Federal-State Marketing Improvement Program
Final Performance Report
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An Outline of the Issue or Problem: A critical, but often bypassed, step for the entrepreneurial food producer is assessing the marketability of their product. Training and technical programs have been developed to assist food producers in product formulation, business planning and process development which the small entrepreneur can usually afford. In contrast, standard methods of collecting information from consumers are quite expensive. The entrepreneur is generally unable to consumer test their product and assess potential markets. Not having the information provided by consumer testing is a threat to their success: a misstep in product launch and the loss of resources used to make it can stop a new business dead in its tracks. Even those who plan to begin their endeavor through direct sales at farmers markets could improve their product and sales strategy through consumer testing. The start-up needs information about what consumers are willing to pay to evaluate whether their production and marketing costs match to a realistic price. Information gathered on consumer liking and price could also be used by start-ups to pitch their product to wholesale and retail buyers and to help them obtain financing as part of a business plan.

Goals and Objectives: The goal of this project was to develop a method by which the entrepreneurial food producer or processor has the tools and knowledge to conduct a consumer test themselves. The sensory and consumer testing manual was devised to walk the entrepreneur through the test execution and analysis process. An Excel workbook was to be developed that would create tables and figures reporting on the consumer test findings. These tools were tested by entrepreneurs and refined based on their experiences.

Contribution of Project Partners: Many staff at the Oregon State University Food Innovation Center contributed to the Market Research for Market Readiness project at various stages and in working with entrepreneurs. Two outside reviewers also deserve mention, Dr. Dawn Thilmany, Colorado State University, and Dr. Kynda Curtis, Utah State University, provided a review and many valuable suggestions. Farmer's markets and a craft markets in the greater Portland, OR Metropolitan area allowed us to do our beta testing at their venues. We also received useful feedback and contacted potential partners at the Washington State and Oregon Farmers Market Association meetings. The Food Distribution Research Society and multi-state project S−1067: "Assessing the Consumer Behavior, Market Coordination and Performance of the Consumer−Oriented Fruit and Vegetable Sector" members have also provided assistance and feedback.

Results, Conclusions, and Lessons Learned: This project resulted in the development of the "Market Research for Market Readiness" (MKTRD) protocol. Materials developed include a manual, an Excel workbook, and several training videos. These are available on a website. The manual describes a set of procedures for self-execution of and reporting on a consumer test. The consumer test design and analysis and reporting is made easier by use of an Excel® workbook. As you create the survey ballot within the workbook, it automatically sets up a worksheet where you enter the data. Once the data is entered, the workbook produces all of the figures and tables for your own evaluation, and this output can be incorporated into a sales pitch, business plan, or feasibility study.

As we progressed in our development we learned that while all entrepreneurs could handle the development of a survey some were less able to get the data entered. This was primarily due to being a small start-up. Those who were comfortable with spreadsheet methods were quick while others were overwhelmed with their start-up activities. However, contact with organizations that work with local food activities, and extension faculty felt that they could help with the project at that level, so we believe that this is a barrier that is reasonably easy to overcome. Over time, we refined the workbook to automatically create the survey ballot based on a series of entries and at the same time automatically create the data entry worksheet. These additions have made it very easy to produce a ballot and record its findings. Several reviewers have asked about development of a completely computerized survey ballot. This will probably happen in the future, but use of paper ballot makes this activity accessible to many more users.

We had one unexpected difficulty and several positive side benefits from this process. We had a greater expectation that external networks could assist in dissemination of our protocol. This was not as successful as we hoped, and so are continuing our efforts in that area.

One unexpected positive result is that the protocol may provide a good interaction point between college students and local start-up businesses. While this has yet to be enacted we have plans for this at our institution through a course to be held this spring, and have interest already from a couple of other colleges. A second side benefit is the realization that we could match entrepreneurial testing at our center into a larger sensory test in the same way that we did during our alpha testing. This provides an additional opportunity for food start-ups that might be adopted in other land grant university food science departments with a consumer testing program.

