

**Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Development
Agricultural Development & Diversification Program (ADD)
Grant Project Final Report**

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The original intent of the ADD Grant was expanding the market of Wisconsin ginseng domestically by increasing sales in two Chinatown areas. With the use of ADD Grant funding, the Coop was able to gather market information by visiting several ginseng shops in the San Francisco bay area and have a consultant do market strategy for us.

Benefiting Wisconsin ginseng growers, who in the past relied on ginseng buyers coming to them, the Coop sought to promote and market directly to shops or wholesalers resulting in higher prices paid to growers. Once that direct link is established, more sales and profit would come back to growers.

Initially, the first step was to determine where the market was and what products we had as growers to fill that market. We were as an industry aware of the language and cultural barriers to some degree. By visiting ginseng shops and having the market strategy completed, we determined that a distributor familiar with the language and customs could assist us in penetrating the Chinatown markets using products we currently had.

The ADD Grant allowed us to contract with a distributor in San Francisco which enabled the Coop to offer clean tested Wisconsin ginseng direct to the consumer. With remaining funds, we are attempting to expand into the Los Angeles area also. At this point, the distributor has been a moderate success,

however expansion into other areas is also needed. We plan to continue to contract with other shops to accomplish this. The shortfall is the volume of roots sold and the prices paid through these shops is insufficient based on the roots available. Further international marketing and large volume sales will be necessary to have the Wisconsin ginseng industry remain profitable in the future.

Agricultural Development & Diversification (ADD)

Grant Report

Domestic Marketing of Wisconsin Ginseng:

Opening new channels

By

Michael J. Dorsch, Ph.D.

June 2004

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Prelude

The Wisconsin ginseng farmer is facing many challenges in the production and marketing of ginseng. As a result, an Agricultural Development & Diversification (ADD) Grant Proposal was prepared and funded to examine the domestic marketing of Wisconsin Ginseng within the Chinatown market in San Francisco. The project, as originally conceived, consisted of two phases: Market Understanding & Strategy Recommendations (Phase I) and Marketing Strategy Formation and Marketing Plan Development (Phase II). The primary purpose of the first phase of the project is twofold and focuses attention on the development of a long-term design for the marketing of Wisconsin ginseng. As a first step, it is important to gain a deeper understanding of the ginseng market, in general, and San Francisco's Chinatown market, in particular. Next, this understanding would provide a basis for developing strategic recommendations for the long-term development of marketing strategies for strengthening Wisconsin ginseng's position within the ginseng industry. These recommendations are intended to provide several options for strengthening Wisconsin Ginseng's position within the ginseng industry. When developing these options, the anticipated costs of implementing each option were not addressed. The second phase of the project is more implementation oriented and is intended to determine a specific course of action and translate the selected long-term strategy/strategies into short-term marketing strategies for effectively positioning Wisconsin ginseng within the Ginseng industry. The current grant addresses Phase 1 of the project. The two Phase study findings should enable the development of well-founded long-term marketing strategies and marketing plans (that currently do not exist) to further strengthen demand for Wisconsin ginseng within the ginseng industry, in general, and the San Francisco Chinatown market, in particular.

The specific objectives, responsibility, timeline, and progress to date for Phase 1 of the project are shown in Table 1.

Table 1			
Project Outline and Timeline			
Objective	Responsibility	Timeline	Progress
<u>Objective 1</u> - Conduct needs assessment for marketing WI ginseng to storeowners and consumers located in Chinatowns in CA. Contract with marketing expertise. Outline data to be collected and how (data that already exists vs. survey tools to be designed) Conduct on-site interviews of selected storeowners.	Co-op Directors & Consultants: Dr. Dorsch, and Distributor	July 03 - April 04	Completed
<u>Objective 2</u> - Develop long-term marketing strategies for strengthening the demand of Wisconsin ginseng within the U.S. Chinatown market. Research marketing techniques to effectively penetrate into Chinatown marketing channels. Provide framework for translating long-term marketing strategies into short-term marketing plans that effectively position Wisconsin ginseng within the U.S. Chinatown market.	Dr. Dorsch	April 04 - June 04	Completed

Situation Analysis

The purpose of a situation analysis is to obtain a detailed understanding of a market by separating it into its various parts and gaining a comprehensive understanding of each part separately and as they relate to each other. The intended outcome of the situation analysis is a more comprehensive understanding of the complete market. Such understanding is important for the development of effective long-term strategies and short-term marketing plans.

To develop a deeper understanding of the Ginseng market and Wisconsin's place within the market, the situation analysis was conducted from data acquired from secondary (publicly available) data and primary research. The secondary data were acquired from Government reports that are available on the Internet (United States and Canadian), reports available from Ginseng Association web pages (primarily Canadian Ginseng Associations), material supplied by the Wisconsin Ginseng and Herb Coop, and reports and newspaper articles acquired from keyword Internet searches. Primary data were acquired from exploratory research conducted in San Francisco during December 2003. Specifically, primary data were collected from personal observation of Chinatown retailing practices in San Francisco and Oakland, California. In addition, personal interviews were conducted with Wisconsin Ginseng and Herb Coop representatives, who are also ginseng growers, and a Chinatown ginseng distributor.

The situation analysis is organized as follows. First the ginseng market is described. Next, the evolving trend of the demand for and the availability of ginseng are examined. The evolving demand and supply trend discussion addresses both global and domestic markets. Special emphasis is given to the Chinatown markets located in San Francisco and Oakland California. Third, the competitive structure within the ginseng market is described. Finally, general marketing approaches used by Canada, China, and in the United States to service the ginseng market are summarized.

UNDERSTANDING THE TYPES OF GINSENG AVAILABLE ON THE MARKET

Ginseng is the dried root of a slow-growing plant of the Araliaceae family of herbs. The therapeutic effects of the herb are attributed to ginsenosides, which are present throughout the plant but levels are highest in the root. During its lifespan, concentrations of ginsenosides shift from each part of the plant as it goes through its annual growth cycle. While wild ginseng tends to be preferred, it was severely depleted from over-harvesting and is now considered an endangered species. Consequently, the ginseng market is based primarily on cultivated ginseng.

Cultivated ginseng requires three to five years of growth before it is ready for harvesting. As it ages, the ginseng root has more time to draw upon the soil nutrients and manufacture higher levels of ginsenosides. However, these benefits are offset with an increased threat of disease which may destroy the ginseng root. Consequently, in an effort to balance the benefits of increased ginsenosides with the decreased risk of disease, the ginseng root is usually harvested at three years. Interestingly, the root shape is determined in the first two years of plant life. It is contractile (shrinks vertically) and develops concentric wrinkles as it ages. These features are desirable in the market place. Once the ginseng root is harvested and processed, it keeps for approximately two to three years without losing potency.

In addition to the root, ginseng seeds also have commercial value and normally seed prices are below the price of ginseng roots. The ginseng seeds, which are extracted from the ginseng berries, are not harvested until the plant is in its third or subsequent year of growth. Ginseng seeds take an additional 18 to 24 months of preparation before they can be used.

Several types of ginseng exist and have commercial value. The most common types of ginseng are Asian ginseng, which is often sold as Panax, Chinese, or Korean ginseng and American ginseng, which is often sold as Wisconsin, North American, American Ginseng, and, more recently, China White. Other species of ginseng, e.g., Siberian ginseng Brazilian ginseng, and Chinese-type ginseng, are not closely related to the Asian or American ginseng and are not considered to possess the medicinal qualities of true ginseng.

While North American ginseng and Asian ginseng are similar in appearance, they possess different chemical properties. Specifically, scientific research has demonstrated that North American ginseng contains more ginsenosides than Asian ginseng and is considered to more potent. More importantly, North American ginseng and Asian ginseng are considered to be complements rather than substitutes. Asian ginseng is known to have a heating effect that invigorates, stimulates and heals the body, especially when the body is depleted. In contrast, North American ginseng is described as having a cooling effect; one that relieves stress, calms the body, and strengthens the internal organs.

The focus of this report is on the North American ginseng, which is indigenous to the eastern areas of North America, growing in Ontario, Quebec, and Wisconsin.

UNDERSTANDING THE DEMAND FOR GINSENG

Why is Ginseng Consumed?

Ginseng is one of the most widely used medicinal herbs in the world, and the demand for ginseng is expected to increase in countries that demand natural and safe products for stress relief and improved quality of life after fifty-five years of age. The active compounds in ginseng, called ginsenosides, are believed to regulate and balance bodily functions and to increase the body's capacity to adjust to stress. More specifically, Asian ginseng is thought to have a heating effect that invigorates, stimulates and heals the body. In contrast, North American ginseng (e.g., Wisconsin ginseng and Canadian ginseng) is believed to have a cooling effect that relieves stress and calms the body. Accordingly, Asian ginseng and North American ginseng are complementary products, not competing products. Moreover, the few clinical studies that examine the health benefits of North American ginseng are encouraging. For example, there are studies that show ginseng may be able to have a beneficial effect normalizing blood pressure, normalizing glucose levels after meals in diabetics, reduce fatigue, improve short-term memory, reinforces the immune system, increases longevity, treating male impotence.

What do customers look for when purchasing Ginseng?

Ginseng value is determined, in part, on the quality of the root. When grading the quality of ginseng, a number of factors are considered, including, age, shape, taste, texture and color. Taste and shape, which are determined by the growing environment of the root, are assessed in terms of chunkiness and the amount of concentric wrinkles appearing on the root. In contrast, texture and color are influenced by the post-harvest processing of the root. The importance of each of these factors when grading ginseng varies and depends on the particular shapes and sizes desired by particular markets for ginseng.

Since North American ginseng is indigenous to the eastern areas of North America, growing in Ontario, Quebec, and Wisconsin, it is difficult to detect observable differences in taste, shape, texture and color of Wisconsin ginseng and Canadian ginseng. However, observable differences between North American ginseng grown in China (referred to as China White) are more easily detectable, e.g., lighter color, noticeably less weight, and the shape of the wrinkles differ from Canadian and Wisconsin ginseng.

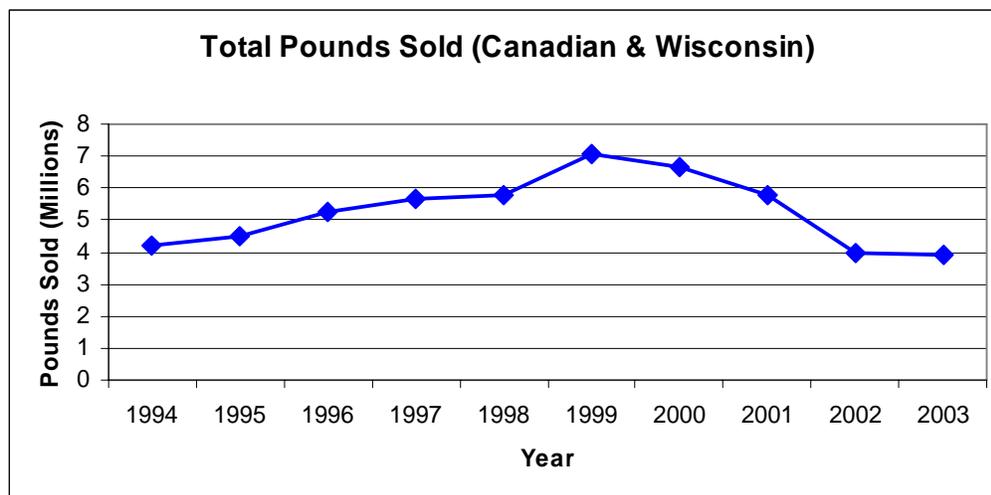
How Large is the Demand for North American Ginseng?

North American ginseng market has existed for many years; yet, only recently has it gained economic significance in the United States and Canada. For example, the United States acknowledged the importance of ginseng to the United States economy in the early 1990s. Specifically, the 1992 Census of Agriculture was the first census in which ginseng production was measured apart from other herbs. Similarly, ginseng production in Canada witnessed exponential growth during the early 1980's. In 2003, an estimated 3,900,000 pounds of North American ginseng was sold.

While the size of the North American ginseng market is about the same as it was in 1994, the North American ginseng market exhibited rapid growth and, more recently, a decline in its volume of sales over the 1994 through 2003

timeframe. Specifically, from 1994 to 1999, the volume (in pounds) of North American ginseng sold grew at a steady rate and peaked during 1999. Moreover, the 1999 sales volume represented an increase of 68.7% when compared to 1994 estimates. However, from 1999 to 2003, pounds of North American ginseng sold dropped dramatically (see Figure 1) and returned to slightly less than the sales level during 1994. The decline in total volume sales of ginseng for the 1999 – 2003 was -44.7%.

Figure 1

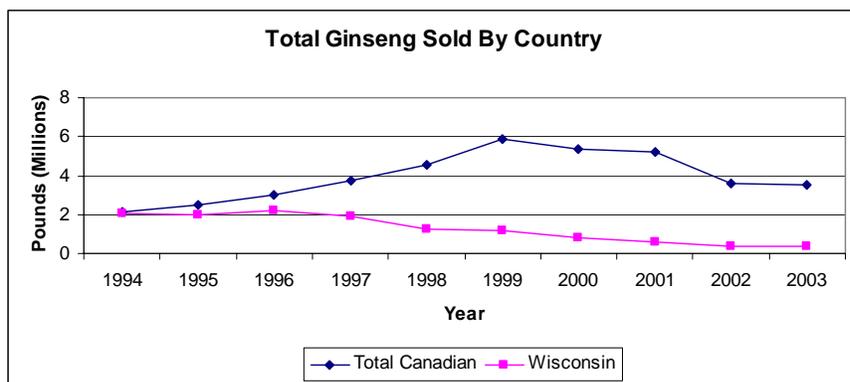


Source: Ontario Ginseng Growers Association (2002), Update to Coop Members and Growers November 2002 (with handwritten updates through 2003). (web page: www.ginsenggrowers.com).

The rise and subsequent decline in the demand for North American ginseng appears to be influenced by several factors including, an increasing desire by consumers for a healthy life, market development practices by ginseng producers, and government action to support import/export activity. During the short-term, it appears that the continued demand for North American ginseng will continue to be low, relative to the sales levels experienced during the mid- to late-1990s. However, the long-term projections for the demand of North American ginseng are encouraging as evidenced by the recent entry of China to the World Trade Organization (WTO), the increase in Wisconsin ginseng exports to Singapore, and the apparent interest in ginseng as reflected by the many web pages devoted to ginseng.

Given the fluctuations in overall demand for North American ginseng during the past twenty years, it is important to determine the extent to which different types of North American ginseng (i.e., Wisconsin and Canadian). A closer comparison of the North American Ginseng sales revealed that during the growth period, Canada sold and increasing amount of ginseng, while the sale of Wisconsin ginseng steadily declined (See Figure 2).

