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Improving USDA's public price and volume data for an equitable organic food value chain

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Abstract

Since 1915, the U.S. Department of Agriculture (USDA) Agricultural Marketing Service (AMS) Market News has supported a key element of our agricultural economic system: equity in access to pricing information between buyers and sellers and across operations of various sizes. Today, the privatization of agricultural information and market concentration in the food system make this public data source especially important for supporting a more fair and stable market for the growing organic sector. In this study, we use a mixed-methods approach to explore how AMS Market

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News organic price and volume data can be improved to better support organic agrifood system actors. Based on 26 interviews and 227 survey responses from organic producers, processors, distributors, and retailers across California, we find consistent interest in increased organic market data presented in visual formats with trend explanations, despite only limited direct reliance on Market News organic data throughout most of the sector. We also identify three main areas where Market News organic price and volume data could be improved: the data interface should be made more accessible and informative, inaccuracies and gaps in the data should be addressed or explained, and efforts to include more organic specialty crops should continue. These improvements will help the development of a more robust public source of organic market data that could especially benefit smaller-scale operations, given the increasing corporate consolidation in the agrifood system.

Keywords
organic agriculture, public data & information, AMS Market News, market data use

Introduction: USDA's Agricultural Marketing Service (AMS) Market News (MN) & Organic Agrifood Systems

For over a century, the U.S. Department of Agriculture (USDA) Agricultural Marketing Service (AMS) Market News (MN) has provided free, up-to-date, unbiased information on agricultural commodity prices, volumes, and movements in order to help producers and agrifood businesses "evaluate market conditions, identify trends, make purchasing decisions, monitor price patterns, evaluate transportation equipment needs and accurately assess movement" (USDA AMS, 2023b). The first MN report, which documented strawberry prices in Louisiana, was shared via telegraph in 1915 (USDA, 2015). Since then AMS has continually updated their dissemination technologies and commodity and market coverage; for example, they added air shipments, international trade, and telephone access in the 1960s and 1970s, and organic products and web access in the 1990s (USDA, 2015; USDA AMS, 2015). Today, MN has a modern data platform, interactive website, and an application programming interface (API) allowing for automated pulls of raw data (USDA AMS, 2025). Nearly a thousand agricultural and livestock commodities are included in the more than 250,000 reports issued by MN that cover retail, shipping point, and terminal markets, as well as commodity movement, feedstuffs, truck rates, and more; these reports get more than 53 million views annually (USDA, 2015; USDA AMS, 2021, 2023; USDA Office of Communications, 2015).

MN promotes stability and fairness in the agricultural economy by providing equitable access to pricing information between buyers and sellers and across operations of various sizes; this encourages honesty in market trades and balanced bargaining power across market positions and operation size (Lesser, 1993; McCallister, 1950). MN was established in response to the post–Civil War agricultural recession, when farmers lacked economic power and market knowledge and the public supported stabilizing incomes for farmers and prices from consumers (Lesser, 1993). Later, MN developed shipping reports and expanded the commodities covered (USDA, 2015) to help maintain equitable and effective marketing practices when widespread adoption of trucking and fruit and vegetable processing in the 1940s again left farmers with limited pricing information for their products (McCallister, 1950).

In this paper, we explore how MN organic data can be improved to better support organic agrifood system actors. While consumer demand has successfully driven growth in U.S. organic retail sales without much public-sector involvement, organic production, and the consequent environmental improvements to our farm land, has not kept pace; imported organic commodities have largely filled this gap (Carlson et al., 2023; Damewood, 2025). As organic production can limit environmental degradation (Reganold & Wachter, 2016), this public benefit is important for the public sector to focus on because it has been repeatedly under-supported in profit-driven privatization trends in agriculture (Duncan et al., 2021; Foster, 2000; Ryan, 2020; Wolf, 1998).

Today, the growing organic agrifood sector needs more high-quality market data (Home et al.,

2017). U.S. organic sales have grown steadily, from about US$10 billion in 2000 to $40 billion in 2015 to US$70 billion in 2024 (a 5.2% growth rate that outpaced the market overall), and organic growth is expected to continue (Carlson et al., 2023; Pfaff, 2025). However, less than 60% of organizations that collect organic market data report performing any kind of data quality checks (Home et al., 2017), limiting organic businesses' ability to rely on the data and leaving many at a competitive disadvantage in relation to conventional growers (Home et al., 2017). Reporting of organic data in MN began in 1992 and was formally supported in the 2002 farm bill (USDA AMS, 2023). Organic commodities are now included when they are consistently present in a market with enough price sources to maintain confidentiality (at least three). However, because of the limited market presence of organic products, data are available on organic versions of only about 200, or 20%, of the current MN commodities (USDA AMS, 2023).

Improving organic MN data could especially benefit organic farmers with small and/or artisanal operations, as market control is increasingly concentrating into the hands of only a few large businesses in the food system (Clapp, 2021, 2025; Frerick, 2024; Howard, 2021; Levins, 2000). In much of our agrifood industry, the top four companies control 40% or more of the market, a level of concentration economists agree poses a serious risk to market functionality (Clapp, 2025; Frerick, 2024; Howard, 2021; Levins, 2000). For example, as of 2018, the top four grocery retailers control 45.2% of the U.S. market and the top four seed and agrochemical firms control more than 50% of their respective global markets (Clapp, 2025; Howard, 2021). Large corporations have also gained prominence in the organic sector; by 2009, 14 of the top 20 North American food processors had organic brands (Howard, 2009). While lower prices may follow some consolidation, this level of concentrated market control has given an increasingly small number of companies disproportionate power to shape agricultural markets, technology, and policy, positioning many farmers, especially smaller operations, at a competitive disadvantage in the marketplace (Clapp, 2025). Equitable access to organic market data can help small organic operations obtain fair prices for their products and better crop insurance and business planning options.

AMS contracted with our research team to evaluate the market data needs of California's organic stakeholders. While we received funding from AMS, our research was conducted independently; AMS had no oversight over our academic output, and input on research decisions was limited. For example, we developed our survey and interview instruments and sampling strategy independently and incorporated AMS feedback on accuracy and coverage of our questions and research population. In our study, we contextualize some of our findings and recommendations within the larger body of academic literature focused on the role of the private and public sectors in agriculture knowledge production. More specifically, we attempt to answer the question: how can MN organic price and volume data be improved for the organic agrifood industry, with an eye towards specialty crops and other important commodities in California?

The Agricultural Information Landscape

MN is one of many public agricultural information sources. The USDA also publishes information on commodity outlooks (USDA, 2026), often used for investment and/or speculation on commodities futures (Karali et al., 2019; McKenzie & Darby, 2017), and the Census of Agriculture focuses on land use, agricultural production practices, and producer income (USDA National Agricultural Statistics Service [NASS], 2025). More broadly, university and county extension programs and local water and conservation districts also produce agricultural information directly relevant to farmers (Beethem et al., 2023), such as methods to reduce yield gaps between conventional and organic production (Carlson et al., 2023).

Public-sector agricultural data, especially those published by USDA, are impactful and highly trusted. For example, USDA crop production estimates continue to impact corresponding commodity prices in the market (Karali et al., 2019; Massa et al., 2024; McKenzie & Darby, 2017). Agrifood businesses—growers, handlers, and banks working

with wheat and potatoes in Washington, hogs in Iowa, and tomatoes in California—are more likely to rate market information as more valuable—that is, more accurate, timely, accessible, and specific—when it comes from USDA (rated 6.9 on a scale of 1 to 10) than from extension services (6.0), commercial sources (5.9), commodity associations (5.7), and informal sources (5.1) (Wolf et al., 2001). It has also been determined that 69% of the market information accessed by agricultural businesses originated from public-sector sources; 30% was accessed directly, but 39% was accessed indirectly through private data intermediaries, like commercial vendors and agricultural consultants (Wolf et al., 2001). While the persistence of embedded public data is somewhat unclear, a more recent report found that nearly 70% of the policy-focused studies published in the *American Journal of Agricultural Economics* relied on public data sources in their empirical analyses (Lusk, 2016).

Nevertheless, agrifood businesses have increasingly turned to private agricultural information sources, like agricultural consultants and commercial information sources, while investment in public sector agricultural data and knowledge production has been cut (Beethem et al., 2023; Prokopy et al., 2015; Wolf, 1998, 2006). A recent survey of large (100+ acres) commercial corn and soybean farmers in the eastern U.S. Corn Belt showed that more farmers rely on chemical and seed dealers (96% used each source) and other farmers for information (91%) than public sources like USDA (79%), conservation districts (67%), and university extension (64%) (Beethem et al., 2023). In 2014, private food and agricultural input companies provided about three times more funding for U.S. food and agriculture research than federal and state agencies (Heisey & Fuglie, 2018).

