

Exploration of Market Opportunities for Western North Carolina Grown Ginseng Root



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About ASAP

[ASAP \(Appalachian Sustainable Agriculture Project\)](#) is a nonprofit organization that brings 20 years of experience strengthening local and regional food systems and building healthier communities in Western North Carolina and the Southern Appalachians. We support family farms, link farmers to markets, create community connections to local food, and conduct rigorous food systems research at our [Local Food Research Center](#). Through advancing food systems change in the Appalachian region and beyond, we have become a national leader in the local food movement.



In addition to our programs and initiatives, we offer consulting to foundations, public agencies, and community organizations across the country. Given our deep expertise in local food systems, much of our consulting is focused on helping clients increase support for local food and farms in their communities. Our consulting services include program design and implementation, strategic planning, quantitative and qualitative research, and program evaluation.

Our specific areas of expertise include:

- **Local food and farm assessments:** Deepen a community’s understanding of its food system and provide recommendations for strengthening local food production, processing, marketing, distribution, access, and consumption.
- **Local food promotion programs:** Build awareness of and increase support for local food and farm activities in a region through effective promotions and local food identification.
- **Implementation plans for regional farm tours:** Create opportunities for communities to showcase their farms and connect individuals with local food producers through tours and other forms of agritourism.
- **Farm to school programming:** Establish and/or enhance programs that provide children with opportunities to learn about local food and farms in the classroom, cafeteria, and community and offer training to teachers, school nutrition staff, parents, community members, and farmers.

About This Study

This study was conducted as part of a North Carolina Speciality Crop Block Grant project with the goal of providing producers the capacity to cultivate wild-simulated American ginseng in the High Country of Western North Carolina through training and demonstration. PHARMN, “Preserve Heritage, Agriculture & Regional Markets Now”, is a 501(c)(3) non-profit that seeks to build community through strengthening the connections between local foods and sustainable agriculture while celebrating and preserving Appalachian cultural heritage.



Sources of the photos in this report include: the High Country Ginseng website and Facebook page.

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EXECUTIVE SUMMARY

This study explores potential market opportunities for locally-grown and source-identified ginseng root in Western North Carolina. It includes both a market research component, as well as a marketing plan for the potential introduction of locally-grown ginseng root into local and regional markets. The information gathered through this study is intended for current farmers and landowners in Western North Carolina who are interested in planting ginseng. This includes existing small-scale ginseng growers who are interested in large-scale cultivation and in forming a ginseng grower's group, as well as other forest landowners who are interested in integrating small-scale ginseng production into their current land management strategies.



Ginseng is a slow-growing, perennial plant that has been used in traditional Chinese medicine for thousands of years. For centuries ginseng has been harvested in the U.S. for export to Asian markets, a trend that continues to this day. This trend in domestic ginseng production is evident in Western North Carolina where county Cooperative Extension offices report an increase in the number of inquiries over the last few years from farmers and landowners who are interested in cultivating ginseng. Additionally, an increasing number of companies have contacted these Extension offices about purchasing ginseng for specialty products.

In order to assess the potential demand for locally-grown ginseng root, interviews were conducted with 22 businesses identified as representatives of market segments that could be potential buyers of local ginseng. Twelve businesses agreed to participate and phone interviews were conducted in 2016 and 2017. Businesses included representatives from Asian markets, herb and/or health food retailers, breweries and cideries, and craft beverage companies. Additionally, web research and interviews with ginseng experts were conducted to assess market demand for ginseng.

From the interviews with businesses, it was determined that a total of eight of the businesses have purchased or are currently purchasing ginseng, three are interested in potentially purchasing ginseng, and one is not interested in ginseng at this time. The findings demonstrate that there is interest in locally-grown and source-identified ginseng among these specialty markets. Challenges were also identified for growing and selling local ginseng root to local and regional markets. The challenges ranged from the cost of the ginseng to regulations such as those from the Alcohol and Tobacco Tax and Trade Bureau (TTB) that regulate additives to alcoholic beverages.

While this study identifies potential market opportunities, detailed market plans and production and marketing budgets will need to be developed to analyze potential for producer profit in new markets.

