

Market Research for Alaska Grown Rhubarb

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CONTENTS PAGE

I. BACKGROUND (page 3)

II. RESEARCH METHODS

- A. Secondary Research (page 3)
- B. Primary Research (pages 3-4)
 - 1) Survey Design
 - 2) Sample Development
 - 3) Data Collection/Interviews
 - 4) Data Analysis/Reporting

III. RESEARCH FINDINGS

- A. Secondary Research (pages 4-7)
 - 1) Background
 - 2) Alaska Market
 - 3) National Overview
 - 4) Barriers
 - 5) Market Positives
 - 6) Competitor/Mentor
- B. Primary Research (pages 8-23)
 - 1) Marketing Rhubarb Products
 - 2) Rhubarb Substitutes
 - 3) Business Use
 - 4) Product Pricing
 - 5) Explanatory Questions
 - 6) Demographic Questions

IV. SOLSTICE RECOMMENDATIONS (pages 24-25)

V. APPENDIX - SURVEY (pages 26-32)

VI. APPENDIX – VERBATIM (pages 33-37)

VII. BIBILIOGRAPHY (pages 38-39)

BACKGROUND

The State of Alaska, Department of Natural Resources, Division of Agriculture requested a study to determine the viability of Alaska Grown rhubarb in state markets.

RESEARCH METHODS

Secondary Research

An extensive search of published secondary data was undertaken to provide:

- a basis upon which to create the primary survey instrument
- general information about rhubarb history/growth/characteristics
- an overview of the current rhubarb market in the state of Alaska
- analysis of similar products deemed to have been successfully marketed both nationwide and internationally
- public receptiveness to rhubarb marketing
- identified barriers in marketing rhubarb
- possible marketing guidelines and suggestions

Primary Research

Survey Design

Solstice Advertising collaborated with Patricia O'Neil of DNR and drew on data from secondary research to define the objectives for the primary research. The objectives for the primary research included:

- identify rhubarb products felt to be marketable
- identify products for which rhubarb can be a substitute
- determine the likelihood of purchase of various rhubarb products
- research pricing
- list identified barriers in marketability
- collect demographic information for cross-referencing purposes

The research team drafted a survey instrument to gather the primary data. After internal and client edits, the instrument was approved and is included in the Appendix of this report. It was found to run about 10-15 minutes in length, containing seven multi-faceted topic-specific questions and four demographic questions.

Sample Development

Solstice Advertising defined the survey sample through secondary research and input from O'Neil as wholesalers, grocery stores, and restaurants. A list of potential respondents was identified through businesses that have historical relationships with Alaska Grown projects, as well as from information obtained

from O'Neil.

Each respondent was screened to ensure they were involved in marketing, buying, processing or distributing fruits or vegetable products on behalf of their company. Respondents were also promised confidentiality of their identity and business in the publication of this survey.

Data Collection/ Interviews

Trained staff members of Solstice Advertising conducted the interviews. Multiple attempts were made to contact interviewees to assure the maximum possible response rate.

Data Analysis and Reporting

The sample population included all possible wholesalers in Alaska. Retailers and restaurants were also included in the sample population. A majority of restaurants surveyed have shown to be historically responsive to the Alaska Grown concept.

All relevant statistical tables and findings from the analysis have been included in this research report. Graphics have been utilized to clarify results and enhance understanding of the data. Demographic information for respondents was utilized for cross-tabulation purposes where deemed appropriate and beneficial to the understanding of data.

RESEARCH FINDINGS

Secondary Research

Background

Rhubarb is a common garden plant widely adapted to nearly all agricultural regions, but particularly to the cool, moderate climates found in Alaska. It is believed Russians first introduced rhubarb to the state in the 1700s in an effort to fight scurvy. Although rooted in history as a medicinal product, rhubarb was sold as produce in America as early as 1820. Thought to be a fruit, and treated as such in most recipes, rhubarb is botanically a vegetable. The leaves are said to be toxic, and are in great quantities, but sporadic or accidental ingestion is not immediately life threatening.

Alaska Market

Over 64 varieties of rhubarb are currently being studied at the Arctic and Sub-Arctic Plant Genetic Resources Unit in Palmer, Alaska, as a research project funded by the U.S. Department of Agriculture's Agricultural Research Service. It

is estimated that over 30 varieties are being grown privately in the Mat-Su Valley alone. The Locavore Network, an online source for locally grown produce, lists 133 different produce growers in the state of Alaska, 22 of which are shown to grow rhubarb. It is one of the first Alaskan products that can be harvested in the spring, often in early to mid-May, and the plants continue to produce until the first frost. Rhubarb is easy to grow, and has been likened to a weed in its resilience.

For years, Alaskan farmers sold rhubarb at local markets and had excess at the end of each day. However, over the past few years, farmers have been selling out each time they bring rhubarb to market, indicating an upward trend in consumer receptiveness. At market, rhubarb sells best when firm and crisp, often with a deep red color running the length of the stalk. With its fibrous consistency, rhubarb does not lend itself well to the fast food/microwave society of the late 90s and early 2000s. But society is changing and locally grown food is moving away from the niche item it once was, especially on restaurant menus. Trendy “local food” movements have opened new markets for locally grown products, and Anchorage has answered the call with farm-to-consumer services, farm-to-restaurant services and you-pick farms.

National Overview

Over half of the nation’s rhubarb crops are currently grown in Washington State, but even that is minimal at less than 900 acres total. Of the 2.6 million pounds of domestic rhubarb shipped each year, Washington growers freeze 1.5 million pounds of it. In many areas of the nation, it is difficult to obtain rhubarb at retail outlets. Its popularity is trumped nationally by okra, turnip greens and escarole.

Barriers

While consumers will pay extra for some high quality produce, there are not many discriminating shoppers looking for rhubarb.

Additionally, the larger mega stores shop primarily on price and have become less reliant on domestic sources for many of their products. At one time, the U.S. was a major supplier of both fresh and frozen rhubarb to Canada, which utilizes the plant in a processed form for pies and pie fillings. Rhubarb was typically purchased frozen in bulk during the growing season and stored year-round. Competition from underpriced foreign suppliers has now edged the U.S. out of the Canadian market. With rhubarb still being imported into the U.S., most notably from Poland, some Alaskan rhubarb growers are considering offering their product locally, nationally and internationally to compete with foreign markets.

Once harvested, rhubarb dehydrates rapidly, making the distance between a farm and freezing facility an important processing consideration. To promote the

product to growers statewide, it would necessitate quick access to processing facilities.

For growers, rhubarb is a heavy feeder and depletes the soil after four years. To maintain organic standards, rhubarb plants need to be uprooted to restore the soil every four years, at which point they need three years to mature for harvesting.

Market Positives

In Alaska, as with the rest of the U.S., our trend toward health and fitness can be seen as an advantage for rhubarb if marketed properly. In studies that compare rhubarb to cranberries, rhubarb offers far more potassium and folate, as well as significantly higher levels of lutein, zeaxanthin, vitamin A, calcium, vitamin K, beta-carotene and magnesium. Rhubarb is also a good source of dietary fiber and vitamin C. It is low in fat and has been shown to have cholesterol-lowering effects.

Most recent findings place rhubarb in the anti-cancer food group as it contains ample amounts of polyphenols: powerful antioxidants known for stopping and preventing the growth of cancer cells. Rhubarb is a viable product for health conscious consumers with the following nutritional facts:

Nutrition Facts		
Serving Size: 100 grams		
Amount Per Serving		
Calories 61	Calories from Fat 4	
	% Daily Value*	
Total Fat 0.50 g		1%
Saturated Fat		
Trans Fat		
Cholesterol		
Sodium		
Potassium		
Total Carbohydrate 9.90 g		3%
Dietary Fiber		
Sugars		
Protein 4.20 g		8%
Vitamin A 4480 IU		90%
Vitamin C 33.0 mg		55%
Calcium		
Iron		
* Based on a 2000 calorie diet		

Alaska Geographic offers a cookbook dedicated just to rhubarb. In addition, hundreds of recipes can be found on the Internet for healthy ways to prepare and serve this easy-to-grow Alaskan crop.

On a national level, rhubarb has been used for cosmetic purposes in products like fragrances. Any positive promotion nationally can be seen as a boost for the product locally.

The national trend of consuming and promoting locally grown products has made

its way to Alaska. The Governor's annual Family Picnic last year was a great example of heeding the call to locally grown produce and included rhubarb-lemonade provided by Palmer-based Alaska Rhubarb Co.

In a recent blog on akrhubarb.blogspot.com, one comment read, "With fresh rhubarb going for \$5 to \$8 per pound 'outside' and with the unlimited use of our 'Alaskan apple,' it's something that Alaskan producers should get serious about!" This call to action gives the impression that local growers should start competing with other markets on a much larger scale.

The ease of maintenance for this heavy producing vegetable is of great advantage to Alaskan growers. It essentially grows like a weed, requiring little care. One plant is capable of providing 90 lbs. of product annually by Lower 48 standards. Alaska's short growing season should be offset by the lengthened daylight hours in the summer, providing similar productivity results.

