

# Evaluation of an Annual Community-Focused Agricultural Literacy Event

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## Abstract

*Agricultural literacy programs are effective pathways to informally teach the public about agriculture through stakeholder (attendee and exhibitor) interaction. Such programs are generally evaluated using attendee feedback but fail to include exhibitors' experience. The purpose of this study was to evaluate a local community agricultural event by (a) exploring attendee agricultural literacy, purchasing behavior, and overall experience at the event, and (b) exploring exhibitor experiences at the same event. Attendees and exhibitors were given electronic surveys to provide quantitative and qualitative feedback as it pertained to the event's educational programming aspects. Attendees reported positive attitudes and perceptions of locally produced agricultural goods. Exhibitors reported satisfaction with the event and found the interactive digital scavenger hunt to be an effective way to interact with attendees and increase exposure to their business. Suggestions from attendees and exhibitors were concerned with pre-event communication and event logistics. The findings identify areas where education could be beneficial (e.g., nutritional information, impact of purchasing locally grown agricultural products, and where to find/purchase locally grown agricultural products). We recommend including attendee and exhibitor feedback to evaluate and improve similar agricultural literacy programs to guide marketing strategies and to better engage attendees and exhibitors with integrated learning activities.*

**Keywords:** agricultural literacy; adult education; attendee perceptions; exhibitor perceptions

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## Introduction

General population involvement in the agricultural industry has steadily decreased over the recent past. In 1980, roughly 3.6% of the United States workforce was involved in agriculture (World Bank, 2016). Currently, less than 1% of the total U.S. workforce is engaged in agriculture (United States Department of Agriculture, Economic Research Service, 2016). This number is similarly reflected in Hawai'i with approximately 6,000 reported hired agricultural workers (.43% of the state population) currently engaged in the state's workforce (United States Department of Agriculture, National Agricultural Statistics Service, 2016). Although these numbers may vary depending on agricultural season, how agricultural workforce is operationalized/reported, and by reporting source, the general trends in agricultural employment are the same.

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Ultimately, we have also seen the development of “a society that has little understanding concerning agricultural production and processing, and how this system meets our basic needs (food, clothing, shelter), and relates or interacts with a sustainable environment and our quality of life” (Spielmaker & Leising, 2013, p. 1). This decrease in agricultural involvement has been met with a recent increase in public interest about agriculture, generally related to specific food movements, nutrition, and the integration of school/community gardens. The public’s quest for information opens the door for the agricultural education profession (i.e., agricultural education, leadership, and communications) to provide agricultural literacy programs to the 99%.

Agricultural literacy programs are designed to increase audience’s knowledge and understanding of agricultural systems (Frick, Kahler, & Miller, 1991). Powell, Agnew, and Trexler (2008) posit that agricultural literacy emerges inductively from applying knowledge and process skills to agricultural topics and deductively by infusing “agricultural topics throughout the academic subject areas” (p. 92). Although much of the agricultural literacy research has been focused on K-12 students and teachers (Kovar & Ball, 2013), such programs have been found to be an effective means to educate the general adult population about agricultural topics, including natural resource issues, impacts of technology, and food purchasing decisions (Kovar & Ball, 2013; Mars & Ball, 2016). LaFollete, Knobloch, Schutz, and Brady (2015) suggested that understanding consumer “beliefs of the agricultural industry may help agricultural educators be more effectively [*sic*] in planning, implementing and evaluation nonformal and informal education programs to engage a more informed stakeholder and consumer” (p. 163).

Informal learning encourages knowledge acquisition between and among diverse audiences in comfortable settings outside of a classroom. To specifically target adults, agricultural community outreach events are ideal venues to create an informal learning environment (Gumirakiza, Curtis, & Bosworth, 2014; LaFollette et al., 2015). Such events promote agricultural literacy for adults because these functions allow for the exchange of information between agricultural businesses, scientists, and farmers and the general public (Kelsey & Mariger, 2002; LaFollette et al., 2015). Moreover, outreach events are ideal venues for consumers to learn about trends and innovations in agriculture, from the farm to the plate. In essence, agricultural literacy programs serve as vehicles for conveying agricultural knowledge and perspectives, which creates a more agriculturally literate population and allows consumers to make informed purchasing decisions as it relates to agricultural products.

When developing agricultural literacy programming, it is important to consider the current, related competencies of the target audience (Rogers, 2003). This understanding of an audience’s agricultural literacies allows agricultural educators, communicators, extensionists, and leaders to access new channels for reaching a diverse group of stakeholders (e.g., students, adults, professionals, community members) with a wide range of perceptions (Mars & Ball, 2016). This will encourage productive dissemination and exchange of knowledge and skills, even within an informal learning environment.

In an effort to tailor educational programming and promote public support for local agricultural production, studies have primarily focused on consumer purchasing behavior and perceptions or feedback from community events, such as farmer’s markets and agricultural tours (Brown, 2003; Chamberlain, Kelley, & Hyde, 2013; Zepeda & Li, 2006). However, such studies often overlook the exhibitors’ experiences at these events. Exhibitors, such as farmers, businesses, and agricultural educators, faculty, and extension agents, are the educators at agricultural community events. Exhibitors at such venues contribute to informal learning experiences because they engage in information exchanges between attendees and each other. Exhibitors facilitate adult learners to examine, evaluate, and adopt new or improved behaviors that will allow learners to

adapt to and cope with changes in their environment (Boone, Safrit, & Jones, 2002). Thus, feedback from exhibitors can also provide useful information during program evaluation to identify program components that need improvement.