This shift exemplifies a privatization of agricultural information, which causes market information imbalances (Beethem et al., 2023; Jiang et al., 2020) that could lead to market failure if not addressed (Akerlof, 1970). Publicly available agricultural information, such as the corn yield predictions published publicly by Descarts Labs and TellusLabs from 2015 to 2017, are increasingly privatized; both labs stopped publishing their high-quality reports publicly after partnering with major grain traders (Jiang et al., 2020). Concentrated market control also gives some firms disproportionate informational advantage; in 2011, the pork bellies futures market stopped functioning because traders could not compete with the informational base of Smithfield, which at that time produced and sold 30% of the commodity (Jiang et al., 2020).

The focus on profit in the private sector is unlikely to yield high-quality information on agricultural practices that promote a healthy natural environment. In precision agriculture and Agricultural Big Data, developers have focused on the goals and motivations of funders bolstering their profitability; these tools therefore largely benefit the financial and technology industries at the expense of farmer autonomy, including efforts to improve the social and/or environmental aspects of their food production practices (Duncan et al., 2021; Ryan, 2020). The preservation of public sector agricultural information is critical for the future of farming, especially organic farming, and for its viability vis-à-vis the powerful actors on both sides of the farmer (Levins, 2000).

Despite the current federal leadership focus on reducing government functionality (Kamarck, 2026) and USDA's historical focus on adoption of large industrialized farming practices (Levins, 2000), a recent USDA Economic Research Service report emphasizes the importance of public sector research for growing the organic sector over the past twenty years, and supports further increases to public organic market and trade data (Carlson et al., 2023). And the 2018 farm fill tasked AMS with improving data reporting on certified organic agricultural products (USDA AMS, 2023a). As the organic agrifood sector grows, high-quality, comprehensive, publicly accessible market information can promote more equitable economic power and market stability.

Methods: Data Collection and Analysis

We used a mixed-methods approach to generate a thorough understanding of the data needs of different actors in California's organic agrifood industry. Interviews brought a nuanced understanding of people's experiences and needs and helped refine the meaning behind some of our

survey findings. Online surveys[1] reached more respondents, captured details of their data use preferences and individual business operations, and helped show the broader frequencies of various themes present in our interview findings. We focused on collecting data from four distinct links within California's organic agrifood supply chain: producers, processors, distributors, and retailers.

For recruitment, we aggregated contact information for 7,027 organic agrifood industry stakeholders across California from the USDA Organic Integrity Database, with supplementation from the California Department of Food and Agriculture, the California Department of Public Health, the Independent Natural Food Retailers Association, the USDA Supplemental Nutrition Assistance Program, and the National Produce Blue Book. We used emails and/or phone calls to request interviews from 200 producers, 667 handlers,[2] and 84 retailers randomly selected from this list. Because mailing addresses were the most common contact information available, we sent three rounds of survey recruitment postcards to 2,987 producers, 2,503 handlers, 926 producer/ handlers, and 393 retailers in early 2024. We supplemented this outreach with emails and phone calls where possible. To avoid possible infiltration by bots and fraudulent survey takers of our online survey (Pinzón et al., 2024), we reached out directly to each intended recipient, rather than posting on listservs or social media.

We completed a total of 26 interviews between December 2023 and May 2024: ten with producers, five with processors, six with distributors, and five with retailers. In the in-depth interviews, we focused on details about the respondent and their organization, marketing and buying strategies, and data use and outstanding needs. All interviews were conducted in English by the lead author and lasted from 20 to 60 minutes. Most interviews were conducted over the phone or via Zoom and were recorded and transcribed using the automated transcription software Otter.[3] Transcriptions were reviewed and edited for accuracy by the lead author, who also analyzed the interview data, using grounded theory, to code for common themes in QualCoder.

Our surveys asked for details about the respondent, their operation and business practices, the organic market data they use, their ideal organic market data, and their opinion of MN organic data. We developed similar but distinct sets of survey questions for producers, processors, distributors, and retailers. Respondents were offered a US$40 incentive for participating. Survey data were collected using Qualtrics and cleaned and analyzed using R and RStudio. All survey results presented are from the 227 responses that were at least 50% complete (from 152 farmers, 34 processors, 27 distributors, and 14 retailers). As anticipated, we received more responses from producers than other supply chain links, reflecting the overall distribution of California's certified organic operations/businesses.

We use two main analytical approaches to our survey data. First, we present descriptive statistics in order to generalize to the overall organic industry in California. Second, we conducted an importance-satisfaction analysis (Galt et al., 2019) that helped identify specific areas where MN may not be meeting the needs of those familiar with the data source. Following this analysis for each market segment, we graphed the average ratings of satisfaction with aspects of MN organic data (x-axis) against the average ratings of importance of aspects of an ideal data source (y-axis) to highlight areas where average importance scores were disproportionately higher than average satisfaction scores.

[1] We used online rather than paper surveys due to budgetary constraints. As of 2023, 91% of California farmers had internet access and 85% had computer and/or smartphone access (USDA NASS, 2023).

[2] Several of our contact information sources (including the USDA) categorized all industry actors handling organic products, including distributors and processors, as "handlers." We differentiated between distributors and processors based on respondents' own identification. We contacted more handlers for interview recruitment because their disproportionate market control may have discouraged participation in our study.

[3] One interview took place in person and was not recorded; detailed notes were made and coded for this interview.

Findings

Little Direct Reliance on Formal Organic Market Data

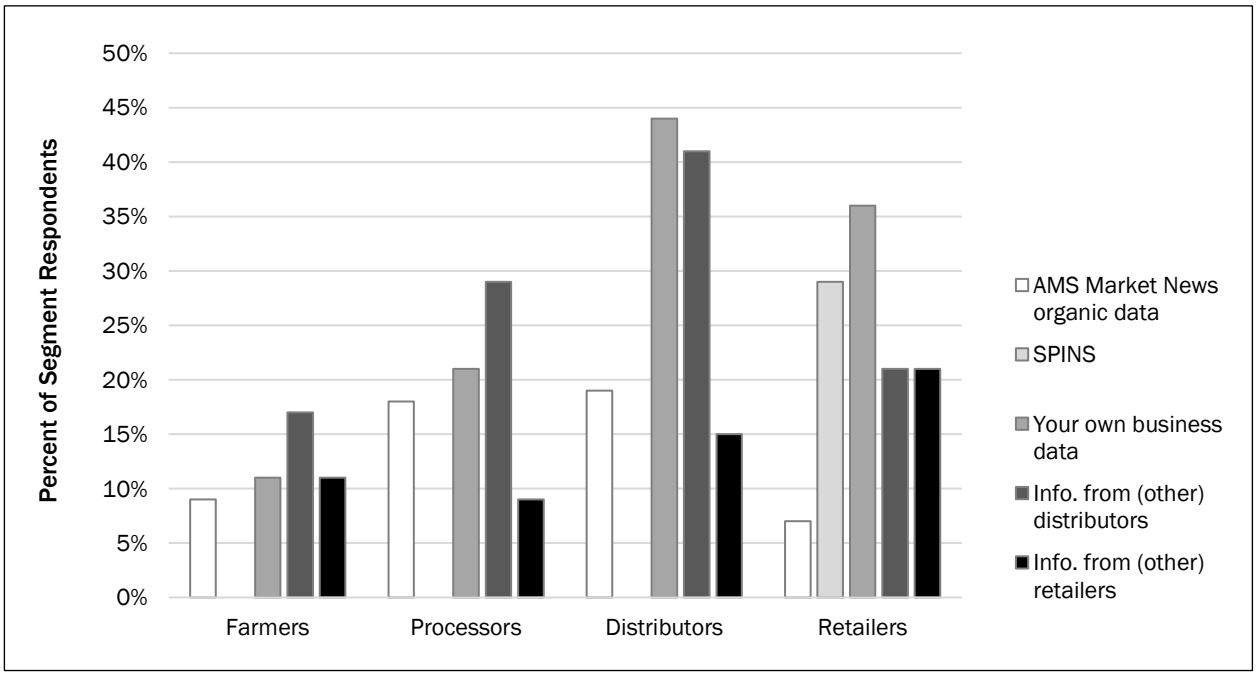
Overall, our research participants regularly used organic price and volume information, often gathered through informal practices like price comparisons and conversations with industry connections. Thirty-nine percent of respondents regularly used some kind of organic price and/or volume data and primarily reported using informal data, including data that their own organization tracks, information from distributors, and information from retailers (Figure 1 and Table 1). Distributors (44%) and retailers (36%) most commonly used data that their own business tracks about its operations, while farmers (17%) and processors (29%) most commonly used information from distributors or wholesalers outside their organization. While rates of direct reliance on MN were low (7% to 19% across supply chain links), distributors may facilitate a wider influence by this data throughout the industry. Distributors are centrally positioned in the market, serving as market information sources for 20 to 30% of all other respondents (41% of distributors also use other distributors), and many (19%) relying on MN organic data regularly (Table 1).