Evaluation: Utilization by a fresh group of entrepreneurs will be the most important measure of success. Dissemination continues, the website had 125 visitors since October, and a recent e-mailing promoted 12 responses within 24 hours, five from outreach faculty at land grant universities, two from instructors, and two from individuals involved with food start-ups. We will measure contacts over the coming year. Certainly feedback is very positive, and reports of success will be made through our regional research group.

Current or Future Benefits/Recommendations for Future Research Several Land Grant and agricultural state university instructors and extension specialists have received information about the availability of the protocol and it is trickling down to groups who will use it with their food entrepreneurs. A number have responded that they see this as a missing step in the development of new food enterprises and new food products. Based on early response contacts we also expect that this protocol may also become part of courses related to food marketing and entrepreneurism in 2017. Introduction of these techniques to

students has benefits to their future careers and their own potential business development, but also may provide for an interaction between such students and start-up enterprises.

We continue to reach out to potential users, and are collecting additional contact information.

As the Principal Investigator, I plan to continue with the dissemination of the protocol over the coming year and beyond. I will spend a portion of my upcoming sabbatical promoting use. In terms of research we will record usage and collect feedback. We have been invited to submit an article by the editor of the Journal of Food Products Marketing.

Project Beneficiaries: To date the beneficiaries have primarily been participants in the alpha and beta testing. The expected beneficiaries include potential food enterprises and value-added producers.

Additional Information: Access to the MKTRD materials is provided through this website: http://fic.oregonstate.edu/food-innovation-center/product-development/market-research-market-readiness-mktrd-protocol.

Consumer Testing for the Local Food Start-Up

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Introduction

- Major food firms do consumer testing all over the country.
  - To test new products for liking and sensory qualities and check for market readiness and reformulate if needed
  - To test for packaging and message
  - Examine purchase intent and price
- These are perhaps more important for a start-up
  - A misstep in product launch and the loss of resources used to make it can stop a new business dead in its tracks.
  - Even those who plan to begin their endeavor through direct sales at farmers markets could improve their product and sales strategy through consumer testing.

Can entrepreneurs do their own consumer test?

- We have rarely been able to help start-ups with consumer tests
- But we see a clear need
  - Entrepreneurs may need a wake up call about their product
  - They may simply need to reformulate or consider their market
  - They may be ready to start marketing to retailers or looking for financing
- A consumer test may be the answer

Professional Sensory & Consumer Testing

Basic information collected

- **Perceptions and opinions of "target market" consumers**
- **Associated demographic and marketing data**
- **Consumer feedback on reformulations**
- **Check whether attributes (e.g., saltiness, sweetness, and texture) are "Just About Right" or need adjustment**

Professional Sensory & Consumer Testing (cont)

- Can recruit a screened group of representative buyers
- Have a follow up with a focus group to more fully examine message/concept and packaging
- Evaluate product and price combination through purchase intent question

  And provides
- Third party, unbiased testing services

However professional testing is expensive

- **Nearly $10,000 just for a basic test in one* location:**
  - panelist payments (e.g.$25 for 100 responses) may seem like a lot for 20-30 minutes but they must get to the test site, multiply their time to participates by 2-4 or more and travel expense)
  - facility rental
  - professional sensory staff time to prepare the survey, recruit the panelists, run the test, and analyze and report on the data collected

Entrepreneurial Sensory & Consumer Testing

- Similar evaluation for the product and its market potential on a small, local scale
  - Perceptions and opinions of "target market" consumers?
- Basic information on purchase intent
  - But will the number of 'panelists' sampled be sufficient size to associate demographic and shopping categories with purchase intent?
- Third party, unbiased testing services

Maybe, or perhaps a reasonable substitute

- Potential for Third Party Lite

Sensory & Consumer Testing for *Start-ups*

- A self-executed consumer test protocol for food entrepreneurs has been designed and is undergoing testing in Portland, Oregon

Key protocol elements

- Instruction manual and a template for development and execution of a survey
- A spreadsheet which automatically produces useful tables and charts from the survey data.
- Instructions, and a video, for data entry into the spreadsheet.