### **Conceptual Framework**

Theories of adult education programming (Boone et al., 2002) and adult learning models (Knowles, Holton, & Swanson, 2011) were used to frame this study. Adult learners differ from young learners in how and why they approach education, and how they learn and engage in the process (Boone et al., 2002; Knowles et al., 2011). Whereas young learners are often the recipients of information (i.e., adults tell students what they need to know), adults are more involved in crafting their learning experiences. Adults actively seek information for specific situations, are self-directed, have experience to build from, and are intrinsically motivated. Rogers (2003) iterates that for an individual to engage in the innovation-decision process, of which the first stage is learning about the innovation or decision, they must have experience with the situation and perceive a need or problem. Knowles et al. (2011) also account for individual and situational differences, goals, and purposes for learning.

Since adult learners differ from young learners, alternative processes are required to meet knowledge acquisition needs. The andragogical process model (Knowles et al., 2011) describes a collaborative learning experience between the educator and learner. When creating a program design, there are eight elements to consider: preparing learners, climate, planning, diagnosis of needs, setting of objectives, designing learning plans, learning activities, and evaluation (Knowles et al., 2011). To prepare adult learners, educators must provide them with enough information so they may prelect (Jones & Bjelland, 2004), the process of thinking about their learning experience before it begins. Preflection may also assist in the evaluation of learner knowledge acquisition.

In terms of learning climate, adults prefer informal settings where the interaction is relaxed, respectful, and authentic (Knowles et al., 2011). This type of setting also emphasizes the importance of learning objective planning, as learners are in control of the means but not the objectives (Mocker & Spear, 1982). The concept of mutuality is a common thread for program planning, assessing needs, and setting objectives. Educators, including extension, should set expectations in these three areas with input from the participating adult learners. In designing learning plans, Boone et al. (2002) and Knowles et al. (2011) suggest using a logical sequence based on knowledge building and to use learning activities that are experiential in nature. Evaluation should also be a mutual experience and collect information about learner reaction to the program and learner knowledge acquisition as a result of the program. This model allows learners to take ownership of their learning experience (Knowles et al., 2011).

Bringing about community change is a charge to extension (Warner, Stubbs, Murphrey, & Huynh, 2016), but this charge can also be extended to farmers and other agricultural enterprises that also share a vested interest in promoting agricultural literacy. In an effort to promote change, it is important to include stakeholders from start to finish in agricultural literacy programming, especially when a program is intended to target a specific audience. For example, Kelsey and Mariger (2002) found that stakeholder inputs were necessary to develop better programming for promoting natural resource education. According to Mars and Ball (2016), adults influence agriculture production and consumption through their purchasing power. Thus, without a reliable agricultural knowledge base, these adults could make consumer decisions based on inaccurate information from biased sources. Boone et al. (2002) outlined three phases in their conceptual programming model: Planning, design and implementation, and evaluation and accountability. In following this model, the exhibitors of the 20th Annual Mealani's Taste of the Hawaiian Range

(Taste) were led through program evaluation efforts to measure program success and inform change for further program improvement. This level of stakeholder involvement creates motivation and ownership in change (Rogers, 2003).

## **Background**

The State of Hawai'i imports 85-90% of its food (Department of Business Economic Development & Tourism, 2012). Any natural disasters and global events may hinder shipping and the food supply, rendering Hawai'i vulnerable. Thus, over the past three decades, the state has increased its focus on sustainability in the form of supporting local agriculture. However, there is a serious need for agricultural literacy research in Hawai'i. According to Kovar and Ball (2013), the main purposes for agricultural literacy research are to assess the agricultural competency of a population and to test the effectiveness of an agricultural literacy program. Therefore, conducting this type of research in Hawai'i will allow researchers to gauge the agricultural literacy of the population that specific educational programs serve. In turn, this research can better inform educational programs to focus on agricultural information that the population currently needs.

One strategy employed to increase consumer demand and access to locally grown foods in Hawai'i is through providing consumer education programming (Department of Business Economic Development & Tourism, 2012). Taste is held on the Island of Hawai'i and is one of the state's premier agritourism events that promotes agricultural literacy through programming. It began 20 years ago as a way for the local extension services to showcase extension research products and to create a forum for relationship development among producers, chefs, and other members of the food service industry. Evolution of the event gave way to a more inclusive, experiential platform to expose consumers to locally grown products and show consumers how to cook with less expensive cuts of locally produced meat, such as off-cuts (e.g., oxtail, tri tip, chuck, etc.) and variety meats (e.g., tongue, liver, heart, etc.) of pasture-raised beef, pork, lamb/mutton, goat, and wild boar. It has since grown into an educational venue to encourage and support the production of local agricultural products through cultural, social, and scientific exchanges (Taste, 2015).