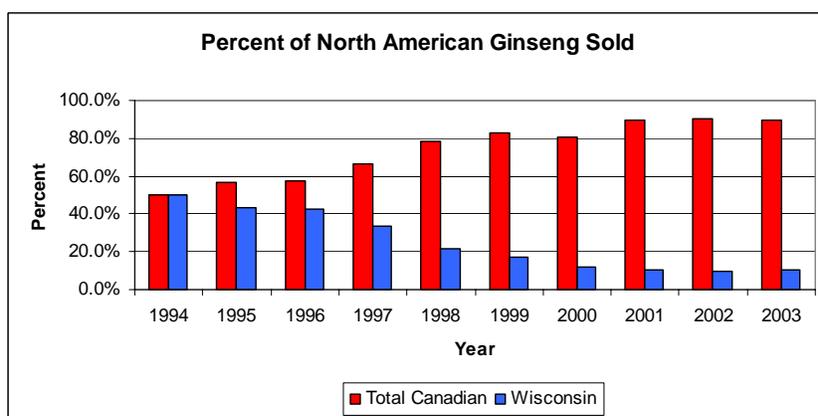
Figure 2



Source: Ontario Ginseng Growers Association (2002), Update to Coop Members and Growers November 2002 (with handwritten updates through 2003). (web page: www.ginsengrowers.com).

In fact, Wisconsin Ginseng, which accounted for approximately 50% of the North American ginseng sold in 1994, accounted for approximately 10% of the North American ginseng sales in 2003 (see Figure 3); a reduction of more than 81%. In contrast, Canada's role in the sale of North American ginseng grew steadily from approximately 50% in 1994 to 90% in 2003; an increase of about 67%. Overall, during the past decade, the sales of North American Ginseng enjoyed rapid growth followed by an equally rapid decline to return to 1994 sales levels. In addition, the significance of Canada and Wisconsin in the sale of ginseng has changed dramatically. During 1994, both Canada and Wisconsin shared equally in the sale of North American ginseng. However, over the next ten years, Canada became an increasing dominant seller of ginseng and its dominance came at the expense of Wisconsin.

Figure 3



Source: Ontario Ginseng Growers Association (2002), Update to Coop Members and Growers November 2002 (with handwritten updates through 2003). (web page: www.ginsengrowers.com).

Who is Buying Ginseng?

Even though there is a worldwide demand, Asian markets (e.g., Chinese and Koreans) are the primary consumers of North American Ginseng. More specifically, Chinese consumers tend to be the ultimate users of North American ginseng. While China accounted for 96% of all Canadian ginseng exports during 2001, the majority (i.e., estimated to be between 70% and 80%) of North American ginseng produced in Canada and the United States (i.e., Wisconsin) was exported to Hong Kong, which is the world trading center for ginseng. Hong Kong, in turn, re-distributes (or re-exports) the ginseng to other Asian markets. Furthermore, China's 2001 entry into the World Trade Organization (WTO) may increase demand for North American ginseng produced in Wisconsin and Canada. The increased demand may be attributable to the lowered trade tariffs that are imposed by the WTO's rules-making body for global trade. By 2006, the tariff on Wisconsin and Canadian ginseng is expected to be 7.5 percent, which is down from 36 percent in 2001.

Other significant importers of North American ginseng may also be identified. For example, Taiwan, Singapore, the United States, and Japan were sizeable importers of Canadian Ginseng. Singapore and the United States may become significant import markets for Canadian ginseng. Singapore is importing an increasing amount of Canadian ginseng and also re-exports unprocessed ginseng to other countries, primarily to Malaysia. Canadian analysts suggest that the United States is an appealing market since the US production of ginseng has declined during the past seven years (i.e., 1994 – 2001).

Currently, Europe and Latin America represent small export markets, which may be developed through educational programs. For example, the United States has exported ginseng to a number of European and Latin American countries, including Mexico, Columbia, United Kingdom, Netherlands, France, and Germany. The United States has also exported small amounts of ginseng to Canada and the Peoples Republic of China.

The United States Ginseng Market. During each of the past two years (i.e., 2002 – 2003), the United States imported more ginseng than it exported (see Figure 4). Moreover, it appears that the volume of ginseng being imported into the United States is increasing at a faster rate than the volume of ginseng being exported from the United States. Specifically, during 2002, the United States imported more ginseng than it exported by 178,363 pounds. During 2003, the United States imported more ginseng than it exported by 373,389 pounds, which represents a 109.3% increase over the previous year.

Figure 4

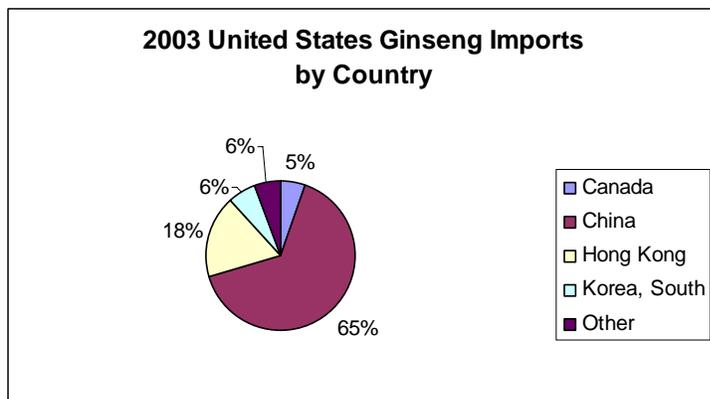


Source: ita.doc.gov/td/industry/otea/index.html, Trade and Economy: Data and Analysis (the Office of trade and Economic Analysis at export.gov).

On closer examination, it appears that China had a major influence on the rapid increase of ginseng imports into the United States. In addition, it appears that the United States is importing a lower value ginseng while exporting a higher value ginseng. While this finding supports the prospect of the United States as an appealing market for the imported ginseng, it appears that the demand may be for a lower value ginseng. This conclusion is based on the following observations.

Examination of United States Import Activities. An examination of the United States import activities for 2003 revealed that the United States exported 94% of its cultivated ginseng to four countries: China (65%), Hong Kong (18%), South Korea (6), and Canada (5%) (see Figure 5). The simple average customs value per pound of ginseng imported into the United States from these four countries was \$16.60 per pound. The U.S. customs value per pound of imported ginseng was highest for South Korea (\$28.57 per pound) and lowest for China (\$10.89 per pound). During 2003, the U.S. customs value per pound of ginseng imported into the United States from Canada was \$13.99.

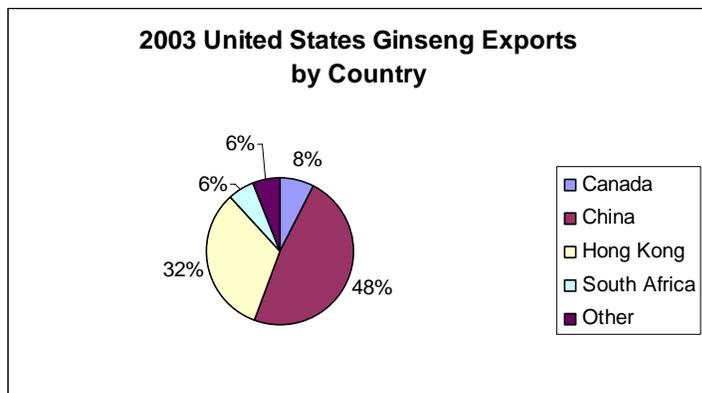
Figure 5



Source: [www.ita.doc.gov/td/industry/otea/U_S_Imports, December 2003, HS 121120.htm](http://www.ita.doc.gov/td/industry/otea/U_S_Imports_December_2003_HS_121120.htm)

Examination of United States Export Activities. A similar pattern was observed when examining the United States import activities for 2003. Specifically, the United States imported 94% of its ginseng to four principal: China (48%), Hong Kong (32%), Canada (8%), and South Africa (6%) (see Figure 6). The simple average U.S. customs value per pound of ginseng exported to these four countries was \$23.74 per pound. The U.S. customs value per pound of ginseng was highest when exporting to Hong Kong (\$38.51 per pound) and lowest for China (\$13.83 per pound). The U.S. customs value per pound of ginseng exported to Canada was \$27.49.

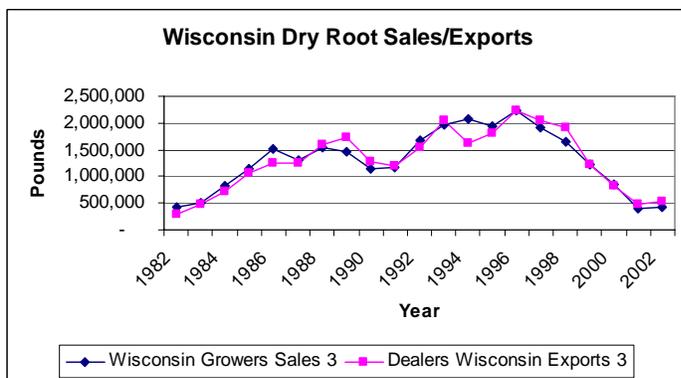
Figure 6



Source: www.ita.doc.gov/td/industry/otea/U_S_Exports, December 2003, HS 121120.htm

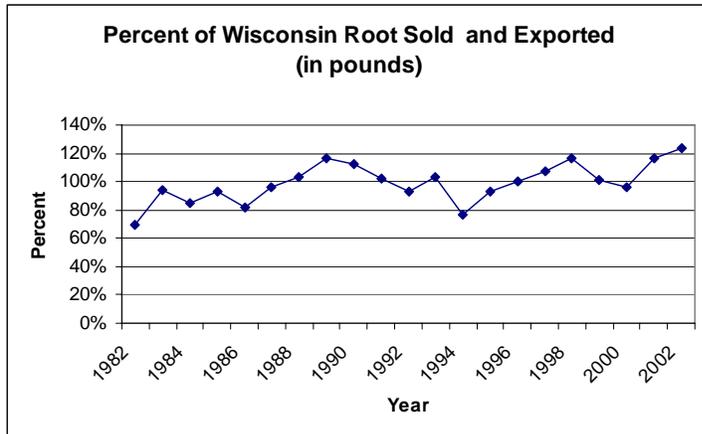
The Wisconsin Ginseng Market. In contrast to the recent United States practice of importing more ginseng than it exports, most of the ginseng sold each year in Wisconsin during the past twenty years (1982 – 2002) was exported (see Figure 7). Moreover, the percent of Wisconsin ginseng exported annually increased from approximately 70% in 1982 to over 124% during 2002 (see Figure 8). Sales and exports exceeding one hundred percent are possible since sales and exports of a particular harvest year may continue for a two-year period. When the percent of exports per year are averaged for the past twenty years, Wisconsin's exports an average of 99% of the ginseng that it harvests each year.

Figure 7



Source: www.nass.usda.gov/wi/vegetables/ginseng03.pdf (2003), Wisconsin 2003 Agricultural Statistics, page 47

Figure 8



Source: www.nass.usda.gov/wi/vegetables/ginseng03.pdf (2003), Wisconsin 2003 Agricultural Statistics, page 47

In an effort to understand how the customer base for Wisconsin ginseng is evolving, the export destinations for Wisconsin ginseng were examined for 2001 and 2002. During 2001, 84% of Wisconsin ginseng was exported to Hong Kong (66%) and China (18%) (see Figure 9). California accounted for 5% of the Wisconsin ginseng exports. During 2002, a slight change in the composition of the customer base for Wisconsin ginseng occurred. Even though most (78%) of the Wisconsin ginseng continued to be exported to Hong Kong (60%) and China (19%), the percentage of exports to Hong Kong declined by six percent (see Figure 10). In contrast, the percent of exports to China increased by one percent and exports to Singapore increased by ten percent. The percent of exports to California remained at five percent. These results suggest that Asian countries continue to be important destinations for Wisconsin ginseng. Specifically, Hong Kong continues to represent the central destination for Wisconsin ginseng. However, China and Singapore appear to be emerging markets for Wisconsin ginseng. In terms of domestic markets, California appears to be a stable and important destination for Wisconsin ginseng.

Figure 9



Source: Wisconsin 2002 Agricultural Statistics

Figure 10



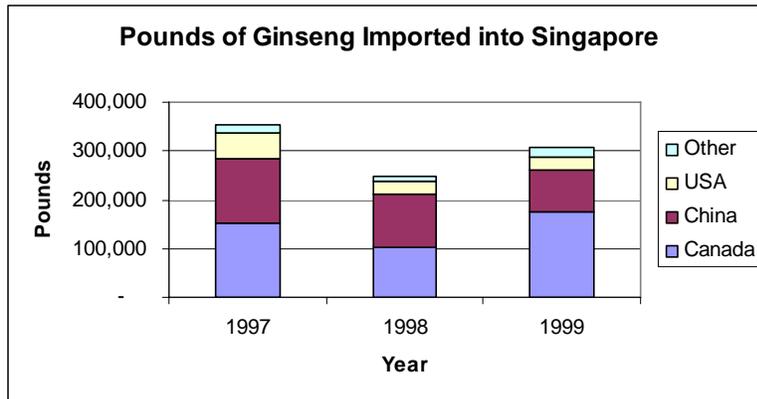
Source: www.nass.usda.gov/wi/vegetables/ginseng03.pdf (2003), Wisconsin 2003 Agricultural Statistics, page 47

The Singapore Ginseng Market. The emergence of Singapore as a potentially important destination for Wisconsin ginseng may be attributed to several demographic and psychographic factors. Specifically, the emerging Singapore market may be described as younger (e.g., under 50 years of age), better educated, and more wealthy (i.e., middle to upper income groups). In addition, this group of consumers tends to use self medication to prevent rather than cure illnesses and there is a tendency for them to not rely solely on their doctors to help them retain a healthy well-being.

In spite of these favorable indications, after more than five years of growth (i.e., 1994 – 1998), the demand for nutritional supplements declined. In addition, an examination of data collected for the 1997-1999 timeframe indicates that the volume of ginseng imported by Singapore fluctuated on an annual basis (see Figure 11). Specifically, the volume of ginseng imported into Singapore was 354,062 pounds in 1997, dropped to 248,241 pounds in 1998, and increased to 307,986 pounds in 1999. When the three year timeframe was considered in total, the percent change in the volume of ginseng imported into Singapore decreased by 46076 pounds, which represents a decrease of 13%. While the reduced demand for nutritional supplements may be attributed, in part, to an economic slowdown that occurred during 1998, the inconsistent results do not provide clear evidence of Singapore's emergence as an important ginseng destination.