I have read the consent form and agree to take the survey. (check box) SURVEY CONSENT ☐

Q1. BEFORE TASTING, read and think about the information on the card, how likely would you be to purchase this product?

	would definitely not buy	would probably not buy	might buy / might not buy	would probably buy	would definitely buy
Check one box:	☐	☐	☐	☐	☐

Q2. Now taste the sample. How well do you like or dislike the sample **OVERALL**?

	dislike extremely	dislike very much	dislike moderately	dislike slightly	neither like nor dislike	like slightly	like moderately	like very much	like extremely
Check one box:	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q3-7 Please rate each product attribute:

	Not nearly enough	Not quite enough	Just about right	Somewhat too much	Much too much
Bacon flavor	❑	❑	❑	❑	❑
Saltiness	❑	❑	❑	❑	❑
Sweetness	❑	❑	❑	❑	❑
Crunchiness	❑	❑	❑	❑	❑
Texture	❑	❑	❑	❑	❑

Q8. For whom and/or what would you buy this product? *Check all that apply or fill in*

❑ For personal use ❑ For my children ❑ As a gift
❑ For a snack ❑ For hiking ❑ As a topping for Ice Cream or Yogurt
❑Other _____

Q9. Please describe what you LIKE and/or DISLIKE about the sample.

Q 10-15. How likely is it that you would BUY a **"your package size" of "your product name"** at the following prices?

Note: you should check EXACTLY SIX BOXES, one in each price row.

If the price was:	would definitely not buy	would probably not buy	might buy / might not buy	would probably buy	would definitely buy
$10.99	☐	☐	☐	☐	☐
$9.99	☐	☐	☐	☐	☐
$8.99	☐	☐	☐	☐	☐
$7.99	☐	☐	☐	☐	☐
$6.99	☐	☐	☐	☐	☐
$5.99	☐	☐	☐	☐	☐

Q16. Please indicate your food consumption preferences and habits. ***Check all that apply and/or fill in.***

☐ Vegetarian ☐ Whatever ☐ Whatever
☐ Gluten-free ☐ Low-sodium ☐ Non-GMO ☐ Other _____

Q17. How many of these a "your package size" of "your product name would you buy per year if the price was $X.XX per package? *Circle your answer.*

0 1 2 3 4-6 7-9 10 or more

Q18. Where do you buy groceries at least once a month? ***Check all that apply.***

☐ Traditional (Safeway, Albertsons, Thriftway)
☐ Warehouse (Walmart, Target, K-mart)
☐ Specialty Grocers (Zupans, Market of Choice)
☐ Convenience (7-11, AMPM Mini Market)
☐ Farmers Markets
☐ CSA – Community Supported Agriculture
☐ Natural Food (New Seasons, Whole Foods)
☐ Club store (Sam's Club, Costco)
☐ Ethnic food (Asian, Indian, Mexican, etc.)
☐ Food Co-op's
☐ Direct delivery
☐ Other_____

Please fill in the blank or check a box.

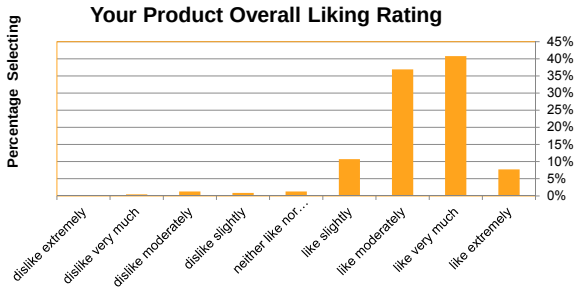
Q19	Q20	Q21	Q22
Your age ☐ 18-25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ 56-65 ☐ 66 and Over	Your gender ❑ Male ❑ Female ❑ Choose not to answer	Please indicate the highest level of education you have completed. ❑ Some High school ❑ High school ❑ Current college student/ some college ❑ 2 year college/technical degree/other ❑ 4 year college/Bachelor's degree ❑ Advanced degree (Masters, Doctorate)	Please indicate your total annual household income before taxes. ❑ Less than $20,000 ❑ $20,000-39,999 ❑ $40,000 to $59,999 ❑ $60,000-79,000 ❑ $80,000 to $119,000 ❑ Over $120,000

Overall Liking

Question 2. Now taste the sample. How well do you like or dislike the sample **OVERALL**?