Taste is now a two-hour event held at a large convention center to accommodate over 1,000 attendees and over 60 exhibitors. There are two types of exhibitors to provide consumer education: Product awareness/educational exhibitors and culinary exhibitors. Product awareness/educational exhibitors are local businesses, farmers and ranchers, agricultural organizations, and researchers that present topics related to local agriculture and food sustainability. Culinary exhibitors are local chefs that prepare a particular off-cut and/or variety meat to introduce attendees to underutilized, locally available protein sources that are prepared in innovative ways (Taste, 2015). The two types of exhibitors are intermingled so, while attendees sample the variety of foods, they can also meet local farmers and ranchers, agricultural researchers, and local agricultural business owners to learn about these various agricultural entities. In 2015, the event organizers attempted to reach the younger, Millennial generation by incorporating a digital scavenger hunt to enhance interaction between exhibitors and attendees. Research has shown that marketing to Millennials with interactive technology can be successful (Fromm & Garton, 2013). Thus, an event like this provides an environment in which informal learning for all attendees can occur. This study aligns with Research Priority 5 (Efficient and Effective Agricultural Education Programs) of the American Association for Agricultural Education's (AAAE) National Research Agenda (Roberts, Harder, & Brashears, 2016).

## Purpose and Objectives

Although Hawai'i's agriculture industry sponsors educational events for consumers, little is known about consumer knowledge and perceptions of Hawai'i's agriculture industry, their motivation for attending these events, or about event attendee purchasing behaviors. Furthermore, no data has been collected on exhibitors' perceptions of this event from previous years. Thus, the purpose of this study was to evaluate the success of Taste by exploring attendee agricultural literacy, purchasing behavior, and overall experience at a local community based agricultural event, and by exploring exhibitor experiences at the same event. This was accomplished by the following objectives:

1. Identify attendees' knowledge and perceptions of locally produced agricultural goods and purchasing behaviors.
2. Identify attendees' general perceptions on the success of the event.
3. Determine motivations for exhibitor participation in the event and the digital scavenger hunt.
4. Identify exhibitors' perceptions of the digital scavenger hunt and overall perceptions on the success of the event.

## Methods

### Attendee Data Collection

A survey instrument was created and implemented using mobile surveying software to determine attendee perceptions of locally produced agricultural products, attendees' perceived behavior, consumer satisfaction of the event, and demographic information. There were a total of 20 questions. Five items on a four-point summated scale (1 = *Strongly Disagree*; 2 = *Disagree*; 3 = *Agree*; 4 = *Strongly Agree*; Trochim & Donnelly, 2007) were used to measure attendee knowledge and perceptions of locally produced agricultural products. Five true/false and yes/no questions also measured attendee perceptions as they related to general knowledge, purchasing, and influencing others to purchase locally produced agricultural products; one question allowed them to indicate the types of locally produced proteins with which they cook. Event satisfaction was measured with three items on a four-point summated scale, as mentioned above, and an open-ended question for comments and suggestions. Demographic data were also collected on event attendance, age, and gender.

A panel of experts established instrument face and content validity (Fraenkel, Wallen, & Hyun, 2015). The panel included administrative faculty and staff of the event who assessed and corrected the language and concepts used in the instrument. The panel also provided feedback on the ease of response, layout, and other aspects that contributed to the overall validity of the instrument. A post-hoc reliability analysis revealed the consumer perception of locally produced agricultural goods (Cronbach's  $\alpha = .74$ ) and attendee satisfaction of the event (Cronbach's  $\alpha = .89$ ) subscales had acceptable reliability.

The instrument was created with the event in mind. Since this was a two-hour event where people were eating, drinking, and socializing, the instrument was designed to be short, require minimal typing, and to be administered on tablets using mobile survey software. Four researchers, each with a tablet, collected data from a convenience sample during the event (Fraenkel et al., 2015). A convenience sample was used due to the size of the event and because attendees were constantly moving from one exhibitor to the next, in no particular order. Attendees were individually approached and asked to complete the instrument. After the event, the data were

uploaded and analyzed. Objectives one and three were descriptive. The associated data were reported using frequencies, percentages, and means, as appropriate. The open-ended question was analyzed using the first two steps of the constant comparative method—comparing incidents applicable to each category, and integrating categories and their properties—to identify emergent themes (Glaser & Strauss, 1967).

Limitations of this study were in the instrument development and implementation opportunity. Because Taste is a two-hour, highly social—coming and going, moving from exhibitor to exhibitor, and holding food and drink—and ticketed event (approximately \$60 per person plus additional expenses), the instrument was designed to be taken quickly as to not take away from their experience. This affected the type and number of questions being asked and severely impacted sampling methods. Convenience samples also introduce limitations, such as bias and the inability to generalize to a larger population (Fraenkel et al., 2015). The knowledge gained from this experience will allow the researchers to ask better questions and use more appropriate sampling and survey methods at the next evaluation of this event.

### **Exhibitor Data Collection**

To measure exhibitor perceptions of the event, a separate instrument was created using online surveying software. Nine items on a four-point summated scale (1 = *Strongly Disagree*; 2 = *Disagree*; 3 = *Agree*; 4 = *Strongly Agree*) were used to measure exhibitor perceptions of the event. Four yes/no and multiple-choice questions determined if exhibitors participated in the digital scavenger hunt, why they chose to participate or opt out, and if they will consider participating in it next year. To measure exhibitor perceptions of the digital scavenger hunt, four items on a four-point summated scale, anchored the same as scale above, were also included. Additional space was given for exhibitors to provide comments or suggestions. Five demographic questions collected data on exhibitors' participation history and base of operation.

