1. Introduction

The Minnesota Premium Asparagus Project began in 2019 to increase the amount of asparagus grown and sold in Minnesota and to identify market opportunities for local growers to increase their sales and profitability. Coordinated by the Sustainable Farming Association of Minnesota (SFA) in partnership with the University of Minnesota Extension and Regional Sustainable Development Partnerships, the project is funded by a grant from the Minnesota Department of Agriculture’s Specialty Crop Block Grant (SCBG) program.

Asparagus is a high value crop and is an early season vegetable that heralds the arrival of the growing season. It is also in high demand. As a perennial, asparagus is useful in farming systems that employ soil health and regenerative agricultural practices. This study is intended to explore the Minnesota asparagus market, identify challenges and opportunities to growers, wholesalers and retailers, and make recommendations to increase sales of Minnesota grown asparagus.

2. Market Study Methodology

The information compiled in this report was collected from secondary research of national asparagus production and market data and phone interviews of 19 asparagus buyers located across Minnesota [See Figure 1]. Interviews were conducted in spring and summer of 2020 by the University of Minnesota Extension’s Regional Sustainable Development Partnerships. Interview respondents were located across 14 Minnesota counties, and represent a wide mix of buyers, including: 3 privately-owned grocery stores, 7 natural food cooperatives, 5 restaurants and cafes, 2 regional food hubs, and 2 special event catering companies.
Interviews included a core set of questions pertaining to purchase history and sell volume, pricing, product specification requirements, and buying/selling transactions. While the core set of questions remained consistent across all interviews, the interview format was semi-structured, which allowed asparagus buyers to freely express their personal preferences and past experiences purchasing local asparagus, as well as details pertaining to their relationships with local asparagus producers. In addition to buyer interviews, a series of 37 cold calls were made to assess asparagus availability and consumer prices at grocery stores of various scales across Minnesota.

3. Minnesota, National & Global Asparagus Trends

Despite a steady increase in consumer demand for fresh asparagus within the US, domestic production acreage of asparagus has decreased significantly over the past 20 years. In 2019, approximately 20,700 acres were harvested nationally with a production total of 84.39 million pounds, which is approximately one-third of the production acres harvested in 2000.
Figure 2: Asparagus Acres Harvested, Total United States, 1998-2019. Source: USDA ERS

Top producing states include California, Michigan, and Washington. Concurrent with the decline in US production, imports of fresh asparagus from the world’s top asparagus exporting countries of Mexico and Peru have increased, and the United States is the largest importer of asparagus worldwide. China is the largest producer of asparagus worldwide, however Chinese production closely matches their own domestic consumption.\(^1\) While China’s production may have little impact on US production, it highlights a potential opportunity for US producers to sell their asparagus at Asian markets and restaurants within the United States or to grocery stores located in areas with a high population density of Asian Americans.

Prior to 2018, production and market data for Minnesota asparagus was not collected or reported, and USDA data on acreage was combined with other specialty vegetable crops. In 2019, the Minnesota SFA Asparagus Project online survey collected 114 responses from current asparagus growers and interested growers within Minnesota. Of the respondents, 28.7% stated that they are currently selling asparagus, with production data ranging from 2 crowns to 3,500 crowns planted per grower and asparagus sales in 2018 ranging from $40 to $6,000.

4. Asparagus Consumer Profile

Understanding the profile of consumers that typically purchase asparagus and the preferences of consumers is important as it shapes the types of places asparagus is typically sold and highlights both opportunities and challenges for farmers selling into various market channels.

Consumer income, ethnicity, age, and household size are key factors influencing consumer purchases within the United States. Likelihood of purchase based on household income is highest amongst households with annual incomes above $100,000, with 38% of consumers in this income bracket likely to purchase asparagus within the calendar year. In contrast, consumers with incomes between $25,000 and $49,900 annually are half as likely to purchase. According to The Packer\(^2\), increased likelihood of asparagus purchase relative to income has been a consistent market trend within the United States over the last decade.


Ethnicity is also a factor influencing the likelihood of consumer purchase. White/Caucasian and Asians were equally likely to purchase asparagus within the United States, while Hispanic, Black/African American, and other ethnicities less likely to purchase within a calendar year.