Check one box:	dislike extremely	dislike very much	dislike moderately	dislike slightly	neither like nor dislike	like slightly	like moderately	like very much	like extremely
	☐	☐	☐	☐	☐	☐	☐	☐	☐

- **Figure generated from the protocol for Overall Liking**



Entrepreneurial Sensory & Consumer Testing

- **Data will be organized in the spreadsheet**

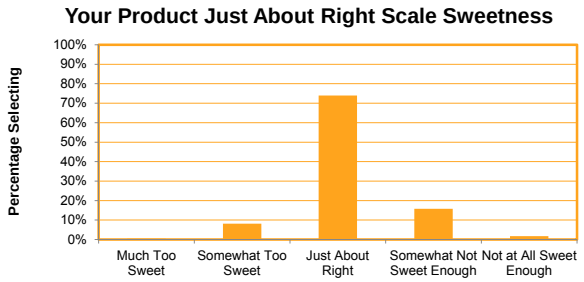
Enter Question # from Survey or type in "NOT USED"		Q1	NOT USED	Q2
Question Description	Survey Presented	*Concept Card Purchase Intent*	*Aroma Liking Rating*	*Overall Liking Rating*
Survey #	OTHER Survey Information as Needed: for example on Price,			
1	Daniel's Mod-Macs	2		9
2	Daniel's Mod-Macs	3		7
3	Daniel's Mod-Macs	3		8
4	Daniel's Mod-Macs	3		7
5	Daniel's Mod-Macs			
6	Daniel's Mod-Macs	3		8
7	Daniel's Mod-Macs	2		7
8	Daniel's Mod-Macs	3		9
9	Daniel's Mod-Macs	2		7
10	Daniel's Mod-Macs	3		8
11	Daniel's Mod-Macs	4		9

JAR (Just About Right)

Question 3. How well do you like or dislike the **SWEETNESS** of the sample? Would you say it is……

	not nearly sweet enough	not quite sweet enough	just about right	somewhat too sweet	much too sweet
Check one box:	☐	☐	☐	☐	☐

Figure generated from the protocol for JAR



Pricing and Purchase Intent Question Trials

Hedonic I

Q #6. Now that you have tried this product, what is the maximum price you would be willing to pay to purchase it? For comparison, the regular retail price for a 2 oz. energy bar or 2 oz. packet of jerky ranges from $1.00 to $5.00.

Fill in a price in $X.XX, _____

Or circle $0.00, Would not buy

Pricing and Purchase Intent Question Trials

Hedonic II

Q #6. Now that you have tried this product, what is the maximum price you would be willing to pay to purchase it? For comparison, the regular retail price for a 2 oz. energy bar or 2 oz. packet of jerky ranges from $1.00 to $5.00. ***Check one price.***

○ $6.00	○ $4.00	○ $2.00	○ $0.00, Would not buy
○ $5.50	○ $3.50	○ $1.50	
○ $5.00	○ $3.00	○ $1.00	
○ $4.50	○ $2.50	○ $0.50	

Ambitious Attempt

Demand producing question

Q #12. How many bars would you buy at different prices? ***For each price please check one row in each column that is closest to the quantity you would buy if the product was available at that price. It is available in four flavors. For comparison, the regular retail price for a 2 oz. energy/protein/granola bar or 2 oz. packet of jerky ranges from $1.00 to $5.00.***

Find other approach

If the price was……						which category is closest to how many you would buy?		
$6	$5	$4	$3	$2	$1	*Quantity*		*which is about*
(check one box in each of the columns)								
						More than 1/day	In a week	*352 per year plus*
						5-7 per week		*312 per year*
						2-4 per week		*156 per year*
						1 per week		*52 per year*
						Three per month	Per Month	*36 per year*
						Two per month		*24 per year*
						One per month		*12 per year*
						9-11 per year	If less than once per month	*10 per year*
						6-8 per year		*7 per year*
						3-5 per year		*4 per year*
						1-2 per year		*1.5 per year*
						0 per year		*0 per year*
Q12a	Q12b	Q12c	Q12d	Q12e	Q12f			

Example: if the price in the first column was $20, you most likely would check the box in the last row for buying '0 per year', and if the price in the last column was $0 you might check the box in the top quantity category of '7 per week'.