Because of its versatility and ease of processing, bulk shipments of individual quick freeze rhubarb cut into one-inch segments is highly attractive as an option given the secondary research reviewed in this project.

Competitor/Mentor

A decade ago, the cranberry industry was in crisis. It is important to note that the industry was in crisis for reasons other than what rhubarb now faces, but market reactions were essentially the same; prices were low and farmers were halting production, producing alternative products or going out of business. Industry leaders began an aggressive farm-marketing program and focused on the strengths of cranberries as a product, production advantages and worldwide opportunities. The result of the campaign brought cranberry sales to an all-time high and invited the creation of new cranberry products. Cherry marketers witnessed similar results after launching a new, health-focused campaign in 2006. They are now the no. 2 so-called superfruit, trailing only to blueberries. The Idaho Potato Commission is a great example of both a successful and adaptable farm-marketing organization. Potatoes were initially marketed to fine restaurants, but have adapted to market demands and are now promoted based on price and nutrient provisional abilities.

Farm industry marketing programs are considered to be exceptional investments, generating at least \$2 profit for every dollar spent – and many have seen even higher returns. Individual producers do not have the means to promote products at such a level, and public funds are becoming obsolete for such research. Programs need to be adaptable and more sophisticated than in years past, targeting specific audiences with websites, grocery displays and direct marketing. In the case of rhubarb, with its health history and healing abilities, there would need to be a direct solicitation to the healthcare industry as well.

Primary Research

The first question that survey takers were asked was what type of business they were in. They were then categorized accordingly:

- food distributor
- restaurant
- grocery store

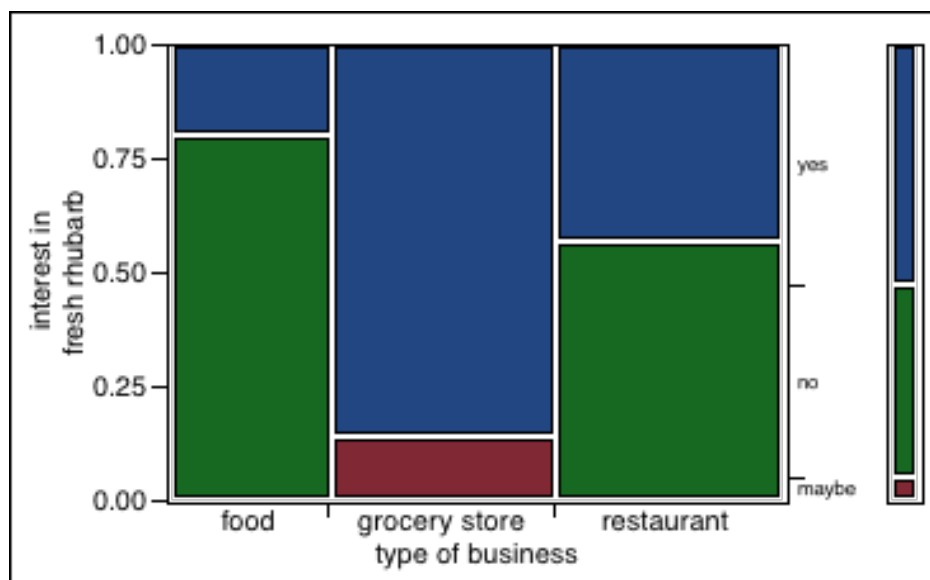
Out of the 20 respondents, five represented food distributors, seven represented restaurants, and eight represented grocery stores.

Marketing Rhubarb Products

Respondents were asked if they were a producer in Alaska, and were responsible for deciding which types of rhubarb products to try and market, which ones would make their list. Respondents were given a specific rhubarb product and asked to reply with “yes”, “no”, or “maybe” response of whether they would try to market it.

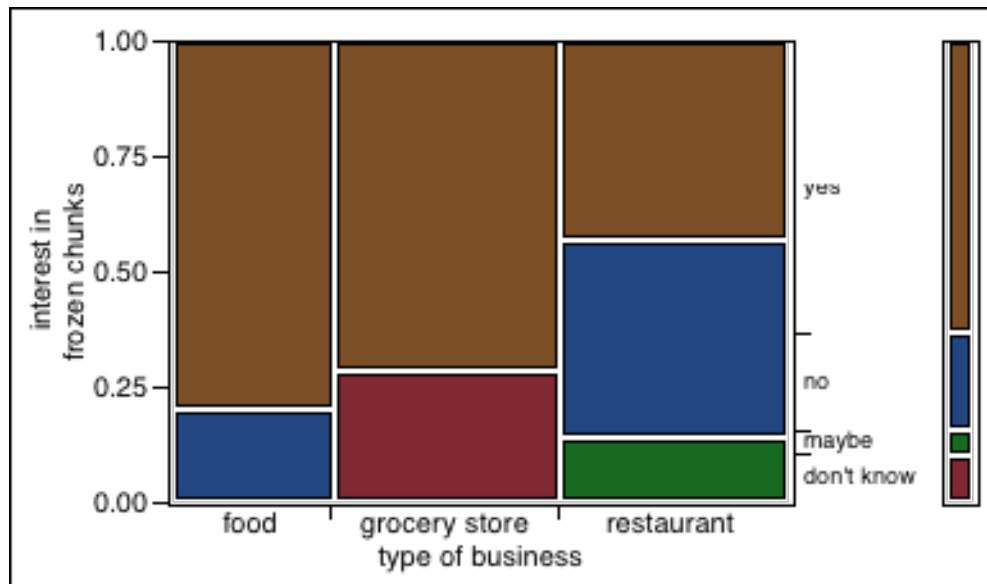
Fresh Rhubarb

- Fresh Rhubarb had the most “yes” responses from grocery stores. None of the grocery store respondents said “no” to marketing fresh rhubarb.



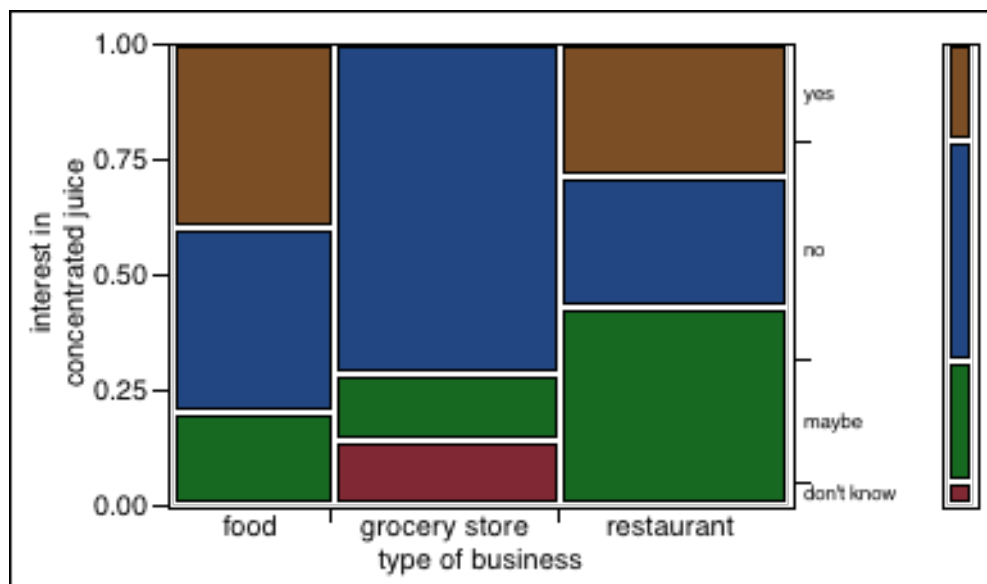
Frozen Chunks

- Frozen chunks of rhubarb had a likelihood of being marketed more by food distributors and grocery stores than restaurants. Similar to fresh rhubarb, frozen rhubarb didn't have a majority of "yes" responses by the restaurants that were surveyed.