Interviewees also demonstrate consistent use of informal data sources, providing detail about how the infotablermation is gathered. Twenty-one of our 26 interviewees discussed comparing prices with others informally in the marketplace as a main information source. Four out of five interviewed retailers checked competitor prices to understand the local market better. A small grocery retailer described their staff regularly going to their local competitors' stores and looking at their prices to get a better sense of how their own pricing compares to their local market:

> All of our fresh teams, produce, meat, and seafood, are always checking out what the other grocery stores are charging in town. … They'll literally go and just take a look (Interview 5).

Of the six interviewed producers who sold their products directly to consumers and/or retailers, five reported observing competitor pricing

Figure 1. Main Data Sources Used by Value Chain Link



Source: Organic Data Initiative Gap Analysis Surveys (2024).

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Table 1. Use of Organic Price and Volume Data Sources by Value Chain Link

Data Source Used	Farmers (*N* = 152)	Processors (*N* = 34)	Distributors (*N* = 27)	Retailers (*N* = 14)	Total (*N* = 227)
None	93 (61%)	12 (35%)	5 (19%)	6 (43%)	116 (51%)
Any	52 (34%)[b]	14 (41%)	16 (59%)	7 (50%)	89 (39%)
Agricultural Marketing Service (AMS) Market News organic data	14 (9%)	6 (18%)	5 (19%)	1 (7%)	26 (11%)
USDA National Ag. Statistics Service (NASS) Census of Ag.	6 (4%)	2 (6%)	0	0	8 (4%)
SPINS[a]	n/a	n/a	n/a	4 (29%)	n/a
Nielsen[a]	n/a	n/a	n/a	0	n/a
Organic Farmers Agency for Relationship Marketing (OFARM)	1 (0.7%)	1 (3%)	1 (4%)	0	3 (1%)
Mercaris, Inc.	0	0	0	0	0
Organic Grain Research and Information Network (OGRAIN)	1 (0.7%)	1 (3%)	0	0	2 (1%)
Organic Trade Association (OTA)	1 (0.7%)	0	1 (4%)	1 (7%)	3 (1%)
Maine Organic Farmers & Gardeners Assn Price Reports	0	0	0	0	0
Data your own business/org. tracks about its operations	17 (11%)	7 (21%)	12 (44%)	5 (36%)	41 (18%)
Info. from distributors/wholesalers outside your organization	26 (17%)	10 (29%)	11 (41%)	3 (21%)	50 (22%)
Info. from retailers outside your organization	17 (11%)	3 (9%)	4 (15%)	3 (21%)	27 (12%)
Other	14 (9%)	1 (3%)	2 (7%)	0	17 (7%)
Total number of data sources used within each link	9	8	7	6	10

Source: Organic Data Initiative Gap Analysis Surveys (2024)

[a] SPINS and Nielsen were only included as survey response options in the retailer survey and are therefore listed as n/a for the other links in the value chain. The zero listed for retailers for Nielsen therefore represents no retailers using that data source.

[b] Rates of market data use were higher among larger farmers; 53% of the 19 farmer respondents with gross sales of US$1,000,000 or more in the previous year used some form of market data.

at farmers' markets or local grocery stores. One produce and wine grape grower noted: "So whatever the co-op's paying, that is kind of what we go by, what I go by" (Interview 8). They mentioned setting their own prices somewhat subjectively, sometimes lower to move a product, sometimes higher because they could. But it was local food co-op prices that they used as their main information source, rather than as a strict guide, for the market-wide price for commodities.

Many interviewees—four of five processors, four of six distributors, and three of four producers who worked with brokers—described price comparison that relied on personal experience and/or market relationships. Often comparison consisted of phone calls with other buyers and/or comparing prices to their own experience of working in the market for many years. Sometimes it involved reviewing the pricing sheets from relevant distributors. One mid-sized produce distributor described the process as calling their "shipping friends" and their buyers to gather their thoughts on the market:

> Before I start a season, I start calling people and I say, "What are you hearing? What do you know? What's the price? What do you think you want?" … "What regions are in production? What are you getting? How's the quality?" … Preseason, and during the season, you call around and you're collecting information from your customers. (Interview 24)

This distributor described collecting nuanced information specific to their products through relationships they have with other people in the marketplace and their customers. Their experience working with their products allows them to interpret the information they gather through their market relationships clearly enough to make pricing and market decisions and manage their operation successfully.

Improving AMS Market News (MN) Organic Data

Of the 14 industry actors we interviewed who were familiar with USDA organic price and volume data, ten did not use it because they felt the data interface, accuracy, and/or product coverage were inadequate for their needs. Survey results specific to attributes (Table 2) and important aspects (Table 3) of an ideal organic market data source support the broader relevance of these interview findings, as does our importance-satisfaction analysis (Figures 2–5).

Data Interface

Overall, survey respondents' ideal data source was a visual format with individual data points, trend information, and some explanation. Sixty-five percent of survey respondents preferred organic market data presented in a standardized visual format like a report or figure, and 22% preferred an interactive visual format like a live dashboard (Table 2). Thirty-eight percent of our survey respondents preferred highly detailed data with individual data points, but almost as many wanted additional explanation for those data points (32%) and summary data (32%) with additional explanation (29%) (Table 2). Furthermore, 37% of survey respondents rated interpretability as "important AND essential" for using an ideal organic market data source; 36% also rated accessibility as important and essential for using the data (Table 3).

Similarly, interviewees were often interested in trend information and additional explanation that would improve their confidence in MN. One producer, four processors, all six distributors, and two retailers discussed using organic commodity data to track longer-term trends and improve market predictions. One small retailer, discussing USDA data in general, described wanting data that could help them better predict future market trends:

> Like to say … the wheat crop is looking like it's gonna be like XYZ right now. That's never really felt accessible to me as a retailer. … I just don't know how to distill it from the commodity information that I have looked at over time. (Interview 4)

This retailer explained that knowing features of production timing would be helpful for them as

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Table 2. Ideal Organic Price and Volume Data Attributes by Value Chain Link

	Farmers (*N* = 152)	Processors (*N* = 34)	Distributors (*N* = 27)	Retailers (*N* = 14)	Total (*N*=227)
Preferred format[a]					
Standardized/static audio format (like recordings)	8 (5%)	0	2 (7%)	0	10 (4%)
Standardized/static visual format (like reports or figures)	105 (69%)	19 (56%)	16 (59%)	8 (57%)	148 (65%)
Standardized/static mixed audio/visual format (like informational videos)	21 (14%)	2 (6%)	4 (15%)	3 (21%)	30 (13%)
Interactive audio format (like conversations)	9 (6%)	1 (3%)	1 (4%)	3 (21%)	14 (6%)
Interactive visual format (like live dashboards)	26 (17%)	8 (24%)	8 (30%)	8 (57%)	50 (22%)
Interactive mixed audio/visual format (like presentations)	17 (11%)	1 (3%)	4 (15%)	3 (21%)	25 (11%)
Preferred level of detail[a]					
Individual data points (like the price of a commodity at a specific time/place)	59 (39%)	12 (35%)	10 (37%)	6 (43%)	87 (38%)
Individual data points with some explanation	42 (28%)	12 (35%)	11 (41%)	8 (57%)	73 (32%)
Summary data (like the average price of a commodity over time)	48 (32%)	11 (32%)	7 (26%)	7 (50%)	73 (32%)
Summary data with some explanation	38 (25%)	11 (32%)	9 (33%)	7 (50%)	65 (29%)
Preferred frequency					
Daily	6 (4%)	1 (3%)	0	2 (14%)	9 (4%)
Weekly	37 (24%)	5 (15%)	12 (44%)	3 (21%)	57 (25%)
Monthly	29 (19%)	5 (15%)	5 (19%)	4 (29%)	43 (19%)
Quarterly	15 (10%)	8 (24%)	0	3 (21%)	26 (11%)
Seasonally	22 (14%)	0	0	0	22 (10%)
Yearly	13 (9%)	4 (12%)	1 (4%)	0	18 (8%)
Less often than yearly	3 (2%)	0	0	0	3 (1%)
We're not interested in these data	10 (7%)	2 (6%)	1 (4%)	0	13 (6%)