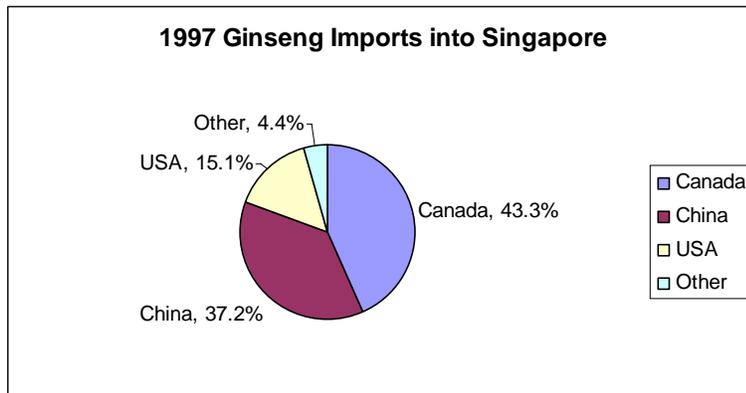
Besides experiencing an overall reduction in the volume of ginseng being imported into Singapore, the composition of ginseng suppliers to Singapore has also changed. While Canada, China, and the United States continue to be the primary suppliers of ginseng, Canada appears to be emerging as the principal supplier of North American ginseng to Singapore (see Figures 12a-c). Specifically, even though the volume of ginseng imported into Singapore decreased from 1997- 1999, the amount of ginseng imported from Canada during this timeframe increased by 14% (see Figure 11). This increase was offset by reductions in the amount of ginseng imported from China (a -34.4% change in volume) and the United States (a -48.8% change in volume).

Figure 11



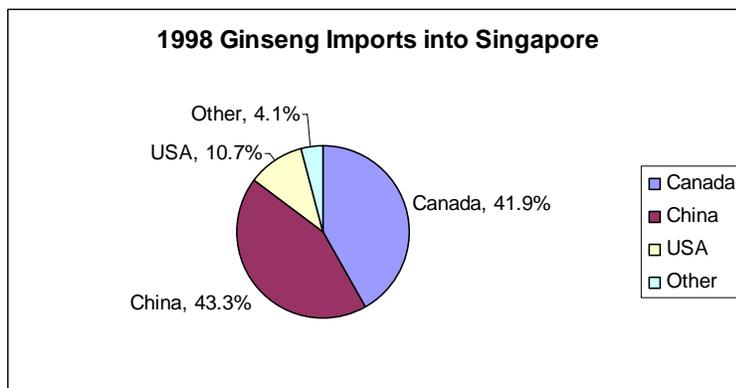
Source: atn-riac.agr.ca/asean/e3242.htm (2001), The Market for Health Foods in Singapore An Executive Briefing for Canadian Exporters (Stanton, Emms & Sia prepared the report).

Figure 12a



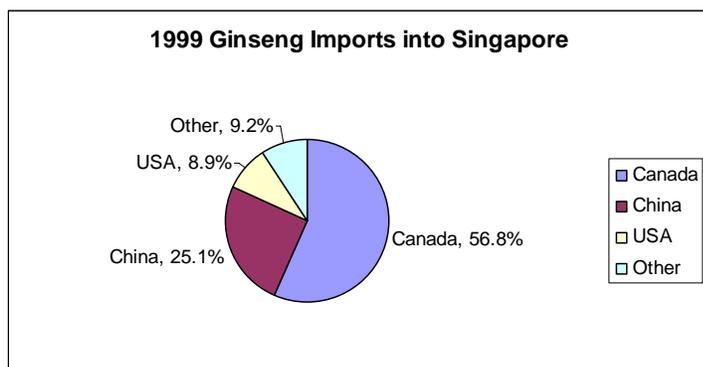
Source: atn-riac.agr.ca/asean/e3242.htm (2001), The Market for Health Foods in Singapore An Executive Briefing for Canadian Exporters (Stanton, Emms & Sia prepared the report).

Figure 12b



Source: atn-riac.agr.ca/asean/e3242.htm (2001), The Market for Health Foods in Singapore An Executive Briefing for Canadian Exporters (Stanton, Emms & Sia prepared the report).

Figure 12c



Source: atn-riac.agr.ca/asean/e3242.htm (2001), The Market for Health Foods in Singapore An Executive Briefing for Canadian Exporters (Stanton, Emms & Sia prepared the report).

Even though the percentage of ginseng imported from the United States has declined over the past three years, over the past two years, the percent of Wisconsin ginseng exported to Singapore has increased (see Figures 9 and 10). In addition, it appears that Wisconsin ginseng may be emerging as a more significant contributor to the total volume of ginseng exported to Singapore. Specifically, by recognizing that Wisconsin typically accounts for 90% to 95% of all ginseng produced in the United States, it is possible to estimate the change in Wisconsin exports to Singapore from 1997 to 2002. In 1997, Wisconsin is estimated to export between 48,017 pounds (90% of US total) and 50,684 pounds (95% of US total) of ginseng to Singapore. Data collected for the export of Wisconsin ginseng to Singapore for 2001 and 2002 indicates that the volume of ginseng exported to Singapore increased from approximately 4,799 pounds in 2001 to 57,467 pounds in 2002, a net increase of 52,668 pounds (1097.5% increase in volume) in a single year. Furthermore, when compared to a conservative estimate (i.e., Wisconsin is estimated to produce 90% of United States total), Wisconsin's 2002 exports to Singapore represented an increase of 9,450 (19.4% increase), when compared to 1997 estimates. These results indicate that Wisconsin ginseng providers continue to be important contributors to the total volume of ginseng harvested in the United States and exported. Nevertheless, whether the apparent increasing prominence of Wisconsin ginseng to the United States total is the result of a reduction in ginseng production outside of Wisconsin or to a preference for Wisconsin ginseng has yet to be determined.

Overall, while the total amount of ginseng exported to Singapore decreased between 1997 and 1999, Canada was able to increase the percent of ginseng that it exported to Singapore. In addition, even though we were unable to obtain estimates of the total volume of ginseng exported to Singapore during 2001 and 2002, we were able to determine that the volume of Wisconsin ginseng exported to Singapore had significantly increased. These findings suggest that Singapore may emerge as an attractive market for ginseng. However, it also appears that Canada is in a better position to benefit from an increase in Singapore's demand for ginseng. Nevertheless, more detailed research on the viability of Singapore as a ginseng destination is warranted. One possible starting point for exploring the market potential for Wisconsin ginseng in Singapore is to attend the Food & Hotel Asia exhibit, which is held every two years in Singapore. The Food & Hotel Asia exhibit, which is one of Asia's largest food and drink shows, attracts large numbers of importers and retail industry buyers from Singapore and other South East Asia countries including China and Taiwan.

UNDERSTANDING THE AVAILABILITY OF GINSENG

How is Ginseng grown?

Ginseng is a slow growing crop that requires at most about 20% sunlight and takes four to five years of growth before it is ready for harvesting. Cultivated ginseng tends to be grown in raised beds that are covered with shade to filter 70 – 80% of the sunlight. As ginseng grows it draws on the soil nutrients to manufacture ginsenosides, which are linked to health benefits. As the ginseng root ages it manufactures higher levels of ginsenosides. In addition, the first two years of plant life determine the shape of the ginseng root. As it ages, the root shrinks vertically and develops concentric wrinkles. The age, chunkiness, and amount of concentric wrinkles are three factors that are important in the Asian market. Even though the quality of the ginseng root increases with age, the threat of disease and environmental issues also increase. As a result, ginseng roots are usually harvested at three years. In addition, to harvesting the ginseng root, the ginseng seeds are extracted and require an additional eighteen to twenty-four months of preparation before they can be used. Typically, ginseng seeds are extracted after the third year of growth. Once a ginseng crop is harvested, the fields are prepared for another five-year growing cycle. Attempts to grow multiple crops of ginseng on the same fields have not been very successful. Consequently, Wisconsin farmers must find new fields where ginseng has not been grown.

In Canada, the total cost of ginseng production is estimated to be \$40,000 per acre, or approximately \$10 to \$20 per pound. Furthermore, the Canadian ginseng industry has been innovative and found ways to increase yields from 10 – 30% and lowering costs by as much as 50%. For example, there is evidence to suggest that using hand labor to deflower third year plants may increase root size by 25 – 30%. In addition, micropropagation has been proposed as an effective approach to efficiently and profitably boost the yield of ginseng.

Micropropagation of ginseng plants refers to a process of propagating microplants in aseptic conditions that enable the plant to be treated and cured of viral and bacterial contaminants. These plants can be certified as pathogen-free. There is evidence that rate of vitro propagation is much greater than seed propagation and it allows the ability to produce plants that contain specific ginsenosides or plants with enhanced disease resistance. For example, there is evidence that micropropagation is capable of producing the equivalent of a two-year ginseng plants in the first year.

Ginseng and other dietary supplements do not require testing for quality by any government or independent agency before being sold. In response to a need for such testing, ConsumerLab.com conducted an independent testing of ginseng dietary supplements during 2000 and again in 2003. ConsumerLab.com's Ginseng Product Review examined two both American and Asian ginseng dietary supplements. The products were tested for their levels of ginsenosides and for potential contamination with heavy metals (i.e., lead, cadmium, and arsenic) and pesticides (i.e., hexachlorobenzene, quintozone (PCNB), and lindane). Hexachlorobenzene, a probable human carcinogen, has been banned from most food crop uses throughout the world. In addition, Quintozone and lindane are potential carcinogens that may also be toxic to various organs and are not generally allowed for use on food products in the U.S. The research findings of the two ConsumerLab.com studies are summarized below.

1. The results of the 2000 study revealed that eight of twenty-two (36%) tested supplements were found to contain high levels of specific pesticides. More specifically, eight of the twelve Asian (i.e., Korean) ginseng products (67%) were found to be contaminated with the pesticides hexachlorobenzene and/or quinterozone. The rate of contamination was as much as twenty times higher than allowed by guidelines published by the United States Pharmacopeia and the European Pharmacopeia. None of the tested American ginseng dietary supplements were found to be contaminated.
2. The results of the 2003 study indicated that the overall quality of ginseng supplements had improved when compared to the 2000 study findings. Specifically, ten of twelve tested products (83%) met ConsumerLab.com's criteria for ginseng quality, label claims, and lack of contaminants and adulterants, and disintegration. Both products (17%) that failed ConsumerLab.com's test were Asian ginseng products. A Korean Ginseng product had a high amount of the pesticide hexachlorobenzene and an extra-strength liquid Chinese Ginseng tested low in ginsenosides.

Recognizing that a need exists to verify that ginseng, regardless of its form (e.g., root, powder, capsules, and so on) meets United States quality standards and is not contaminated, ConsumerLab.com is licensing its flask-shaped Seal of Approved Quality for Asian or American Ginseng to manufacturers and distributors to use on products that passed testing. ConsumerLab.com states that it will periodically re-evaluate these products to ensure their compliance with its standards. In addition, ConsumerLab.com indicates that manufacturers and distributors may request that the company test products not already tested.

Who produces Ginseng?

Even though China and South Korea are the largest producers of ginseng worldwide, these countries tend to produce Asian ginseng. With respect to North American ginseng, Canada has become the world's largest producer. More specifically, over the past decade, Canada accounted for about 60% of the world production of North American ginseng. In addition, almost all North American ginseng produced in Canada is grown in Ontario (approximately 67%) and British Columbia (33%).

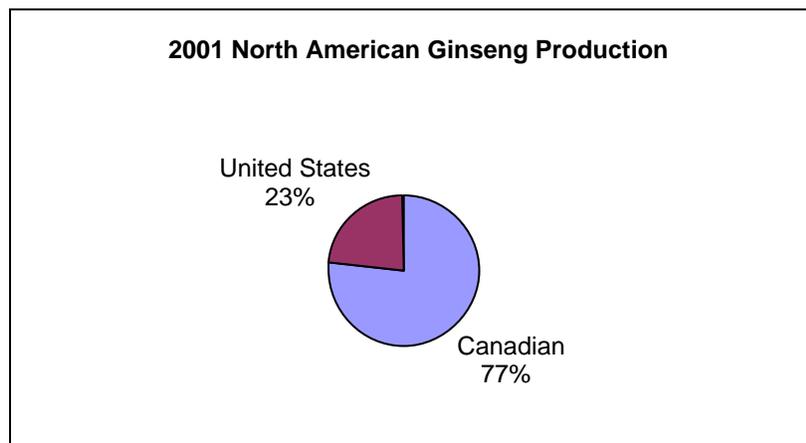
The United States is the second largest producer of North American ginseng, and Wisconsin accounts for approximately 90% to 95% of all North American ginseng produced in the United States. Moreover, Marathon County, Wisconsin produces about 95% of Wisconsin's annual crop and about 85% of the United States annual crop.

China is the third largest producers of North American ginseng and currently accounts for about fifteen percent of the North American ginseng production. Furthermore, while the Chinese version of North American ginseng, referred to as China White, is traditionally perceived to be lower in quality than Wisconsin and Canadian ginseng, since the late 1970's the grade and quality standards of China's North American ginseng have been judged by some to be comparable to ginseng harvested in North America.

How much Ginseng is being produced in North America?

With the bulk of North American ginseng being harvested in North America, it is important to understand the impact that Canada and the United States have on the production of North American ginseng. Based on 2001 estimates, it appears that Canada is becoming the principal provider of North American ginseng. In particular, during 2001, the production of North American ginseng by Canada and the United States peaked at approximately 6,613,868 pounds (i.e., 3,000,000 kilograms¹). Canada accounted for 77% and the United States accounted for 23% of the total production of North American ginseng for 2001 (see Figure 13). Since 2001, the production of North American ginseng has dropped and is expected to remain fixed. As such, Canada appears well positioned to remain the principal supplier of North American ginseng to a global marketplace.

Figure 13



Source: www.agr.gc.ca/mad-dam/e/bulletine/v16e/v16n05_e.htm (February 21, 2003, Volume 16 (5)), Bi-weekly Bulletin: Ginseng from Canada, (Author: Sergio Novelli, Market Analyst)

Canadian Ginseng Production

Canada's prominence as a provider of North American ginseng is surprising, given that vigorous commercialization of Canadian ginseng appears to have begun during the early 1980s. Furthermore, Canada's status as the largest producer of North American ginseng does not appear to be in jeopardy. The Canadian production of North American ginseng increased from 467,380 pounds (i.e., 212,000 kilograms) in 1987 to over 5,070,632 pounds (i.e., 2,300,000 kilograms) in 2001. This change represented an increase in production of 985%. Such a rapid increase in production is attributed to a larger seeded

¹ Conversion rate: 1 kilogram = 2.2046226 pound (source: http://www.onlineconversion.com/weight_common.htm)

area and an improvement in yields. For example, the number of harvested acres in 2001 represented a 44% increase when compared to the number of acres harvested during 1998, which totaled 4,942 acres. Even though Canada's seeded area increased, Canadian production of North American ginseng dropped from its peak in 2001 to 4,299,014 pounds (i.e., 1,950,000 kilograms) in 2002, which represents a decrease in production of approximately 15%. The continued production of ginseng is expected to remain static fixed due to lower prices and high production levels.