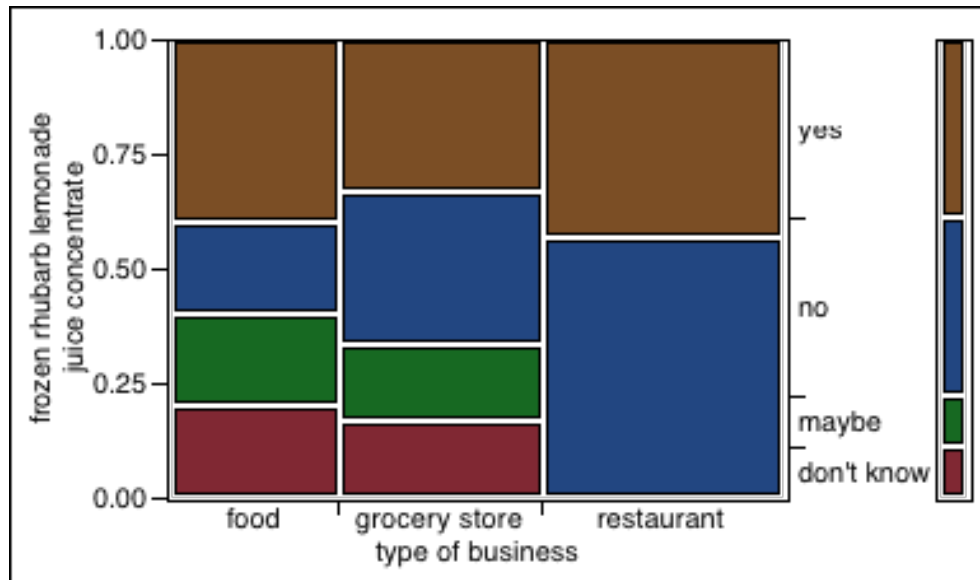
Juice Concentrate

- An unsweetened juice concentrate did not show a strong "yes" response in marketability by any of the respondents.



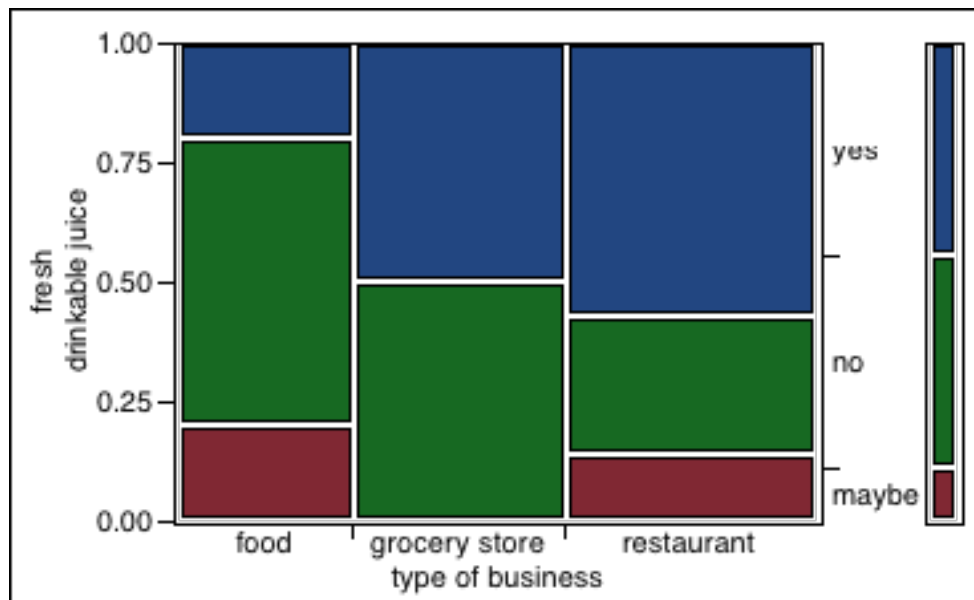
Frozen Juice

- A frozen sweetened juice concentrate had more “yes” responses than a non-frozen rhubarb juice concentrate. However, a majority of the respondents did not reply with a “yes” for marketability of this product.



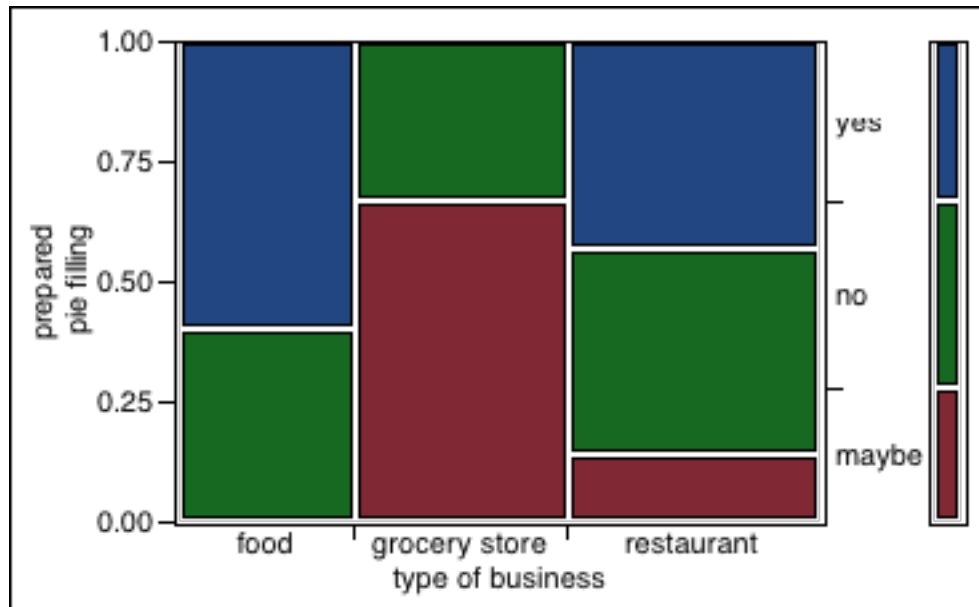
Fresh Juice

- A majority of restaurants said they would be willing to market a fresh drinkable rhubarb juice product. Although, grocery stores and food distributors did not seem likely to market this product.



Prepared Pie Filling

- A majority of food distributors said they would market a prepared rhubarb pie filling. Grocery stores either replied that they would, or would possibly try to market a prepared rhubarb pie filling.



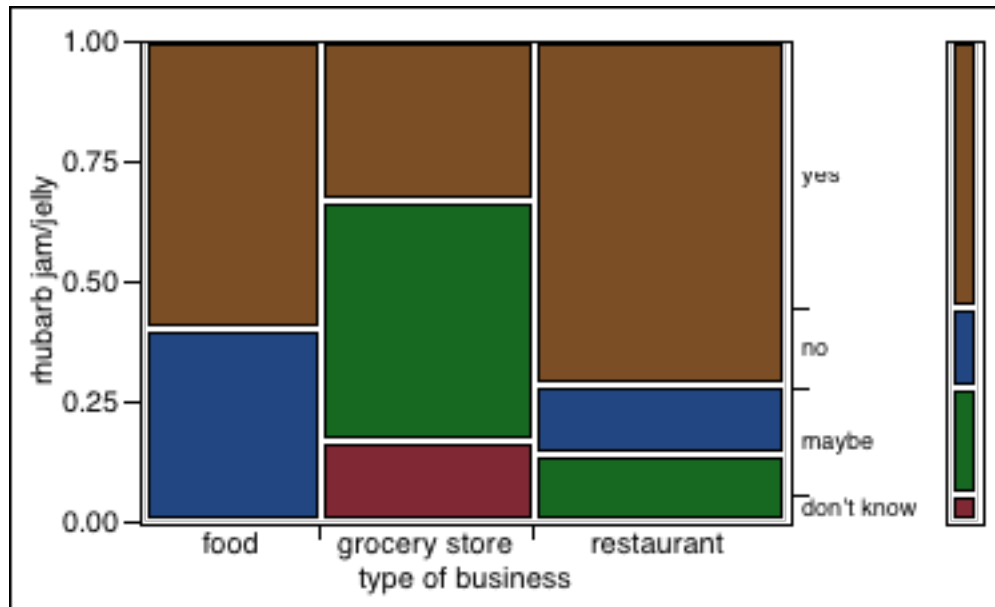
Prepared Pie Crisp

- Although there wasn't a strong "yes" response to market a prepared rhubarb pie/crisp, grocery stores seemed most likely to market this product.



Jam/Jelly Product

- When it came to a rhubarb jam/jelly product, a majority of restaurants and food distributors seemed likely to market this product. None of the grocery stores gave a “no” response in marketing this product.



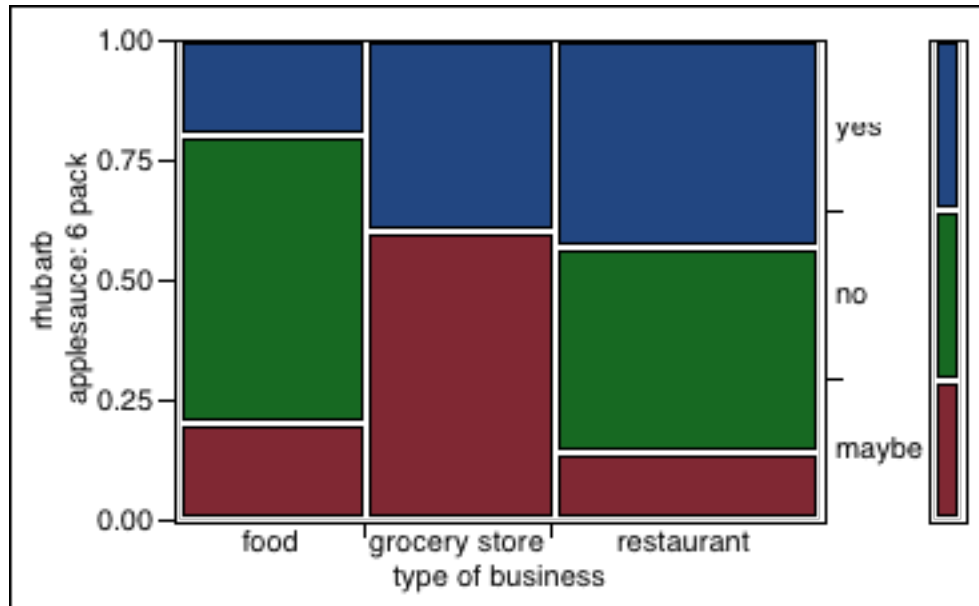
Dried Rhubarb Snack

- A dried rhubarb snack was not a product that a majority of any of the respondents would try to market.