Entrepreneurial Sensory & Consumer Testing

- **Final purchase intent question**

Questions # 9-14. How likely is it that you would BUY a 5.3oz wedge (see sample package) of this cheese at the following prices?

	Prices	Would definitely not buy	Would probably not buy	Might buy / Might not buy	Would probably buy	Would definitely buy		
If the price was	$14	√					***check just one box in each of the price <-rows***	Q#9
	$12		√					Q#10
	$10			√				Q#11
	$8				√			Q#12
	$6					√		Q#13
	$4					√		Q#14

Correctness of Answers to Purchase Intent Matrix

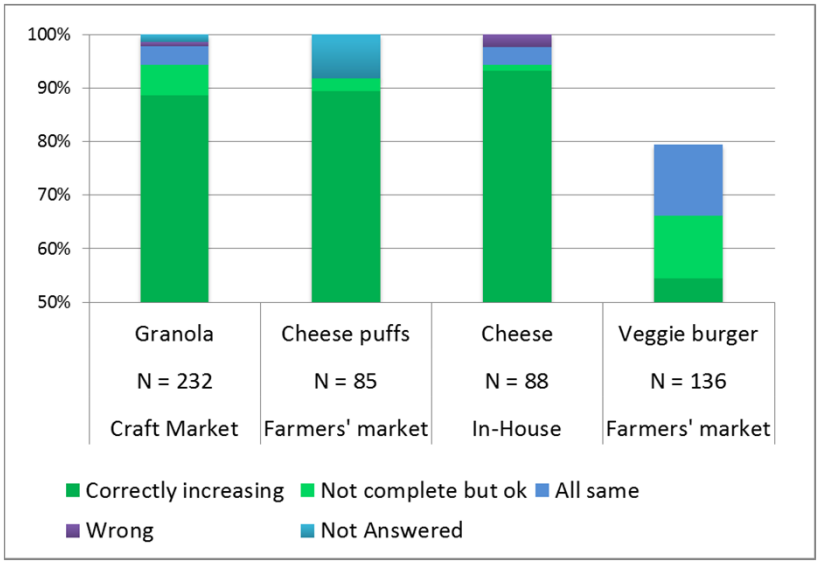
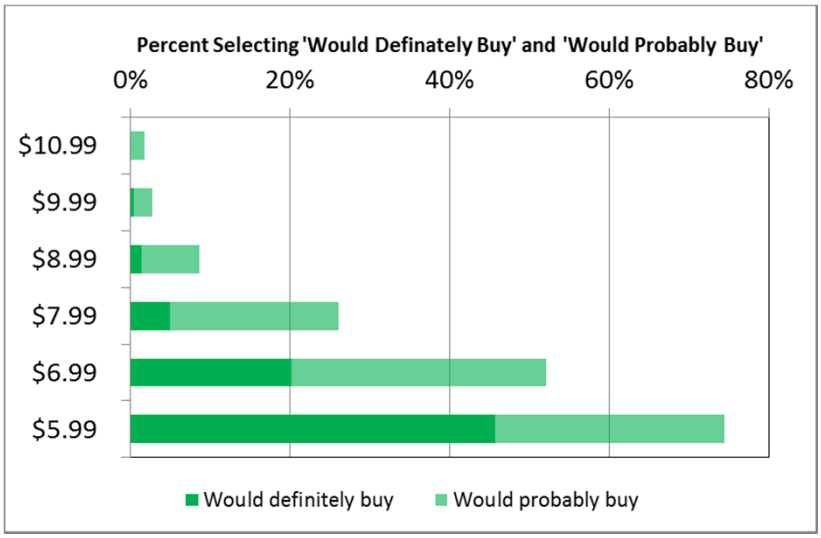
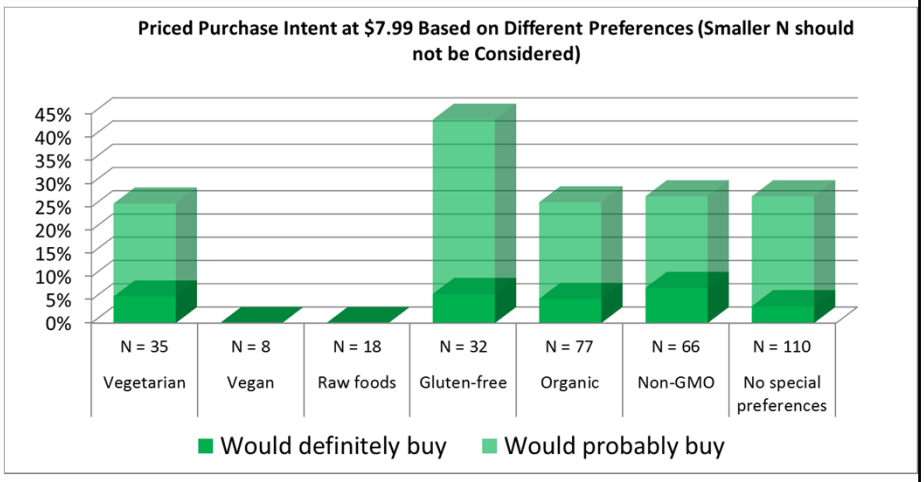