Table 2. (Continued) Ideal Organic Price and Volume Data Attributes by Value Chain Link

	Farmers (*N* = 152)	Processors (*N* = 34)	Distributors (*N* = 27)	Retailers (*N* = 14)	Total (*N* = 227)
Preferred way to access and/or receive data updates[a]					
Email	98 (64%)	19 (56%)	16 (59%)	9 (64%)	142 (65%)
Website	59 (39%)	15 (44%)	11 (41%)	8 (57%)	93 (41%)
Smartphone app	30 (20%)	4 (12%)	2 (7%)	2 (14%)	38 (17%)
Printed materials	27 (18%)	2 (6%)	3 (11%)	4 (29%)	36 (16%)
Automated data updates that allow us to maintain our own data tables, visualizations, and/or reports (i.e. via API)	7 (5%)	1 (3%)	2 (7%)	3 (21%)	13 (6%)
Other[b]	16 (11%)	6 (18%)	2 (7%)	2 (14%)	26 (11%)
We're not interested in these data	9 (6%)	2 (6%)	1 (4%)	1 (7%)	13 (6%)
Additional data on organic products would be very or extremely useful, by category					
Major specialty crops	45 (30%)	11 (32%)	9 (33%)	7 (50%)	72 (32%)
Major grain crops	11 (7%)	8 (24%)	3 (11%)	3 (21%)	25 (11%)
Other crops	24 (16%)	3 (9%)	4 (15%)	3 (21%)	35 (15%)
Livestock and/or poultry	7 (5%)	5 (15%)	3 (11%)	8 (57%)	23 (10%)
Dairy and/or eggs	14 (9%)	4 (12%)	1 (4%)	8 (57%)	27 (12%)
Non-food commodities like cotton or other fibers	4 (3%)	3 (9%)	1 (4%)	0	8 (4%)
Value-added specialty crop products	22 (14%)	5 (15%)	4 (15%)	2 (14%)	33 (15%)
Value-added grain products	8 (5%)	7 (21%)	2 (7%)	2 (14%)	19 (8%)
Value-added livestock and/or poultry products	4 (3%)	5 (15%)	1 (4%)	3 (21%)	13 (6%)
Value-added dairy and/or egg products	8 (5%)	2 (6%)	1 (4%)	4 (29%)	15 (7%)
Value-added non-food products like textiles	5 (3%)	2 (6%)	1 (4%)	1 (7%)	9 (4%)
Other value-added products	6 (4%)	4 (12%)	3 (11%)	2 (14%)	15 (7%)

Source: Organic Data Initiative Gap Analysis Surveys (2024)

[a] Because we allowed participants to select multiple response options, the sum of all responses is greater than the total number of participants.

[b] "Other" includes the following category options in the original question: "Social media (Facebook, Instagram, etc.)," "Phone call," "Radio," "Podcast," "In-person," and "Other"

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Table 3. Importance of Various Aspects of Ideal Data Source by Value Chain Link

	Farmers (*N* = 152)	Processors (*N* = 34)	Distributors (*N* = 27)	Retailers (*N* = 14)	Total (*N* = 227)
Timeliness: the data are available and/or updated as often as we need					
Important AND essential for using the data	36 (24%)	9 (26%)	6 (22%)	6 (43%)	57 (25%)
Important BUT NOT essential for using the data	21 (14%)	6 (18%)	7 (26%)	1 (7%)	35 (15%)
Moderately important	29 (19%)	6 (18%)	3 (11%)	3 (21%)	41 (18%)
Not at all important/Of minor importance	38 (25%)	2 (6%)	2 (7%)	1 (7%)	43 (19%)
Products: the data cover the right products					
Important AND essential for using the data	60 (39%)	13 (28%)	8 (30%)	9 (64%)	90 (40%)
Important BUT NOT essential for using the data	18 (12%)	4 (12%)	4 (15%)	0	26 (11%)
Moderately important	17 (11%)	5 (15%)	4 (15%)	2 (14%)	28 (12%)
Not at all important/Of minor importance	28 (18%)	1 (3%)	2 (7%)	1 (7%)	32 (14%)
Geographies: the data cover the right geographic area(s)					
Important AND essential for using the data	55 (36%)	6 (18%)	4 (15%)	7 (50%)	72 (32%)
Important BUT NOT essential for using the data	22 (14%)	5 (15%)	6 (22%)	0	33 (15%)
Moderately important	17 (11%)	8 (24%)	4 (15%)	3 (21%)	32 (14%)
Not at all important/Of minor importance	17 (11%)	4 (12%)	3 (11%)	2 (14%)	26 (11%)
Accessibility: the data are easy to access					
Important AND essential for using the data	57 (38%)	12 (35%)	6 (22%)	6 (43%)	81 (36%)
Important BUT NOT essential for using the data	18 (12%)	6 (18%)	8 (30%)	3 (21%)	35 (15%)
Moderately important	21 (14%)	5 (15%)	2 (7%)	2 (14%)	30 (13%)
Not at all important/Of minor importance	28 (18%)	0	2 (7%)	1 (7%)	31 (14%)

Table 3. (Continued) Importance of Various Aspects of Ideal Data Source by Value Chain Link

	Farmers (*N* = 152)	Processors (*N* = 34)	Distributors (*N* = 27)	Retailers (*N* = 14)	Total (*N* = 227)
Accuracy: the data are accurate					
Important AND essential for using the data	75 (49%)	16 (47%)	11 (41%)	10 (71%)	112 (49%)
Important BUT NOT essential for using the data	11 (6%)	1 (3%)	3 (11%)	0	15 (7%)
Moderately important	13 (9%)	3 (9%)	2 (7%)	1 (7%)	19 (8%)
Not at all important/Of minor importance	24 (16%)	1 (3%)	2 (7%)	1 (7%)	28 (12%)
Interpretability: the data are easy to understand and interpret					
Important AND essential for using the data	63 (41%)	10 (29%)	7 (26%)	5 (36%)	85 (37%)
Important BUT NOT essential for using the data	22 (14%)	7 (21%)	6 (22%)	4 (29%)	39 (17%)
Moderately important	14 (9%)	5 (15%)	3 (11%)	2 (14%)	24 (11%)
Not at all important/Of minor importance	23 (15%)	0	2 (7%)	1 (7%)	26 (11%)
Usability: we are able to use the data the way we want to					
Important AND essential for using the data	43 (28%)	10 (29%)	4 (15%)	6 (43%)	63 (28%)
Important BUT NOT essential for using the data	27 (18%)	6 (18%)	6 (22%)	3 (21%)	42 (19%)
Moderately important	23 (15%)	6 (18%)	4 (15%)	2 (14%)	35 (15%)
Not at all important/Of minor importance	27 (18%)	0	3 (11%)	1 (7%)	31 (14%)
Automation: the data work well with automated reports we use or want to use					
Important AND essential for using the data	17 (11%)	6 (18%)	3 (11%)	2 (14%)	28 (12%)
Important BUT NOT essential for using the data	19 (13%)	9 (26%)	5 (19%)	3 (21%)	36 (16%)
Moderately important	21 (14%)	5 (15%)	3 (11%)	5 (36%)	34 (15%)
Not at all important/Of minor importance	49 (32%)	2 (6%)	4 (15%)	1 (7%)	56 (25%)

Source: Organic Data Initiative Gap Analysis Surveys (2024)