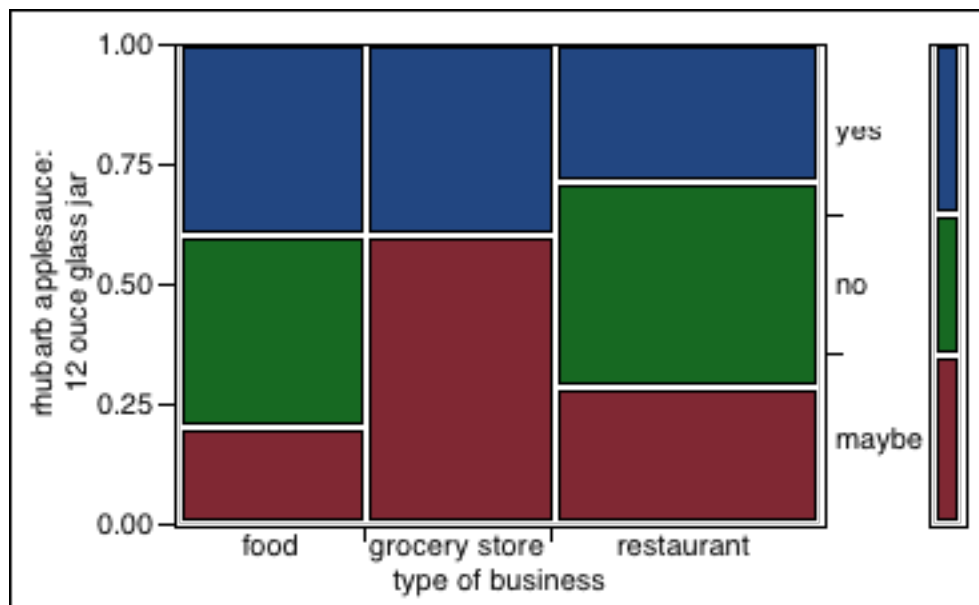
Rhubarb Applesauce (Six-pack)

- A majority of respondents were unlikely to market a rhubarb applesauce product packaged in the form of a six-pack.



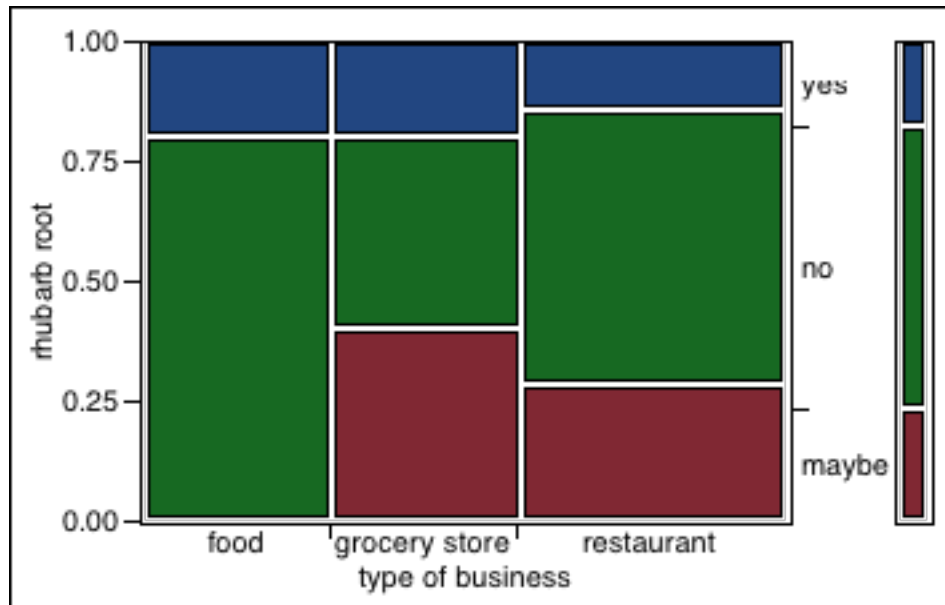
Rhubarb Applesauce (Glass Jar)

- A majority of respondents were unlikely to market a rhubarb applesauce product packaged in the form of a glass jar.



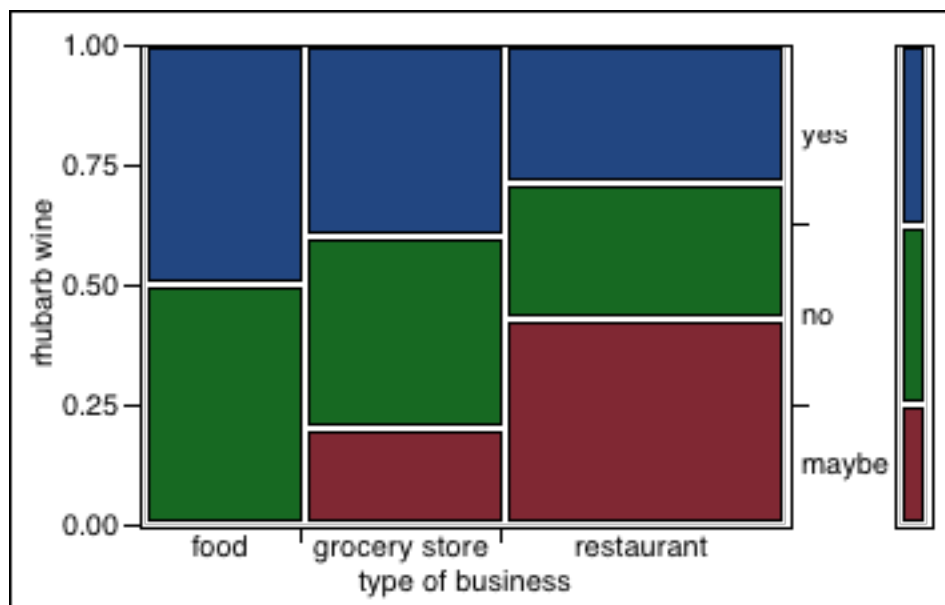
Rhubarb Root

- A majority of respondents were unlikely to market a rhubarb root product for medicinal uses.



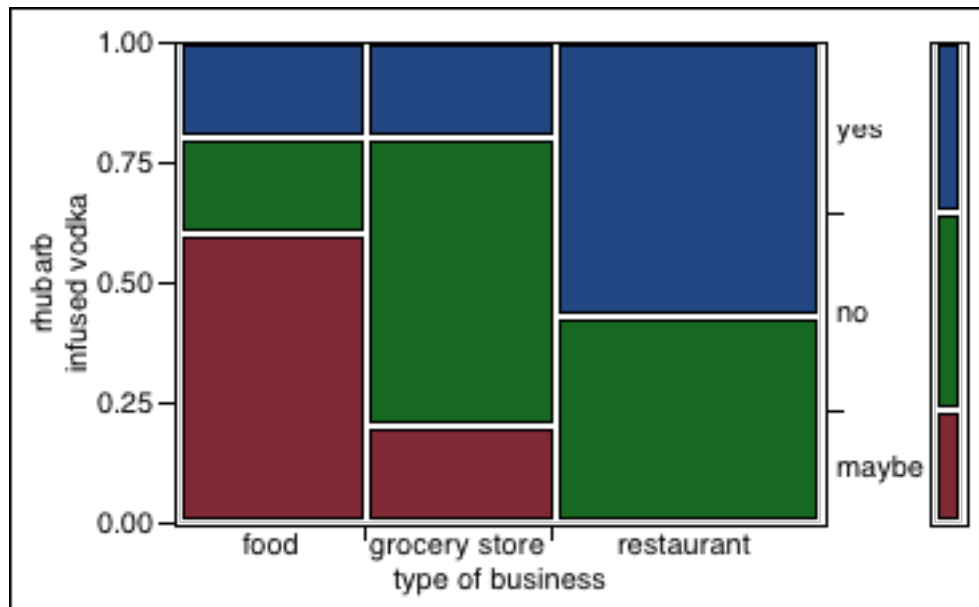
Rhubarb Wine/Spirits

- Food distributors were split when it came to marketing a rhubarb wine/spirits. A majority of restaurants either gave a "yes" or "maybe" response for marketing this product.