The cost of producing ginseng is high. In 2003, the total direct cost of production was estimated to be about \$40,000 per acre, or approximately \$10 to \$20 per pound. The typical ginseng yield per acre is estimated to be between 2,000 pounds and 4,000 pounds. While a 4,000 pound per acre yield is considered possible under ideal conditions, the actual root yield varies by production method and the number of years before the root is harvested, as defined by the Governments of British Columbia and Ontario. In addition, root disease has been known to reduce the yield per acre to 100 pounds per acre. For example, during 2001, Canada reported producing approximately 5,070,632 pounds of ginseng on 7,117 acres, for an average yield of 713 pounds per acre.

United States Ginseng Production

In contrast to the growth in ginseng experienced in Canada, the United States production of North American ginseng fluctuated during the past ten years and 2001 estimates place the volume of ginseng as slightly below that produced in 1992. Specifically, from 1992 to 1994, the volume of ginseng produced in the United States increased from 1,726,487 pounds (i.e., 783,121 kilograms) in 1992 to approximately 2,204,623 pounds (i.e., 1,000,000 kilograms) in 1994. This change represented an increase in production of 28%. However, over the next seven years, the United States production of North American ginseng declined to about 154,326 pounds (i.e., 700,000 kilograms) in 2001, which represents a 30% drop in production. The variability in the production of United States ginseng when combined with the long growth cycle for North American ginseng suggests that the United States may be at a disadvantage to quickly respond to increases in global and/or domestic demand for North American ginseng.

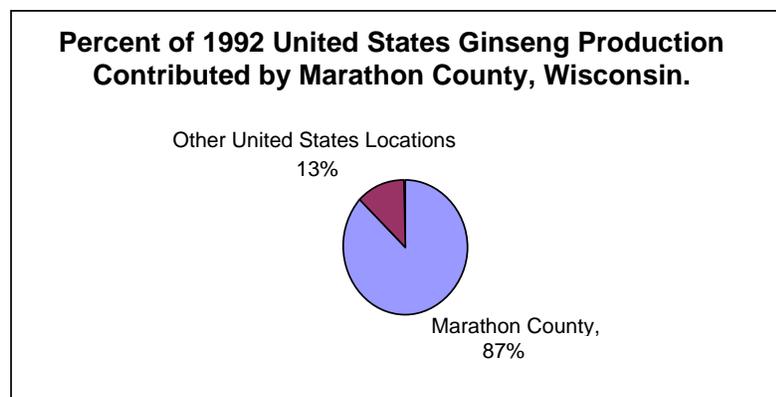
The cost of producing ginseng in the United States is thought to be somewhat higher than the cost of producing ginseng in Canada. Based on sentiments expressed in recent newspaper articles, the direct production cost per pound of Wisconsin ginseng may be estimated to be slightly less than \$25 a pound, which appears to be close to the estimated high end cost per pound of Canadian ginseng. In addition, the average yield per acre of harvested Wisconsin ginseng may have declined over the past twenty years. Specifically, during 1992, the United States reported harvesting 1,726,487 pounds of ginseng on 1,505 acres for an average yield of 1,147 pounds per acre. Wisconsin was the primary contributor to the 1992 production of United States harvest by producing an estimated 1,674,692 pounds of ginseng on 1430 acres for an average yield of 1,171 pounds of acre. However, during 2001, Wisconsin was estimated to produce between 1,388,912 pounds and 1,466,074 pounds of ginseng on 1,835 acres for an average yield per acre of between 757 and 799 pounds per acre. A comparison of the 1992 and 2001 average yields per acre revealed that Wisconsin growers experienced an average decline in production between 372 pounds per acre and 414 pounds per acre, which is a 31.7% to 35.4% reduction in yield from 1992. The reduction in yield per acre increases the direct production cost per acre.

Wisconsin Ginseng Production

Since the United States, as a whole, appears to be at a disadvantage if pushed to respond quickly to increases in demand for North American ginseng, it is important to determine Wisconsin's capability to quickly respond to possible increases in demand for Wisconsin ginseng. After examining the trend in Wisconsin ginseng production and profiling the typical Wisconsin ginseng producer, Wisconsin is showing the same signs of being unable to respond quickly to increases in demand for North American, and more precisely, Wisconsin ginseng. For example, the production of Wisconsin ginseng fluctuates over time; this is detrimental given ginseng's long growth cycle. In addition, even though Wisconsin has more than sixty years of experience in commercializing ginseng, United States legislation governing the use of pesticides combined a lack of competition, has slowed the need for research into more efficient ginseng production. Finally, if the current composition of the Wisconsin ginseng producers parallel's the profile that existed in 1992, the typical Wisconsin ginseng producer may be described as a small farmer (i.e., A small farmer is defined as harvesting less than two acres of ginseng per year). A more detailed description of the Wisconsin ginseng production capabilities is present next.

Wisconsin, and specifically, Marathon County, account for the majority of ginseng produced in the United States. Correspondingly, it comes as not surprise that Wisconsin's ginseng production parallels the United States trend. During 1992, Marathon County, Wisconsin was the primary producer of United States ginseng (see Figure 14). Specifically, during 1992, Wisconsin produced approximately 1,674,692 pounds (i.e., 7,535,923 kilograms) of North American ginseng, which is 97% of the North American ginseng produced in the United States. In addition, ginseng farms located in Marathon County produced 1,460,750 pounds (i.e., 662,585 kilograms), which was 87% of the total United States production for 1992. From all indications, Marathon County, Wisconsin continues to be a primary producer of United States ginseng.

Figure 14

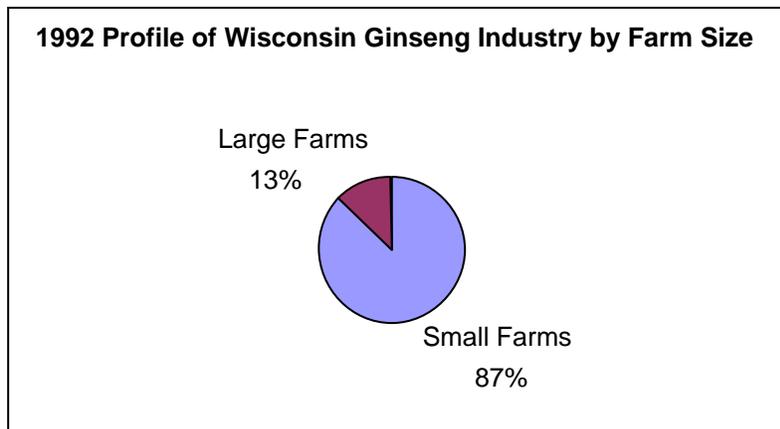


Source: www.nass.usda.gov/census/census92/gingfst.pdf (1995) Census of Agriculture: Featured Stories: American Ginseng – Rooted In Wisconsin, No. 2 (September)

It appears that the vast majority of Wisconsin ginseng producers may be classified as small farms. Yet, these small farms seem to account for approximately 60% percent of the ginseng produced in Wisconsin. Given the relatively high cost of production, the larger ginseng producers are able to achieve greater efficiencies in production by spreading their costs over a larger seeded area and yield. By achieving production efficiencies, the larger ginseng producers are better able to absorb the risk associated with fluctuating ginseng demand and market prices than the small ginseng producer. Consequently, while Wisconsin appears to be at a general disadvantage to respond quickly to increases in demand for ginseng, relative to the Canada, the larger Wisconsin ginseng producer may be less disadvantaged than the small Wisconsin ginseng producer. This conclusion is based on the following observations, which assumes that the profile of Wisconsin ginseng producers has not changed much since 1992.

The 1992 production of North American ginseng in Wisconsin took place on 785 farms, 649 of which were located in Marathon County. Of the Wisconsin farms producing ginseng, 685 (87%) may be classified as small farms (i.e., farms that harvested less than two acres of ginseng). The remaining 100 (13%) of the Wisconsin farms harvested more than two acres of ginseng during 1992 and may be classified as large farms (see Figure 15).

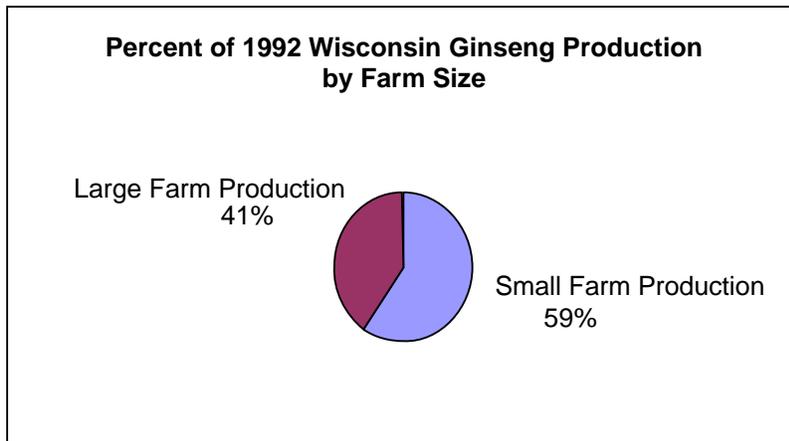
Figure 15



Source: www.nass.usda.gov/census/census92/gingfst.pdf (1995) Census of Agriculture: Featured Stories: American Ginseng – Rooted In Wisconsin, No. 2 (September)

The small Wisconsin farms accounted for a total of 995,842 pounds (i.e., 451,706 kilograms) of ginseng, which represents 59% of the total Wisconsin ginseng production for 1992. The large Wisconsin farms accounted for 678,850 pounds (i.e., 307,921 kilograms) of ginseng, or approximately 41% of the total Wisconsin ginseng production for 1992 (see Figure 16). The average pounds of ginseng produced by a small Wisconsin farm was 1,453 pounds (i.e., 659 kilograms), and the average pounds of ginseng produced by a large Wisconsin farm was approximately 6789 pounds (i.e., 3,079 kilograms). Accordingly, a large Wisconsin farm produced an average of 4.7 times more ginseng than a small Wisconsin farm.

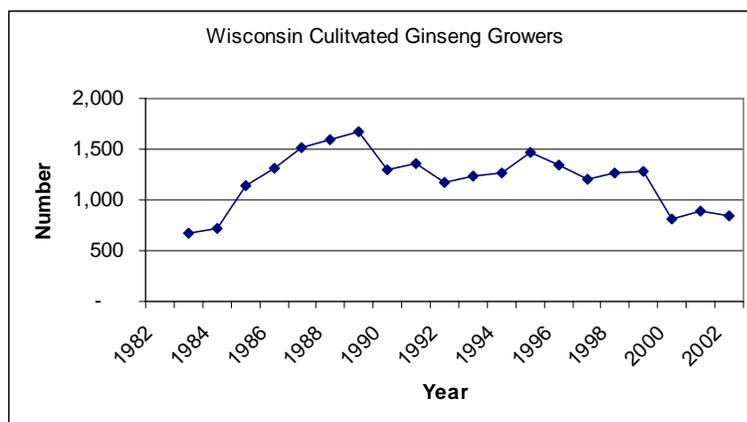
Figure 16



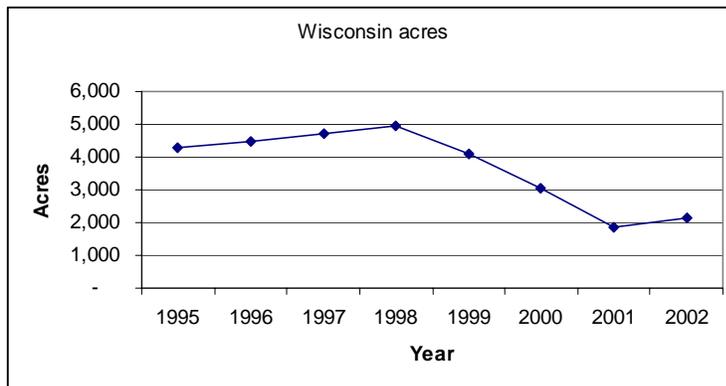
Source: www.nass.usda.gov/census/census92/gingfst.pdf (1995) Census of Agriculture: Featured Stories: American Ginseng – Rooted In Wisconsin, No. 2 (September)

Continued evidence that Wisconsin may be at a disadvantage to respond quickly to an increase in demand for ginseng may be acquired by examining changes in the number of Wisconsin ginseng producers and the number of acres used to grow ginseng over the past twenty years. Figure 17 illustrates that the total number of Wisconsin ginseng growers has fluctuated during the past two decades. As expected, as the demand for Wisconsin Ginseng increased, so did the number of growers. However, when demand declined, the number of Wisconsin growers did as well. During 2002, Wisconsin ginseng growers were estimated to number about 840, which represented a 26% increase when compared to 1983 estimates. The decline in Wisconsin ginseng sales has resulted in a reduction in the number of Wisconsin growers and a corresponding reduction in the number of acres devoted to growing ginseng (see Figure 18). Specifically, during 1995 ginseng was grown on an estimated 4,264 acres in Wisconsin. However, during 2002, the number of acres was reduced to 2,135. The reduction of 2,129 over the seven year period represents a 50% reduction in acres used to grow Wisconsin ginseng.

Figure 17



Source: www.nass.usda.gov/wi/vegetables/ginseng03.pdf (2003), Wisconsin 2003 Agricultural Statistics, page 47.

Figure 18

Source: www.nass.usda.gov/wi/vegetables/ginseng03.pdf (2003), Wisconsin 2003 Agricultural Statistics, page 47.

Overall, it appears that the emerging trend is a continued decline in the number of Wisconsin ginseng growers. Furthermore, as the number of Wisconsin ginseng declines, so does the number of acres used to grow ginseng. More specifically, during the 1996- 2002 timeframe the average annual percent change in the number of Wisconsin ginseng growers was -6.5 percent, compared to an average annual percent change of -7.3 percent in the number of acres used to grow ginseng. These percents suggest that, on average, the reduction in the number of acres used to grow ginseng tends to be at least the same, if not greater, than the reduction in Wisconsin ginseng growers. One plausible explanation for this observation is that Wisconsin continues to consist primarily of small ginseng producers. In addition, it appears that the number of acres planted by large Wisconsin ginseng producers does not necessarily increase, or increase at the same rate, as the number of acres forgone by Wisconsin ginseng producers leaving the industry. This finding is not necessarily surprising, given the labor intensiveness of ginseng cultivation, the cost of production, the risk of disease, and depressed market prices. Nevertheless, in the absence of innovative approaches to lower production costs and increase ginseng yields, the anticipated availability of Wisconsin ginseng may not be able to match the demand generated from Wisconsin's efforts to develop the Wisconsin ginseng market.