BACKGROUND

Ginseng is a slow-growing, perennial plant with light-colored, forked-shaped roots, a relatively long stalk, and green leaves with an oval shape¹. There are various types and species of ginseng including *Panax quinquefolius* (American ginseng) and *Panax ginseng* (Asian or Korean ginseng). American ginseng is native to woodlands throughout the mountain areas of the eastern U.S. and in eastern Canada². Both American ginseng and Asian ginseng roots, which range from 2 to 12 inches long, are believed to offer many health benefits including restoring and enhancing normal well-being, providing an energy boost, enhancing virility, lowering blood sugar and cholesterol levels, reducing stress, promoting relaxation, and treating diabetes. In recent years, ginseng has become one of the most popular herbal remedies in the world³ and is being grown in different areas of the U.S., including the High Country region of Western North Carolina. Here, growers are sustainably planting ginseng in response to wild ginseng becoming more scarce. Over 2,500 pounds of seed was sown in Watauga County alone between 2014-2016 and growers are continuing to plant additional seed each year. These growers also intend to produce seed and rootlets to encourage the reestablishment of this increasingly rare forest medicinal⁴.



While some wild-simulated ginseng plantations simply involve scattering or planting small quantities of seed throughout the forest, the ginseng growers in the High Country are using a more intensively managed method of cultivation. There are various distinctions between different production methods for ginseng in the marketplace, but one thing is clear: how the ginseng is grown impacts its market value. In order to best assess the market potential for the particular kind of ginseng considered for this market report four “kinds” of ginseng are identified: wild ginseng, wild-simulated ginseng, woods-grown ginseng, and field-cultivated ginseng.



¹Nordqvist, J. (2016). Ginseng: Health benefits, facts and research. Retrieved from <http://www.medicalnewstoday.com/articles/262982.php>.

²Mandal, A. (2014). What is ginseng? Retrieved from <http://www.news-medical.net/health/What-is-Ginseng.aspx>.

³Nordqvist, J. (2016). Ginseng: Health benefits, facts and research. Retrieved from <http://www.medicalnewstoday.com/articles/262982.php>.

⁴High Country Ginseng (2017). Retrieved from <http://www.highcountryginseng.com/>.

Ginseng Types⁵:

	Wild	Wild-simulated	Woods-grown	Field cultivated
Origin	Naturally occurred	Seeds and rootlets planted	Seeds and rootlets planted	Seeds and rootlets planted
Habitat	Within natural range	Within natural range	Grown in woods similar to natural habitat	Grown in fields with artificial shade
Cultivation	None	Planting of seeds and rootlets only	When planted, build raised beds for drainage	Intensive human cultivation
Harvest method	Dug by hand	Dug by hand	Dug by machine	Dug by machine
Price	Highest	High	Medium	Low



The type of ginseng considered for this report is intensively planted in untilled beds in forests. The harvested root very closely resembles wild-harvested and wild-simulated root. While clearly not wild-harvested, it falls in the wild-simulated category based on its appearance. The hybrid nature of this cultivation method (due to the need to spray the plants because of their density) makes it particularly hard to estimate market potential and is an area that will need to be addressed with any future marketing efforts⁶. For this report we referred to the product for interviews as “cultivated forest-grown ginseng.”

DEMAND FOR AMERICAN GINSENG

In 2015, the U.S. Fish and Wildlife Service estimated the annual wholesale value of the American ginseng trade to be \$26.9 million. Approximately 90% of American ginseng is exported to Asia, with the majority of the roots going to China where ginseng has been harvested to near extinction. The price of ginseng, heavily influenced by market demand, varies from year to year. Ginseng buyers in Asia are willing to pay a premium for roots with high potency and unique character such as “man roots” - ones with a

⁵Wildgrown.com. Retrieved from <http://www.wildgrown.com/index.php/Ginseng-Articles/Growing-Ginseng/Different-Ginseng-Types-Depends-on-How-Its-Grown.html>.

⁶ Hamilton, J., N.C. Cooperative Extension. (2017, February 17). Personal interview.

human shape and what appear to be body parts. These roots can go for thousands of dollars. Some of the most sought-after ginseng is harvested from the wild in the eastern U.S., primarily from North Carolina, Georgia, Tennessee, Kentucky, and West Virginia⁷.

Recent trends in American ginseng show that it has become increasingly popular within the U.S. as well. An increased demand for both fresh and dried ginseng root is evident in multiple markets, including Asian markets which are the largest retailer supplier of ginseng in the U.S. This increased demand is partially attributed to the growing Asian population now living in the U.S.⁸. These trends in American ginseng, and in particular, its increasing popularity, are evident in Western North Carolina. Farmers and landowners in Western North Carolina are increasingly expressing interest in growing ginseng and companies interested in purchasing ginseng for specialty products have contacted Cooperative Extension offices⁹. Additionally, demand from domestic Korean buyers has increased for “green” or freshly harvested ginseng.