Rhubarb Vodka

- A majority of restaurants were likely to market a rhubarb infused vodka.



Product Marketability Summary

- Grocery stores** were most likely to market **fresh** rhubarb, as well as **frozen chunks** of rhubarb.
- While **restaurants** showed some interest in marketing frozen rhubarb chunks, they were most interested in marketing a **rhubarb jam/jelly** product, as well as a **fresh rhubarb drinkable juice**, and **infused rhubarb vodka**.
- Food distributors** were mostly likely to market **frozen rhubarb chunks**, but were also likely to market a **prepared rhubarb pie filling**, and **rhubarb jam/jelly**.
- The product that had the biggest chance of being marketed by all respondents was **frozen rhubarb chunks**.

Rhubarb Substitutes

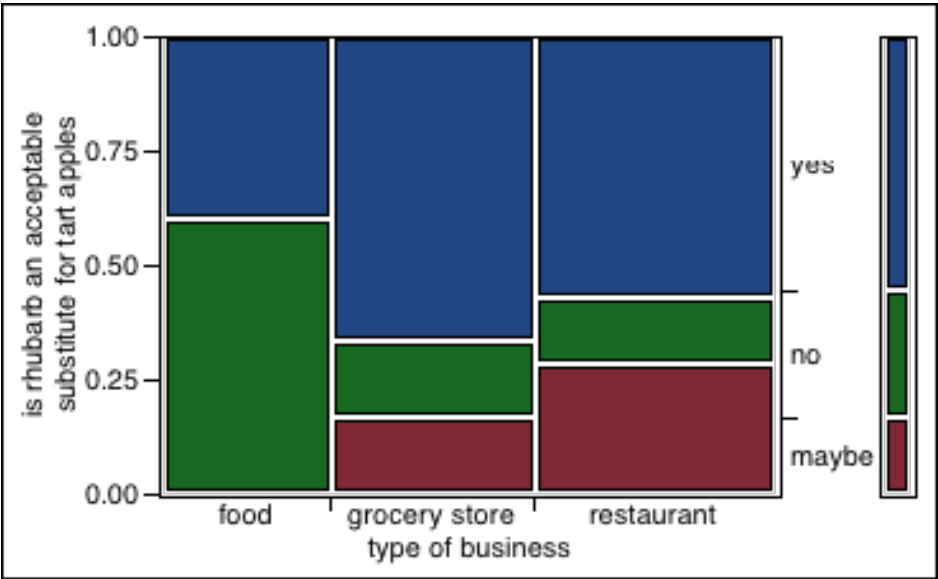
Because of Alaska’s short growing season and distance from the Lower 48, availability of many produce items is limited and products can be expensive. A group of questions were asked to determine whether rhubarb could act as a substitute for any produce similar in taste and texture. Currently, rhubarb is a common substitute in many recipes for tart apples, cranberries, pomegranates and mangos.

Respondents were asked if they would consider using rhubarb as a substitute for a certain type of produce. They were asked to give a “yes”, “no” or “maybe” response.

Tart Apples

Would you consider using rhubarb in a recipe that calls for tart apples?

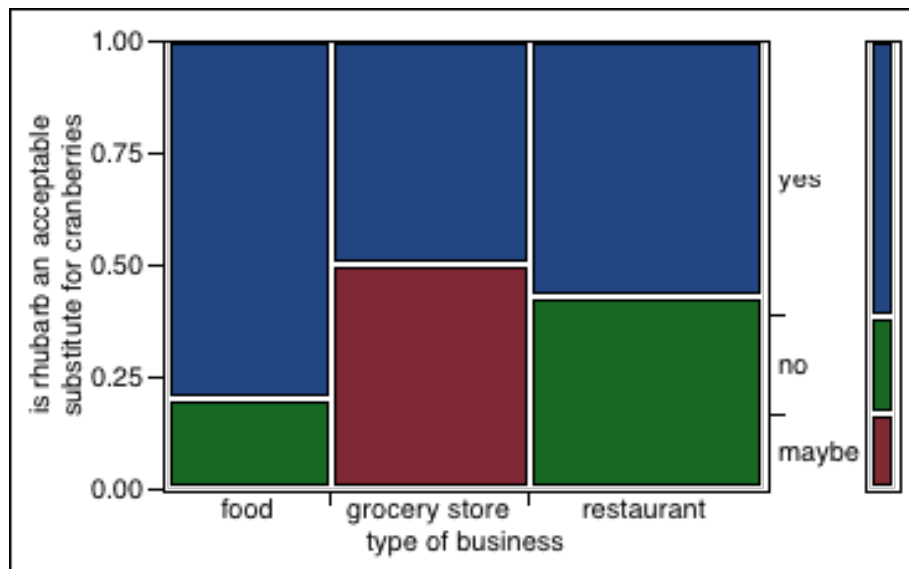
- A majority of grocery store and restaurant respondents would consider using rhubarb as a substitute for tart apples.



Cranberries

Would you consider using rhubarb in a recipe that calls for cranberries?

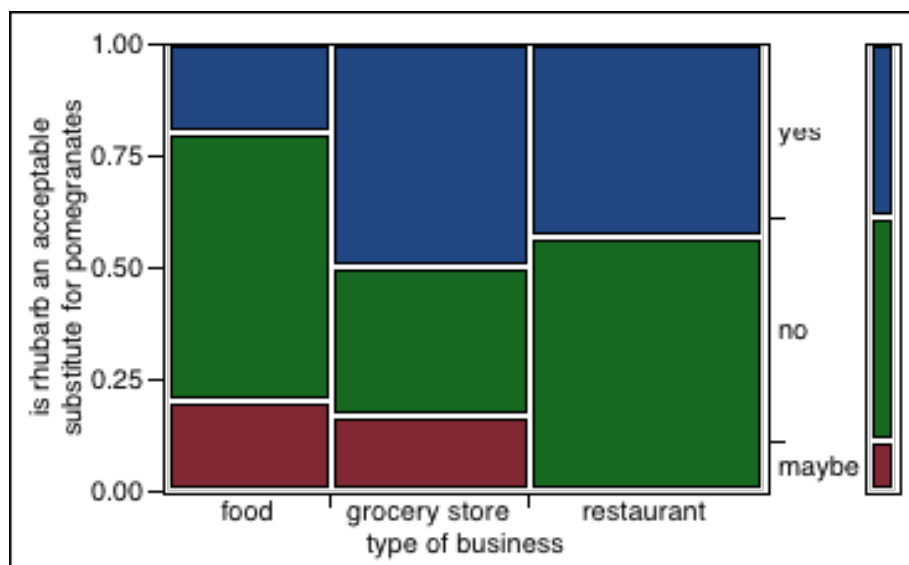
- A majority of food distributors would likely substitute rhubarb for cranberries.



Pomegranates

Would you use rhubarb as a substitute for pomegranates?

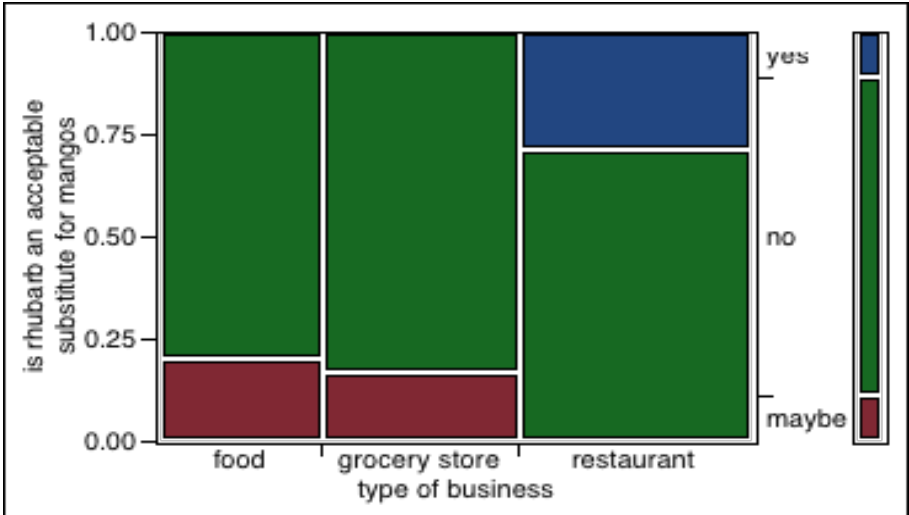
- A majority of all respondents would not use rhubarb as a substitute for pomegranates.



Mangos

Would you substitute rhubarb for mangos in a recipe?

- A majority of all respondents would not use rhubarb as a substitute for mangos. Out of all of the produce items, mangos were least likely to be substituted with rhubarb in a recipe.



Other Substitutes

Could you tell me any other items you might consider using rhubarb as a substitute for?

- To read the verbatim responses to this question, please see the **Appendix section** in this report.