The same panel of experts that was used for the attendee survey evaluated the instrument for the exhibitors. The panel established instrument face and content validity by providing feedback on language, concepts, ease of response, and layout (Fraenkel et al., 2015). The instrument was implemented after Taste in accordance with the tailored design method (Dillman, Smyth, & Christian, 2014). Quantitative data were analyzed using descriptive statistics, and qualitative data were analyzed using the constant comparative method (Glaser & Strauss, 1967). Trustworthiness was upheld through credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Triangulation between sources was used to establish credibility, purposive sampling was used to establish transferability, and dependability and confirmability were established through audits (Dooley, 2007; Lincoln & Guba, 1985).

## **Findings**

### **Attendees**

Of the approximately 1,200 people in attendance, a total of 112 surveys were collected during the two-hour event. The demographic data are listed in Table 1. A majority of the respondents were aged 51 – 69 (45%,  $f = 50$ ), female (60%,  $f = 67$ ), had attended the event for 1- 5 years (86%,  $f = 96$ ), and had come to support local agriculture (38%,  $f = 43$ ) or for entertainment (38%,  $f = 42$ ).

Table 1

*Demographic Data of Respondents (N = 112)*

Item	<i>f</i>	%
Age (years)		
18-20	3	3
21-38	36	32
39-50	20	18
51-69	50	45
70-85	3	3
Gender		
Male	45	40
Female	67	60
Years of event attendance		
1-5	96	86
6-10	8	7
11-15	5	5
16-20	3	3
Primary reason for attendance		
Support local agriculture	43	38
Entertainment (Social event, family time, etc.)	42	38
Information about local products	12	11
Cooking tips	4	4
Other	11	10

*Note.* Totals of percentages are not 100 for every characteristic because of rounding.

Overall, respondents had positive perceptions about locally produced agricultural goods (see Table 2). A majority of respondents had strong agreement with four of the five statements. They strongly agreed that local products have less environmental impact than imported ones and that they purchase locally grown products to stimulate the economy. Respondents also prefer the taste of locally grown products over imported ones and will buy locally grown products over imported if they cost the same. However, they only had agreement with the statement indicating they would pay more for a locally produced item over an imported item (52.7%,  $f = 59$ ); the frequencies from a true/false question corroborated this point (72.3%,  $f = 81$ ). This item also had the highest frequency of disagreement (9.8%,  $f = 11$ ) of all the perception statements. Further, a true/false questions showed that 92% ( $f = 103$ ) of respondents indicated they encourage their family and friends to buy locally sourced products and that locally grown products were more nutritious than imported products (86.6%,  $f = 97$ ).

Table 2

*Attendee Perceptions About Locally Grown Agricultural Goods at Taste*

Item	Strongly Disagree	Disagree	Agree	Strongly Agree
	$f$ (%)	$f$ (%)	$f$ (%)	$f$ (%)
I will pay more for a locally produced item over an imported item. ( $n = 112$ )	1(0.9)	10(8.9)	59(52.7)	41(37.5)
Local products have less environmental impact than imported. ( $n = 112$ )	2(1.8)	5(4.5)	46(41.1)	59(52.7)
I buy locally grown products to stimulate the local economy. ( $n = 112$ )	—	5(4.5)	49(43.8)	58(51.8)
I prefer the taste of locally grown products over imported. ( $n = 112$ )	—	3(2.7)	52(46.4)	57(50.9)
I will buy a locally produced item over an imported item if they cost the same. ( $n = 112$ )	—	2(1.8)	25(22.3)	85(75.9)

Note.  $M = 3.48$ . Cronbach's  $\alpha = .74$ .

Three questions asked attendees about their purchasing of variety meats and off-cuts because the founding motivations behind the creation of Taste was to increase these proteins in the local diet. Although a majority of respondents (55.4%,  $f = 62$ ) do not purchase variety meats (e.g., tongue, liver, heart, etc.), the remaining 44.6% ( $f = 50$ ) indicated they do purchase them regularly or seasonally. Conversely, 79.5% ( $f = 89$ ) of respondents indicated they do purchase off-cuts (e.g.,

oxtail, tri tip, chuck, etc.) regularly or seasonally. Regarding the use of locally sourced protein (see Table 3), a majority of respondents cook with locally sourced grass fed beef (90.2%,  $f = 101$ ). The least indicated proteins were deer/venison (25.9%,  $f = 29$ ) and goat (15.2%,  $f = 17$ ).

Table 3

*Locally Produced Proteins Used for Cooking by Attendees of Taste*

Item	<i>f</i>	%
Grass fed beef	101	90.2
Pork	84	75.0
Poultry	79	70.5
Lamb/Mutton	42	37.5
Wild boar	37	33.0
Venison/Deer	29	25.9
Goat	17	15.2

*Note.*  $N = 112$

Overall, the respondents had positive perceptions of Taste. They were satisfied with the event, as a whole (96.4%,  $f = 108$ ), and believed the event did a good job of educating the public about locally grown products (99.1%,  $f = 111$ ; see Table 4). A majority of the respondents also strongly agreed the experience at Taste was worth the price of the admissions ticket (64.2%,  $f = 70$ ).

Table 4

*Attendee Perceptions About Taste*

Item	Strongly Disagree	Disagree	Agree	Strongly Agree
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Taste does a good job educating the public about locally grown products. ( <i>n</i> = 112)	—	1(.9)	59(52.7)	52(46.4)
I am satisfied with Taste. ( <i>n</i> = 112)	—	1(.9)	40(35.7)	68(60.7)
My experience at Taste is worth the ticket price. ( <i>n</i> = 112)	—	1(.9)	38(33.9)	70(64.2)

Note. *M* = 3.58. Cronbach's  $\alpha$  = .89.