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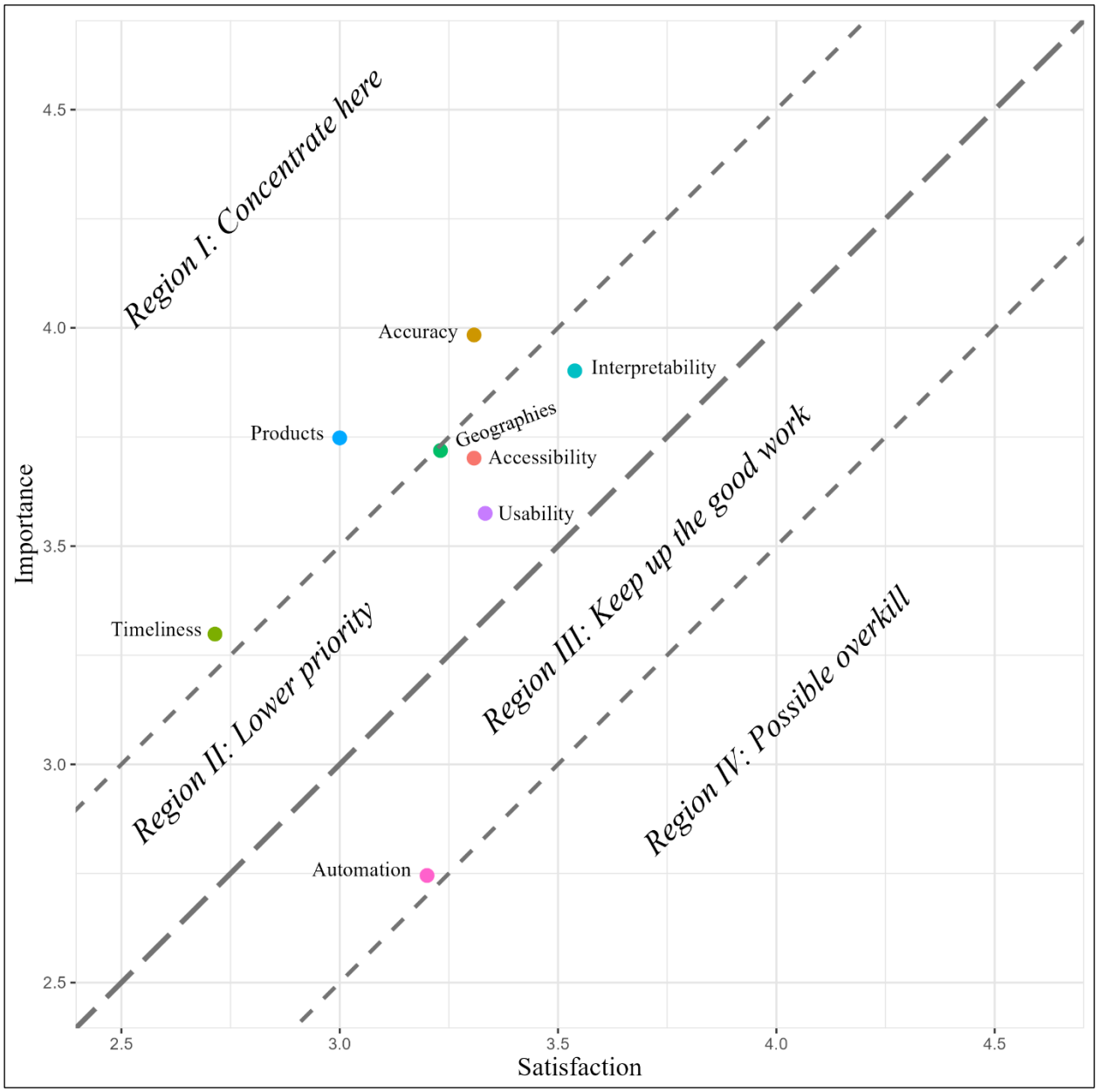
a retailer; however, despite their general sense that USDA probably has data that could help them, they were unsure about how to make predictions from data they could find and understand. This indicates a need for more explanation of trends for organic products but also demonstrates the desire to use agricultural information to make longer-term business decisions.

Relatedly, a processor of fresh cut greens stated that their data needs included better access to information about why prices might be changing over time:

> If we're gonna go out to our big customers and ask for a price increase, a lot of times we need information … and validation to make that

Figure 2. Producers' Average Importance and Satisfaction Ratings

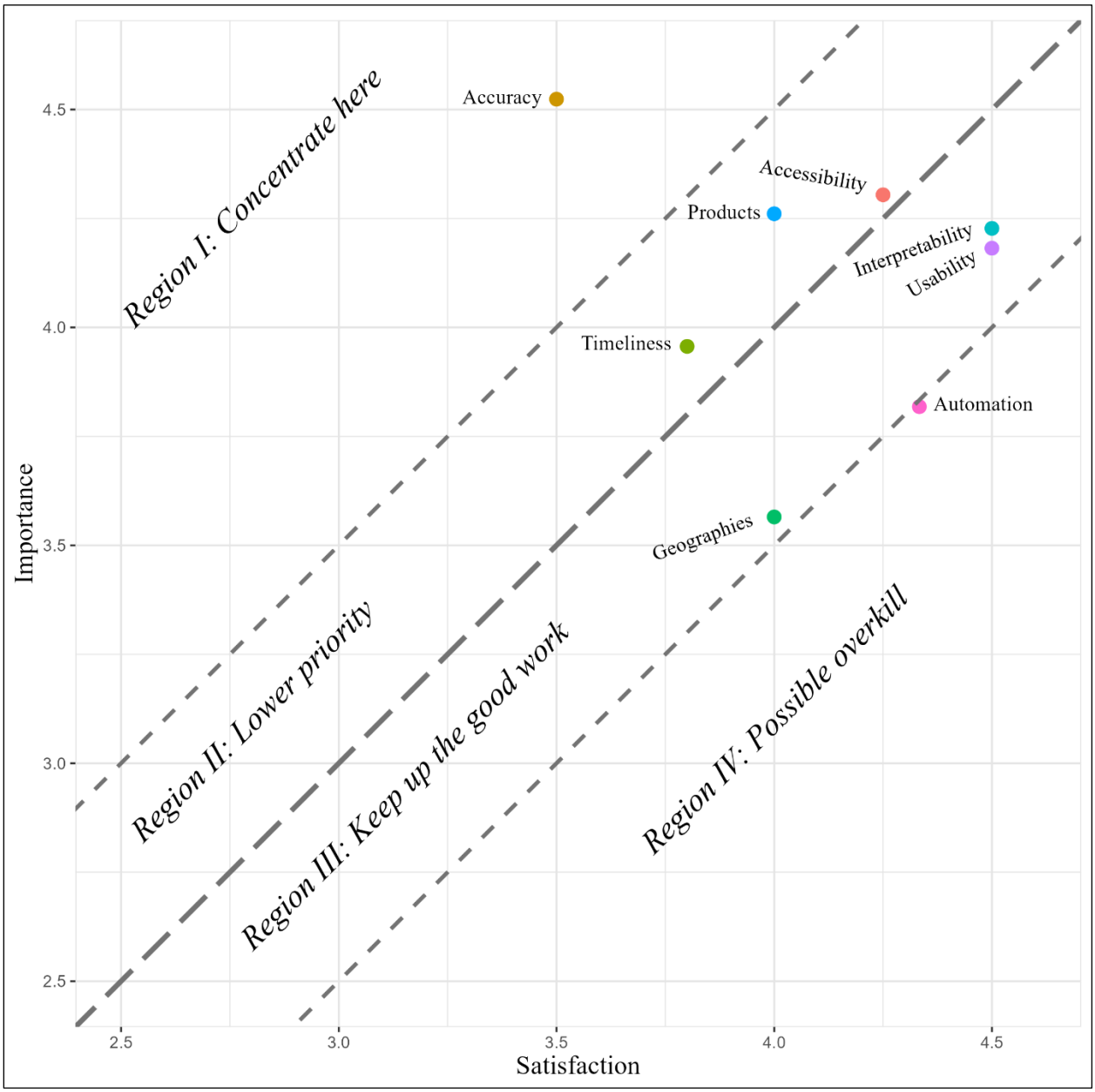


Source: Organic Data Initiative Gap Analysis Surveys (2024).

increase. So, let's say organic kale pricing's up 5% year-over-year, having some sort of grower input onto why that 5% is happening, whether it's labor or water or … I think we understand a lot of those challenges, because we were growers, but having that data published in a kind of fair report that's … from AMS. … I think that would be helpful. (Interview 1)

This processor needed more than just points of data that indicated changes in the market price. They needed a clearer explanation for their customers of the root cause of price increases, as the information would facilitate negotiating a fairer price with customers when they experience price increases from the producers they worked with. They noted the value of a neutral party, such as

