Kansas State
Department of Agricultural Economics
Nov. 2024 Special Report

MDM: Meat Demand Monitor

The MDM tracks U.S. consumer preferences, views, and demand for meat with separate analysis for retail and food service channels. MDM is a monthly online survey with a sample of over 2,000 respondents reflecting the national population.

Deep Look at U.S. Consumer Segments

Executive Summary

In February 2020, the Meat Demand Monitor (MDM) project was launched collecting data from over 2,000 U.S. consumers each month. The MDM project is funded in-part by the beef and pork checkoffs and tracks U.S. consumer preferences, views, and demand for meat with regular, separate analysis for retail and food service market channels.

In this report, data from March-September 2024 MDM surveys are used to assess heterogeneity among the U.S. public. This follows the National Pork Board's (NPB) extensive effort initiated in 2023 to identify and understand seven distinct segments within the U.S. population. Here NPB's approach to segmentation is applied to MDM data to assss how MDM data aligns regarding size and composition of each segment. This also provides a host of additional consumer heterogeneity insights enabled by the rich nature of MDM data regularly gathered. Data from over 21,000 survey respondents are used to support the assessment summarized in this report.

Key insights include:

- Consumer segment size and overall composition align very closely with conclusions originally drawn in 2023, in a different dataset. Confirmation of consistency with a separate dataset adds credence to initial conclusions and enhances confidence in strategies built upon this consumer segmentation.
- Culinary Adventures (19%), Mindful Choicemakers (12%), and Culture Celebrators (7%) are three segements that lead with strongest retail meat demand. These three segments also lead with the strongest demand for dinner meals away-from-home featuring meat entrees.
- Confident Meat Eaters (21%) rank highly in prior day pork consumption (number of prior day meals including pork) but not in willingness to pay reflecting their interest in pork yet elevated price sensitivity.
- Consumer heterogeneity is more stark in the retail than food service (dinner meal) channel suggesting targeting efforts may also be more impactful within the retail channel.
- All segments are similar in level of knowledge around pork color, use of temperature to assess doneness, and awareness of USDA inspection suggesting these issues do not underpin current differences in consumption or demand.

The foregoing provides additional details on the above findings.

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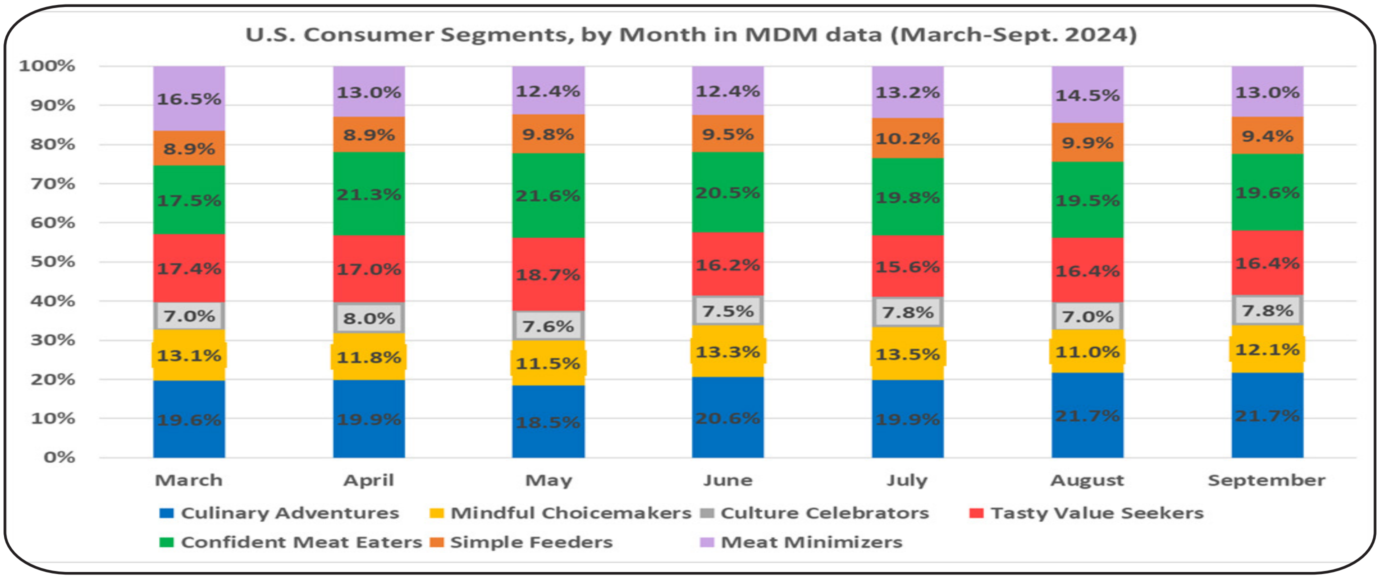
Consumer Connect and details on seven consumer segments available here: https://live.porkcheckoff.org/pork-branding/consumer-connect/

Consumer Segment Size Assessment

We begin by outlining details on the size of consumer segments. Recall the original segments were assessed in 2023 and here we are using a separate (MDM) data set in 2024 for further examination.