Age and family size are also significant factors determining likelihood of asparagus purchase, with consumers over the age of 59 nearly twice as likely to purchase asparagus within a calendar year as consumers between the ages of 18 and 39. Households without children are more likely to purchase relative to households with children, with 27% of families without children and 18% of families with children purchasing asparagus within the year.
While reasons accounting for differences in consumer willingness to purchase asparagus based on income, age, and household size are not conclusively known, the higher average price of asparagus per pound higher relative to other vegetable alternatives could likely account for the increase in consumption amongst higher income consumers. Similarly, asparagus is widely marketed for its potential health benefits due to relatively high levels of fiber and micronutrients, which could explain the increased popularity of asparagus amongst older individuals that tend to be more health-conscious consumers overall. Asparagus’ popularity in stir fry and other traditionally Asian dishes account for its popularity with Asian Americans. Lastly, taste preferences relating to age may also account for the relative low consumption rate of asparagus amongst younger consumers and families with children, which typically consume higher amounts of fruit relative to green vegetables.

When consumers were asked in the U.S. Grocery Shopper Survey about their top reasons for buying locally grown foods in grocery stores, freshness was the most frequent reason cited (83%). The second most cited reason was concern for supporting the local economy (68%), followed by taste (56%). These findings highlight that consumers buy local primarily for superior freshness, flavor, and socio-economic reasons primarily, while factors such as knowing the source of their food and concern for the environment are of lesser importance (ERS 2015).

5. Market Channels for Minnesota Grown Asparagus

A market channel, also known as a distribution channel, is the way in which products are transferred from the producer to the consumer. Because each marketing channel offers a different combination of benefits and drawbacks, understanding market channel opportunities for local asparagus is important for growers as it can expand their reach and maximize revenue.

Farmers have two main channels in which to sell produce locally: directly to the consumer or through intermediated marketing channels. Direct-to-consumer market channels include farm stores, roadside stands, and farmer’s markets. Intermediated marketing channels are short supply chains which link farmers with consumers through an intermediary seller. Examples of intermediated marketing channels are sales to restaurants, grocers, schools, hospitals and other institutions, regional wholesalers, and direct sale to regional distributors.3 Far reaching sales channels, such as national distribution and export,

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are marketing channel opportunities for large-scale production systems but are not in scope of this market report.

Direct-to-consumer market channels have historically been the primary means by which specialty crop producers have sold their produce locally. In recent years, pressures from low market pricing have led many farmers to increase their production scale and efficiency, which has in turn increased the volume of locally grown produce sold through regional food hubs and wholesale distribution channels.

Direct and intermediated market channels both have benefits and drawbacks to consumers and producers, and the best choice of market channel depends on a variety of factors such as production scale, access to affordable farm labor, producer interest and competency in selling direct-to-consumer, and the types of businesses within a producer’s region. Selling direct to consumers allows producers to sell to consumers at a lower price (relative to retail pricing) while providing a higher price to producers. However, marketing to consumers can be costly to producers in terms of labor and transportation expenditure. Depending on production scale and sales volumes, once labor and transportation is factored, marketing directly to consumers may not yield higher net profits than selling through wholesale market channels. Insights into the opportunities and challenges of selling asparagus through different market channels were revealed during this market research, and these insights are highlighted in Figure 6. [Figure 6: Market Channels for Local Asparagus]

Given current data on consumers’ reasons for purchasing local and consumer willingness to purchase asparagus based upon income, ethnicity, and age [see Asparagus Consumer Profile], the strongest opportunities to sell asparagus are likely to be high at high-end, health-focused, or farm-to-table restaurants and natural foods grocery stores that cater more specifically to higher-income consumers, seniors, and health-conscious consumers. Asian markets and restaurants may also present a market channel opportunity, although data was not collected from Asian markets in buyer interviews conducted during this study.

Higher-end restaurants and cafes are typically found within Minnesota metro areas and in areas trafficked by seasonal vacationers from cities, and this market channel presents a good opportunity for farms located in relative close proximity to urban and suburban areas. These restaurants often differentiate themselves as fine dining or farm-to-table establishments with eclectic and seasonal menus that feature local produce, meats, and fresh-caught fish. Fresh asparagus is often grilled and featured as an accompaniment to meats, cooked in soups and sauces, or in baked into dips, quiches, or scones. These restaurant buyers are likely to be familiar with purchasing products directly from local producers, and may even feature their local suppliers on their menu, website, or on social media platforms. When thinking of restaurant market channels, it is important for growers to look for opportunities outside farm-to-table restaurants, as opportunities also present at places such as gourmet pizza parlors, local brew pubs, country clubs and other businesses that serve higher-income and foodie-focused clientele.