Figure 3. Processors' Average Importance and Satisfaction Ratings



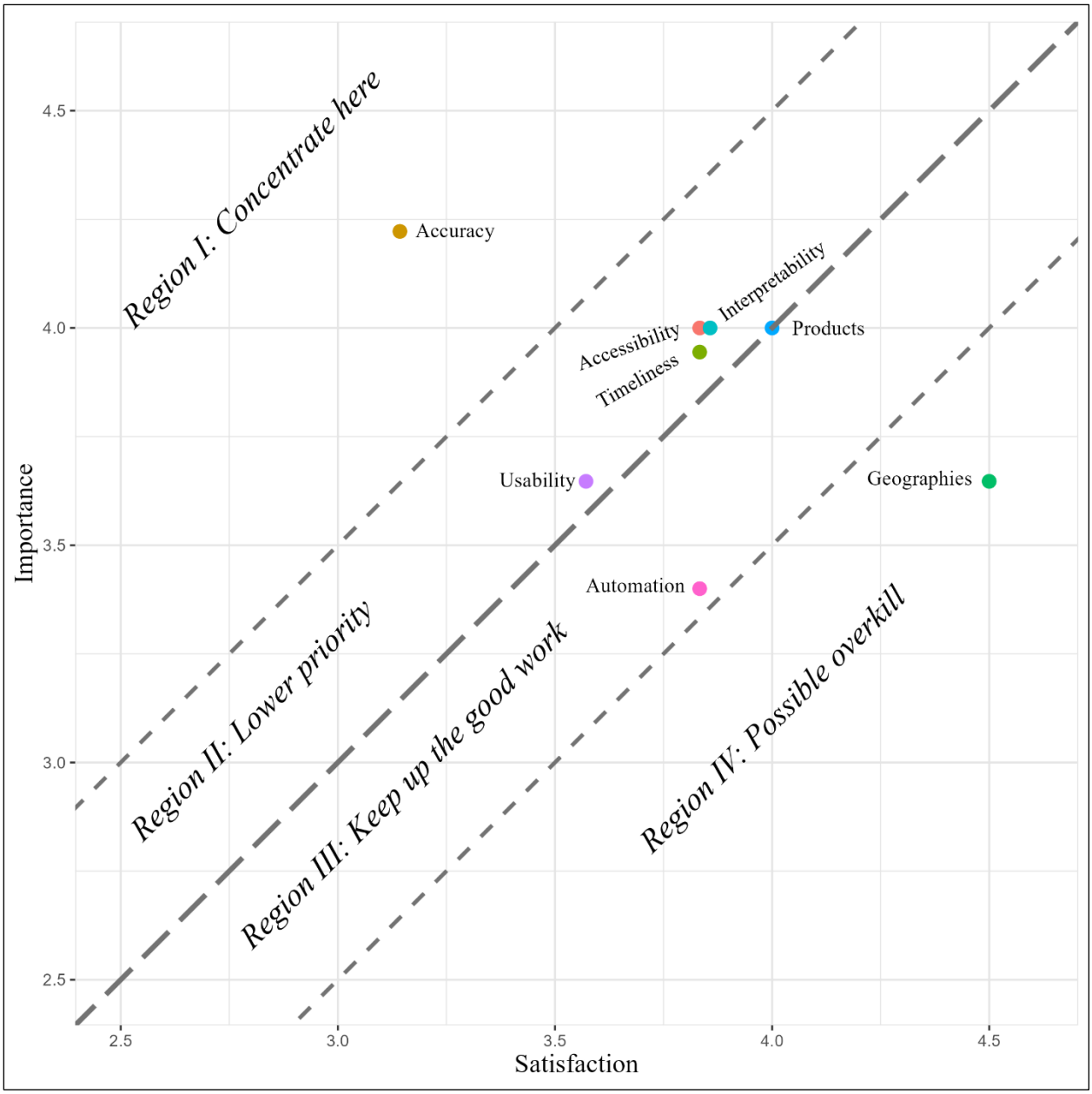
Source: Organic Data Initiative Gap Analysis Surveys (2024).

AMS, being the source for this information.

Consistent with this need for more explanation, 16 interview participants seemed to need more clarity and improved functionality of organic market data already available through MN. Some asked how these data are collected and what types of pricing, products, or item sizes are included. One large grower wondered how transportation costs are factored into the pricing numbers, especially for the organic feed and seed commodities they grow.

> To have a national thing to tell me, "hey, the price of hay in Wisconsin is US$100." It's completely different here [in California]. … Would it be good for me to see that? I'm

Figure 4. Distributors' Average Importance and Satisfaction Ratings

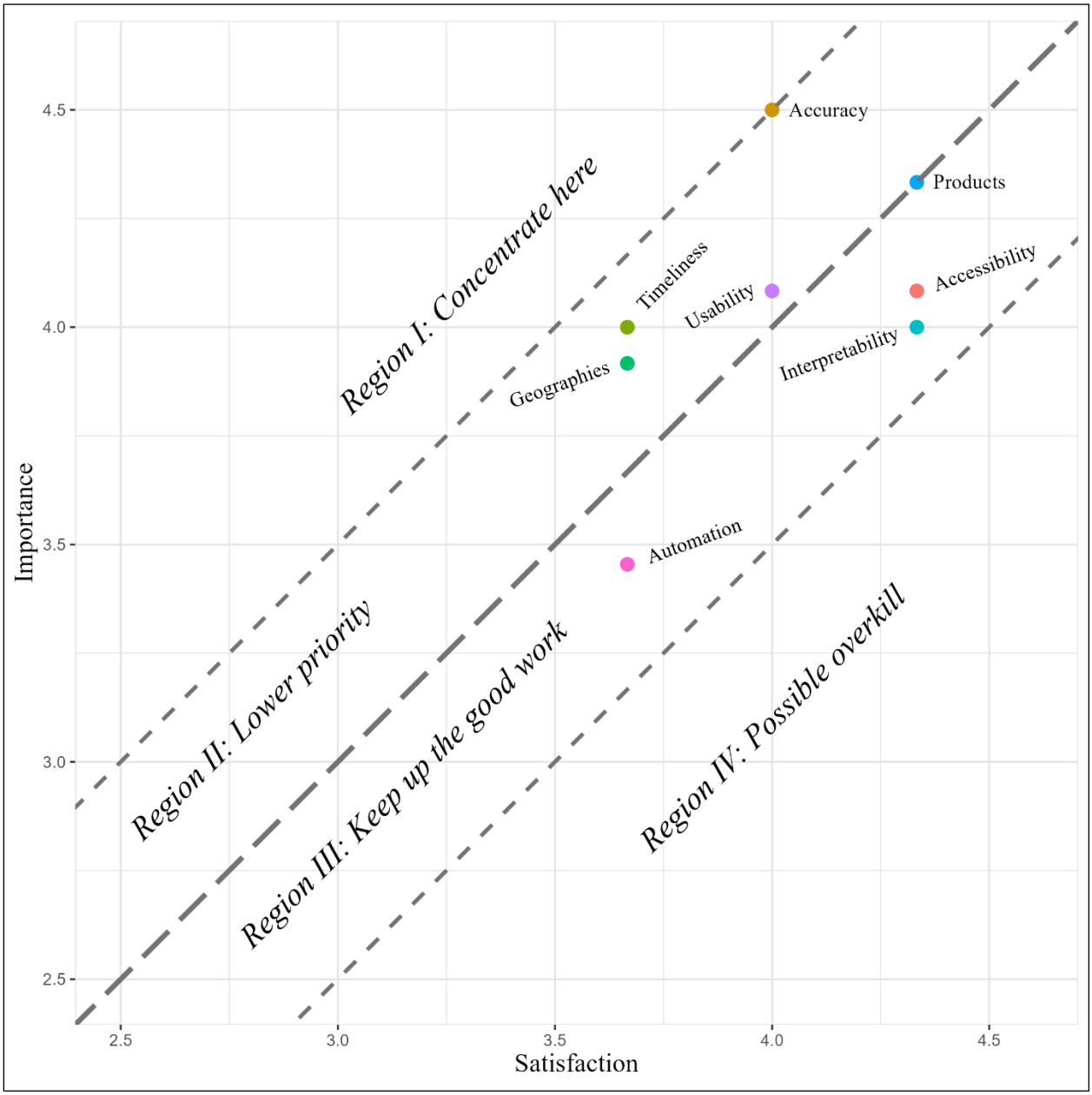


Source: Organic Data Initiative Gap Analysis Surveys (2024).

always interested in that. I like to look at a lot of different things, right? But I need to know what's going on around here. … I need to know because it's all based on transportation … my broker would haul the hay at 20 bucks a ton. Now it's 30 bucks a ton. So is he going to buy my hay from here? Or is he gonna buy [from] a guy in [another county] that he has to haul it for US$14 a ton instead of hauling m[ine for] US$35? So automatically, my hay went up US$17 a ton just because of the trucking. (Interview 15)

In short, the variation in transportation costs made it difficult to apply existing USDA data to their business. They need additional details about

Figure 5. Retailers' Average Importance and Satisfaction Ratings



Source: Organic Data Initiative Gap Analysis Surveys (2024).

the contexts in which data are collected for them to be useful.