UNDERSTANDING THE DISTRIBUTION CHANNEL FOR GINSENG

How does Ginseng get to market?

In order to effectively and efficiently match supply and demand, it is necessary to understand the path or paths that ginseng takes from the farm to the consumer. Furthermore the path may be influenced by whether the ginseng is wild or cultivated. Specifically, even though wild ginseng is preferred to cultivated ginseng, it has been over-harvested and is considered to be an endangered and threatened species under the Convention on International Trade in Endangered Species (C.I.T.E.S.), which is an agreement among many nations to protect wild plant and animal life from extinction. Furthermore, cultivated American ginseng is also considered to be an endangered species under C.I.T.E.S, but it is not considered a threatened species. This distinction has important implications for international trade. In particular, international trade restrictions are imposed on endangered and threatened species, such as wild ginseng. In contrast, endangered but not threatened species, such as cultivated American ginseng (e.g. cultivated Wisconsin ginseng) does not limit international trade; instead a permit documenting the importing or exporting of unprocessed American ginseng is required by the exporting country. This permit or another comparable form of documentation is required for all countries, whether or not a nation has ratified C.I.T.E.S. A permit is not required for processed root or seeds.

In an effort to protect Wisconsin ginseng from becoming a threatened species, which is then subject to trade limitations, the Wisconsin Ginseng Regulatory Program was created. The program requires the registration of Wisconsin ginseng growers and dealers and the certification of dry roots and seed as originating in Wisconsin. In addition, the program provides for the inspection of growers and dealers records for accuracy and for the investigation of Wisconsin ginseng gardens during the growing season for pests and diseases.

After harvesting the root, most ginseng growers sell their dry root to authorized buyers who deliver it directly to Asian markets. Normally, Chinese buyers, either traveling from China or living in the United States, contact and deal directly with individual growers. Ginseng prices, which are set through negotiation with individual buyers, vary from year to year, and may also change during a given year. The buyers then export most of the purchased root to Hong Kong or China for grading and sorting, as few ginseng graders exist in the United States. The graded and sorted ginseng is then re-exported to other countries where it may be further graded and processed. Graded ginseng is also imported back into the United States where it is sold almost exclusively to Chinatown retailers.

Ginseng buyers appear to represent a very strong member of the ginseng channel and may influence ginseng prices. Specifically, ginseng buyers negotiate for the purchase of ginseng from individual growers, who are geographically dispersed and often difficult to locate. Next, ginseng buyers work with graders and sorters to process the ginseng. Buyers also negotiate for the sale of ginseng with wholesalers and retailers located globally, including wholesalers and retailers located in the United States.

The strength of the ginseng buyer is also influenced by the number of buyers competing for harvested ginseng. A reduction in the number of ginseng buyers tends to strengthen the influence that the remaining ginseng buyers possess over market prices. Within the United States, the number of ginseng buyers serving North America (i.e., United States and Canada) has fluctuated over the past twenty years (see Figure 19). More specifically, during the past twenty years, increases (decreases) in the number of United States and Wisconsin ginseng buyers reflected the changes in the number of Wisconsin growers. As the number of Wisconsin ginseng growers increased, the number of United States and Wisconsin ginseng buyers also increased. Likewise, as the number of Wisconsin growers decreased, so did the number of ginseng buyers.

A comparison of the average number of ginseng growers per buyer over the twenty years suggests that the number of ginseng growers changes at a slower rate than the number of ginseng buyers. Specifically, over the past twenty years, there were an estimated average of seventeen Wisconsin ginseng growers for every United States ginseng buyer and an average of thirty-one Wisconsin growers for every Wisconsin ginseng buyer. However, for 2002, the number of estimated United States ginseng buyers was at its lowest during the previous twenty years, with one United States ginseng buyer for an average of thirty-seven Wisconsin ginseng growers. Similarly, the number of Wisconsin ginseng buyers for 2002 was also at its lowest during the previous ten years, with one Wisconsin ginseng buyer for an average of forty-four Wisconsin growers. The increase in the average number of ginseng growers per ginseng buyer suggests that as the number of ginseng buyers decline, both growers and retailers have fewer choices on where to sell/buy ginseng. In these instances, the remaining ginseng buyers tend to possess greater influence when negotiating the price of the ginseng.

Figure 19



Source: www.nass.usda.gov/wi/vegetables/ginseng03.pdf (2003), Wisconsin 2003 Agricultural Statistics, page 47

How is Ginseng Retailed in the United States?

In order to more effectively serve the domestic market for Wisconsin ginseng root, it is important to understand how ginseng is being retailed in the Chinatown markets, which represent the primary target market for Wisconsin ginseng. Ginseng sold at the retail level in the United States may appear in several different forms. Retail customers typically purchase the dried ginseng root itself. While customers tend to purchase the whole root, it is also available in sliced and powdered form. In addition, to retailing the root itself, the ginseng root has been processed into a wide assortment of products including beverages, candies, capsules, soaps, tablets, and teas.

In the United States, dried ginseng is typically retailed in bulk form or packaged form. Packaged ginseng is retailed in a variety of sizes and may be branded by a distributor. Alternatively, retail shops may purchase dried ginseng in bulk from a distributor and package it on site. When sold in bulk, the dried ginseng roots are placed in bins and made available to retail customers. Customers collect the ginseng root from the bins, place it bags that are then weighed and priced accordingly.

Since most ginseng retail customers are unable to evaluate the quality of ginseng, they tend to rely on quality indicators such a price, type of ginseng, or the location where the ginseng was grown. Accordingly, retailers use several methods to inform customers of the different qualities of ginseng that the retailer is offering. While, price is the most common approach for distinguishing differences in ginseng quality, retailers also typically recognize that retailer customers value North American ginseng and Wisconsin ginseng and use these labels to identify the particular type of ginseng being sold.

Ginseng Labeling Issues: Given their inability to recognize observable differences among the different types of ginseng, ginseng customers typically rely on the brand name to help them decide which ginseng to purchase. However, there is evidence that some retailers use generic labels and, in some instances, mislabel their ginseng. Both of theses approaches may mislead retail customers. Retailers often use generic labels, such as North American ginseng, to identify the basic type of ginseng that is being sold. While the generic label is correct and may be used to distinguish North American ginseng (i.e., “cold” ginseng) from Asian ginseng (i.e., “hot” or Korean ginseng), it does not distinguish different qualities of North American ginseng that may exist. For example, since Wisconsin ginseng, Canadian ginseng, and China white, are all classified as North American ginseng, the ginseng roots from these countries may be mixed together in the same bulk bin. In other instances, the ginseng from these countries may be placed in separate bins and priced differently; however, each bin may labeled as being North American ginseng. This type of labeling does not provide much help to retail customers who prefer North American ginseng that is produced from a particular country (e.g., Wisconsin ginseng).

The difficulty in distinguishing the different types of North American ginseng (e.g., North American ginseng grown in China, Canada, and Wisconsin) raises the possibility for mislabeling ginseng. Through mislabeling, the retailer, directly or indirectly, makes false claims about the ginseng and thus misrepresents the ginseng to their customers. Mislabeling ginseng may occur in several ways. For example, ginseng would be mislabeled when Canadian ginseng and China White are placed in barrels that explicitly display the Wisconsin Ginseng Seal, which is a registered trademark signifying that the ginseng was grown in Wisconsin. In addition, some retailers may post the Wisconsin Ginseng Seal in their retail shop windows even though they are not current registered members of the Wisconsin SEAL program and/or they do not supply Wisconsin ginseng to their retail customers. During 2003, evidence of generic labeling and mislabeling was observed in several ginseng retailers located in San Francisco's Chinatown district.

The San Francisco Chinatown Market: During December 2003, a three member research team traveled to the San Francisco Chinatown district to gain a deeper understanding of how ginseng was being retailed. The research team consisted of two representatives of the Wisconsin Ginseng Co-op, who were also experienced ginseng growers, and a Marketing Scholar. The research team visited most of the ginseng retailers in the San Francisco Chinatown district and the Oakland Chinatown district and observed how ginseng was displayed for sale. In addition, attempts were made to interview retail owners and managers for their perceptions about several retailing related issues. Unfortunately, most of the retail owners and managers that we approached declined to be interviewed. We also interviewed a local distributor for additional insights.

Despite the reluctance of most retailers to be interviewed, the messages obtained from the interviewed retailers were consistent with our observations of the ginseng displays, and with the insights obtained from the distributor.

1. **THE WISCONSIN GINSENG SEAL IS BEING MISUSED.** This conclusion is based on personal observation by the research team of the display of the Wisconsin Seal by retailers that were not currently registered SEAL members. There were several instances where the Wisconsin Seal was visible on barrels that clearly did not contain Wisconsin ginseng. In some instances the barrel had a label inserted into the ginseng identifying it only as North American Ginseng. In other instances, the barrel contained China White, a ginseng with physical properties that enable it to be more easily distinguished from Wisconsin ginseng. There was also visible evidence that in several instances, the posted Wisconsin SEAL appeared to be aged and poorly photoduplicated. In addition to personal observation, interviewed retailers, who were typically Wisconsin SEAL members, often complained that non-SEAL members were obtaining and posting forged copies of the Wisconsin SEAL.

- 2. GINSENG CUSTOMERS MAY BE DECEIVED BY GINSENG RETAILING PRACTICES.** This conclusion was based on personal observation resulting from interactions of the research team with the retail clerks. In several instances, the research team entered a ginseng retailer and posed as customers, this technique is referred to as mystery shopping. The research team would visually examine the bulk ginseng available for sale and then ask the retail clerk whether the ginseng was Wisconsin ginseng. There were a few instances when the retail clerk told the research team member that the ginseng was indeed Wisconsin ginseng, even though the visual assessment indicated that it was not. In other instances, an approached retail clerk indicated that the ginseng was not Wisconsin ginseng; often these retail clerks would report that the ginseng in question was Canadian ginseng.
- 3. WISCONSIN GINSENG CONTINUES TO HAVE A HIGH QUALITY IMAGE AND IS PREFERRED BY RETAILERS, BUT RETAILERS TEND TO FOCUS ON PRICE WHEN PURCHASING GINSENG.** Based on personal observation of the research team members and by comments expressed by interviewed retailers, it appears that Chinatown retailers of ginseng recognize that Wisconsin cultivated ginseng is of high quality and they prefer to retail high quality ginseng. However, these retailers tend to be price sensitive and seek to acquire cultivated ginseng at low prices. Consequently, when purchasing ginseng, Chinatown retailers appear to consider cultivated ginseng as a commodity and focus on price. For example, interviews with several retail managers/owners revealed that they believed that Wisconsin ginseng was high quality and they preferred to sell Wisconsin Ginseng. However, the retailers also stated that they felt that it was overpriced relative to Canadian ginseng and, as a result, they decided to stock Canadian ginseng and label it as North American Ginseng, which is appropriate.

Many ginseng retailers offer all three types of North American ginseng (i.e., Wisconsin, Canadian, and China White) to their customer and typically promote the differences among the ginseng types to their customers. For instance, the research team noted that many of the ginseng retailers had posted advertisements in their retail windows promoting Wisconsin ginseng. In addition, personal observation of the retail prices for cultivated ginseng revealed that different price points were set based on ginseng quality. While exceptions were found, typically, it was observed that low quality cultivated ginseng was being retailed for about \$20 - \$60 per pound, a medium quality ginseng was being retailed for about \$80 - \$120 per pound, and high quality ginseng was being retailed for about \$140 - \$200+ per pound. The research team observed that the North American ginseng cultivated in China (i.e., China White) retailed at a low price point, Canadian cultivated ginseng typically retailed at the medium price point, and Wisconsin ginseng normally retailed at the medium or high price points. In contrast to cultivated ginseng, wild ginseng, which is designated as an endangered species under the Convention on International Trade in Endangered Species (C.I.T.E.S.), retails at the highest point, often between \$700 and \$1000 per pound.

- 4. MARKETING DIRECT TO RETAIL OWNERS MAY BE DIFFICULT.** Interviews with the ginseng retailers indicated that they are personally acquainted with the ginseng distributors serving the Chinatown district. Furthermore, even though the retailers may be on friendly terms with their distributors, each year there is a tendency by the retailer to purchase ginseng from the distributor that offers the lowest price. The reluctance of many retailers to speak with the Caucasian research team, combined with the established relationships that the retailers have with existing Asian ginseng distributors is likely to pose significant difficulties for Wisconsin growers seeking to market directly to San Francisco Chinatown retailers. Furthermore, while the possibility to reach Chinatown retailers through the Internet exists, little is known about the extent to which the retailers use the Internet for personal or business purposes.
- 5. OPPORTUNITIES AND CHALLENGES EXIST FOR SUPPLEMENTING THE SALE OF DRIED GINSENG ROOT WITH ADDITIONAL SERVICES.** The majority of dried ginseng that was displayed for sale by retailers appeared in bulk bins. Packaged ginseng also appeared on the retail shelves; however, a large percentage of the packaged ginseng appeared to be boxed up on site rather than purchased in a pre-packaged form from a distributor. For example, retail employees were often observed sorting, trimming, and packaging dried ginseng in smaller quantities. In addition, interviews with retailers and the local distributor revealed that most cultivated ginseng that they purchased was purchased in bulk and delivered in barrels. The distributor also noted that the barrels of dried ginseng also contained a large amount of fiber. While packages of ginseng fiber, either from the barreled ginseng or from trimming the dried ginseng root, were found on the retail shelves, the practice of retailing fiber does not appear to be common or perceived to be profitable. The distributor indicated that retail customers preferred the dried ginseng root and did not show much interest in purchasing the ginseng fiber. The local distributor indicated that Chinatown retailers typically did not have a need for the ginseng fiber, and are unable to convert the fiber into ginseng powder. Consequently, there is a belief that the retailers are interested in ways to profitably discard the fiber.

The purchasing and packaging practices of Chinatown ginseng retailers pose opportunities and challenges for Wisconsin ginseng growers.

- A. An opportunity exists for Wisconsin ginseng growers to recover ginseng fiber from the Chinatown retailers and further process the fiber. For example, the fiber may be converted to ginseng powder. The ginseng powder may be packaged and offered directly to ginseng users or marketed to businesses that further process the ginseng into other products, such as beverages, candies, capsules, and teas.