METHODOLOGY

To explore potential market opportunities for locally-grown ginseng root in Western North Carolina, four categories of specialty markets that may have interest in purchasing local ginseng were identified. The four categories of specialty markets include: 1) Asian markets (Korean and/or Chinese); 2) Herb and/or health food retailers; 3) Breweries and cideries; and 4) Other craft beverage businesses. A total of 22 businesses were identified and contacted. Restaurants were also considered as a fifth category of potential market but were determined to be too low in potential and dropped from consideration¹⁰.

Two types of interview subjects were identified: 1) owners and/or managers assumed to already be purchasing ginseng; and 2) owners and/or managers assumed not to be purchasing ginseng but with potential interest. A total of 12 business owners and/or managers were interviewed based on willingness and availability to participate in this study.

In addition to conducting interviews with business owners and/or managers, interviews were also conducted with four ginseng experts to gather background information on ginseng. The experts included Dr. Jeanine Davis of the Mountain Horticultural Crops Research and Extension Office, Dr. Erik Burkhart of Penn State University’s Department of Ecosystem Science and Management, Dr. Jim Hamilton, Watauga

⁷Moss, L. (2015). Ginseng demand boosts prices and poaching. *Mother Nature Network*. Retrieved from <http://www.mnn.com/earth-matters/wilderness-resources/stories/ginseng-demand-bosts-prices-crime>.

⁸Nordqvist, J. (2016). Ginseng: Health benefits, facts and research. Retrieved from <http://www.medicalnewstoday.com/articles/262982.php>.

⁹Davis, J., Mountain Horticultural Crops Research and Extension Center. (2016, August 24). Personal interview.

¹⁰Through informal interviews with leading chefs and a search in the ASAP Local Food Guide of 223 regional restaurants that feature locally grown food, it was determined that no restaurants or chefs in the region are currently using or are interested in using ginseng. Further, restaurants are extremely price sensitive and consequently, offer low opportunity as markets that can pay the higher prices required to make the type of ginseng considered in this study profitable to grow. The market for culinary ginseng is currently very small and there is little potential for significant sales of ginseng to restaurants.

County Extension Director with NC State University, and Dr. Steve Kruger of Virginia Tech's Department of Forest Resources and Environmental Conservation. These experts provided information on the various types of ginseng, product pricing, potential markets, and recent trends in the sale of this product.

FINDINGS: POTENTIAL MARKET OPPORTUNITIES

There is demand for both fresh and dried ginseng root

The findings of this study reflect recent trends that show a demand for both fresh and dried ginseng root. More than half of the businesses interviewed currently purchase, or have purchased, ginseng root. Several of the businesses that have not yet purchased ginseng expressed an interest in exploring the use of ginseng.



Businesses are especially interested in purchasing *locally-grown* ginseng root

All businesses that currently purchase, or have purchased, ginseng root are interested in purchasing ginseng that is source-identified as locally-grown. Those that are not currently purchasing ginseng say that they would consider purchasing locally-grown ginseng. The majority of businesses were unwilling to speculate on potential specific quantities without more information about the product. Businesses repeatedly emphasized that potential quantities purchased depended on a number of factors with price being one of the most important. According to one of the experts interviewed, it is possible that costs could be reduced by providing 'seconds' or damaged root for beer brewing as the root properties (taste and compounds) are not affected by appearance--the standard by which whole ginseng root is judged¹¹.

Businesses would like information about the availability of locally-grown ginseng

Businesses would like more information on how much locally-grown ginseng is available, where and how the ginseng is being grown, details on the farmers and locations where the ginseng is grown, and the estimated cost.

There is interest in parts of the ginseng plant other than just the root

Several of the businesses who are currently selling ginseng root are also selling the leaves.

Different types of businesses are interested in different forms of ginseng

¹¹ Hamilton, J., N.C. Cooperative Extension. (2017, February 17). Personal interview.

Businesses that are currently purchasing ginseng sell it or use it in a variety of forms including packaged and bulk and a range of ginseng products are being offered including capsules, salves, tinctures, tea bags, and royal jelly. Businesses that use or plan to use ginseng in value-added products require ginseng to be in a different form than businesses that sell ginseng in packages directly for consumers.

Businesses are interested in exploring the use of ginseng in value-added products

Three of the businesses who are not currently using ginseng are interested in exploring its use in value-added products. This includes businesses that make hard cider, kombucha, and artisan soda.

FINDINGS BY SPECIALTY MARKET

Asian Markets Within a 200-Mile Radius of Boone, North Carolina

Interviews were conducted with representatives from two Asian markets: Grand Asia Market with locations in both Raleigh and Charlotte and Anh Dao Sakura Oriental Market in Charlotte. Both markets are currently selling cultivated, dried ginseng root. One market is selling dried ginseng root in a variety of forms including whole, sliced, powdered, and in tea bags and is also selling the root in bulk. The other market is selling ginseng royal jelly, in addition to the dried ginseng root. Both owners prefer to purchase packaged ginseng, rather than in bulk. While the ginseng from one market is being sourced from Korea through one distributor, the ginseng from the other is sourced from Wisconsin through three different suppliers. One owner shared that he purchases approximately \$15,000 worth of ginseng annually.