The following figures present details on the size of consumer segments as measured with MDM data. There is no segment more than 3% different in relative size when compared to NPB's 2023 assessment. Furthermore, even when examined by calendar month with a smaller overall sample the relative segment sizes are rather robust over the March-September 2024 period. Combined this indicates MDM data corroborates general segment size conclusions as initially drawn from other data sources and analyses.

Mar-Sep 2024 MDM %	19%	12%	7%	18%	21%	9%	13%
NPB 2023 Seg. Study %	16%	14%	8%	18%	20%	12%	11%
NPB Seg Name	Culinary Adventures	Mindful Choicemakers	Culture Celebrators	Tasty Value Seekers	Confident Meat Eaters	Simple Feeders	Meat Minimizers



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MDM-Based Consumer Segment Composition: Socio-Economic

Now that relative segment size consistency has been shown we move to details on segment composition. Here we use green highlighting to show cases of over-indexing (>10% above the national average) and red highlighting to document cases of under-indexing (>10% below the national average).

Measure	National Average	Culinary Adventures	Mindful Choicemakers	Culture Celebrators	Tasty Value Seekers	Confident Meat Eaters	Simple Feeders	Meat Minimizers
Baby Boomer	28.7%	71	87	71	138	125	96	82
GenX	26.6%	91	100	93	98	112	106	96
Millennial	29.0%	126	105	112	77	85	95	110
GenZ	15.7%	121	115	142	76	61	104	123
Male	48.6%	110	100	102	94	103	96	90
Married Now	45.9%	102	109	101	99	105	91	89
Kids Under 12	24.3%	134	122	115	68	86	84	101
4-Year College Degree	32.4%	113	135	108	89	72	86	115
Household Income Over $100,000	30.2%	118	131	104	88	83	79	101
Hispanic/Latino	17.1%	131	106	144	73	70	88	119
White/Caucasian	76.9%	95	96	90	102	109	106	95
Black/African American	13.3%	121	111	119	93	75	79	112
Northeast	17.1%	104	110	99	97	92	93	106
Midwest	21.0%	87	92	87	104	120	112	88
Southeast	38.2%	97	101	101	105	99	96	99
West	23.8%	113	98	110	91	89	101	108

Culinary Adventures, Mindful Choicemakers, and Culture Celebrators over-index among GenZ while Tasty Value Seekers and Confident Meat Eaters over-index among Baby Boomers. As the Baby Boomer generation declines (28.7% nationally currently) in relative consumption and demand, younger generations will also gain in potential purchasing power becoming increasingly important to domestic meat demand.

While Meat Minimizers are more likely to be Female and not currently married, taken broadly neither gender nor marriage status are key drivers of differences across segments. Those with children under 12 are more likely Culinary Adventures, Mindful Choicemakers, or Culture Celebrators. Higher income and those with 4-year college degrees are more likely to be Culinary Adventures or Mindful Choicemakers than Tasty Value Seekers, Confident Meat Eaters, or Simple Feeders.

Hispanic/Latino (17.1% nationally) and Black/African American (13.3% nationally) over-index as Culinary Adventures, Culture Celebrators, and Meat Minimizers. As growing groups in the U.S. population, pivoting these groups out of Meat Minimizer affiliation is an opportunity for the meat industry. Regionally, residents from the Northeast are most likely Mindful Choicemakers, Midwest residents are most likely Confident Meat Eaters or Simple Feeders, West residents are most likely Culinary Adventures, and Southeast residents (the largest region at 38.2% of nation) are the most uniformly distributed across the seven segments.

MDM-Based Consumer Segment Composition: Consumption

Each MDM survey starts with a detailed and conditional question sequence documenting prior day meal composition. Nationally for the March-September 2024 period, residents consumed on average 0.81, 0.68, 0.48, and 0.29 meals the prior day that contained chicken, beef, pork, and fish/seafood respectively. While national trends for beef and pork are reported in each month's base MDM report, here our interest centers around segment differences.

Culinary Adventures and Culture Celebrtors over-index on chicken consumption frequency while Confident Meat Eaters under-index. Culinary Adventures over-index on prior day beef meals while Tasty Value Seekers and Meat Minimizers under-index. Regarding prior day pork consumption frequency, Culinary Adventures and Confident Meat Eaters over-index while Mindful Choicemakers and Meat Minimizers under-index. The strongest differences across segments appears when examining prior day fish/seafood consumption frequency. Culinary Adventures, Mindful Choicemakers, Culture Celebrators, and Meat Minimizers over-index on prior day fish/seafood meals while Confident Meat Eaters and Simple Feeders under-index.