Figure generated from the protocol for Purchase Intent questions



Combine response to one price with …



Lessons Learned
Problems with Self – Executed Tests

- Entrepreneur can't stop 'selling' the product
  - Influences beyond normal point of purchase
- Getting the consumers to take consumer test instead of desire to give out samples
- Not being forward enough to ask people to take the test
- Can't be third-party certified

Solutions to Self-Executed Consumer Test problems

- Get a less involved, and outgoing, associate to 'conduct' the test
  - If they attend they can talk to interested parties, but apart from the test
- This test should replicate a point of purchase scenario, not a trade show display to buyers
  - Some reasonable exceptions are FM signage if that is your first market

Don’t conduct the test at the same time you are selling-if at all possible

- One of our Beta Testers wanted to do their test at the same time they were selling at a Farmers Market. But certainly some potential testers were lost because they could get a sample without filling out the survey

Shorter Surveys

- A shorter survey is much better in situations where:
  - Space is Tight
  - Passers by have an agenda or schedule to keep
- Actually a shorter survey may always be better
  - Our basic length has been a single two-sided legal sheet
  - This captures a lot of information, and the consumer details help legitimize the results.

Other recommendations

- **As with any survey**
  - **Really set things up to attract participants and make it easier t execute**
    - **comfortable seating**
    - **in the shade**
    - **out of the wind**
  - **These things are hard to control, but worth the effort to increase the response rate.**

Is the survey about the product or the market?

- If the product formulation still has a few design details to work out the focus should be on the concept and the sensory aspects.
  - Have several JAR questions
- If the product formulation is pretty set or fixed you can focus on:
  - Confirm liking
  - Price
  - Consumer niche (needs higher N to truly evaluate)
  - Possibly package size/container

If the information is about the market

- You probably want it to prove the concept to:
  - yourself
  - buyers such as distributors and retailers
  - or lenders
- Will the latter accept the self-executed survey as evidence?
  - Maybe/Maybe Not
- Is there a way around this?

Possibility of Certification

- Working on a method to obtain 3rd Party Certification
  - Have "Closed" Box survey collection

  - Involving Farmers Market Managers as intermediary. They receive the taped closed box they observed at the beginning and ship it in a pre-stamped envelope to the survey enumerator and report creator.

Would 3rd Party Lite Certification work?

- For example marketing/extension faculty could have student enter data and provide a report explaining how this was done and being willing to confirm to lenders or retailers how it was accomplished.
- We will review procedure with FM managers in February and ask their opinion.