Both businesses emphasized the importance of the quality and appearance of ginseng. More specifically, the ginseng must be clean and be free of any black spots. When asked whether specific growing practices are preferred, only one of the businesses expressed that organic growing practices are important to customers. The businesses were also asked whether they would be willing to pay premium prices for locally-grown and sourced ginseng. While one said that he would be willing to pay a premium given that they place a high level of importance on buying local products, the other indicated that his market places low to moderate importance on local products and consequently, might not be willing to pay a premium. Both businesses say that they would be willing to pay 5-10% more than what they are currently paying for ginseng for a higher quality or enhanced valued product.

Regarding the sale of locally-grown ginseng, one business offered that it would be beneficial for locally-grown ginseng to have informational packaging that provides in Chinese a description of the ginseng grower. Similarly, the other business mentioned

that it would be beneficial for an informational brochure to be offered to customers interested in purchasing local ginseng.

Herb and/or Health Food Retailers

Interviews were conducted with representatives from four herb and/or health food retailers: Red Moon Herbs and French Broad Food Co-op in Asheville, Be Natural Market in Boone, and House of Health in Winston-Salem. All four businesses in this category are currently purchasing ginseng, however, the amount that they purchase varies from year to year depending on the price. One business shared that they purchase approximately 15-19 pounds per year whereas another business only purchased approximately 1 pound every two years. Most of the ginseng that these businesses purchase is wild or wild-simulated.

The four herb and/or health food retailers purchase ginseng in a variety of forms including whole root, powdered root, tea bags, and value-added products. Examples of value-added products include capsules, extracts, elixirs, and salves. Two of the businesses are selling packaged ginseng, in addition to bulk product. The ginseng purchased by these retailers is being sourced from the United States (Madison and Yancey counties in NC), Korea, and China. Three of the businesses purchase ginseng directly from growers, whereas the other business purchases from several herb distributors.

All businesses said that while verification or certification is not required, they do prefer to know the grower they are purchasing from. All businesses stressed the ginseng must come from a reputable source, be sustainably grown, be high quality, and have good root character. Two of the businesses stated that they are interested in purchasing ginseng leaves in addition to ginseng root. All four expressed that the ginseng should be grown without spray and that they prefer organically-grown ginseng. All four businesses indicated that they are interested in purchasing local/regional dried ginseng in bulk and/or packages, and that they would be willing to pay more for local ginseng. The price that they would be willing to pay ranged from \$250 per pound to \$700 per pound. The herb and/or health food retailers, like the Asian markets, suggest that growers offer promotional/educational materials that include information about their growing practices and about the location of where the ginseng is grown.

Breweries and Cideries

Interviews were conducted with representatives from three breweries: Lost Province Brewing Co., Highland Brewing Company, and Wedge Brewing Company. Both Highland and Wedge are located in Asheville and Lost Province is located in Boone. Two of these breweries have brewed beer using ginseng. One of the breweries sourced their fresh roots from Watauga County and the other sourced ginseng powder from California.

The business that purchased fresh roots commented on how labor intensive it was to process the roots. The roots needed to be hand-washed and scrubbed, trimmed, added to diluted sanitizing solution, then rinsed, chopped, and later boiled. According to this interviewee, this labor intensive process could potentially serve as a barrier for breweries who want to use ginseng in their beer. The brewery that used ginseng powder commented that “ginseng powder is the best way to use it for a brewery because boiling it won’t destroy its properties¹².”

Both businesses commented on the high cost of ginseng, suggesting that the cost might be prohibitive for brewers. According to one interviewee, typically the most expensive ingredient in beer is hops at about \$20 per pound¹³. The other interviewee shared that he paid \$200/lb for ginseng from California and would likely only be able to purchase two pounds of ginseng once a year¹⁴. The labor cost of processing fresh ginseng, along with the cost of the ginseng, would increase the price of the end product which might result in it being less appealing to customers who do not wish to pay premium prices.