Data Accuracy

Overall, about half (49%) of survey respondents felt data accuracy was important and essential for an ideal organic price and volume data source (Table 3). Our importance-satisfaction analysis (Figures 2–5) further suggests that data accuracy is the most important aspect of MN organic data to improve. Each figure in the analysis contains demarcations of four separate areas of attention. Region I is where most concentration should be focused; items in this area had average importance ratings at least a half point higher than their satisfaction rating. Items in Region II have average importance ratings less than a half point higher than average satisfaction ratings and are less pressing to address. Items in Region III have average importance scores less than a half point lower than average satisfaction scores, so the region represents areas where MN is meeting users' needs. Items in Region IV, where average satisfaction scores are at least half a point higher than average importance scores, require less attention.

Data accuracy falls in the high priority region (Region I) for producers, distributors, and processors, and in the lower priority region (Region II) for retailers. The average importance score for data accuracy is 3.98 among producers, 4.52 for processors, and 4.22 for distributors, but the average satisfaction score for data accuracy of MN organic data is only 3.31 among producers, 3.5 among processors, and 3.14 among distributors (Figures 2–4). The gap between importance and satisfaction scores is about two-thirds of a point for producers, and more than one entire point for both processors and distributors. For data accuracy, retailers have an average importance score of 4.5 and an average satisfaction score a half-point lower at 4.0 (Figure 5).

Of our 14 interviewees familiar with USDA organic price and volume data, five were frustrated with inaccuracies in the data for organic products. An organic tree fruit grower-shipper showed the first author gaps in the MN data they use to demonstrate to investors longer-term trends. They came to the interview with an excel spreadsheet with some figures to illustrate the problem:

> This is something that I took out of the USDA website because I needed to make a report for some of the investors we have on the [specific variety] orchards. And this here [referring to the spreadsheet and figures] is what I mainly needed to show them, is that the [specific variety] pricing is always higher than … the [several] core [main] varieties, so it's always higher. But look at this. They just didn't collect data for these two months [referring to two months where the figures showed no data for organic]. … And this kind of stuff is rampant in the USDA website … and this is our peak season right here [referring to the months for which data was missing]. So I had to tell the investors like, "yeah, I guess it would be a nice little mountain here where we'd have better pricing, but I don't really know." For whoever at the USDA decided not to get store pricing that day. So that is my main grievance. I also just think it's pretty clunky that I have to drop it out of the website into Excel in order to do anything. It's inconsistent … by region. Sometimes they collect data for a particular region on a particular month and then the next month they don't. So I don't know how that works, but I think it's not very helpful. (Interview 22)

The spreadsheet they shared included a line graph that tracked the price over 12 months of one specific tree fruit variety as compared to others. Datapoints for two of the months, as explained in the quote above, are simply missing for that variety. Their explanation of the impact of this data gap—having to guess for investors at what peak-season pricing might be— shows that the gaps limit the utility of MN organic data for businesses wanting to look at longer-term trends. They further described data gaps as common for organic commodities in MN, limiting data usability, especially for tracking longer-term trends. They also echoed sentiments from other interviewees that the interface is "clunky," requiring them to copy the data to Excel to make needed illustrations.

Data Coverage

Overall, 40% of survey respondents indicated that product coverage was important to essential for use of organic market data (Table 3). Thirty-two percent of survey respondents also wanted more information on major specialty crops (Table 2). Our importance-satisfaction analysis suggests that products covered may be more important to address for producers and processors. Products covered falls in Region I for producers, with an average importance score of 3.74 and an average satisfaction score of nearly three-quarters of a point lower at 3.00, and in Region II for processors (4.26 importance, 4.0 satisfaction). Average importance and satisfaction scores were identical for both distributors (4.0) and retailers (4.33) for products covered, placing this item in Region III for both of these supply chain links (Figures 2–5).

Four producers, two processors, and one retailer we also expressed interest in organic market data sources, including MN, covering a wider variety of organic products. A mid-sized vegetable producer felt confident that MN was not useful for their operation, which sells their produce through direct channels like farmers markets and restaurants. When asked what barriers they encountered when trying to access organic market data, they responded that they do not even look for this type of data and expressed a lack of confidence that they would be able to find it and/or that it would meet their needs:

> I don't really go looking for it because I don't know where I would find it. Whenever I've looked at the sort of official, USDA or whatever it is, it's always sort of commodity stuff, you know? Whereas we've got restauranty [specialty variety] things. So they don't list prices for the kinds of things that we sell [like pointed cabbage]. (Interview 17)

This farmer differentiates their products from commodity produce and states that the difference makes USDA data largely unusable for them since the products they grow and sell are mostly not listed in USDA data. This proved largely true later in the interview, when this producer spent some time reviewing MN reports and narrating some of the issues they found as they reviewed the reports:

> Interviewee: We grow pointed cabbage. So this is Atlanta, Atlanta, Atlanta [Georgia], I guess it's alphabetical so. … Page two … San Francisco, here we go! And then the most recent date they have is the 10th of January. [The interview took place in late April.]
>
> Interviewer: So not recent enough to be useful for you.
>
> Interviewee: No, no. And then it doesn't specify which cabbage. Oh, sorry. Variety. Round green, round green, round green, red, red, red, savoy. Whoopee. So we do grow the savoy. And then it gives you low and high price. There's not much difference. It doesn't tell you the weight. Oh, no it does, sorry. Thirty pounds. And then a Danish cabbage, whatever that is. I don't know. But our [pointed] cabbage isn't there. (Interview 17)

Their main point was that data for the specific varieties of specialty crops they grow are not available. Their narration of their experience also indicates other aspects of the data that are not useful for them or are confusing, showing the cognitive load it takes for producers unfamiliar with the data to navigate the MN interface. After a largely counterintuitive search that took several minutes for this producer, they ultimately concluded that their variety of cabbage was not included and the data were therefore not useful for them. This highlights some of the points of dissatisfaction in using the MN organic data that are available. The data organization is not intuitive and product sizes are specific to commodity markets rather than what might be found in other sales channels which many smaller organic producers work in.

Discussion

While we find only limited direct reliance on MN among the organic agrifood sector, the data likely remain impactful through indirect use (Wolf et al., 2001). We find that California's organic industry primarily relies on informal sources of organic

market information. Ultimately, we cannot determine the extent to which this reliance represents a broader dissemination of MN organic data because we did not explore the origin of data shared across value chain links. However, one main informal source is distributors: 17% of farmers, 29% of processors, 41% of distributors, and 21% of retailers we surveyed use organic price and volume information from (other) distributors, making distributors the most important source for farmers and processors. And 19% of distributors regularly rely on MN organic market data. Thus, at least some of the distributor information that is used by 20 to 30% of respondents within the other links of the value chain is likely influenced by or originated as MN organic data. Indeed, distributors typically act as the mediators of supply and demand—and thus the entities setting prices— within intermediated market channels. This means the influence of MN organic data, indirectly through distributors is more widespread than it appears in our findings about direct use. Future research on organic market data use should more thoroughly consider this indirect impact and determine ways to track it.

Importantly, we find consistent interest among producers, processors, distributors, and retailers in increased organic market data presented in visual formats with trend explanations. This somewhat contradicts existing research demonstrating the use of informal information sources (Beethem et al., 2023; Hoffman et al., 2015; Lubell et al., 2014; Wolf et al., 2001), but those studies focused on current agricultural information use practices, did not specifically ask research participants about their ideal information sources, and did not focus specifically on price and volume data, which are relatively easily represented via trend analysis. Specifically focusing questions in our surveys on an ideal organic market information source, and our interview questions on what other information would be helpful for participants' businesses, reveal a persistent interest in formal data sources that could help organizations assess long-term trends in the organic marketplace. Including additional analysis and explanation of organic data trends in formal publicly available organic market data sources like MN would make them more useable for industry actors and help maintain a fairer market for farmers and smaller operations. We also suggest increasing the accessibility of existing MN organic data. For example, developing and promoting an easier item-based search process may help industry actors use existing data more easily, especially smaller operations with limited capacity and time. This search process could function by entering a single commodity item and obtaining an overview of the data available for that item through MN.

Data accuracy also emerged in our importance-satisfaction analysis as a primary area where MN should strive to reach more actors in the organic agrifood industry and enhance their decision-making. Our interviews identified data gaps and inconsistent reporting as key issues with MN organic data that likely cause the lower average satisfaction rating for accuracy. Where possible, MN should address these gaps and inconsistencies, even if they largely reflect the thinness of organic commodity markets. More broadly, the short turnaround, typically within a day, in MN report production as compared to other USDA reports may limit data quality. In this context, data presentation adjustments could help bolster trust in organic MN data; specifically, the root causes of data gaps should be explained in close proximity to the data presentation. And including clearer explanation of terms used throughout MN, and overviews of the data collection process, would build trust in existing resources among industry actors.