- *What do you think?*

Market Research for Market Readiness

State funds for this project were matched with Federal funds under the Federal-State Marketing Improvement Program of the Agricultural Marketing Service, U.S. Department of Agriculture

Oregon State University OSU College of Agricultural Sciences

USDA United States Department of Agriculture

Any Questions?

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Consumer Testing for the Local Food Start-Up

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Abstract

Consumer tests are utilized by medium and large food companies to evaluate new products or test new product formulations on potential buyers. The typical objective is to examine various sensory attributes for liking and to examine whether adjustable product attributes such as saltiness, sweetness and texture are "Just About Right" or need reformulation, but packaging, message, and purchase intent questions can be incorporated or emphasized to evaluate the market. These pieces of information may help a company market its product to retailers or distributors by proof of liking or willingness to purchase. However, though this information is perhaps needed even more by those interested in starting-up a food company. A consumer test could help avoid serious losses in launching a product that consumers either don't like sufficiently or which will require a price which consumers aren't willing to pay. A consumer test can also help discover if small adjustments in formulation are needed. Properly executed such a study can also provide evidence to start marketing to retailers or look for financing. Unfortunately the costs of a professionally executed test can be prohibitive.

Conducting a professional consumer test starts at around $10,000 when panelist payments, facility rental, and the professional sensory staff time to prepare the survey, recruit the panelists, run the test, and analyze and report on the data collected are included. Large, well established companies don't have a problem paying for this type of research and many run consumer tests regularly for new products or reformulations, but generally entrepreneurs are unable to do so.

A self-executed consumer test protocol for food entrepreneurs has been designed and is undergoing testing in Portland, Oregon. The key elements of the protocol are a template and instructions for development and execution of a survey, and a spreadsheet which automatically produces useful tables and charts from the survey data. The protocol was developed to allow entrepreneurs to evaluate their product and its market potential on a small, local scale.

The survey template begins with standard consumer test questions assessing concept and liking and evaluating sensory attributes, how they would utilize the product (check all that apply and fill-in), and if desired, open-ended likes and dislikes. The second page begins with set of priced purchase intent questions. A price range (six prices) is listed and consumers are asked to indicate their willingness to pay for the product at each price. The results for these purchase intent questions can be used to produce a pseudo-demand curve of the proportion of the consumers surveyed willing-to-buy the product at each price. This question has been effective and fairly accurately answered. These are followed with a check all that apply question on production and ingredient preferences relevant to the product (for example attributes such as organic and gluten-free). The next question asks about the quantity they would buy per year at a specific price. This provides a means by which to project a total annual demand if combined with information on where the product would be offered. Finally, there are demographic questions (age, gender, income, education). Together these questions can provide entrepreneurs with crucial information about their product or their market niche.

The survey protocol has been beta-tested at a craft market and three farmers markets with four different products. These beta testers all have recently started their small, local business with limited funds. Three have sold their products in farmers markets and at a small number of local retailers. One was still in product formulation stage.

While entrepreneurs can discover a great deal of information from such tests, there are some lessons to be learned from the beta testing. One is that it is difficult for entrepreneurs not to market their products by providing consumers with information, beyond what was contained on the package. The goal is to replicate a point of purchase scenario, not a trade show display to buyers. Thus the entrepreneurial spirit may reduce the accuracy of the consumer test. One of the entrepreneurs (the only one who was selling the product at the same time) gave out samples without asking the consumer to fill out the survey first-which both reduced the consumers desire to take the consumer tests, and interfered somewhat with evaluation of the concept. On the other hand sometimes team members are not bold enough to ask people to take the survey. Finally, we find that the connection to a regional university seems to be important. This is particularly true in getting permission to conduct a test, and signs announcing the university's involvement in the consumer test helps in getting consumers to take the survey. These factors may indicate that the involvement of cooperative extension will be critical to the success of this protocol for the start-up that does not yet have a retail buyer or location already established. Further beta tests are expected to take place at a grocery store and at a restaurant. The protocol is expected to completed and available at the end of 2015.

Acknowledgement

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Keywords: consumer test, sensory, purchase intent, start-up, local food.