Selling directly to grocery stores is a strong opportunity for asparagus growers who are in close proximity to a natural foods store, small- or mid-scale grocery cooperative or specialty stores such as fish and meat markets. These types of stores often differentiate themselves from their competition by selling locally-grown products, and thus, establishing a selling relationship can be a win-win for both producer and retailer. Specialty and natural foods grocery stores may also feature profiles of grower partners through in-store signage and online, which can be a good opportunity for farmers to gain market exposure, thus increase future sales opportunities at other local businesses or through selling direct to the consumer.

There is less opportunity for asparagus growers to sell directly to large-scale conventional grocery stores, due to factors such as the difference in production scale of a single grower relative to store demand,
purchasing decisions at chain retailers are often made at regional and national offices with orders being fulfilled by regional and national wholesalers. And, customers shopping at larger conventional grocery chains are more likely to be price-conscious and less health focused than consumers shopping at specialty and natural foods stores.

Selling through special events and catering market channels present both opportunities and challenges to growers. It can be a tremendous sales volume opportunity, particularly if the catered event aligns with peak asparagus season. However, catering companies may need greater assurance that quantities ordered will be delivered in full and arrive at a specific date and time. These may be challenging requirements for some producers as variables such as weather can impact asparagus yields day to day. Farmers wishing to sell through catering channels should look for companies in their area and establish a relationship prior to the growing season, as catering events are booked well in advance.

6. Availability & Market Demand

While year-round availability of asparagus is now common across large-scale grocers and mid-scale specialty grocers within metro areas, availability of local asparagus was rarely observed in larger outlets. Produce buyers not purchasing Minnesota-grown asparagus cited a lack of availability that matched their sales volume and a lack of local options sold through their preferred distribution channels.

“We’d love to carry local, but it’s not available through Albert’s or J&J, and we don’t typically buy directly from growers.” - produce buyer, large-scale conventional grocery

In 2020, Minnesota-grown asparagus was available in metropolitan and suburban areas in May and June, primarily sold at small and mid-scale natural foods retailers and farmers markets. Availability was more limited in areas with lower population density. A few small-town grocery buyers noted that they did not buy local asparagus or rarely purchased it because of a lack of growers selling wholesale in their market area and a high degree of price-sensitivity among their customers. Some indicated there was widespread availability of wild asparagus, leading some residents to forage rather than buy asparagus in the store.

While availability was limited in some parts of Greater Minnesota, areas with higher levels of seasonal tourism and lake recreation were more likely to carry local asparagus as it is a popular vegetable for grilling with fresh-caught fish and other meats. Vacationers are generally less price-sensitive when making purchasing decisions and typically represent consumers in higher income brackets, a key demographic for asparagus consumption.

Minnesota-grown asparagus was consistently available in natural foods cooperatives throughout the state. All cooperatives surveyed sold local asparagus if local supply was available. Only one cooperative out of 12 surveyed did not sell Minnesota-grown, but the produce buyer expressed a strong desire to purchase locally should the opportunity become available. Availability was also observed at several farmer’s markets across the state.

Demand for local was higher than local supply at nearly all of the natural and cooperative grocery stores that were already purchasing local asparagus. Buyers expressed enthusiasm for Minnesota-grown, but admitted that because local supply wasn’t always enough to meet their demand, they also purchased non-local asparagus through large produce distributors or Wisconsin-grown asparagus through a regional distributor. Buyers often mentioned that they gladly purchase more than their original purchase agreement if their local producer communicated surplus availability during the growing season.

“Mostly we say we will buy whatever you can get us.” - Asparagus buyer, natural grocery
“It’s a high demand product with not enough supply, and if it comes in fresh, we pretty much entertain whatever comes our way” - Asparagus buyer, large-scale cooperative grocery

While higher demand for local was observed across small- and mid-scale natural grocery stores, excess demand was not communicated from restaurant, cafe, and catering company buyers. A catering company highlighted that while they liked supporting local asparagus farmers, the asparagus season did not align with their busy wedding season which is typically late summer into early fall. One restaurateur cited lack of dependability of on-time delivery and quantities falling short of purchase agreements as limitations of purchasing more local products directly from growers. It is worthy to note that because so few restaurants were available for interviews during the COVID-19 pandemic, restaurant and other food service demand for local asparagus is difficult to assess and could likely be higher than 2020 interviews suggest.