Beyond the labor cost of processing ginseng and the cost per pound, US Food and Drug Administration (FDA) regulations can serve as a barrier for breweries who are interested in brewing ginseng beer. Ginseng is regulated by the FDA as a food additive¹⁵, given the regulatory concern over alcoholic beverages with added caffeine¹⁶. According to one brewer, there are regulations that make it impossible for ginseng to be used in beer that will be bottled or canned¹⁷. Breweries that wish to use ginseng in bottled or canned beer must apply for a Certificate of Label Approval (COLA) from the Alcohol Tax and Trade Bureau (TTB) and work with the TTB to ensure that marketing, labeling, and formulation meet the TTB guidelines¹⁸.

When asked how customers have responded to the ginseng beer, one brewer noted that it has been very popular with customers. Both breweries expressed that they are interested in purchasing additional ginseng, however, only one preferences locally-grown ginseng.

The brewery that has not used ginseng shared that they are interested in exploring the use of ginseng in beer but that their willingness to purchase it would depend on the cost, approval from the Tobacco and Alcohol Tax Bureau (TTB), and how it affects the smell and taste of the beer. This brewer also noted that, given how labor intensive it can be to process fresh roots, he would require the ginseng to be packaged specifically for brewing purposes. This brewer expressed no preference for certain production practices and emphasized the importance of labeling that meets the TTB standards. This brewery

¹²Melissas, C., Wedge Brewing Company. (2017, February 9). Personal interview.

¹³Mason, A., Lost Province Brewing Company. (2016, June 24). Personal interview.

¹⁴Melissas, C., Wedge Brewing Company. (2017, February 9). Personal interview.

¹⁵Nestle, M. (2010, November 7). Alcohol nutritional labeling a regulatory maze. SF Gate. Retrieved from <http://www.sfgate.com/food/foodmatters/article/Alcohol-nutritional-labeling-a-regulatory-maze-3247058.php>.

¹⁶U.S. Food & Drug Administration. (2010, November 17). Serious concerns over alcoholic beverages with added caffeine. Retrieved from <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm233987.htm>.

¹⁷Melissas, C., Wedge Brewing Company. (2017, February 10). Personal interview.

¹⁸Mason, A., Lost Province Brewing Company. (2016, June 24). Personal interview.

shared that they are potentially interested in exploring the use of ginseng in beer and that locally-grown ginseng is more desirable than ginseng that is sourced from outside of the region.

Hard cider is also growing in popularity and market share, though not yet at the size and scale of craft beer. An interview was conducted with an Asheville-area cider maker. They expressed high interest in ginseng for its health effects and stimulant properties and believe it could “take off, especially in the tasting room.” While they are interested in potentially adding fresh ginseng to one of their ciders, they stressed that it would have to be Food and Drug Administration (FDA) regulated and TTB approved. They added that they “doubt [they] would use very much of the product.” When asked about their level of interest in locally-grown ginseng, they shared that it would “increase [their] brand for sure” and by knowing the story of how the ginseng is grown would help [them] tell their story¹⁹.” At this time, according to interviewees, it is unknown whether ginseng can be legally added to hard cider²⁰.

Other Craft Beverage Businesses

Interviews were conducted with representatives from two craft beverage businesses: Buchi in Weaverville and Waynesville Soda Jerks in Waynesville. Buchi makes kombucha, a living probiotic beverage made by fermenting black tea, and Waynesville Soda Jerks creates handcrafted, bottled sodas.

Neither of these businesses is currently purchasing ginseng to use in their products, however, one expressed that they are very interested in developing a ginseng product due to its energy-boosting effects. They felt that ginseng grown locally would be more desirable, given that their business is committed to using local ingredients whenever possible. This business offered that they preferred fresh ginseng that is grown with no chemical fungicides sprayed.

The other business expressed a similar interest in ginseng, but shared that they do not have any plans for incorporating it into their products at this time. If, in the future, they decide to purchase ginseng, it would need to be certified organic and available in bulk. This interviewee shared that they would be willing to pay a higher price for locally-grown ginseng, but that the cost would have to stay within certain boundaries.

¹⁹Beveridge, W., Bold Rock Hard Cider. (2017, February 9). Personal interview.

²⁰Beveridge, W., Bold Rock Hard Cider. (2017, February 9). Personal interview.