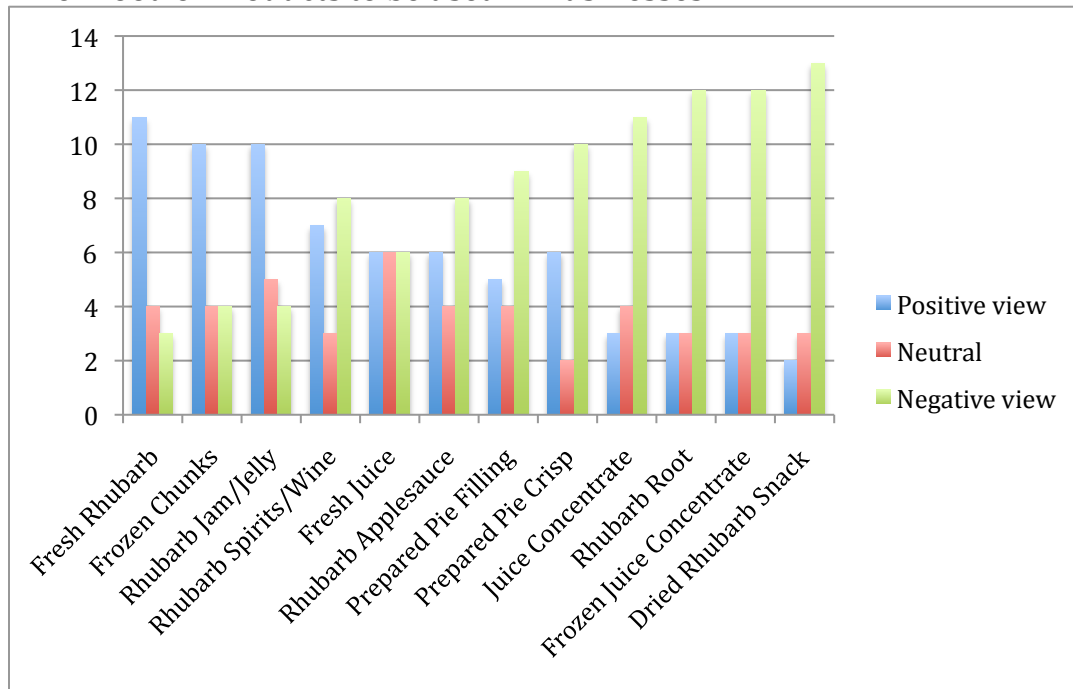
Substitute Summary

- Out of all of the possible substitutes, a majority of respondents **would consider** using rhubarb as a substitute for **cranberries**.
- A majority of respondents **would not consider** using rhubarb as a substitute for **mangos** or **pomegranates**.
- A majority of grocery stores and restaurants would consider using rhubarb as a substitute for tart apples.

Business Use

To gauge whether respondents would actually use certain rhubarb products in their business, we asked them to rate on a scale of 1 to 5 the likelihood of them using rhubarb in a specific form. Two of the respondents opted out of giving ratings due to time constraints. Respondents who gave a "4" or "5" rating were categorized as having a positive view of the product. Respondents who gave a "3" rating were categorized as having a neutral view of the product. Respondents who gave a "2" or "1" rating were categorized as having a negative view of the product.

Likelihood of Products to be used in Businesses



Fresh Rhubarb: 61% of respondents were likely to use this product in their business.

Frozen Chunks: 55% of respondents were likely to use this product in their business.

Rhubarb Jam/Jelly: 55% of respondents were likely to use this product in their business.

Rhubarb Wine/Spirits: 38% of respondents were likely to use this product in their business.

Fresh Drinkable Juice: 33% of respondents were likely to use this product in their business.

Rhubarb Applesauce: 33% of respondents were likely to use this product in their business.

Prepared Pie or Crisp: 33% of respondents were likely to use this product in their business.

Prepared Pie Filling: 27% of respondents were likely to use this product in their business.

Juice Concentrate: 16% of respondents were likely to use this product in their business.

Rhubarb Root: 16% of respondents were likely to use this product in their business.

Frozen Juice Concentrate: 16% of respondents were likely to use this product in their business.

Dried Rhubarb Snack: 11% of respondents were likely to use this product in their business.

Business Use Summary

- Out of all of the listed rhubarb products **fresh, frozen,** and a **jam/jelly** product were **most likely** to be used in the surveyed businesses.
- **Rhubarb root, juice concentrate,** and a **dried rhubarb snack** were **least likely** to be used in the surveyed businesses.

Product Pricing

Respondents were asked pricing questions to gauge how much they would expect to pay for a rhubarb product if it was offered. If the respondent was unable to come up with a pricing figure, an identified APP or Assisted Pricing Prompt was provided for the product or a comparable product.

Survey Note: A majority of respondents opted out of giving pricing responses due to time constraints. As included in Solstice's recommendations, further product pricing research is recommended.

Fresh Rhubarb

-One pound, about 3-5 stalks

- **Average Price: \$1.63/lb**

Total respondents: 8

Frozen Rhubarb

-One pound, frozen chunked

- **Average Price: \$2.60/lb**

Total respondents: 9

Unsweetened Juice Concentrate

-16 ounce bottle

- **Average Price: \$3.72**

Total respondents: 4

Sweetened Frozen Juice Concentrate

-16 ounce container

- **Average Price: \$3.48**

Total respondents: 8

Fresh Rhubarb Juice

-16 ounce bottle

- **Average Price: \$3.96**

Total respondents: 8

Prepared Rhubarb Pie Mix

-21 ounce can

- **Average Price: \$5.83**

Total respondents: 6

Prepared Rhubarb Pie or Crisp

- **Average Price: \$11.29**

Total respondents: 8

Rhubarb Jam or Jelly

-12 ounce jar

- **Average Price: \$6.29**
Total respondents: 8

Rhubarb Applesauce

- Six four-ounce snack packs

- **Average Price: \$8.08**
Total respondents: 6

Rhubarb Applesauce

-12 ounce jar

- **Average Price: \$4.60**
Total respondents: 8

Dried Rhubarb Snack

-1.5 ounce bag

- **Average Price: \$3.59**
Total respondents: 7

Rhubarb Root

-One fluid ounce

- **Average Price: \$9.49**
Total respondents: 6

Rhubarb Wine

-750 milliliter bottle

- **Average Price: \$10.49**
Total respondents: 7

Rhubarb Infused Vodka

-750 milliliter bottle

- **Average Price: \$17.08**
Total respondents: 6

Pricing Summary

A majority of the overall respondents did not answer any of the pricing questions due to their own personal time constraints. The respondents who did answer pricing questions suggested a price that was fairly close to prices found in secondary research or to a comparable product.

Explanatory Questions

Respondents were asked to explain any reasons why they would not be willing to consider purchasing an Alaska Grown rhubarb product.

They were given the following options for a response:

- recipes not readily available
- product will not be readily available
- too expensive
- clients have never asked for it
- don't think clients will like it
- will buy rhubarb, but do not care if it is Alaska Grown
- other

One respondent chose "the product will not be readily available" as a reason. Another respondent listed "too expensive" as a reason. A total of 17 respondents gave "other" as their answer and elaborated on their opinion. A majority of those respondents said that they would support an Alaska Grown local rhubarb product and that they currently try to use local products as much as possible. To see the verbatim of the "other" responses please see the **Appendix section** in this report.

Respondents were also asked if they had any other comments to share with the state about Alaska Grown rhubarb. A majority of these responses voiced some sort of support for Alaska Grown to create a supply/market of a rhubarb product. To see the verbatim responses to this question please see the **Appendix section** in this report.

Demographic Questions

Demographic related questions were asked in this survey including gender, age, and years of experience in their field of work.

A total of 11 respondents were male, and nine respondents were female.

- Respondents were between 31 to 60 years of age. However, three of the respondents did not wish to share their age.

All of the respondents have been in their line of work for at least one year. Fifteen of the respondents have been in their line of work for 11 years or more.

Overall, the demographic had no visible trend or impact on the results of the survey.

IV. SOLSTICE RECOMMENDATIONS

Based on the initial findings of this research, respondents seemed to have a positive view of using rhubarb as an Alaskan Grown product. However, it seems like the type of product that is created, is what will dictate Alaska Grown's success. For instance, fresh or frozen rhubarb would be more likely to sell to a variety of businesses and vendors, versus a product like rhubarb applesauce that wouldn't be picked up by alcohol distributors or a majority of restaurants.

Marketing Campaign

Looking into the verbatim responses given during the survey, the success of a rhubarb product also seems dependent on the strength of its marketing campaign. Rhubarb is often thought of as a "summertime only" product, so if Alaska Grown's goal is to give it a year-round appeal then consumers would need to be educated on how to incorporate rhubarb into their lives year-round.