7. Consumer Pricing

While the national consumer price for conventionally grown asparagus averages around $3 per pound at large-scale chain retailers and value-positioned retail grocery stores, retail prices for locally-grown conventional asparagus sold within Minnesota ranged from $3.99 to $6.99 per pound across stores surveyed. Higher prices for Minnesota-grown relative to mass-market pricing likely reflects strong
consumer willingness to pay a premium for locally-grown and the price insensitivity of higher-income

consumers who are more likely to purchase asparagus.

Higher prices for conventionally grown asparagus were consistently noted at cooperative grocery stores that championed a strong relationship with their local grower, and at stores that communicated through store signage or customer service that their local asparagus was grown using organic practices. Lower prices were observed in stores located in lower-income areas, stores with higher competitive pressure from mass retailers, and stores located in the Twin Cities metro with competitive pressure from other natural foods stores.

Retail prices for local Certified Organic asparagus ranged from $4.99 to $7.99 per pound, with higher prices noted across specialty and natural retailers located within metro areas and at smaller stores within Greater Minnesota having less direct competition from discount grocery retailers. Lower prices in the range were observed at farmer’s markets and at retail locations located in competitive areas.

8. Wholesale Pricing

Similar to the wide ranges of consumer prices, wholesale prices of Minnesota-grown conventional asparagus paid by buyers surveyed ranged widely from $3.50 to $5.50 per pound, however the majority of prices fell between $4 and $5 per pound. Higher prices were noted for asparagus sold directly to retail stores and lower prices were observed for sales through wholesale distribution channels, food hubs, and farmers selling direct to restaurants. However, this was not consistent across all price data collected and prices varied greatly within each respective market channel.

Premium prices were consistently paid to growers for asparagus grown organically or otherwise, without the use of pesticides, and two buyers paid more for hand-harvested spears because they recognized the waste associated with trimming machine cut asparagus. Lower prices were noted for sales through regional distributors and grower-direct sales for larger-volume catering and special events contracts. This could be associated with a reduced ability for catering companies to market the product to their customers (and thus capture a premium price) in the same way that retail stores can do through in-store
signage. However, larger-volume sales transactions require less labor and transportation expenditure for growers, and it was noted by one grower that selling wholesale was their preferred market channel due to the scale of their production and their lack of interest and time to directly market their product.

Certified Organic asparagus was purchased by only two retail buyers interviewed, and in both cases was grown on Wisconsin farms, sourced through a regional distributor. Prices averaged $5 per pound with little price variance. Grocery buyer preference for purchasing Certified Organic vs conventional varied at retail outlets and was largely dependent on the strength of their shoppers’ values for Certified Organic and the price sensitivity and average income level of their customers. Only one buyer interviewed purchased Certified Organic exclusively, while several preferred to purchase conventional that was grown naturally due to the lower prices. These buyers communicated that while Certified Organic was important to their customers, they didn’t sell as high of volume of Organic asparagus as they did conventional due to the higher sales price.

**100% of asparagus buyers said they willingly pay more for locally grown.**

Asparagus buyers already committed to buying local products will pay more for local asparagus. When asked about their willingness to pay more for local asparagus, 100% of asparagus buyers surveyed said they would willingly pay more for locally-grown, primarily due to freshness. They also noted that asparagus was the first real sign of the Minnesota growing season in their departments, which generated consumer excitement for their department overall. Three buyers also recognized the high labor cost associated with asparagus production and expressed willingness to pay more for local farm labor. Lastly, the short season of local asparagus relative to the year-round availability of imported product created a sense of scarcity around local asparagus which in turn drove up consumer demand and price.

“It’s a high labor product and only available for a short time. It’s worth paying a premium for.”
- Asparagus buyer, large-scale cooperative grocery

“Selling local asparagus is celebratory. It’s the first real sign of summer in our department.”
- Asparagus buyer, small-scale cooperative grocery

In several cases, buyers who were willing to pay more for local were in actuality *not paying more* relative to prices paid for distributed product coming from California, Mexico, or Peru. In one circumstance, the grower intentionally sold for a lower price to increase sales volume at their local cooperative, which in turn meant the grower didn’t need to sell at other locations or through the farmer’s market. The store in turn passed on a lower price to customers and actively promoted the product and the grower’s farm through social media and in-store customer service, which generated excitement for local asparagus and fulfilled the cooperative’s mission to support local producers. In two other circumstances, buyers were willing to pay more for local but their local grower was charging them less than market value for no apparent reason or benefit to the grower, and thus growers missed the opportunity to receive a higher profit margin.