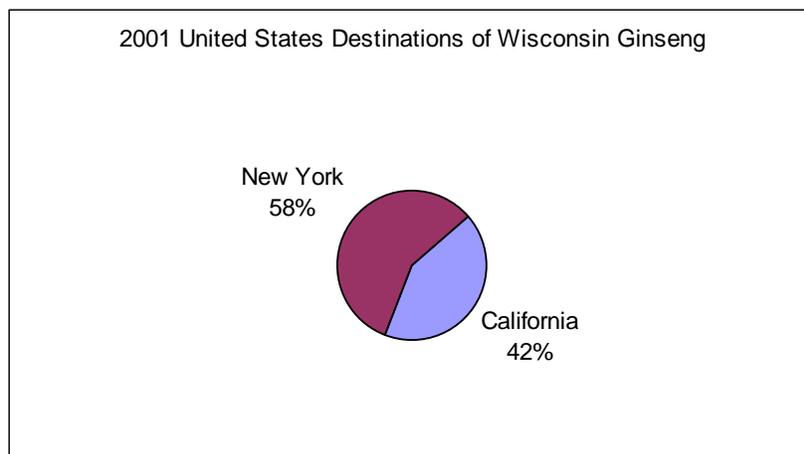
B. While an opportunity also exists to pre-package dried ginseng root, in whole or slices, and market it to Chinatown retailers. While pre-packaging Wisconsin ginseng affords Wisconsin growers more control over the retailing of Wisconsin ginseng, adding a packaging service would require increased financial and labor investments. For example, pre-packaging Wisconsin ginseng would require that the dried ginseng roots be sorted, graded, trimmed, and packaged by Wisconsin growers or their agents. Furthermore, since the majority of Wisconsin ginseng is sold in bulk, Wisconsin growers are faced with the risk of slow acceptance of pre-packaged ginseng by ginseng distributors, retailers, and/or customers. Specifically, converting the sale of bulk ginseng to pre-packaged ginseng represents a significant deviation from the traditional purchasing practices of ginseng distributors and retailers. Major changes in the purchase practices of distributors and retailers are often initially met with resistance, which may require several years to change. Consequently, the offering of pre-packaged ginseng, should be carefully evaluated in terms of the incremental costs associated with pre-packaging dried ginseng and the rate of distributor, retailer, and customer acceptance of pre-packaged ginseng. If a decision is made to offer a pre-packaging service, a prudent approach would be to continue to market bulk ginseng, while building demand for pre-packaged ginseng. As pre-packaged ginseng gains acceptance by ginseng distributors, retailers, and customers, then the volume of bulk ginseng offered to the market may be reduced in favor of pre-packaged ginseng.

- 6. THE SAN FRANCISCO CHINATOWN MARKET APPEARS TO BE A SMALL BUT IMPORTANT UNITED STATES DESTINATION FOR WISCONSIN GINSENG.** An interview with a local ginseng distributor, who has lived in San Francisco for many years, revealed that most (approximately 90%) of the ginseng sold in the San Francisco Chinatown district was purchased as gifts for relatives and friends living in Asian countries. The distributor indicated that gift-giving is common in Asian cultures and Asians living in San Francisco periodically travel to visit their friends and relatives living in Asian countries. However, the frequency of the visits tends to be influenced by environmental factors such as exchange rates, airline ticket prices, and a concern for personal health (e.g., the SARS outbreak).

Moreover, it appears that the demand for Wisconsin ginseng is relatively stable but small, relative to other destinations of Wisconsin ginseng. During 2001, 23,993 pounds of Wisconsin ginseng was distributed to California; the amount represented 5% of the total volume of Wisconsin ginseng distributed that year. During 2002, the volume of Wisconsin distributed to California increased to 26,121 pounds, which represented 5% of the total volume of Wisconsin ginseng distributed during 2002. Even though, the 2,128 pound increase in the volume of Wisconsin ginseng distributed to California represents a 8.9% increase over 2001, Wisconsin exported considerably more ginseng to foreign markets (i.e., Hong Kong (308,231 pounds), China (99,216 pounds), and Singapore (57,467 pounds),

Of the United States destinations for Wisconsin ginseng, California appears to be an increasingly attractive destination. During 2001, Wisconsin distributed approximately 57,584 pounds of ginseng to United States destinations (i.e., New York and California), which represented 12% its worldwide distribution, and New York was the primary destination for Wisconsin ginseng. Specifically, New York accounted for approximately 58% (33,591 pounds) and California accounted for 42% (23,993 pounds) of the Wisconsin ginseng distributed in the United States (see Figure 20a).

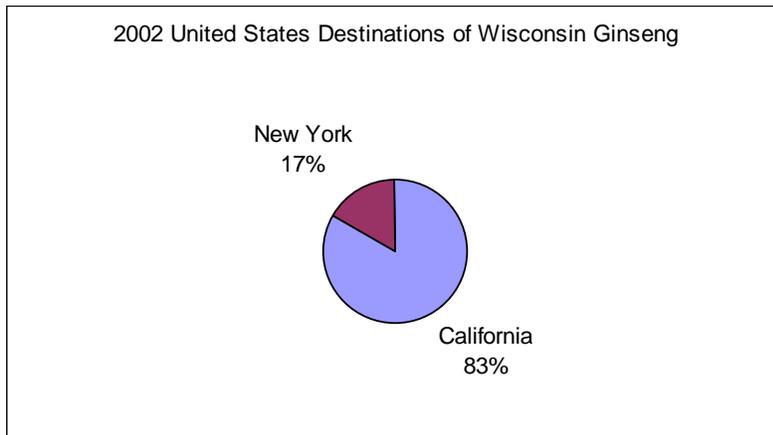
Figure 20a



Source: Wisconsin 2002 Agricultural Statistics

During 2002, Wisconsin distributed 31,346 pounds of ginseng to United States destinations, which represented 6.1% of its worldwide distribution and a decline of 45.6% (26,238 pounds) from the previous year. A drop in the total volume of Wisconsin ginseng distributed to United States locations was due to a reduction in the amount of Wisconsin ginseng distributed to New York. Specifically, New York accounted for 17% (5,224 pounds) of the Wisconsin ginseng distributed to United States locations in 2002. This amount was 28,366 pounds less than the volume distributed to New York during 2001 and represents a -84.4% change from 2001. In contrast, Wisconsin distributed 2,128 pounds more to California during 2002 than it did during 2001; this change represents an 8.9% increase from 2001. The increase in Wisconsin ginseng distribution to California combined with a deduction in the volume of Ginseng distributed to New York result in California's accounting for 83% (26,121 pounds) of the Wisconsin ginseng distributed in the United States during 2002 (see Figure 20b). This finding suggests that California may continue to be an important destination for Wisconsin ginseng within the United States.

Figure 20b

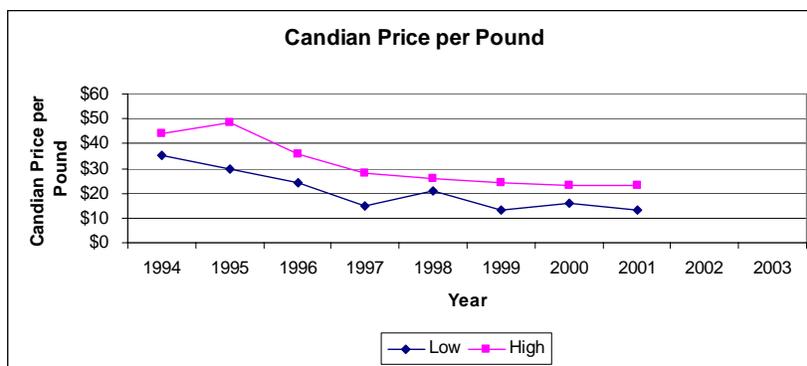


Source: www.nass.usda.gov/wi/vegetables/ginseng03.pdf (2003), Wisconsin 2003 Agricultural Statistics, page 47

UNDERSTANDING THE COMPETITIVE STRUCTURE WITHIN THE GINSENG MARKET

In order to develop a strategic (long-term) advantage the market, it is important to understand the type of competition that is occurring and the type of competition that is likely to occur in the future. Currently, the competitive nature of the cultivated ginseng market appears to resemble a price competition environment, which is evidenced by a continued price decline over the past twenty years. Specifically, an examination of Figure 21 reveals that the average price per pound of cultivated Canadian ginseng has steadily declined from 1994 through 2001. Since the volume of Canadian ginseng sold worldwide has increased, relative to the volume of Wisconsin ginseng sold worldwide (see Figures 2 and 3), the price per pound of Wisconsin harvested ginseng is projected to follow a similar path.

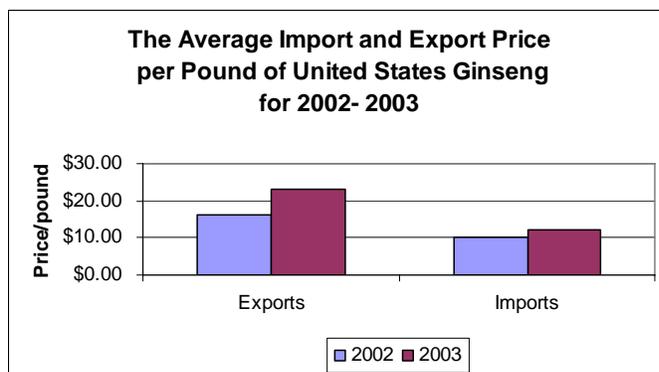
Figure 21



Source: Ontario Ginseng Growers Association (2002), Update to Coop Members and Growers November 2002 (with handwritten updates through 2003).

While the overall price of ginseng has declined, there is evidence that ginseng exported from the United States tends to sell at a higher price than ginseng imported into the United States (see Figure 22). Furthermore, since the United States imports the majority of its ginseng from China (see Figure 5), which is considered to be a lower quality ginseng, it looks as if the United States may be less discriminating when evaluating the quality of ginseng and more price sensitive.

Figure 22



Source: ita.doc.gov/td/industry/otea/index.html, Trade and Economy: Data and Analysis (the Office of trade and Economic Analysis at export.gov)

In a price competitive environment, a majority of customers for a particular product tend to be unable or unwilling to make meaningful distinctions about the quality among competing brands. In this instance, customers tend to act as if the competing brands have about the same quality and treat it as a commodity. As a commodity, a customer's decision of which brand to purchase is often based on price, with customers favoring lower priced brands. Correspondingly, the available evidence provides signals that retail customers prefer North American ginseng harvested from Canada and the United States. However, there are also indications that retail customers, worldwide and in the United States, are unable to distinguish the various types of ginseng; especially between Wisconsin grown ginseng and Canadian grown ginseng.

Even though the production and worldwide sale of North American ginseng has decreased during the past ten years (see Figure 7), the price per pound of ginseng has not increased at the same rate as the decline in production. This finding may be attributed, in part, to the practice of selling a single year's ginseng harvest over a two-year period. The finding may also be an indication that retail customers consider ginseng to be a luxury (or comfort) product rather than a necessity. As a result, while a decline in product availability may result in an increased price per pound of cultivated ginseng, the increase in price is also likely to decrease the volume of ginseng purchased. Such circumstances are harmful to distributors (i.e., buyers) and/or retailers who are unable to move their inventory of ginseng. Consequently, distributors and retailers may continue to maintain low prices for ginseng, in order to deplete their ginseng inventory. Therefore, it appears that ginseng prices lag behind the ginseng production level. Since the distributor and retail inventory levels of ginseng are unknown, the lag effect can not be estimated.

Acknowledging the apparent price competitiveness within the ginseng market, many ginseng producers seek to make a profit by focusing their attention on reducing their costs of producing ginseng. For example, through innovative practices, Canadian ginseng producers have been able to increase ginseng yields from 10% to 30% while reducing costs of production by as much as 50 percent. As a consequence of Canadian efforts to become more efficient in the production of ginseng, Canadian ginseng was rated by Singapore importers as the best value-for-money in terms of price and quality. In addition, Canadian ginseng associations have sought to reduce the selling expenses of association members by building strong alliances with Hong Kong buyers. Such alliances benefit both ginseng buyers and producers. Strong alliances help the ginseng producer by stabilizing the market price for ginseng. In addition, the alliances help the buyers by assuring them a steady volume ginseng.

Other ginseng producers attempt to make a profit by seeking to compete on a basis other than price. The basic idea is to establish meaningful distinctions among the different types of ginseng; thereby enabling the ginseng producers to establish quality differences that are valued by ginseng users. Ginseng customers tend to be less likely to price sensitive when they value higher quality ginseng and recognize quality distinctions among competing types of ginseng. In this situation, producers of higher quality ginseng are able to achieve higher profit levels through price increases. For example, even though Canada and China compete for market leadership in the supply of unprocessed ginseng to Singapore, the United States ginseng is considered to be an important participant in Singapore's high quality retail packed ginseng market. The high quality retail packed ginseng segment is small compared to the unprocessed commodity ginseng market, which is

used by the Chinese medicine industry. This segment tends to be price sensitive and demands low quality ginseng; the low cost Chinese ginseng is important to this segment.

In recent years, the Wisconsin ginseng association attempted to increase demand and profit for Wisconsin ginseng producers by emphasizing the quality of Wisconsin ginseng, relative to ginseng harvested in Canada and China. Specifically, the Wisconsin ginseng association maintains that Wisconsin has a reputation for high quality cultivated ginseng (i.e., it is estimated to have greater amounts of ginsenosides – 7% to 10% – than Canadian – 4% or lower – and China ginseng) and that it is uncontaminated (i.e., does not contain illegal chemicals such as PCNB and DDT). In addition, the Wisconsin ginseng association estimates that approximately 80 percent of cultivated ginseng imported into the United States from Canada and China is contaminated.

To distinguish Wisconsin ginseng from Canadian and China ginseng, the Wisconsin Ginseng Board sought to brand Wisconsin ginseng by developing a Wisconsin Seal program in the late 1980s. In addition, during the 1990s, the Wisconsin ginseng association began to formally request United States government involvement to keep contaminated ginseng from entering the United States. By limiting the United States ginseng market to non-contaminated root, the volume of ginseng available for sale in the United States is reduced, which also tends to increase the market price for ginseng. To date, the Wisconsin Seal program does not appear to be very successful, as there is strong evidence of trademark infringement both within and outside of the United States. Likewise, there is little evidence to suggest that efforts to keep contaminated ginseng root from entering the United States are successful. When customers cannot readily observe product differences, they tend to rely on the brand name to signify quality. However, when a trademark is not actively protected, the likelihood of trademark infringement increases, which may damage the market value of the trademarked product. The loss of market value for the trademarked brand tends to occur when customers are unable to recognize the product quality and base their decisions on brand name. A customer's inability to evaluate product quality in terms of observable product characteristics makes them increasingly vulnerable to unscrupulous retail practices, such as intentionally mislabeling a product. Furthermore, customer inability to recognize meaningful distinctions between the different types of ginseng tends to weaken the market value of the high quality ginseng by enabling ginseng distributors and retailers to treat ginseng as a commodity.