SUMMARY OF FINDINGS BY SPECIALTY MARKET

Specialty Market	Key Findings
Asian Markets	<ul style="list-style-type: none"> ● Interested in purchasing locally-grown, high quality ginseng in a variety of forms, including bulk and packaged ● Locally-grown ginseng must be comparable to the ginseng they are selling currently ● Prefer to have information about the grower and growing practices to share with customers ● Suggest informational materials include Chinese and Korean characters
Herb and/or Health Food Retailers	<ul style="list-style-type: none"> ● Interested in purchasing locally-grown, high quality ginseng in a variety of forms, including bulk and packaged ● Prefer ginseng that comes from a reputable source, is sustainably grown, is high quality, and has good root character ● Prefer to know the ginseng grower ● Prefer ginseng grown without spray ● Prefer to have information about the grower and growing practices to share with customers
Breweries and Cideries	<ul style="list-style-type: none"> ● Interested in exploring the use of locally-grown ginseng ● Ability to purchase locally-grown ginseng depends heavily on the price ● Purchasing of ginseng is contingent upon approval by the Alcohol Tax and Trade Bureau
Other Craft Beverage Businesses	<ul style="list-style-type: none"> ● Interested in exploring the use of locally-grown ginseng in craft beverages ● Prefer ginseng grown without spray, some prefer organic ● Unable to pay premium prices for ginseng

CONCLUSION

In response to the growing interest in American ginseng, this study was conducted to explore potential market opportunities specifically for locally-grown ginseng root in Western North Carolina.

The findings from this study demonstrate the following:

1. There is demand for both fresh and dried ginseng root among some businesses;
2. Businesses are especially interested in purchasing *locally-grown* ginseng root;
3. Businesses would like information about the availability of locally-grown ginseng;
4. There is interest in parts of the ginseng plant other than just the root;
5. Different types of businesses are interested in different forms of ginseng;
6. Businesses are interested in exploring the use of ginseng in value-added products

In addition to identifying potential market opportunities, this study identified challenges for growing and selling local ginseng root to local and regional markets. The challenges ranged from the cost of the ginseng to regulations such as those from the Alcohol and Tobacco Tax and Trade Bureau that regulate additives to alcoholic beverages.



Based on these findings, it is clear that additional research is needed before fully investing in specific potential markets. Detailed market plans and production and marketing budgets will need to be developed to analyze potential for producer profit in new markets. The next section of this report is a marketing plan for the potential introduction of locally-grown ginseng root into local and regional markets. This marketing plan, which is based on the findings of this study, is intended to serve as a guide for current farmers and landowners in Western

North Carolina who are interested in planting ginseng. This includes existing small-scale ginseng growers who are interested in large-scale cultivation and in forming a ginseng grower's group, as well as other forest landowners who are interested in integrating small-scale ginseng production into their current land management strategies.

MARKETING PLAN FOR INTRODUCTION OF LOCALLY-GROWN GINSENG

1. Conduct a competitive analysis

A competitive analysis is a critical part of your marketing plan that involves identifying who else is growing North Carolina ginseng and the price point at which they are selling it and establishing what makes your ginseng unique from the ginseng of your competitors. As identified in this report, potential buyers must have price ranges in order to estimate potential purchasing and they must understand how this product is different from other products currently available in the marketplace.

2. Conduct a SWOT analysis

This is an analysis of strengths, weaknesses, opportunities, and threats related to growing local ginseng, marketing it, and selling it to specialty markets in Western North Carolina. The market research included in this report should help inform your SWOT analysis.

3. Develop a detailed production budget

Developing a detailed production budget involves calculating the costs of growing local ginseng. This process will enable you to determine the price at which you can profitably grow ginseng. As identified in this report, prices are one of the most important factors that go into purchasing decisions for buyers. The price at which ginseng can profitably be grown and sold must be understood before specific markets and production quantities can be estimated.

4. Identify your target market

Your target market is the particular group of buyers, consumers, or specialty markets that you wish to sell your ginseng to. As illustrated in this report, different specialty markets have different preferences for how ginseng is grown and whether the ginseng is sold in bulk and/or packages.

For example, a potential consumer segment that might be considered is marketing to tourists. Tourism is the number one industry in the region and offers a particularly attractive opportunity as a target market. North Carolina has been experiencing an increasing number of international tourists, and in particular, Asian tourists. In 2013, China/Hong Kong was the third top international market by market share. During that year, North Carolina had a total of 38,014 visitors from China/Hong Kong and these visitors each spent an average of \$742²¹.

²¹Boyle, J. (2015). *Asheville Citizen-Times*. International tourists flock to mountains, NC. Retrieved from <http://www.citizen-times.com/story/news/local/2015/08/30/international-tourists-flock-mountains-nc/71436532/>.

5. Contact potential buyers in your target market

Once you have identified your target market and your price points, reach out to potential buyers identified through this market research study as well as other potential buyers.