Attendees' responses to the open-ended question revealed general satisfaction of the event. "Awesome! Keep it up!" (A1); "Love this event" (A10, A34); "Very satisfying event" (A50); and "Great event!" (A6-8). Comments for improvement centered on a desire for additional information through more exhibitor interaction (A2, A102) and additional time (A14, A33, A87, A88).

### Exhibitors

Each exhibitor was emailed a survey (*N* = 35) for completion. Eighteen (51.43%) responded and were coded E1-18. Exhibitors ranked five motivations for participating in Taste. The number one motivation for participation was "Exposure to new clients," followed by "Providing information to attendees," "Showcase new products/menu items," "Support Taste as a community event," and "Other." Other motivations to participate included supporting customers (E9) and direct request to participate (E6).

Eleven exhibitors reported their overall perceptions of the digital scavenger hunt. Most felt it was a good way to engage attendees (72.8%, *f* = 8) and allowed them to provide good information (81.8%, *f* = 9) to attendees. Respondents who participated in the digital scavenger hunt (*n* = 7) did so to increase consumer exposure to their business (42.9%, *f* = 3), educate their customers (42.9%, *f* = 3), or simply because it sounded interesting (14.3%, *f* = 3). The exhibitors who chose not to participate in the digital scavenger hunt (*n* = 10) felt they did not have time to participate (60.0%, *f* = 6), were not interested or prepared for it (20.0%, *f* = 2), or were unsure of the purpose or benefit to their organization (20.0%, *f* = 2). Although two (18.2%) respondents felt the scavenger hunt was a negative distraction from their booth, most would consider participating in the digital scavenger hunt the next year (94.1%, *f* = 15).

All respondents were satisfied with the event as a whole, including exhibitor space, setup and dismantle time, attraction of target consumers, and worth of effort. Exhibitors also felt that pre-event communications were conducted appropriately (87.6%, *f* = 14). In terms of event performance, 33.3% (*f* = 5) felt the overall event performance remained the same, 53.3% (*f* = 8)

reported the event has gotten better, and 13.3% ( $f = 2$ ) felt it was getting much better. A majority (93.8%,  $f = 15$ ) agreed to participate in next year's event.

Exhibitors also provided feedback through additional comments. Two themes emerged: Logistics improvement and ideas for consideration. Logistics improvement included providing better transportation and set up options for exhibitors (E5, E15), and to improve exhibitor communications before the event (E3). Ideas for consideration included hiring a social media team (E4) for the event, creating items to commemorate the event (E9), and providing an opportunity for exhibitors to network and collaborate on market development ideas and initiatives (E17).

### **Conclusions and Recommendations**

Taste is designed for informal learning in a relaxed atmosphere, where agricultural literacy benefits both attendees and exhibitors. In light of the responses from attendees and exhibitors, Taste was successful as an agricultural community outreach event. The relaxed, social environment and the presence of relevant information (Gumirakiza et al., 2014; Knowles et al., 2011; LaFollette et al., 2015; Rogers, 2003) allowed the event attendees to approach exhibitors and engage in effective and fun agricultural education (Mocker & Spear, 1982). Attendees had the opportunity to learn from chefs about how to cook with alternative protein sources that are locally available, meet with local farmers, network with local agricultural businesses and their products, and learn about the latest research findings from agricultural extensionists. Exhibitors had the opportunity to educate the public about their business, products, and latest agricultural research findings. Kelsey and Mariger (2002) found that stakeholders frequently obtained information from other people in informal settings, which corroborates our findings.

The purpose of this study was to measure the impact of this local community based agricultural event that promoted agricultural literacy. Involvement of stakeholders (e.g., attendees and exhibitors) is beneficial to program improvement, not only because it can enhance the likelihood of producing valid evaluation findings, but also because they provide information that program personnel do not know (Brandon, 1998). More importantly, stakeholder involvement is necessary so that evaluators can learn whether or not a program is making a difference in the lives of their target audience and to improve program planning (Boone et al., 2002). In this study, we gathered information on consumer knowledge and perceptions of agricultural products (e.g., agricultural literacy, purchasing behavior, knowledge of locally available protein sources), and we gathered feedback on the success of Taste from the perspectives of both attendees and exhibitors.

The purpose of objective one was to identify attendees' perceptions and knowledge of locally produced agricultural goods, including their self-perceptions of purchasing behaviors. Analyses revealed that attendees had positive perceptions of locally produced agricultural goods. Other studies have reported similar findings (Brown, 2003; Yue & Tong, 2009). This is encouraging for producers and food retailers, but it should be noted that when people are allowed to self-report behaviors, they often overestimate their behaviors to fit into the perceived social expectation (Feldmann & Hamm, 2015); attendees could have felt obligated to respond positively because they felt it was socially correct at the event. It should also be noted that these perceptions may or may not be influenced by the information presented at the event. Research has shown that food-centered social and marketing movements have positively influenced consumers' perceptions of locally produced agricultural goods (Brown, 2003; Chamberlain et al., 2013; Yue & Tong, 2009; Yue et al., 2011). Based on these findings, the directors of this event and similar events should continue to center the event on locally produced agricultural goods. Similarly, agricultural educators who assist in creating the educational narrative of this type of event should work with food-centered social and marketing movements to develop accurate, informational messages. This

will keep such events relevant to current food perceptions and to food-based social and marketing movements.