When examining the competitive structure of the ginseng market, it appears that the ginseng buyers (i.e., distributors) represent the principal contributors to creating a price competitive market. From the supply side, the ginseng market may be described as consisting of a large number of small and geographically concentrated ginseng producers. Furthermore, there does not appear to be a single ginseng producer that is able to drive (or direct) the market. As a result, there tends to be extensive competition among ginseng producers to sell their annual harvests. Similarly, from the demand side, the ginseng market may be described as being made up of a large number of small and geographically dispersed customers. In addition, there does not appear to be a single customer that is able to drive (or direct) the market. As a result, it is extremely difficult to match individual ginseng harvesters with individual ginseng customers, whether they are final customers or retailers. In this situation, the difficulty of matching many ginseng producers with many ginseng customers is

facilitated through authorized ginseng buyers (distributors). There are relatively few authorized buyers of North American ginseng, and the number of buyers within the United States and Wisconsin has been declining for several years (see Figure 19). These buyers take responsibility for purchasing large amounts of ginseng from the various producers, grading and sorting the root, and selling the root in smaller quantities to a many retailers located worldwide. In addition, the ginseng buyers appear to have established relationships with their customers, which may be difficult to change. As such, the small number of North American ginseng buyers combined with the importance of their responsibilities for directing the ginseng through the distribution channel makes it possible for them (i.e., the ginseng buyers) to exert considerable influence over ginseng prices.

UNDERSTANDING THE DIFFERENT APPROACHES COUNTRIES USE TO INFLUENCE THE GINSENG MARKET

Recognizing that the success of a country's ginseng producers may be influenced by their actions and the support that they receive from government agencies, it is important to compare practices across the three countries where North American ginseng is produced. The purpose of such a comparison is to identify possible advantages or disadvantages that might be attributable to the level of government assistance provided to the ginseng producers of a particular country.

Canadian Efforts

Many of the Canadian producers of North American ginseng are represented by ginseng associations, e.g., the Ontario Ginseng Association (OGCA) and the Associated Ginseng Growers of British Columbia. The purpose of these associations is threefold: to enhance communication among Canadian ginseng growers, to advance market development and to encourage ginseng research.

The Canadian ginseng associations facilitate communication among ginseng producers through quarterly newsletters and web pages. Furthermore, it appears that the Canadian ginseng associations are actively maintaining their web pages and newsletters. In addition, the web pages provide links to a wide range of resources and reports for the ginseng grower. To advance market development, the associations assist Canadian ginseng producers in their ginseng sales planning by publicizing available information on current market conditions, including updates on ginseng production figures and root availability. The associations also provide services that introduce ginseng buyers and ginseng producers to each other. With respect to ginseng research, the Canadian ginseng associations make available production and medical research. Production research entails the analysis of issues such as pesticide residues on ginseng and registration of chemicals for use with the crop. Production research also assists in assisting ginseng producers to make more effective and efficient use of existing technology and to facilitate the development of innovative improvements in the production of ginseng. Medical research, in contrast, involves examining the benefits associated with the consumption of ginseng. Through their research efforts, the Canadian ginseng industry has been innovative and found ways to increase yields from 10 – 30% and lowering costs by as much as 50%. However, there is a concern that some Canadian ginseng may contain residue of pesticides that are outlawed in the United States. Even though Canadian ginseng producers may not use the United States outlawed pesticides on their ginseng plants, a large percent of ginseng tends to be grown on former tobacco fields where the now-outlawed pesticides (e.g., DDT) were once used. The residue of the pesticides resides in the soil where it is absorbed by the ginseng root. Evidence that DDT residue sometimes appears in Canadian ginseng was documented in tests commissioned by the Wisconsin Ginseng Board.

China's Efforts

Recently, Chinese ginseng farmers have become increasingly skilled at producing North American ginseng. While the Chinese variety of North American ginseng, referred to as China White, is considered to be inferior by the Chinese, it is being positioned as similar to North American ginseng produced in the United States. Specifically, efforts to position China White as comparable in quality to Wisconsin ginseng highlight the similarity in growing conditions. In particular, Chinese ginseng producers tend to emphasize that China White is grown on the same latitude (i.e., the 45th parallel) as the ginseng growing region in Wisconsin and the ancient ginseng-growing regions of Korea and China. Similarly, Chinese ginseng producers maintain that the growing conditions (e.g., soil, climate, and hydrology) for producing China White are similar to those found in the United States. In addition to increasing revenue through positioning, there is evidence to suggest that some Chinese buyers and retailers may be mislabeling Chinese ginseng, i.e., labeling the ginseng as Wisconsin ginseng even though it was not harvested in Wisconsin.

Besides being positioned as possessing comparable quality to United States ginseng, China White producers are estimated to produce ginseng root at less than half the cost of producing Wisconsin ginseng. Part of the cost reduction may be attributable to China's pesticide controls, which are less strict when compared to those enforced in the United States. Furthermore, Chinese ginseng buyers are also seeking to reduce processing costs through the creation of large, state-of-the-art ginseng processing centers, which have the capacity to expand (e.g., double) capacity. In addition, Chinese ginseng buyers are ensuring that they have an abundant supply of Chinese ginseng by developing a large network of Chinese ginseng cultivators (e.g., 3,000 to 5,000 Chinese ginseng producers).

United States (i.e., Wisconsin) Efforts

Wisconsin ginseng is well recognized worldwide as a high quality and preferred ginseng. Furthermore, until the 1980s Wisconsin was a primary provider of North American ginseng. Since the early 1980s Wisconsin has experienced increasing competition. In an effort to assist Wisconsin ginseng producers to maintain and expand domestic and international markets in an increasingly competitive environment, the State of Wisconsin established in 1986 an agricultural market order for the Ginseng Board of Wisconsin (GBW). Specifically, the Ginseng board of Wisconsin is responsible for encouraging research and development, public education, and national and international marketing efforts. For example, the Ginseng Board of Wisconsin, similar to other Wisconsin Agricultural Market Orders, may assist ginseng producers who seek help with research support on issues such as quality standards, environmental problems, and disease control. Second, the GBW may help ginseng producers to make use of new methods to market their commodities in domestic and foreign markets. Third, the Ginseng Board of Wisconsin is empowered to help develop educational programs for producers, buyers and consumers.

From 1986 through 2000, the Ginseng Board of Wisconsin was not able to keep pace with the increasing competition within the global ginseng industry. As a result, in 2000, the Ginseng and Herb Coop was formed in an effort to revitalize the Wisconsin ginseng industry. The primary purpose of the Ginseng and Herb Coop is to market Wisconsin ginseng, implement marketing strategies, and educate Wisconsin ginseng producers. In addition, the Ginseng and herb Coop, which has acquired a Trade Certificate from the Department of Commerce and has applied for a World Trade Certificate, is able to sell ginseng on behalf of its members. Unlike the GBW, which all Wisconsin ginseng growers are members; ginseng producers may choose to become members of the Ginseng and Herb Coop. To date, the Ginseng and Herb Coop membership has approximately 110 members, which is approximately 48 percent of the active Wisconsin ginseng producers. More over, membership in the Ginseng and Herb Coop has declined over the past few years.

Since its inception in 1986, the Ginseng Board of Wisconsin and, more recently, the Ginseng and Herb Coop have worked to improve the competitiveness of Wisconsin ginseng within a global market. During the early 1990s, the GBW sought to take advantage of Wisconsin ginseng's high quality image by developing and administering the SEAL Program. Recognizing the difficulty in customer ability to distinguish Wisconsin ginseng from ginseng harvested elsewhere, e.g., Canada and China, the GBW created the SEAL Program to preserve the integrity of the Wisconsin harvested ginseng root. The Seal Program is an annual membership program and ginseng sellers may join the program throughout the year at a prorated membership rate. Seal Program members are authorized to use the Seal Program's registered trademark, which indicates that the ginseng, whether packaged or sold in bulk, by the seller was grown in Wisconsin. Currently, the Wisconsin Ginseng trademark is registered in about twenty countries. Even though the Wisconsin Ginseng trademark is registered with a number of countries, including the United States, the GBW is still responsible for monitoring of the trademark for copyright infringement. However, since the inception of the Seal Program, approximately fourteen years ago, the GBW did not actively monitor or protect its trademark. As a result, an increasing number of ginseng sellers tended to misuse the trademark without fear of retribution. Today, evidence exists that the misuse of the Wisconsin Ginseng logo is widespread, both domestically and globally.

During 2000, in an effort to protect Wisconsin ginseng interests within the United States ginseng market, the Ginseng Board of Wisconsin began to solicit support from the U.S. Customs and the FDA to stop the importation of contaminated ginseng root. While the efforts to stop the importation of contaminated root has achieved limited success, the GBW is continuing to work with government agencies in a continued effort to reduce the amount of contaminated ginseng entering the United States. In addition, a Wisconsin Senator and Congressman are proposing two pieces of legislation intended to protect Wisconsin ginseng producers. These bills, which were first introduced in 2000 and then reintroduced in 2004, are endorsed by the Ginseng Research Institute of America and the Ginseng Board of Wisconsin. One bill demands that the U.S. Customs Services crack down on ginseng smuggled into the United States. The other bill, The Ginseng Harvest Labeling Act, would require country of origin labeling on ginseng being imported to the U.S. Specifically, the law would require that ginseng sold at the retail level with a label that clearly identifies the country where the ginseng was harvested. It is argued that more effective labeling is required to help consumers make an informed decision on the type and quality of ginseng that they purchase.

Besides working with the U.S. government to stop the importation of contaminated ginseng root, the Wisconsin ginseng industry is engaged in self-policing to ensure that its crops are free of chemical residues. Even though there have been a few instances where Wisconsin ginseng root was tested and found to contain residues of outlawed pesticides, the problem is not thought to be widespread. Nevertheless, the detection of outlawed pesticides on Wisconsin produced ginseng, may indicate a growing need to protect Wisconsin ginseng root from contamination during the growing process. Specifically, there are several instances where pesticides outlawed in the United States for use on ginseng may be legal in the United States when applied to other crops. This situation is potentially problematic for Wisconsin ginseng producers. Since Wisconsin ginseng tends to be grown once on a crop field, Wisconsin ginseng producers are constantly searching for new fields on which to grow ginseng. The fields contracted for ginseng typically used to grow a variety of crops. In several instances, the crops grown on these fields are treated with pesticides legal for that crop, but illegal for ginseng. Since it may take many years before these pesticides to decay, their residue may appear in the ginseng grown on that field. Furthermore, the difficulty in recalling the history of pesticide on the fields used to grow ginseng, combined with a depletion of possible ginseng growing areas increases the likelihood that tests of Wisconsin ginseng will detect pesticide residue. Consequently, there is a need to begin thinking about ways to successfully deal with the pesticide problem. There are several alternative solutions that may be considered, including the following.

1. One alternative is to effectively communicate available options and appropriate protocol to Wisconsin ginseng producers. For example, the U.S. Environmental Protection Agency has established an EPA minor-use program that enables growers to apply for chemical registration that would permit the application of the registered pesticides on ginseng plants. However, gaining approval for crops like ginseng may be difficult. Furthermore, it appears that the chemical registration through the EPA's minor-use program may be grower specific. If this is the case, a more practicable solution may be required.
2. Another possibility is the provision of research support for examining the effects of various pesticides on ginseng. For example, since the EPA makes policy decision on the use of pesticides on crops, including ginseng, the Wisconsin ginseng industry may petition for more research resources to examine the effect of pesticides on ginseng. The results of these studies would then be submitted to the EPA for their consideration.

In addition to the efforts of the Ginseng Board of Wisconsin and the Wisconsin Ginseng and Herb Coop, the State of Wisconsin is taking steps to encourage the expansion of markets for Wisconsin agricultural products, including ginseng. Specifically, the Wisconsin Department of Agriculture created the International AgriBusiness Center (IABC), which provides assistance to buyers of Wisconsin agricultural products by introducing them to Wisconsin suppliers. The IABC uses several methods for connecting buyers with Wisconsin suppliers, including creating a directory of Wisconsin agricultural exporters, offering a trade lead program, arranging face-to-face meetings between buyers and suppliers, and

partnering with other agencies. While the IABC is intended to service all Wisconsin agricultural products, it does not appear sufficient to address the needs of the Wisconsin ginseng producers and sellers.

Until recently, the GBW did not recognize the need for a comprehensive marketing strategy. As a result, the GBW and the Ginseng and Herb Coop tended to take a piecemeal approach to encouraging market development, both domestically and globally. For example, while GBW recognized the need for branding Wisconsin ginseng, there was not an active effort to protect the trademark. In addition, a significant amount of effort has been devoted to petitioning the United States government for legislation to protect the Wisconsin ginseng grower. There is also some evidence that the GBW has encouraged production and medical research on ginseng. However, there appears to be less effort devoted to developing communication programs (e.g., newsletters and actively maintained web pages) and education programs to keep Wisconsin ginseng growers informed of current conditions and market trends. Likewise, as noted previously, there is a need for a more effective service to match ginseng buyers with Wisconsin ginseng producers. Consequently, the piecemeal approach to protecting Wisconsin interests in the global ginseng market was unproductive and damaged Wisconsin's competitive position within the evolving ginseng industry.

Assessing Wisconsin's Potential to gain a Competitive Advantage within the Ginseng Industry

To evaluate the potential of Wisconsin ginseng producers to become increasingly competitive in the ginseng industry in general, and more specifically, in the Chinatown markets in San Francisco, it is necessary to compare the capabilities of Wisconsin ginseng producers with an evolving ginseng market. Such a comparison involves a SWOT analysis, which consists of two distinct, yet related assessments. One assessment addresses the strengths and weaknesses of the Wisconsin ginseng producers. The other assessment examines the opportunities and threats that exist in the ginseng market. By considering both the capabilities of the Wisconsin ginseng growers with the evolving Market characteristics, Wisconsin ginseng growers will be more informed and better able to develop long-term marketing strategies and short-term marketing plans.

Wisconsin Ginseng Producer Capabilities

In order to determine the extent to which the Wisconsin ginseng producers may be able to become increasingly competitive in the ginseng market, it is important to identify their Strengths and Weaknesses. To determine the strengths of Wisconsin ginseng producers, it is important to identify the advantages that Wisconsin ginseng producers have relative to other providers of North American ginseng. Similarly, to determine the weaknesses of Wisconsin ginseng producers, it is important to identify areas where Wisconsin ginseng growers may be deficient relative to their competitors.

Wisconsin's Strengths. The Wisconsin ginseng growers' primary strength is the Wisconsin ginseng root. The root is demonstrated to be of high quality. In addition, Wisconsin ginseng has a worldwide reputation and is well-respected for producing high quality ginseng.