Specific Recommended Products

- * Fresh Rhubarb
- * Frozen Rhubarb
- * Rhubarb Jam/Jelly

Not Recommended Products

- * Dried Rhubarb Snack
- * Rhubarb Root
- * Frozen Juice Concentrate

The recommendations listed above are based off the results of the marketability and business use surveys in no particular order. The recommended products showed a strong majority of "yes" responses or "likely" ratings when it came to marketing or using these products in the surveyed businesses. The non-recommended products received a majority of "no" or "unlikely" responses when it came to marketing or using these products in the surveyed businesses. As for the rest of the products, some showed a positive response, but that was limited to a specific category of respondents such as a grocery store, or wholesaler. The unlisted products here did not show a majority result across all respondents.

Further Pricing Research

Because a majority of respondents failed to give pricing answers, Solstice recommends that Alaska Grown do further research into pricing expectations of rhubarb products that showed a strong likelihood of success. Pricing seems to be an important aspect in marketing a rhubarb product, as many respondents noted that they wouldn't seek interest in a product if it were priced too high. Some education in pricing should also be included in a rhubarb marketing campaign so consumers can understand that the price they are asked to pay is reasonable.

Communicating Additional Uses

Additional education is needed on how rhubarb can be used in a variety of ways beyond just baked goods. Many of the respondents were skeptical of using rhubarb as a stand-alone product, but feel that it is an enhancing ingredient when combined with other ingredients such as sugar, fruits and vegetables. As noted by many respondents, however, it has other uses for things like sauces and wines. Providing some education about these uses would help expand the consumer group of rhubarb. Allowing clients to taste these products before they financially commit to them may also help ease fears about purchasing an often tart-tasting produce.

Dietary Concerns

Other responses noted concerns of using a rhubarb product because of dietary restrictions; more specifically having to add sugar to rhubarb in order to make it taste good. As Alaska faces high obesity and diabetes rates, there is a marketing opportunity to solicit a product that helps fight these consistently climbing numbers. According to the Alaska Department of Health and Social Services, 3 out of every 4 Alaskans eat less than the recommended 5 or more daily servings of fruits and vegetables. Solstice recommends that Alaska Grown explores ways to use rhubarb as a healthy option, and markets these advantages.

Supporting Local Products

Overall, the audience values produce that is locally grown. That value alone may help create a strong market for rhubarb because people know that when they are buying it, they are supporting local growers. Based on Solstice's research, rhubarb could be a successful Alaska Grown product if it's something that can be used by a variety of consumers/businesses in a range of ways, such as fresh, frozen or jam/jelly form, and is supported with an educational campaign about its uses and pricing.

Appendix

Survey

DATE: _____

BUSINESS NAME: _____

CONTACT INFORMATION: _____

Hello, my name is _____, I'm calling from Solstice Advertising, an Alaska research firm, conducting a feasibility study for the Alaska Division of Agriculture concerning rhubarb products.

I would like to speak with a person who markets, buys, processes or distributes fruit or vegetable products on behalf of your company.

(GET CONTACT ON LINE... MAKE APPOINTMENT IF NECESSARY).

This survey will take just a few minutes. Your opinions are important to us, and we'd appreciate your participation – and of course your responses will be completely confidential.

The Alaska Division of Agriculture is considering whether a viable market exists for a line of rhubarb products and is investigating different products for Alaska Grown rhubarb.

If rhubarb were more readily available, and available in different forms, rather than just fresh cut, would businesses and consumers be willing to purchase it? Thanks for helping in this survey that will help us answer those kinds of questions.

IF YES, PROCEED.

IF NO, ASK FOR A BETTER TIME TO CALL OR SOMEONE ELSE WHO MIGHT BE ABLE TO HELP YOU.

1) IF NOT DEFINED BY THE RESPONDENT LIST - Could you tell me the type of business you are in (CHECK ONE OR MORE)

- _____ Roadside/Farmers Market
- _____ Grocery Store
- _____ Wholesale Warehouse
- _____ Convenience Store
- _____ Restaurant
- _____ Bar
- _____ Other _____

2) Let's say you were a producer in Alaska and you had the responsibility of deciding which types of rhubarb products to try and market. I'm going to read you a list of products ... tell me whether they'd make your list. (CIRCLE THE RESPONSE RECEIVED)

A) Fresh rhubarb This is available in bunches of 3 to 5 stalks	YES NO MAYBE DON'T KNOW
B) Frozen chunks This is available in a 1 pound sealed bag	YES NO MAYBE DON'T KNOW
C) Concentrated juice This is unsweetened and available in a 1-gallon jug	YES NO MAYBE DON'T KNOW
D) Frozen rhubarb lemonade juice concentrate This is sweetened and available in a 11.5 ounce container that makes 1 gallon	YES NO MAYBE DON'T KNOW
E) Fresh drinkable juice This is sweetened and available in a 16 ounce container	YES NO MAYBE DON'T KNOW
F) Prepared pie filling This is available in a jar and makes 1 pie	YES NO MAYBE DON'T KNOW
G) Prepared pie or crisp This is available ready-to-heat-and-eat	YES NO MAYBE DON'T KNOW
H) Rhubarb jam/jelly This is available in a 12 ounce jar	YES NO MAYBE DON'T KNOW
I) Rhubarb applesauce This is available as a six pack of individual 4 ounce plastic containers	YES NO MAYBE DON'T KNOW
J) Rhubarb applesauce This is available as a single 12 ounce glass jar	YES NO MAYBE DON'T KNOW
K) Dried rhubarb fruit snacks	YES NO MAYBE DON'T KNOW
L) Rhubarb root For medicinal use – 1 fluid ounce	YES NO MAYBE DON'T KNOW
M) Rhubarb wine This is similar to a Port or Dessert Wine	YES NO MAYBE DON'T KNOW
N) Rhubarb infused vodka	YES NO MAYBE DON'T KNOW

3) Rhubarb is a common substitute in many recipes for tart apples, cranberries, pomegranates and mangos.

Would you consider using rhubarb in a recipe that calls for tart apples? Please answer Yes, No or Maybe.

YES NO MAYBE DON'T KNOW

How about in a recipe that calls for cranberries?

YES NO MAYBE DON'T KNOW

Would you use rhubarb as a substitute for pomegranates?

YES NO MAYBE DON'T KNOW

And would you substitute it for mangos in a recipe?

YES NO MAYBE DON'T KNOW

Could you tell me any other items you might consider rhubarb as a substitute for?

4) If Alaska grown rhubarb were available in the following forms, how likely would you use it in your business?

Please use a scale of 1 to 5 with 1 being unlikely and 5 being very likely.

Fresh	1	2	3	4	5
Frozen chunks	1	2	3	4	5
Unsweetened juice concentrate	1	2	3	4	5
Frozen sweetened juice concentrate	1	2	3	4	5
Fresh drinkable juice	1	2	3	4	5
Prepared pie filling	1	2	3	4	5
Prepared pie/crisp	1	2	3	4	5
Rhubarb jam/jelly	1	2	3	4	5
Rhubarb applesauce	1	2	3	4	5
Dried Rhubarb snack	1	2	3	4	5
Rhubarb roots/medicinal use	1	2	3	4	5
Rhubarb wine/spirits	1	2	3	4	5

5) How much would you expect to pay for:

INTERVIEWER, ONLY PROVIDE THE ASSISTED PRICING PROMPT (APP) IF RESPONDENT IS UNABLE TO PROVIDE AN ANSWER UNASSISTED – INDICATE WHETHER RESPONDENT WAS ASSISTED BY CIRCLING YES OR NO AFTER EACH QUESTION

One pound of fresh rhubarb (about 3-5 stalks) _____

(APP) (Fresh cranberries run about \$3 per pound on average, tart apples can be found locally for as low as \$1.50 per pound)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

One pound of frozen chunked rhubarb _____

(APP) (Frozen rhubarb can be found on-line for \$3.50-\$4.50 per pound, retail)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

Rhubarb concentrate unsweetened juice – 16 ounce bottle _____

(APP) (Cranberry unsweetened concentrate run for \$12 on-line, retail)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

16 oz container of sweetened frozen juice concentrate (like orange juice) _____

(APP) (Frozen orange juice concentrate can be found for \$2 locally, retail)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

16 ounce container of fresh juice (like Odwalla or Rhubarb Lemonade) _____

(APP) (Odwalla sells in local convenience stores for \$3.50)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

21 ounce can of prepared rhubarb pie mix _____

(APP) (Prepared apple pie filling sells locally for under \$2 for a 21 ounce can, whereas blueberry pie filling sells for \$6 or more, retail)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

One prepared rhubarb pie or crisp _____

(APP) (Pre-made fruit pies can be purchased for \$8-\$11 retail)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

12 ounce jar of rhubarb jam/jelly _____

(APP) (Currently available at \$4.50-\$8 per jar retail)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

Six four-ounce snack packs of Rhubarb applesauce _____

(APP) (Organic applesauce sells similarly for \$5.50 in retail stores)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

12 ounce jar of rhubarb applesauce _____

(APP) (A 12 ounce jar of applesauce sells locally for \$3.50 in retail stores)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

1.5 ounce bag of dried rhubarb/strawberry snacks _____

(APP) (Organic cherry fruit snacks run \$2.50 for a 1.5 ounce bag on-line)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

1 fluid ounce rhubarb roots/medicinal use _____

(APP) (1 ounce bottle can be found on-line for as low as \$6) (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

Bottle of rhubarb wine – 750 milliliter

(APP) (Port dessert wines sell locally for \$13-\$15 for a 750 ml bottle)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

Bottle of rhubarb infused vodka – 750 milliliter _____

(APP) (Permafrost Alaskan Vodka, 750 milliliter, sells for \$40 retail)
 (RESPONDENT WAS ASSISTED IN PRICING YES OR NO)

6) Can you explain why you would not be willing to consider purchasing Alaska Grown rhubarb products?