9. Product Specifications

All asparagus buyers interviewed were asked a variety of questions pertaining to their requirements and preferences on spear length, width, uniformity, specialty variety, packaging, and banding. The relative importance of these specifications were subjectively assessed based upon the number of buyers expressing preference for each specification and the strength of their response.
Regarding spear length and width, buyers overall expressed very little concern over product variation in locally sourced asparagus. None of the buyers refused to purchase asparagus based on spear thickness or length, although three of the nineteen buyers voiced preference for slender spears. One of the buyers was a chef at an upscale catering company that preferred long and slender spears because they presented more beautifully on a platter. The other two buyers communicated previous negative experiences with purchasing thick asparagus which was also dry, tough and fibrous, but noted that this was not an issue with locally-sourced asparagus.

“The fresh factor of local asparagus compared to what we get in from California or Mexico is so extreme, that some irregularity in sizing [spear thickness and length] is really a non-issue. We love it, and we try to get in as much as we can” - Asparagus buyer, large-scale cooperative

While spear length and width were of lesser concern to buyers, consistency in both length and width within banded bundles was of much greater concern for retailers and restaurateurs. Retail buyers communicated that sometimes they needed to re-bundle or trim bundles prior to merchandising, which was costly in terms of labor and product waste. Restaurant buyers and caterers also desired consistency in spear diameter to ensure proper cooking of each spear, and one higher-end restaurateur also voiced preference for uniformity for a better aesthetic in his plating presentations.

“I wish we could be pickier about consistency, but we make it work even if the spears aren’t perfect.” - Asparagus buyer, Twin Cities restaurant

Case size and packaging material were generally of lesser importance to local asparagus buyers, and buyers reported receiving anywhere from 5lbs per delivery at a small town grocery store to bundle case trays or boxes of 11, 15, 24, 27-30, and even larger case sizes for larger accounts and catered events. Eleven pound cases were the most common. While none of the 19 buyers had a minimum purchase quantity requirement, it is worth noting that case sizes larger than 15 pounds may not fit in some commercial coolers and would be less desirable for restaurants and catering companies, while cases smaller than 11lbs were not sold through regional distributors. While generally buyers didn’t have preference on packaging material, one buyer at a natural foods cooperatives communicated that they prefer to receive orders in recyclable packaging.

**Figure 9: Asparagus Case Packaging, 11lbs.**

All buyers reported receiving asparagus that was pre-bundled, either with one band or two. While most buyers didn’t have strong opinions on banding, two preferred bundles to be single-banded. In the first case, the catering company reported that sometimes second banding could lead to spear heads snapping off which led to loss of usable product. In the second case, the retail buyer preferred to do the second banding on arrival so they could apply a store band with the proper PLU-code, which provided more accurate information for checkout cashiers.
All buyers, except for one, purchased bundles that were approximately one pound. One grocery store purchased in half-pound bundles because their local grower had smaller hands and had difficulty bundling larger bundles. This store buyer also reported higher volume sales on the half-pound bundles compared to full-pound bundles and attributed higher sales to many of their customers being single adults or older couples that often preferred to purchase in smaller quantities.

Differences in buyer preference on packaging, bundle size and banding revealed during the buyer interviews highlights the importance of communicating with buyers on their preferences. In some cases, communication with buyers may result in reduced labor expenditure for the grower and win-win scenarios for both grower and buyer.

10. Buying & Selling Relationships

Buying and selling relationships in the context of this report include supply and purchase agreements, delivery, payment transaction, verbal communication, co-branding partnerships, and the personal aspects of buyer-seller relationships.

A common theme throughout the asparagus buyer interviews was the close and meaningful relationships buyers held with their local producers. Sentiments such as “I love our asparagus farmer,” “we’ve been purchasing from the same farm for many years,” and “we have a close relationship with our grower,” were expressed by almost all the buyers currently purchasing local asparagus.