In terms of knowledge about locally produced agricultural goods, attendees seemed to overestimate locally grown benefits. Although previous studies have shown a spectrum of advantages and disadvantages of locally produced goods (Hopp & Gussow, 2009; Paarlberg, 2013; Weber & Matthews, 2008), attendees of Taste found them to be better for the environment and more nutritious than imported goods. Our findings reveal areas where purposeful education could be beneficial: nutritional information, impact of purchasing locally grown agricultural products, and where to find/purchase locally grown agricultural products. In an effort to increase and expand attendee knowledge and understanding of these topics, pre-event messaging and communications and interactive event activities should highlight scientific facts, evidence, and benefits of locally produced agricultural goods. An event social media team, as desired by the event exhibitors, could support this type of messaging. This combination of messaging will encourage reflection (Jones & Bjelland, 2004) and experiential knowledge application (Knowles et al., 2011) during the event, therefore enhancing knowledge acquisition. It should be noted that a majority of the attendees were first-time attendees. Although this is a positive for event attendance, if attendees do not return in the following years, longitudinal impact could be difficult to measure. Thus, return attendance should also be a focus of the event board.

Increasing consumer purchasing of specific local proteins and cuts was a primary goal of Taste when it began 20 years ago. Therefore, objective one also asked attendees about their purchasing of these alternative protein sources. Few attendees purchase goat, venison/deer, wild boar, and lamb/mutton, and few purchase variety meats (e.g., tongue, liver, heart, etc.) either regularly or seasonally. If there is to be an increase in the purchasing of these proteins and cuts, future events should focus specifically on how to access and prepare them in ways that are convenient and appealing. Current demonstration resembles a tasting rather than providing instruction or a recipe. Zepeda and Li (2006) suggest the use of recipes and demonstrations to encourage support for local agricultural products. Therefore, integrating educational demonstrations by the culinary exhibitors may provide this type of relevant and needed information and experience for attendees (Knowles et al., 2011; Rogers, 2003).

Objective two aimed to identify attendees' general perceptions of the event as a measure of event success. The results indicate that attendees are satisfied with Taste and believe it is achieving its goal to educate the public about locally produced agricultural goods. The quality of information provided to consumers (Stolzenbach, Bredie, Christensen, & Byrne, 2013) and consumer preference (Chamberlain et al., 2013) are critical to consumer acceptance of marketing messages. Carpio and Isengildina-Massa (2008) further explain that messages encouraging hometown pride may provide consumer motivation to buy locally grown products. Taste is currently providing these experiences for attendees and perhaps explains why attendee perceptions of the event are positive. By taking into account the suggestions for improvement, the board of directors for this event can increase the interaction between the attendees and exhibitors to further enhance educational opportunities. Other attitudes of attendees that may be related to supporting local agriculture (e.g., enjoyment of cooking) may be another motivation for attending this event. For example, Zepeda and Li (2006) found that enjoyment of cooking was one of the factors that significantly influence support of local agriculture. Thus, this could be a promotion strategy for Taste coordinators to explore for future iterations of this event.

Another intention of Taste was to encourage the public to support local agriculture. The results indicate a level of support for local agriculture by attendees. However, the fact that only 38% of respondents primarily attend this event to support local agriculture indicates a need for

event coordinators to develop better marketing strategies to target more attendees come to this event with an intention to support local agriculture. Moreover, the fact that only 11% of respondents primarily attend this event to gain information about local products indicates another area on which to focus promotions for next year's event. As suggested by LaFollete et al. (2015), utilizing the findings from event evaluations will allow agricultural education organizations to develop educational events that are appealing to their intended audiences and market such events in a manner that is appealing for consumers to attend.

Objective three sought to determine motivations for exhibitor participation in the event and the digital scavenger hunt. Out of the 35 exhibitors, 18 responded and ranked five motivations for participating in Taste. Results indicated that the greatest motivational factor for participation was to expose new clients to their business. Exhibitors were also motivated to participate in the event to provide information about their business and educate attendees, show new products or menu items, and support Taste as a local community event. Additionally, exhibitors were motivated to participate in the digital scavenger hunt because they felt it was a good way to increase consumer exposure to their business, educate potential customers, and simply because it sounded interesting. These findings show that exhibitors, which included extensionists, see Taste as an opportunity to influence change in the general public and the digital scavenger hunt as a way to potentially reach new, younger clientele (Fromm & Garton, 2013). This is in accordance with Warner et al. (2016) who stressed that the role of extension is to create change in communities. These findings align with Taste coordinator's programmatic educational objectives and, according to adult education theorists, this type of venue is ideal for this informal, andragogical approach to promoting agricultural literacy (Boone et al., 2002; Knowles et al., 2011; Rogers, 2003).

Objective four aimed to identify exhibitors' perceptions of the digital scavenger hunt and overall perceptions of the event. In an effort to provide information in a relevant and interesting way (Boone et al., 2002; Knowles et al., 2011; Rogers, 2003), Taste incorporated the digital scavenger hunt. Exhibitors who integrated it into their booths were satisfied with their experience and there was high interest in participating in the digital scavenger hunt next year. Most respondents who participated in the digital scavenger hunt felt it was a good means to engage attendees and provide information about their businesses. Exhibitors that did not participate in the scavenger hunt felt they had no time to participate, were not interested or prepared, or were uncertain of the purpose of the activity. However, most exhibitors were interested in participating in a future iteration of the digital scavenger hunt. This attitude reflects the adult learning theories presented by Boone et al. (2002) and Knowles et al. (2011) and their focus on learner-relevant content.