- Recipes not readily available
- Product will not be readily available
- Too expensive
- Clients have never asked for it
- Don't think clients will like it
- Will buy Rhubarb, but do not care if it is Alaska grown
- Other (INTERVIEWER, PLEASE LIST ANSWERS BELOW)

7) Is there anything else you would like to share with the State of Alaska about Alaska Grown rhubarb?

DEMOGRAPHIC QUESTIONS

The following questions are demographical and will be used for statistical purposes only. You will not be personally identified to the client, but a consensus of all answers will be provided.

GENDER (INTERVIEWER: YOU MAY ENTER THIS WITHOUT ASKING THE RESPONDENT)

- Male
- Female

Would you please share your age? _____

- Less than 25
- 26-30
- 31-35
- 36-40
- 41-45

- ☐ 46-50
- ☐ 51-55
- ☐ 56-60
- ☐ 61 or older

How long have you been in your current line of work? _____

- ☐ Less than 1 year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11 years or more

How long have you been in your current line of work in Alaska? _____

- ☐ Less than 1 year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11 years or more

That completes the survey. I have a telephone number for Solstice Advertising that you can call with any comments, compliments or complaints. Would you like the number? (907-258-5411) Thank you very much for your help. Goodbye.

APPENDIX

Verbatim Responses

Rhubarb Substitutes

3) Could you tell me any other items you might consider rhubarb as a substitute for?

"No. We make a strawberry rhubarb wine. We have all the other fruits here. We use rhubarb to blend mostly. We juice everything here. We wouldn't mind trying other juices, but we would need to taste it before we bought it."

"For anything tart, more on the tart berry side."

"Usually use it as a combination with others, not as a substitute."

"Blueberries. Any kind of tart berry really."

"Use it in a crisp. We make it into crisps now and we have made it into pies. It would be raw products only. Pre-made is no good because of dietary restrictions."

"No. But we can use rhubarb for a lot of things though. I use it in my recipes."

"We have made barbeque sauce with rhubarb before."

"I wouldn't know because I do not bake."

"I grow rhubarb here in the garden at our business to use the leaves for catering displays."

Purchasing Rhubarb Products

6) Can you explain why you would not be willing to consider purchasing Alaska grown rhubarb products?

"That is up to the executive chefs more than anything. They are the ones who have more say in what happens with our menu than I do. It depends if it's an ingredient they like to experiment with. One of our chefs in Seward experiments dishes with his family during the winter, and the things he likes he will bring in

as a special for our restaurant. If there was a sauce, a chutney, a salsa or syrup I could see those as possibilities. If we wanted to be a little more Alaskan and organic, I could see a salsa to accompany a meat or syrup for pancake if it tastes good."

"Very limited based on what customer demand is. Once the customer awareness of a product increases, then we end up purchasing more versus us buying and then trying to sell it. It is best to educate, as far as in a retail sector, the average housewife and husband will use the rhubarb at home and then when they eat out they will request that product and then we will begin to entertain it."

"Not really. There's no reason not to consider buying Alaska Grown rhubarb. My store is Alaska Grown everything."

"If priced too high. We use local rhubarb as much as we can. I will be willing to pay a little more for local. We like it to be a nice, red color so color quality and price are things I would have to consider before buying as well."

"We would be willing to buy any consumer ready Alaska Grown product, including rhubarb, but we are not in a position to buy wholesale products."

"For the rhubarb items I said 'no' to, it is only because they are made with sugar and it goes against the dietary restrictions for what is in our store."

"Every summer, I purchase all Alaska Grown products. One vendor does have rhubarb so I purchase from him, so that is why I wouldn't. I support local growers here. Whatever they have really, I try to buy it from them. Rhubarb is a big thing here in the summer so I do sell it, and I do purchase it from a local grower here. Only thing is, the grower here doesn't have it here all year long since summers are short."

"I will strongly buy it. I prefer to buy fresh, Alaskan Grown products. My restaurant is based on Alaskan Grown products."

"I would be willing to purchase Alaska Grown rhubarb products."

"No reason. I use chopped, fresh, and frozen rhubarb for my recipes now. I would easily buy Alaskan rhubarb if it were comparable to the price. I order it from Washington for it to be sent up here."

"I can't say I won't purchase it. If we purchase local, it helps growers stay here. We purchase from Di Tomaso's right now."

"No reason at all. I would buy rhubarb products that are Alaska Grown."

"I use lemonade and ice tea. I do not think I need any more drinks. I would use jams and jellies if they were in individual portions. I might try rhubarb pie and rhubarb crisp for the breakfast program though."

Likelihood of Rhubarb use in Business

4) If Alaska Grown rhubarb were available in the following forms, how likely would you use it in your business? Please use a scale of 1 to 5 with 1 being unlikely and 5 being very likely.

"For rhubarb applesauce someone would have to demo it."

"Looking at the history of rhubarb, it is very low in this business. When it comes to fresh rhubarb, there is so much readily available but not a huge demand to see it produced on a large scale. We need to promote and educate people with rhubarb. Consumers need to be educated more to know about substitutes, etc."

"I would have to introduce a whole other line to incorporate these items."

"If rhubarb applesauce was in individual packets, then I would use it in my business."

Marketing Rhubarb

5) Let's say you were a producer in Alaska and you had the responsibility of deciding which types of Rhubarb products to try and market. I'm going to read you a list of products, tell me whether they'd make your list.

"If they produce enough for all the locations, and keep up with demand, we can always use more. We support Alaska Grown and buy local whenever possible. We do purchase rhubarb already."

"We buy 2,000 to 3,000 lbs. of rhubarb so we wouldn't purchase it in bunches of 3 to 5 stalks."

In response to frozen chunks available in a 1 lb. sealed bag: *"We buy rhubarb already in different sizes of zip lock bags."*

"I would want to try the concentrated juice before committing to it. If the price wasn't too high we would buy it."

"We would like to try the rhubarb infused vodka."

"We wouldn't want the prepared pie filling because we use honey instead of sugar in our products."

"We may use the rhubarb root, since we sell it now and there's not a distributor up here."

"I wouldn't use the prepared pie or crisp because we have a bakery."

"If there was a national marketing campaign for a rhubarb drinkable juice I would consider it, but not until then."

Additional Comments

7) Is there anything else you would like to share with the State of Alaska about Alaska Grown rhubarb?

"We are looking to source rhubarb. We are looking to buy raspberries and blueberries. Native villages are hard to deal with since they have most of the berries. It's hard to buy berries from native villages. We juice everything ourselves, so our main problem is getting enough Alaskan berries."

"All the products that come out of Mat-Su Valley look fresh and ready to eat."

"It grows really well. I hope we can do something with it."

"One thing is, since we are a retail/grocery store we do not sell alcohol."

"We do support local farmers and manufacturers. We would definitely look at it if it fit the bill, and if it were the right product."

"Overall, you are doing some type of study and seeking out information first before going all out. I think it's good that you are doing the survey and I do know the Agriculture Department is doing a roundtable session later on, but I will be out of town for it. I do think the research is a good idea."

"I am part of the Farm Bureau so I always voice my opinion. I am trying to get rhubarb in my store though and would like to have Alaska Grown rhubarb."

"We are in favor of promoting it. I have tried rhubarb lemonade and juice before and it was very good. I think it has good potential. The redder variety is something we favor more."

"Any sort of processing company in Alaska, especially anything agricultural based separate from fish is a good thing. There should be synergies explored and joint base processing, instead of each person having their own thing and starving along, and going broke."

"Alaskan rhubarb is the largest rhubarb I have ever seen. It's better tasting than the ones that come from the Lower 48, so you don't need a lot to make your recipe which is a good thing."

"We are very strong supporters of Alaska Grown. That is the base of our restaurant. We are very proud to be one of the restaurants that provide mostly all Alaskan Grown produce in our dishes."

"No, but I do think marketing it is a good idea."

"Fund it, fund it, fund it! Alaska has a great opportunity with rhubarb as a crop and it's something I could sell 400 pounds of over the summer."

"Try to encourage growers and help them out the best they can."

"Rhubarb is a pleasure to have. We have it fresh and chop it up and freeze it. We use it for pudding and barbeque sauce. It's nice to have and I think customers in the summer time from out of state seem to enjoy it."

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