The degree of formalization in the buying and selling relationship was often (but not always) reflective of the size and scale of the buyer’s business. While buyers of all sizes required written invoices of their local producers, smaller cafes and cooperative grocery stores often conducted yearly business informally through handshake agreements over price and quantity. Delivery schedules were less defined and expectations placed upon growers were minimal as long as product arrived throughout the growing season. If the grower had surplus availability, buyers at smaller stores and cafes were likely to increase their orders with little or no prior notice. However, restaurant owners did express that shortages at the
time of delivery could be problematic if proper notice wasn’t provided as sufficient quantities were required for use in recipes or to feature as a special menu item.

“Our farmer calls us every day during the asparagus season to make sure we have enough. If we’ve sold out, he delivers extra the next day. That communication makes things easier for us, and that’s why we have a long-standing relationship with this farmer.” – Asparagus buyer, small-scale grocery

Mid- and large-scale grocery buyers tended to have additional layers of formality which included yearly meetings, written supply and purchase agreements, contracts or pledges to ensure natural on-farm growing practices, on-site visit of the farm, or proof of liability insurance. Mid- and large-scale grocers alike also had greater expectations for growers to deliver at regular and set days and times, although several buyers did communicate flexibility around delivery shortages if the weather conditions were suboptimal and quantities were less than promised. These stores did, however, stress the importance of phone communication with the grower prior to delivery when shortages to supply agreements were anticipated. Although uncommon, one asparagus grower noted that one of his restaurant accounts required payment through electronic funds transfer, which could be a limitation for some growers.

Larger accounts, including accounts with more than one retail location, were more likely to purchase their local (Wisconsin-grown) asparagus through a regional distributor to be palletized with other produce orders. While this came with an added cost to retail buyers, the logistics efficiency of having orders arrive at stores at set times and days were worth the additional price, given the scale of their operations. However, some buyers still maintained strong relationships and continuous communication directly with growers. In addition, these larger accounts championed their local growers with their customers through local-identified signage, frequent sales promotions, and website features of farmer-partners.

“There are times when it’s just easier to pay $25 per pallet to [our regional distributor] than it is to deal with an erratic delivery schedule with someone that has a small truck.” - asparagus buyer, large-scale grocery

Many buyers that were not already purchasing local expressed interest in doing so if they were to be approached by growers professionally. They also noted that growers that provided sample product and one-page sell sheets were more likely to gain their attention. One buyer mentioned that while he rarely purchased from local growers directly at the time of introduction, he was more likely to follow up at a future date if they had good-quality product samples and basic marketing materials such as a sell sheet or business card. One interested buyer noted that they weren’t sure about the legality or liability associated with purchasing directly from a farmer, but that if the farmer provided this information at the time of introduction it would be helpful in establishing a sales relationship.
**Figure 11: Farm to Grocery Toolkit**

Farm to Grocery Toolkit: Opening New Farm to Grocery Market Channels to Help Increase Access to Minnesota Specialty Crops and Local Foods was released in April of 2020 by the Regional Sustainable Development Partnerships as a resource to farmers and grocers to help facilitate the sale of farm-grown products to grocery stores. The toolkit covers legality and methods of selling and buying local foods, includes a legal product checklist and various templates (labels, farm feature, invoicing), and provides tips on building successful business relationships.

**11. Conclusion**

While production of asparagus has declined within the United States in recent decades, demand for Minnesota-grown asparagus remains high and current supply lags behind local demand. Despite many co-op grocers already having established producer relationships, there are many opportunities for growers statewide to form new sales relationships. Growers should also consider exploring relationships with restaurants, farm-to-table cafés, specialty retailers, and catering companies. Considering asparagus key consumer demographics will help growers identify potential buyers. Asparagus consumers are more likely to be Caucasian and Asian, high income, and over 50 years old. Given this information, there may be untapped opportunities for selling asparagus to Asian grocery stores and restaurants.

Local asparagus is sold for relatively high price premiums at retail stores statewide, and retail buyers of local asparagus expressed willingness to pay more for Minnesota-grown. Growers should be careful not to underprice their asparagus.

Growers that invest time in fostering relationships with buyers through clear and frequent communication will be rewarded with long-term and positive buyer-seller relationships. Growers should
communicate with buyers to better understand their preferences for banding, bundle and case sizes, and packaging. Buyers tend to prefer thinner spears and place a high value on spear consistency. This could require more frequent picking and sorting. While one pound bundles are standard, some buyers may have other preferences. When approaching new buyers, growers that bring product samples and basic marketing materials are more likely to secure sales contracts.