A second strength that appears to be evolving in within the collection of Wisconsin ginseng growers is the implementation of new leadership within the Ginseng Board of Wisconsin. Within the first six months of 2004, there is evidence that the newly elected members of the Ginseng Board of Wisconsin are taking a more active role in protecting the interests of the Wisconsin ginseng grower. For example, there is evidence that the Board members are beginning to actively pursue infringements of the Wisconsin Ginseng trademark. In addition, there is evidence that the Ginseng Board of Wisconsin is seeking to develop a more cooperative relationship with the Wisconsin Ginseng and Herb Coop. Furthermore, the Wisconsin Ginseng Board and the Wisconsin Ginseng and Herb Coop appear to be taking a more active and visible role in serving the interests of the Wisconsin ginseng growers. Specifically, members of the GBW along with the Wisconsin government officials are actively pursuing the development of global markets for Wisconsin ginseng. Similarly, GBW members and Wisconsin Ginseng and Herb Coop members are working with government officials to enact legislation designed to protect domestic markets from contaminated ginseng and to bring greater awareness of Wisconsin ginseng through newspaper and magazine articles.

Wisconsin's Weaknesses. Wisconsin ginseng growers appear to have several critical weaknesses. One serious weakness facing Wisconsin ginseng growers is the lack of safeguards for protect against the mislabeling of Wisconsin ginseng. For example, the failure to protect against the misuse of the registered Wisconsin ginseng logo by ginseng sellers lessens the need of a ginseng seller to be a registered SEAL program member. In addition, the logo loses its value to ginseng sellers.

Another significant weakness associated with the Wisconsin ginseng producers is an apparent lack of effective communication program (e.g., newsletters and actively maintained and up-to-date web pages) to educate Wisconsin ginseng growers about current market conditions and to facilitate market development (e.g., establishing a service to introduce ginseng buyers and producers). It appears that the organizations (e.g., Ginseng Board of Wisconsin and the Wisconsin Ginseng and Herb Coop) established to represent the Wisconsin ginseng growers have not provided recognizable value to their constituents.

A third major weakness is related to the decreased production of ginseng and the reduction in number of acres being used to grow ginseng. Given the time necessary to produce a ginseng crop (i.e., three- five years), the cost of production, and the recognition that most of the Wisconsin ginseng producers grow small amounts of ginseng (i.e., less than two acres), it appears that Wisconsin ginseng growers will have a difficult time satisfying an increasing demand for North American ginseng resulting from efforts to develop domestic and global markets. This weakness becomes increasingly important when Wisconsin ginseng growers continue to experience depressed market prices, which puts pressure on their ability to realize a satisfactory level of profit, especially during the market development activities.

Ginseng Market Characteristics

To determine the attractiveness of an evolving ginseng market, it is important to identify the market opportunities and threats facing the Wisconsin ginseng growers. To determine market opportunities available to Wisconsin ginseng producers, it is important to identify those evolving market conditions that are favorable to Wisconsin ginseng growers. Similarly, to determine the market threats, it is important to recognize those evolving market conditions that are unfavorable to Wisconsin ginseng producers.

Market Opportunities. One of the principal market opportunities that appears to be the increasing demand for North American ginseng worldwide. Of particular interest is the opening up of the China market and the apparent emergence of Singapore. European and South American markets may also represent viable market opportunities.

Domestically, the Chinatown markets in California represent a very important market for Wisconsin ginseng growers. While the domestic demand for ginseng is nationwide, there has been a shift in demand for Wisconsin ginseng. In 2001, slightly more Wisconsin ginseng was distributed to New York, relative to California. However, during 2002, a shift in demand occurred with a vast majority (over 80%) of Wisconsin ginseng being distributed to California. As a result, there appears to be a more durable state of demand for Wisconsin ginseng in California than in New York.

The lack of demand for ginseng fiber represents an opportunity for Wisconsin ginseng growers. The ginseng fiber may be collected and processed into powder. The ginseng powder may then be further processed into candy, beverages, capsules, or other related products. Currently there appears to be a growing interest in consuming ginseng for its medicinal benefits, and more products are being introduced with ginseng as an ingredient.

Market Threats. A serious market threat to Wisconsin ginseng growers is the inability of ginseng consumers to visibly distinguish differences in quality of the various types of ginseng. Even though some observable distinctions exist between the various types of North American ginseng, many consumers are typically not sophisticated enough to detect the sometimes subtle differences. Such a circumstance enables ginseng to be misrepresented by unscrupulous ginseng retailers. In addition, customers inability to detect meaningful differences among the various types of ginseng is likely to produce an opinion that all ginseng is similar, which relegates ginseng to a commodity status where price becomes an important decision criterion.

Another significant threat facing Wisconsin ginseng growers is the increasing dominance of Canada as a supplier of North American ginseng. Canada appears to foster a more collaborative environment among Canadian ginseng producers and the Canadian government. Such collaboration has resulted in innovative production methods and marketing approaches to benefit the Canadian ginseng producer. In addition, Canada appears to be prepared for handling an increase in demand from the development of global markets, including the expansion of the United States ginseng market.

A third threat facing Wisconsin ginseng producer is the prolonged process for acquiring government intervention to protect Wisconsin ginseng producers from unfair trade practices. Without aggressive efforts to control ginseng smuggling into the United States and mislabeling practices in the United States and globally, Wisconsin ginseng producers will continue to be at a disadvantage.

A fourth disadvantage facing the Wisconsin ginseng producer pertains to the amount of power possessed by ginseng buyers. Even though the ginseng market consists of a large number of producers and customers (e.g., retailers and consumers), traditional approaches to connecting producers and customers is expensive in both time and money. In addition, there are few ginseng graders and sorters, especially in the United States, and it is difficult to gain access them. As a result, the few ginseng buyers that serve the ginseng market have developed complex networks of ginseng producers, graders and sorters, and customers, which are difficult to replace. These networks serve both domestic ginseng markets (e.g., the Chinatown markets in California) and global markets (e.g., China and Singapore). Consequently, ginseng buyers are able to effectively influence market prices for ginseng.

A fifth threat pertains to the possible contamination of Wisconsin ginseng roots grown on fields that were treated with pesticides outlawed for use on ginseng. An inability to map out the long-term pesticide history of a field, combined with a lack of understanding about the appropriate protocol for gaining pesticide approval must be addressed.

General Recommendations

The primary purpose of this exploratory study was to gain an initial understanding of the evolving ginseng market, with special attention devoted to the Chinatown market in San Francisco. In addition, the study was intended to provide a starting point for the development of a long-term marketing strategy. While a comprehensive marketing strategy is beyond the scope of the study, a set of challenges and general recommendations for handling the challenges outlined in Table 2 is intended to stimulate thought on how to proceed. Here it is important emphasize that a quick fix solution for improving Wisconsin's ginseng industry is not likely and that a piecemeal approach to re-positioning Wisconsin ginseng is not likely to be very effective.

General Recommendations for the Development of a Comprehensive and Cohesive Marketing Strategy.

To successfully position the Wisconsin Ginseng Industry within the Chinatown market in San Francisco and for expansion into a global market, it is important to that a long-term marketing strategy be established that outlines specific objectives to be accomplished, provides comprehensive and integrative strategy for making effective use of available resources, and includes mechanism for regulating and adjusting the strategy to adapt to environmental changes. In addition, to have a well developed marketing strategy, it is important that the strategy be transformed into detailed action plans that are to be implemented in the short –term. When developing a short term marketing plan, it is important to employ a backward positioning approach to properly position Wisconsin ginseng. Specifically, it is recommended that the positioning process begin with a clear understanding of the target market. Next, it is important to determine the product image that is likely to be favorably received by the target market. Third, the desired image must be effectively communicated to the target market by ensuring each element of the marketing mix, i.e., price, promotional message, product offering, including branding and packaging, and distribution channel are sending the same message to the target audience.

In addition to developing detailed marketing plans, it is also important that the individuals responsible for the strategy's success and the plan's success are dedicating themselves to achieving success. These individual's must be adequately compensated and the Ginseng Industry leadership must be actively involved and committed to the success of the strategy. Furthermore, the strategy and plan must be provide with adequate support when the strategy and plan are implemented, including establishing a realistic timeframe for accomplishing the strategy and plan objectives. It should also be recognized that any strategy or plan is based on a set of assumptions and understandings that may change as the environment changes. This means that the strategy should be adaptable to changing market conditions. Moreover, the adaptability of the strategy and plan requires continual environmental scanning to detect changing trends and the creation of a database to warehouse acquired facts about the ginseng market.

General Recommendations for Challenges Identified in the Exploratory Study

With respect to the current study, it is evident that the Wisconsin Ginseng Industry is faced with several serious challenges that need to be addressed when contemplating the development of a global market or the further penetration of the Chinatown market in San Francisco, California. These challenges, which outlined below (see Table 2), address every aspect of the marketing of Wisconsin ginseng, beginning with the production of ginseng root to the sale of root to the final consumer. In addition, general recommendations for handling these challenges are provided.

Table 2
Challenges and General Recommendations

Origin of Challenge	Challenge	General Recommendation
1. Production	Reduce the cost of growing ginseng	<ol style="list-style-type: none"> 1. Consider appropriateness of Micropropagation procedure that appears is being used in Canada. 2. Continue research on ginseng production, e.g., reducing susceptibility to disease, increasing yields per acre, which in turn reduces costs of production.
2. Wisconsin Ginseng Farmers	The “official” representative of Wisconsin ginseng farmers needs to provide added value to its membership.	<ol style="list-style-type: none"> 1. The Wisconsin Ginseng Board and the Ginseng Co-op will need to provide greater value to Wisconsin ginseng farmers through research, education, and market development. (e.g., see Ontario Ginseng Association). 2. Implement a Co-op membership drive to increase the number of ginseng farmers in the Co-op. 3. Develop increased cooperation among the Wisconsin Ginseng Growers Association, The Wisconsin Ginseng Board, and the Wisconsin Ginseng and Herb Cooperative. (The goal is to seek a unified front, gain farmer support, and make efficient use of membership dues.) 4. Create and maintain ginseng related data bases, e.g., Membership data, sales data, etc. (The databases should be updated on a regular basis to reflect current conditions. The data bases would be helpful in regulating marketing related activity.)
3. Channel to Dealers	Gaining Dealer support	<ol style="list-style-type: none"> 1. Actively and effectively regulate seal membership. 2. Develop a closer working relationship with seal members (e.g., education, personalized service, communication, consistent product quality and availability in sufficient amounts, work to protect Wisconsin “friendly” dealers.) 3. Identify and work to develop preferred working relationships with “key” dealers.

4. Channel to Retailers	Gaining Retailer support	<ol style="list-style-type: none"> 1. Actively and effectively regulate use of current Brand name (i.e., Wisconsin Seal). Retailers should recognize and understand that the “Wisconsin” brand name will be protected and that violations of the trademark will be prosecuted. Without evidence that the trademark protection activity is effective, retailers are less likely to support the Wisconsin Seal program. <ol style="list-style-type: none"> a. Developing a new logo may be considered as a <u>last resort</u> to effectively protecting the value of the current logo. 2. Actively and effectively regulate seal membership program, e.g., ensure that membership lists are current. 3. Develop a closer working relationship with retailers who are seal members (e.g., education, personalized service, communication). 4. Explore the possibility of developing channel directly from the Co-op to ginseng retailers. It should be noted that introducing a new channel, i.e., direct from the Co-op to retailers, is likely to face significant resistance at the beginning. Retailers may be reluctant to buy direct from the Co-op since it represents a major change in the way ginseng is currently purchased (i.e., through buyers). In addition, ginseng dealers are anticipated to take actions that slow down retailer and, possibly, farmer acceptance of the Direct marketing approach.
5. Channel to End Users	Effectively distinguish Wisconsin Ginseng from competing brands.	<ol style="list-style-type: none"> 1. Educate consumers about benefits of Wisconsin Ginseng, relative to competing ginseng “brands.” (promotional issue) 2. Help consumers recognize Wisconsin Ginseng in retail outlets (promotional, branding & packaging issues.) 3. Develop special packaging and labeling to help consumers recognize quality ginseng, e.g., Wisconsin ginseng may be tested by an independent company and those yields that meet the US standards may be given the company’s seal of approval (see for example, ConsumerLab.com Approved Quality Product Seal). <ol style="list-style-type: none"> a. If this approach is used, then the consumer will need to be educated and instructed to look for the quality product seal. (A drawback to this approach is if two different symbols are being used – the Wisconsin Seal and the ConsumerLab.Com seal of approval. b. Such an approach may be confusing to the final customer. In this instance, it may be worth exploring the possibility of using a single seal, e.g., the Wisconsin Seal, and only place the seal on those yields that meet the ConsumerLab.com testing. c. Regardless of the approach, the customer (final customer, retailer, and dealer) will need to be educated about the symbol and its significance.

6.	Market Development	Growing within a limited market. (Chinatown market in San Francisco is limited. San Francisco traditionally accounts for approximately 5% of Wisconsin ginseng sales. This sales level has been relatively stable.)	<ol style="list-style-type: none"> 1. Consider entering into new markets or further developing existing markets (e.g., Hong Kong, China, Singapore, Europe, Latin America) 2. Seek to develop Oakland market. 3. Seek to further penetrate San Francisco Chinatown market (see items 4 and 5). 4. Seek to develop alternative markets for less potent Wisconsin ginseng. (Since ginseng loses potency after two years, its value also begins to deteriorate. In this instance, it would be advantageous to identify and develop markets for less potent ginseng. For example, consider those markets being served by China White, either in root form or powder form. If alternative markets for less potent Wisconsin ginseng are pursued, the branding of the less potent ginseng will become very important.)
7.	Market Offerings	Increase the range of ginseng related product offerings.	<ol style="list-style-type: none"> 1. Explore the possibility of offering additional for-pay services to dealers and retailers (e.g., grading, sorting, de-pronging, pre-packaging, direct distribution of ginseng root to retailers). 2. Develop a market for ginseng fiber. (Purchase ginseng fiber from dealers and retailers. The fiber may then be ground into powder for inclusion in other ginseng products.) 3. Consider developing a market for ginseng seeds. 4. Develop market for micropropogated ginseng plants. The market may be domestic (Wisconsin or other US states that produce North American ginseng) or international (e.g., Canada and China).
8	Government	Combating Ginseng fraud	<ol style="list-style-type: none"> 1. Continue to work with the State of Wisconsin and the United States Governments to enforce existing laws related to ginseng imports. 2. Continue to lobby for the passage of the Country-of-Origin labels on ginseng imported in the United States. (May be extended to require that retailers include a country-of-origin label on ginseng that they sell to the end consumer).
9.	Government	Protection from Root Contamination During the Growing Process.	<ol style="list-style-type: none"> 1. Need to work with EPA to gain approval for various pesticide use and/or acceptable residue levels. 2. Need to support research on the effects of pesticide residue on ginseng. 3. Need to educate Wisconsin ginseng producers on the appropriate protocol for registering pesticides for use on ginseng.

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