Regarding overall perceptions of the event, exhibitors reported a satisfactory experience. A majority of exhibitors also felt Taste has improved over time and agreed they would participate in next year's event. Moreover, exhibitors provided valuable feedback regarding logistics improvement and ideas for future change and consideration (Boone et al., 2002; Rogers, 2003). Providing better transportation and setup options and better pre-event communications were expressed concerns. Exhibitors also suggested that planners for next year's event consider hiring a social media team specifically for this event, creating memorabilia for the event, and providing opportunities for exhibitors to network and collaborate on marketing development. Use of social media is a great way to reach younger, more tech-savvy audiences. Bailey, Arnold, and Igo (2014) found social media was highly utilized by their participants to stay current on educational events and information. Additionally, younger farmers and ranchers find value in networking with older producers, leaders in agriculture, and peer producers because it can serve as an educational experience (Bailey et al., 2014). Despite some logistical and technological difficulties, exhibitors had positive perceptions of the 20th Annual Taste.

There are also several recommendations to be made considering the findings as a whole. Specifically regarding this event, future research should take advantage of this study to collect longitudinal data about attendee knowledge acquisition and event satisfaction. As indicated by Brandon (1998) and Boone et al. (2002), this type of stakeholder feedback is useful for program improvement. Further, future evaluation of this and similar events should explore surveying and sampling methods that will allow for the exploration of relationships between demographic characteristics and relevant responses, especially years of attendance and knowledge and perceptions of locally grown agricultural products. These recommendations allow for a more meaningful evaluation of the impact of this event, an ability to generalize to a larger population, and an ability to speak to the effectiveness of similar adult-targeted agricultural education events. Such efforts will result in increased agricultural literacy through efficient and effective agricultural community education programs.

### References

- Bailey, N. E., Arnold, S. K., & Igo, C. G. (2014). Educating the future of agriculture: A focus group analysis of the programming needs and preferences of Montana young and beginning farmers and ranchers. *Journal of Agricultural Extension, 55*(2), 167-183. doi:10.5032/jae.2014.02167
- Boone, E. J., Safrit, R. D., & Jones, J. (2002). *Developing programs in adult education: A conceptual programming model* (2nd ed.). Long Grove, IL: Waveland Press.
- Brandon, P. R. (1998). Stakeholder participation for the purpose of helping ensure validity: Bridging the gap between collaborative and non-collaborative evaluations. *American Journal of Evaluation, 19*(3), 325-337.
- Brown, C. (2003). Consumers' preferences for locally produced food: A study in southeast Missouri. *American Journal of Alternative Agriculture, 18*(4), 213-224. doi: <https://doi.org/10.1079/AJAA200353>
- Carpio, C. E., & Isengildina-Massa, O. (2008). *Consumer willingness to pay for locally grown products: The case of South Carolina*. Paper presented at the Southern Agricultural Economics Association Annual Meeting, Dallas, TX. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.565.5923&rep=rep1&type=pdf>
- Chamberlain, A. J., Kelley, K. M., & Hyde, J. (2013). Comparing consumer preferences for locally grown and certified organic produce in the mid-Atlantic region of the United States. *HortTechnology, 23*(1), 74-81.
- Department of Business Economic Development & Tourism, Office of Planning. (2012). *Increased food security and food self-sufficiency strategy*. Retrieved from [http://files.hawaii.gov/dbedt/op/spb/increased\\_food\\_security\\_and\\_food\\_self\\_sufficiency\\_strategy.pdf](http://files.hawaii.gov/dbedt/op/spb/increased_food_security_and_food_self_sufficiency_strategy.pdf)
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, mail, and mixed-mode surveys: The tailored design method* (4th ed.). Hoboken, NJ: John Wiley & Sons.
- Dooley, K. E. (2007). Viewing agricultural education research through a qualitative lens. *Journal of Agricultural Education, 48*(4), 32-42. doi:10.5032/jae.2007.04032

