심이 없는	1	2	3	4	5	6	7	관심이 가는
(2)	흥미롭지 않은	1	2	3	4	5	6	7	흥미로운
(3)	호감이 없는	1	2	3	4	5	6	7	호감이 가는
(4)	원하지 않는	1	2	3	4	5	6	7	원하는
(5)	가치가 작은	1	2	3	4	5	6	7	가치가 큰
(6)	유익하지 않은	1	2	3	4	5	6	7	유익한
(7)	매력적이지 않은	1	2	3	4	5	6	7	매력적인
(8)	쉽게 얻을 수 있는	1	2	3	4	5	6	7	쉽게 얻을 수 없는

3. 귀하가 시식하신 **나빛농원 산채비빔밥**에 대한 선호도를 평가해 주십시오.

	전혀 그렇지 않다			보통			매우 그렇다
(1) 나는 이 음식에 호감이 간다.	1	2	3	4	5	6	7
(2) 나는 이 음식이 좋다.	1	2	3	4	5	6	7
(3) 나는 이 음식이 마음에 든다.	1	2	3	4	5	6	7

4. 귀하가 시식하신 **나빛농원 산채비빔밥**에 대한 만족도를 평가해 주십시오.

4-(1) 시식한 음식의 모든 면을 고려했을 때, 전반적으로 음식에 대해 만족하였습니까?

매우 불만족	불만족	보통	만족	매우 만족
1	2	3	4	5

4-(2) 시식한 음식은 나의 기대를 어느 정도 충족하였습니까?

기대보다 훨씬 못함	기대보다 못함	비슷함	기대보다 나음	기대보다 훨씬 나음
1	2	3	4	5

4-(3) 먼저 모든 면에서 완벽한 음식을 떠올려 봅시다. 시식한 음식은 그 완벽한 음식에 가깝습니까?

매우 멀다	멀다	보통이다	가깝다	매우 가깝다
1	2	3	4	5

5. 귀하가 시식하신 **나빛농원 산채비빔밥**에 대한 구매 의도를 평가해 주십시오.

	매우 낮다	낮다	보통이다	높다	매우 높다
(1) 내가 이 음식을 구매할 가능성은 _____ .	1	2	3	4	5
(2) 내가 이 음식을 사려고 생각해 볼 확률은 _____ .	1	2	3	4	5
(3) 이 음식을 기꺼이 살 의향이 _____ .	1	2	3	4	5

6. 일반적으로 서울 시내의 **비빔밥은 평균 약 5,300원**에 해당합니다. 당신은 해당 음식에 얼마를 지불하시겠습니까? (***숫자로만*** 기재해주십시오.)

_____ **원**

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FoodBiz LAB MARKETING & INFORMATION MANAGEMENT

설문지 B [다음은 식사 전반에 대한 평가 문항입니다]

1. 오늘의 식사 전반에 대해 평가해 주십시오.

	전혀 그렇지 않다	그렇지 않다	보통이다	그렇다	매우 그렇다
(1) 나는 오늘 시식한 시래기 된장국이 마음에 든다.	1	2	3	4	5
(2) 나는 오늘 시식한 식사가 전반적으로 마음에 든다.	1	2	3	4	5

[다음은 인구통계학적 정보에 대한 문항입니다.]

2. 귀하의 성별은 무엇입니까?

① 남성 ② 여성

3. 귀하의 나이(연세)는 어떻게 되십니까? 만 나이로 기입해 주십시오. 만 _____ 세

4. 귀하의 최종 학력은 어떻게 되십니까?

① 고등학교 졸업 이하 ② 대학 재학 ③ 대학 졸업
④ 대학원 재학(석-박사) ⑤ 대학원 졸업(석-박사)

5. 귀하의 직업은 무엇입니까?

① 전문직 ② 사무직 ③ 생산기술직
④ 서비스직 ⑤ 공무원(공사포함)/교직원 ⑥ 자영업
⑦ 학생 ⑧ 퇴직/무직 ⑨ 주부 ⑩ 기타

6. 실례지만, 귀하의 월평균 가구소득은 얼마나 되십니까?

① 200만원 미만 ② 200~299만원 ③ 300~399만원 ④ 400~499만원
⑤ 500~599만원 ⑥ 600~699만원 ⑦ 700~799만원 ⑧ 800만원 이상

7. 귀하는 현재 다이어트 중이십니까? ① 예 ② 아니오

8. 귀하는 체중관리에 얼마나 신경을 쓰고 계십니까?

	전혀 그렇지 않다	그렇지 않다	조금 그렇지 않다	보통 이다	조금 그렇다	그렇다	매우 그렇다
나는 체중관리에 신경을 쓰고 있다.	1	2	3	4	5	6	7

귀하께서 실험 참여에 신청하실 때 사용하셨던 이메일 주소를 기입하여 주십시오.
(본인의 개인 정보 활용과는 전혀 무관하며 실험의 정확성을 높이는데 활용됩니다)

(실험 참여 신청 시 사용한) 이메일 주소 : _____

설문이 종료되었습니다.

연구책임자의 지시가 있을 때까지 잠시 기다려주시기 바랍니다. 감사합니다.

초 록

농촌관광에서의 소비자들의 식품 관련 행동

지역 사회의 지속 가능한 개발도구로써 농촌관광이 대두되었다. 농촌관광은 학계를 포함한 다양한 이해관계자들로부터 관심을 받아왔으며, 앞으로 더 성장할 것으로 예상된다. 본 연구는 소비자의 관여도(involvement)를 중심으로 농촌관광과 관련된 소비자들의 식품 관련 행동을 조사하고자 한다. 첫 번째 연구에서는 농촌관광이 소비자들의 식품 구매 행동에 미치는 영향을 확인한다. 이를 위해, 본 연구에서는 준이상수요체계(Almost Ideal Demand System)을 이용하여 1,111명의 소비자 패널들의 농식품 구매 지출내역을 분석하였다. 분석 결과, 농촌관광을 경험은 소비자들의 곡류, 야채류, 과일류, 육류, 수산물의 지출 비중에 영향을 미쳤다. 두 번째 연구에서는 농촌관광에서 제공되는 식사의 종류와 식품 준비 활동 참여 여부가 식품의 평가에 미치는 영향을 확인하고자 한다. 본 연구는 이를 위해 외식점에서 식품의 종류와 식품 준비 활동 참여 여부에 따른 조건에 따라 130명의 참가자를 대상으로 실험을 진행했다. 그 결과, 식품의 종류가 지불의사에 미치는 영향에 유의한 차이를 보며, 식품 준비 활동 참여 여부가 조절변수로 작용했다.

주요어 : 농촌관광, 준이상수요체계, 농식품구매패턴, 식사종류, 음식 준비 활동, 식품 평가

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