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<th>Market Channel</th>
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<tr>
<td>Farm Stand</td>
<td>● Price optimal for grower and consumer&lt;br&gt; ● Sales opportunity for all scales of production&lt;br&gt; ● Builds brand identity for the farm locally&lt;br&gt; ● Farmer is the sole decision-maker&lt;br&gt; ● Direct communication with consumer for exchange of product information and consumer preferences</td>
<td>● High labor costs&lt;br&gt; ● Direct marketing may not be an interest or a core competency of many growers&lt;br&gt; ● Opportunity to increase production and sales may be limited for growers located in rural areas</td>
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<tr>
<td>Farmer's Markets</td>
<td>● Potential sales opportunity for all scales of production&lt;br&gt; ● Price optimal for grower and consumer&lt;br&gt; ● Higher consumer traffic relative to individual farm stands&lt;br&gt; ● Opportunity for growers to connect directly with new/potential customers</td>
<td>● High labor costs&lt;br&gt; ● Consumer traffic is slower during the spring season&lt;br&gt; ● Urban/suburban markets may have limited stall space for small growers</td>
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<td>Intermediated, Direct Sale:</td>
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<td>Rural Grocery</td>
<td>● Potential sales opportunity for small-scale producers</td>
<td>● Shoppers in rural areas may be more price-sensitive and less health conscious than urban/suburban consumers&lt;br&gt; ● Practice of wild harvesting by consumers reduces consumer demand in stores&lt;br&gt; ● Limited sales growth potential</td>
</tr>
</tbody>
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| Natural Foods Grocery | • Natural foods shoppers are the core asparagus consumer demographic  
• Selling local products generally aligns with store mission  
• Local products are actively promoted in-store and online by retailer  
• Buyers are experienced with buying direct from growers | • Stores may already have an established relationship with an asparagus grower  
• Stores may have higher demands on product specifications  
• Regular communication during growing season is essential to success |
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<td>Specialty Retail</td>
<td>• Sales at butcher shops and fish markets an under-developed sales opportunity</td>
<td>• Buyers may have limited experience buying directly from growers</td>
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| Restaurants & Cafes | • Higher demand at fine-dining and farm-to-table establishments  
• Market-expansion opportunities at gourmet pizza parlors, Asian restaurants, brew pubs. | • Buyers may have specific quantity and product specification requirements  
• On-time delivery is important to buyers and transportation/logistics may be challenging and costly for smaller-scale producers |
| Catering & Special Events | • Opportunity for growers to sell larger quantities in a single transaction  
• Relatively high demand for asparagus with buyers due to the ease of asparagus grilling, ability to portion control, and strong plating presentation | • Peak catering season does not align with asparagus harvest  
• On-time delivery is essential  
• Stricter quantity and product specification requirements |
| Farm-to-School |  | • Miss-alignment with school year and asparagus season  
• Younger adults and children are not the core consumer demographic |
| Assisted Living & Hospitals | • Seniors and health-conscious individuals are the core asparagus consumer demographic | • Historically not a strong sales opportunity for growers  
• Buyers may lack experience with buying directly from growers  
• Buyers are highly price-sensitive |

Intermediated, Wholesale:
| Wholesale Distributors | • Sales opportunity for larger-scale producers  
• Less costs associated with labor, transportation, marketing and overhead | • Lower prices paid to growers  
• Not an opportunity for smaller-scale producers |
| Conventional Grocery | • Might be opportunities with independently-owned stores or small grocery chains | • Conventional grocery channel consumers are price-sensitive and not within the core asparagus consumer demographic  
• Buyers typically purchase through large wholesalers  
• Buyers may only be accessible through regional or national offices |
| Regional Food Hubs | • Higher prices paid to growers relative to large-scale wholesalers  
• Buying from local producers generally aligns with food hub mission  
• Food hubs actively promote local produce sales within their trade and market on behalf of growers  
• Buyers are familiar with purchasing from local producers Higher prices paid to growers relative to large-scale wholesalers  
• Lower costs to growers associated with labor, transportation, marketing, and overhead | • Prices paid to growers are generally lower than direct sales to consumers or direct sales through other intermediated market channels  
• Regional food hubs are more limited by scale and range of trade area relative to regional and national wholesale distributors |