- Feldmann, C., & Hamm, U. (2015). Consumers' perceptions and preferences for local food: A review. *Food Quality and Preference*, *40*, 152-164. doi: 10.1016/j.foodqual.2014.09.014
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to design and evaluate research in education* (9th ed.). New York, NY: The McGraw-Hill Companies.
- Frick, M. J., Kahler, A. A., & Miller, W. W. (1991). A definition and the concepts of agricultural literacy. *Journal of Agricultural Education*, *32*(2), 49-57. doi: 10.5035/jae.1991.02049
- Fromm, J., & Garton, C. (2013). *Marketing to Millennials: Reach the largest and most influential generation of consumer ever*. New York, NY: American Management Association.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago, IL: Aldine.
- Gumirakiza, J. D., Curtis, K. R., & Bosworth, R. (2014). Who attends farmers' markets and why? Understanding consumers and their motivations. *International Food and Agribusiness Management Review*, *17*(2), 65-82. Retrieved from <http://ageconsearch.umn.edu/bitstream/167905/2/420130109.pdf>.
- Hopp, S. L., & Gussow, J. D. (2009). Comment on "Food-miles and the relative climate impacts of food choices in the United States". *Environmental Science and Technology*, *43*(10), pp. 3982-3983. doi: 10.1021/es900749q
- Jones, L., & Bjelland, D. (2004). International Experiential Learning in Agriculture. *Proceedings of the 20<sup>th</sup> Annual Conference, Association for International Agricultural and Extension Education, Dublin, Ireland*, 963-964. Retrieved from <http://www.aiaee.org/attachments/article/1052/jones-carousel.pdf>
- Kelsey, K. D., & Mariger, S. C. (2002). A case study of stakeholder needs for extension education. *Journal of Extension*, *40*(2), 1-11. Retrieved from <http://www.joe.org/joe/2002april/rb2.php>.
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (2011). *The adult learner: The definitive classic in adult education and human resource development* (7th ed.). Burlington, MA: Elsevier.
- Kovar, K. A., & Ball, A. L. (2013). Two decades of agricultural literacy research: A synthesis of the literature. *Journal of Agricultural Education*, *54*(1), 153-169. doi: 10.5032/jae.2013.01167
- LaFollette, L. K., Knobloch, N. A., Schutz, M. M., & Brady, C. M. (2015). Consumers' motivations and dairy production beliefs regarding participation in an education dairy farm event. *Journal of Agricultural Education*, *56*(2), 167-178. doi: 10.5032/jae.2015.02153
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Mars, M. M., & Ball, A. L. (2016). Ways of knowing, sharing, and translating agricultural knowledge and perspectives: Alternative epistemologies across non-formal and informal settings. *Journal of Agricultural Education*, *57*(1), 56-72. doi:10.5032/jae.2016.01056

- Mealani's Taste of the Hawaiian Range. (2015). About us. Retrieved from <http://www.tasteofthehawaiianrange.com/about-taste-of-the-hawaiian-range/index.html>
- Mocker, D. W., & Spear, G. E. (1982). *Lifelong learning: Formal, nonformal, informal, and self-directed*. Information Series No. 241. Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education, National Center for Research in Vocational Education, Ohio State University.
- Paarlberg, R. (2013). *Food politics: What everyone needs to know* (2nd ed.). New York, NY: Oxford University Press.
- Powell, D., Agnew, D., & Trexler, C. (2008). Agricultural literacy: Clarifying a vision for practical application. *Journal of Agricultural Education*, 49(1), 85-98. doi: 10.5032/jae.2008.01085
- Roberts, T. G., Harder, A., & Brashears, M. T. (Eds.). (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication. Retrieved from [http://aaaeonline.org/resources/Documents/AAAE\\_National\\_Research\\_Agenda\\_2016-2020.pdf](http://aaaeonline.org/resources/Documents/AAAE_National_Research_Agenda_2016-2020.pdf)
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.
- Spielmaker, D. M., & Leising, J. G. (2013). *National agricultural literacy outcomes*. Logan, UT: Utah State University, School of Applied Sciences & Technology. Retrieved from <http://agclassroom.org/teacher/matrix>
- Stolzenbach, S., Bredie, W. L. P., Christensen, R. H. B., & Byrne, D. V. (2013). Impact of product information and repeated exposure on consumer liking, sensory perception and concept associations of local apple juice. *Food Research International*, 52, 91-98.
- Trochim, W. M. K., & Donnelly, J. P. (2007). *The research methods knowledge base* (3rd ed.). Cincinnati, OH: Atomic Dog Publishing.
- United States Department of Agriculture, Economic Research Service. (2016). Farm labor: Background. Retrieved from <https://www.ers.usda.gov/topics/farm-economy/farm-labor/background.aspx#Numbers>
- United States Department of Agriculture, National Agricultural Statistics Service. (2016). Quick stats. Retrieved from <https://quickstats.nass.usda.gov/results/F290A6FC-A73F-3079-B1FA-AB69709DF26E>
- Warner, L. A., Stubbs, E., Murphrey, T. P., & Huynh, P. (2016). Identification of the competencies needed to apply social marketing to extension programming: Results of a Delphi study. *Journal of Agricultural Education*, 57(2), 14-32. doi:10.5032/jae.2016.02014
- Weber, C. L., & Matthews, H. S. (2008). Food-miles and the relative climate impacts of food choices in the United States. *Environmental Science & Technology*, 42(10), 3508-3513. doi:10.1021/es702969f

- World Bank. (2016). *Employment in Agriculture (% of total employment)*. Retrieved from [data.worldbank.org/indicator/sl.agr.empl.zs?locations=us](http://data.worldbank.org/indicator/sl.agr.empl.zs?locations=us)
- Yue, C., & Tong, C. (2009). Organic or local? Investigating consumer preferences for fresh produce using a choice experiment with real economic incentives. *HortScience*, *44*(2), 366-371. Retrieved from <http://hortsci.ashspublications.org/content/44/2/366.full.pdf>
- Yue, C., Dennis, J. H., Behe, B. K., Hall, C. R., Campbell, B. L., & Lobez, R. G. (2011). Investigating consumer preference for organic, local, or sustainable plants. *HortScience*, *46*(4), 610-615. Retrieved from <http://hortsci.ashspublications.org/content/46/4/610.full.pdf+html>
- Zepeda, L., & Li, J. (2006). Who buys local food? *Journal of Food Distribution Research*, *37*(3), 1-11.