Be ready to discuss the following with potential buyers:

- The cost of your product
- The amount of product you have available to sell
- Your growing practices
- Whether you are able to sell your product both in packages and in bulk
- Whether you are able to provide information to customers about your product through rack cards, brochures, or other promotional materials

6. Consider certifying your product

Certification can bring an enhanced value to your product and provide a means for marketplace differentiation. Additionally, some buyers may require you to have specific certifications to verify how your product is grown, such as a USDA organic certification. To learn about the USDA organic certification, visit <https://www.ams.usda.gov/grades-standards/organic-standards>. Other buyers may require you to be verified by the Pennsylvania Certified Organic (PCO) Forest Grown Verification Program, which establishes a voluntary, third-party verification for non-timber forest grown products that are produced and harvested in a sustainable and legal manner. All producers and harvesters of forest grown American ginseng operating on owned or leased, private forestland in the United States are eligible to apply. To learn more about this verification, visit <https://www.paorganic.org/forestgrown>.



7. Identify strategies for marketing ginseng as “local”

As assumed in this research, marketing your ginseng as locally-grown is critically important²². Given the level of consumer demand for local products, particularly in Western North Carolina, there is an opportunity to market locally-grown ginseng within and in conjunction with the “local food” movement. Locally-grown ginseng is associated with a particular place and consequently, it serves as a unique product identifier.



²²Davis, J., Mountain Horticultural Crops Research and Extension Center. (2016, August 24). Personal interview.

ASAP's Appalachian Grown™ certification program is an existing program that offers opportunities to identify ginseng as local in the marketplace. Appalachian Grown is a marketing and branding effort of ASAP that certifies family farms in Western North Carolina and the Southern Appalachian Mountains as "local." Once certified, growers can use the Appalachian Grown logo in the marketing of their product(s). When consumers see the logo - at stores, farmers tailgate markets, or other businesses - they know they're buying a product that supports family farms, strengthens their local economy, preserves rural culture, and protects the region's natural beauty. To learn more about becoming Appalachian Grown™ certified, visit www.asapconnections.org.

Other certification/verification and marketing programs that should be explored include Blue Ridge Naturally and High Country Grown. A sample list of certification and verification programs is provided in Appendix A.

Combined with an effective marketing campaign, a regional brand can create a strong link between a product, its origin, and other unique qualities. It can be an effective way for producers in a region to differentiate their products, develop customer loyalty, and, in the long term, provide them with competitive advantages. A brand also ensures the term "local" retains its value in an increasingly crowded messaging market. Your brand should differentiate your product, describe how it is grown, identify where it is grown, and potentially have Chinese and/or Korean characters included on the packaging.

Creating a brand is an intensive project that requires working with a graphic designer and/or marketing firm to develop a logo, slogan, and other brand messages, as well as working with a consultant/facilitator to articulate a detailed marketing plan for launching the brand. A branding project should also plan for a multi-year commitment and plan for future support. As you create your product brand, you'll want to:

- ❖ Define how farmers or businesses qualify,
- ❖ Develop a system to ensure compliance,
- ❖ Evaluate and solicit input from participants, and
- ❖ Develop a marketing plan to increase participation and awareness

8. Create promotional materials

An important step in marketing ginseng is creating promotional materials. Promotional materials include packaging, signage, labels, business cards, brochures, and farmer profiles. For products that are certified Appalachian Grown, the logo can be used on these promotional materials including customized materials. For information on the the use of other promotional logos such as Blue Ridge Naturally and others, see Appendix A.



Given the high demand for ginseng among Asian populations, growers are encouraged to include Chinese and/or Korean characters on promotional materials. This is especially important for ginseng being sold to Asian markets, as noted in these interviews.



9. Make your product stand out

Lastly, in order to successfully introduce locally-grown ginseng root into local and regional markets, it is important that you make your product stand out. Below are some tips based on the findings of this report:

- ❖ Share your farm story: Wholesale buyers and customers want to know who grows their ginseng, as well as where and how it was grown;
- ❖ Offer site visits to potential buyers: Site visits are an opportunity for you to show buyers how and where your ginseng is grown and gives buyers an opportunity to learn more about the product;
- ❖ Display any applicable verifications and/or certifications: Verifications and certifications provide information to buyers about how the product is grown and helps buyers build trust in the grower;
- ❖ Market and promote your ginseng as local: Locally-grown ginseng is associated with a particular place and consequently, it serves as a unique product.

Appendix A: Grower Source Certification Programs

Certification Program	Website
Appalachian Grown™	http://asapconnections.org/tools-for-farmers/appalachian-grown-certification/
Blue Ridge Naturally	http://www.blueridgenaturally.org/about.php
Got to Be NC	http://www.gottobenc.com/become-a-member
High Country Grown	http://www.highcountrylocalfirst.org/our-projects/high-country-grown

Appendix B: Interview Protocols

Buyer Questions - For businesses currently selling/buying/using ginseng

I am working with Appalachian Sustainable Agriculture Project (in Asheville, NC), and the North Carolina Cooperative Extension to conduct a survey to research potential demand for locally/regionally grown ginseng. Currently, there is a group of growers in the High Country region of WNC that are producing cultivated forest-grown ginseng. We are researching the potential demand for this product in local and regional markets.