Finally, our findings demonstrate a consistent need for the inclusion of additional products, especially specialty crops, in MN organic price and volume data. Because organic commodities consistently present in traditional markets are already included in MN, AMS has begun to address this need by collecting information at more organic-focused markets, such as farmers markets (USDA AMS, 2024). Coverage of organic-focused markets should continue to expand to better serve the organic industry. Because data relevance (i.e., the presence of relevant products) may be the most critical component of a data source for users (Home et al. 2017, p. 151), increasing the products covered will be critical for expanding relevance and use of MN organic data.

Overall, survey and interview respondents are interested in the type of data that MN provides:

price and volume data for organic products. These data are particularly important for distributors, who have a crucial price-setting role in the organic market and may disseminate this data more broadly throughout the industry. Our research also reveals one specific area where MN organic data is working well for California's organic agrifood industry: MN's automation abilities, which facilitate pulling raw data rapidly. This suggests the effectiveness of recent efforts to improve automation options, like the introduction of the MyMarketNews API (USDA AMS, 2019).

Limitations

Our research respondents represent a subgroup of organic agrifood stakeholders across the U.S., mostly smaller-scale operations focused on specialty crops. However, our farmer sample is largely representative of California organic farmers in terms of size and crops produced: excluding non-responses, 25% of farmers in our sample had less than US$10,000 in sales in 2024 and 44% mainly grow fruits and/or nuts (Table 4). Twenty percent of California organic farmers had less than US$10,000 in sales in 2021 compared to 11% nationally, and 63% of California organic farmers grow fruits and/or nuts compared to 21% nationally (USDA NASS, 2022, 2025). The lack of publicly available data on other organic businesses makes it difficult to assess the representativeness of the rest of our sample. However, the ongoing corporate consolidation of food retail and organic handling suggests that these supply chain links are disproportionately occupied by larger operations (Howard, 2009, 2021; Zeballos, 2025). Our study may, therefore, focus on voices of organic processors, distributors, and retailers with less leverage to lobby for changes to USDA data or practices. As such, we hope that this research serves as an important addition to other work in this area.

Conclusion

In an era when agricultural information is increasingly becoming privatized (Beethem et al., 2023; Prokopy et al., 2015; Wolf, 1998, 2006), the need for and reliance on public agricultural information persists (Beethem et al., 2023; Karali et al., 2019; McKenzie & Darby, 2017; Wolf, 2006; Wolf et al., 2001), especially in organic and/or sustainable agrifood where corporate incentives for collecting data may be diminished (Beethem et al., 2023; Hoffman et al., 2015; Prokopy et al., 2015; Warner, 2006). The USDA Agricultural Marketing Service Market News (MN) has helped level imbalances in agricultural price information for more than 100 years (Lesser, 1993; McCallister, 1950; USDA, 2015). We have explored how their organic market information could be improved to better support organic producers, processors, distributors, and retailers. Results from surveys and interviews suggest that actors in California's organic agrifood industry largely rely on market information from informal sources, but are interested in more formal visualizations, especially with trend information, of data on organic prices and volumes like that produced by MN. This demonstrates the continued need for public investment in agricultural knowledge generation, even in an environment where market information may be disseminated more broadly through informal networks.

Improving the interface, accuracy, and coverage of the MN organic data would all enhance their utility for the agrifood industry. Implementing a simpler item-based search process, clearer explanations of terms, and overviews of data collection processes would improve the existing MN data interface. Developing more visualizations of organic commodity data would also help the data interface remain relevant and useful, as would personalized or tailored data access points. We recommend that AMS continues expanding coverage of organic-focused markets and provides clearer explanation of gaps in existing organic price and volume data.

AMS funding should be increased to support these improvements and help maintain a robust public source of organic market data that could be especially beneficial for organic farmers and smaller-scale operations. Opposition from political leaders seeking to reduce federal government functionality—ongoing defunding of government statistical agencies has already decreased availability of robust public data on many topics (Beethem et al., 2023; Bowen et al., 2025; Orszag, 2025)—does

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Table 4. Descriptives of California Organic Agrifood Businesses by Value Chain Link

	Farmers (*N* = 152)	Processors (*N* = 34)	Distributors (*N* = 27)	Retailers (*N* = 14)
Size	Num. Acres Farmed: Mean: 452 Median: 16	Num. Facilities: Only 1: 18 (53%) 2–5: 3 (9%) No response: 13 (38%)	Num. Warehouses: Only 1: 12 (44%) 2–5: 5 (19%) No Response: 10 (37%)	Num. Retail Stores: Only 1: 9 (64%) More than 1: 3 (21%) No response: 2 (14%)
Gross Sales Last Year	Less than $10k: 30 (20%) $10k–$99k: 40 (26%) $100k–$999k: 31 (20%) $1mil. or more: 19 (13%) No response: 32 (21%)	Less than $100k: 3 (9%) $100k–$999k: 6 (18%) $1mil. –$49mil.: 10 (29%) $50mil. or more: 3 (9%) No response: 12 (35%)	Less than $100k: 0 $100k–$999k: 4 (15%) $1mil. –$9mil.: 7 (26%) $10mil. or more: 3 (11%) No response: 13 (48%)	Less than $999k: 1 (7%) $1mil. –$9mil.: 4 (29%) $10mil. –$49mil.: 5 (36%) $50mil. or more: 2 (14%) No response: 2 (14%)
Number of Managers	Mean: 2.5 Median: 2	Mean: 22 Median: 7	Mean: 14 Median: 8	Mean: 34 Median: 15
Main Organic Products	Fruit/Nuts: 36 (24%) Vegetables: 14 (9%) Grains/Pulses: 3 (2%) Flower/Nursery: 7 (5%) Cropland (not otherwise specified): 14 (9%) Rangeland: 7 (5%) Not specified: 71 (47%)	Fruit/Nuts: 3 (9%) Vegetables: 3 (9%) Grains/Pulses: 4 (12%) Meat products: 4 (12%) Other: 4 (12%) No response: 13 (38%)	Fruit: 3 (11%) Vegetables: 8 (30%) Grains/Pulses: 1 (4%) Meat products: 4 (15%) Value-added: 1 (4%) Other: 4 (15%) Not specified: 9 (33%)	Fruit/Nuts: 5 (36%) Vegetables: 6 (43%) Grains/Pulses: 5 (36%) Dairy/Eggs: 5 (36%) Meat products: 3 (21%) Flower/Nursery: 3 (21%) Value-added: 1 (7%) Other: 2 (14%) No response: 1 (7%)
Majority (50% or more) Ownership	Veterans: 2 (1%) Beginning farmers: 12 (8%) People of color: 10 (7%) Women: 30 (20%) Combination: 28 (18%) None of these: 23 (15%) No response: 46 (30%)	Veterans: 0 People of color: 4 (12%) Women: 4 (12%) Combination: 3 (9%) None of these: 6 (18%) No response: 16 (47%)	Veterans: 0 People of color: 5 (19%) Women: 2 (7%) Combination: 2 (7%) None of these: 1 (4%) No response: 17 (63%)	Veterans: 0 People of color: 1 (7%) Women: 3 (21%) Combination: 2 (14%) None of these: 2 (14%) No response: 6 (43%)

Source: Organic Data Initiative Gap Analysis Surveys (2024)

not diminish the need for continued improvements to MN organic data. Agricultural information privatization has created information imbalances that disadvantage smaller operations (Beethem et al., 2023; Jiang et al., 2020; Wolf, 2006), and concentrated market power in the U.S. food system has already pushed many medium- and smaller-scale operations out of the market entirely (Clapp, 2021, 2025; Frerick, 2024; Howard, 2021; Mitchell, 2024). Freely available agricultural data sources like MN help support equitable access to market information because many farmers and smaller-scale operations cannot afford private market data sources. Improved MN organic pricing data will help farmers and small operations ensure they receive fair prices for their products as the organic market continues to grow. It will also support improved organic crop insurance options, which often require robust pricing data, and more consistent information on organic premiums may encourage more U.S. farmers to meet the growing consumer demand for organic products currently being met through imports (Damewood, 2025).[4] The more useful MN organic data are for smaller-scale operations, the more they support balanced organic market information and, therefore, a stable and equitable organic agrifood market.

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