Info on cultivated forest-grown ginseng:

Similar to wild ginseng, cultivated forest-grown ginseng is grown under forest shade. It also has similar root characteristics to wild grown.

1. Does your business currently sell ginseng or use it as an additive in products you sell at your business? What products?
 - a. How are you sourcing your ginseng?
 - b. Do you know where it is being grown?
 - c. Do you know how it is grown?*[cultivated, wild, simulated]*
 - i. How do you know? *[verification, communication from seller]*
 - d. Do you purchase dried or green/fresh? Dried leaves?
 - e. What other qualities in ginseng are important to you? *(appearance, cleaned, etc.)*
 - f. Do you have a preference for certain production practices, e.g., organic production/no spray? *[the roots are grown in dense quantities, the growers are currently using fungicides to protect against crop loss]*
 - g. What volume do you purchase on an annual basis?
 - h. On average, about how much do you pay for it per pound?
2. What level of importance does your company put on buying locally grown products?
High, moderate, low, none
3. Sourcing local
 - a. Are you willing to pay premium prices for locally grown and sourced ginseng?
 - b. If yes, what percent would you be willing to pay?
 - c. Are there incentives, such as promotional/advertising materials, that need to be set in place for you to be more willing to pay the premium prices?
 - d. Would you need any form verification that this ginseng is a locally sourced product?
 - e. For locally grown ginseng, would you want the same growing practices you previously mentioned, or would you consider other practices?
 - f. How is the ginseng you purchase packaged/if any? Would you be interested in purchasing bulk product, or packaged only?

Buyer Questions - For those currently not sourcing ginseng

I am working with Appalachian Sustainable Agriculture Project (in Asheville, NC), and the North Carolina Cooperative Extension to conduct a survey to research potential demand for locally/regionally grown ginseng. Currently, there is a group of growers in the High Country region of WNC that are producing cultivated forest-grown ginseng. We are researching the potential demand for this product in local and regional markets.

More info on cultivated forest-grown ginseng:

Similar to wild ginseng, cultivated forest-grown ginseng is grown under forest shade but it's grown at a high density. Wild-simulated has similar root characteristics to wild grown.

1. Are you familiar with ginseng? Are you aware that it is being used as an additive/ingredient in mainstream products, such as beer and soda as well as herbal products?
2. Would you be interested in developing products with ginseng as an ingredient? Yes, maybe, no
 - a. If yes, would a locally grown product be more or less desirable or the same?
 - b. If no, would you be interested in developing products with locally grown ginseng?
3. What qualities would be important to you?
 - a. Production practices: Do you have a preference for certain production practices, e.g., organic production/no spray? [because the roots are grown in dense quantities, the growers are currently using fungicides to protect against crop loss]
 - b. Other qualities?
4. If you were willing to buy ginseng, do you think you would pay more for local?

Questions for Breweries Who Have Used Ginseng

I am calling today to talk with you about the local ginseng small batch beer your brewery made a while back. I am working with Appalachian Sustainable Agriculture Project, and in collaboration with Jim Hamilton at the Watauga Extension Office, to research possible demand for locally grown ginseng. I have a few questions for you to help me understand your experience using local ginseng in a small batch, and get your perspective on the potential for ginseng as an ingredient for local/regional beer makers.

1. Did you enjoy the process of creating a local ginseng beer?
 - a. How was it for you all to work with Jim from the Extension Office and Travis the ginseng grower?
2. In what form did you receive the ginseng from Travis? Did you receive dried or green roots? Had the roots been cleaned?
 - a. Is that still the form of ginseng that is most suited for a brewery, or would you prefer it in another form?

3. In utilizing this local ginseng, and using it in a small batch brew, was it profitable?
 - a. How much ginseng did you receive for the small batch?
 - i. Did you use all the ginseng for the one batch? Could it have used more?
4. If you were to purchase local ginseng for another batch, how much would you be willing to pay per pound? Is local more valuable to you than ginseng sourced from somewhere else?
 - a. What is the likelihood that you will use ginseng again?
5. How did you market the beer? Did you market the local ginseng?
 - a. What was the customer response? Did the local ginseng generate customer interest?
 - b. Did it add value to the beer - were you able to charge a premium for it?
 - c. What would need to happen (promotions, certification) to make it worthwhile for you to pay a premium for locally-grown