While several nuanced observations can be made, observing Culinary Adventures to over-index on all four protein sources likely reflects strong desire for variety or "adventure." Conversely, stark differences among Mindful Choicemakers, Confident Meat Eaters, and Meat Minimizers underlies variation in consumption that is often masked in more aggregate data (e.g. national, per capita consumption publicly reported quarterly).

Measure	National Average	Culinary Adventures	Mindful Choicemakers	Culture Celebrators	Tasty Value Seekers	Confident Meat Eaters	Simple Feeders	Meat Minimizers
Prior Day Meals, Beef	0.681	117	96	101	87	107	102	85
Prior Day Meals, Chicken	0.812	115	106	113	92	87	92	102
Prior Day Meals, Pork	0.481	117	90	98	94	115	93	77
Prior Day Meals, Fish/Seafood	0.292	131	140	117	91	61	58	114

MDM-Based Consumer Segment Composition: Protein Values

Protein Values (PV) are reported nationally each month to convey the relative importance of 12 factors in protein purchasing decisions. These PV scores are zero-sum by design as MDM respondents are asked to identify the four most important factors (PV scores of +1) and the four least important factors (PV scores of -1). The four intermediate factors receive a PV score of 0 such that the sum of all 12 PV scores is zero. This is important to appreciate as this forced rank prevents respondents from indicating everything is equally important. For instance, the 0.44 national score for Taste means there are 44% more who indicate Taste is a top factor than there are respondents considering Taste a bottom factor.

The following figure shows PV scores vary notably across segments. This is not surprising as PV score reflect relative importance from a diverse population. Convenience stands out as a key protein purchasing factor for Culinary Adventures, Mindful Choicemakers, and Culture Celebrators. Mindful Choicemakers further place priority on Nutrition and Health. Both Culinary Adventures and Mindful Choicemakers place much lower (relative to other segments) weight on Price. Combined this may suggest that value-added marketing (rather than reduced price, volume-based featuring) may align with Culinary Adventures and Mindful Choicemakers.

Meanwhile most factors besides Convenience rank higher for the other four segments. Price ranking highly for Tasty Value Seekers, Confident Meat Eaters, and Simple Feeders suggests that reduced price, volume-based featuring may align well with these segments.

Meat Minimizers place more weight on Health and Nutrition than the national average (yet not above all other segments). This suggests improved perceptions on Health and Nutrition of meat products may lead Meat Minimizers to adjust and perhaps become members of other segments over time.

Measure	National Average	Culinary Adventures	Mindful Choicemakers	Culture Celebrators	Tasty Value Seekers	Confident Meat Eaters	Simple Feeders	Meat Minimizers
Protein Values, Taste	0.436	81	59	92	117	135	122	76
Protein Values, Freshness	0.418	78	91	78	114	131	110	77
Protein Values, Price	0.271	64	-14	94	150	142	152	87
Protein Values, Safety	0.248	93	103	100	108	95	112	95
Protein Values, Nutrition	0.219	89	142	97	124	78	63	109
Protein Values, Health	0.128	95	210	126	135	33	14	113
Protein Values, Appearance	0.023	68	-470	8	181	518	528	-355
Protein Values, Convenience	-0.117	151	251	171	62	50	-33	76
Protein Values, Hormone/Antibiotic-Free	-0.330	65	37	88	133	133	140	88
Protein Values, Animal Welfare	-0.378	85	63	86	131	124	114	74
Protein Values, Origin/Traceability	-0.444	78	79	83	120	120	117	90
Protein Values, Environmental Impact	-0.474	75	68	88	128	126	123	76

MDM-Based Consumer Segment Composition: Knowledge

For the March-September 2024 period, nationally 41.7% correctly recognize the role of red (vs. white) color in pork while the majority correctly note USDA inspects all meat sold commercially (80.1%) and that cooking temperature is more accurate than color in assessing if meat is done (85.3%). Here our interest is how these basic knowledge measures differ over consumer segments.

The absence of green or red highlighting in the figure below indicates that no single segment, for any of the presented knowledge measures, differs from the national average by more than 10%. There is very little variation across the seven segments in these true-false responses. Accordingly, while education of these topics may hold merit on its own, differences in knowledge do not appear to correspond with differences in meat consumption or demand.

Measure	National Average	Culinary Adventures	Mindful Choicemakers	Culture Celebrators	Tasty Value Seekers	Confident Meat Eaters	Simple Feeders	Meat Minimizers
Knowledge, Pork Color	0.417	99	101	106	99	99	99	102
Knowledge, USDA Inspection	0.801	102	101	100	98	103	100	95
Knowledge, Cooking Temp.	0.853	101	97	98	102	103	99	96

MDM-Based Consumer Segment Composition: Demand

Every month nationally represenative willingness-to-pay (WTP) estimates are reported for retail and food service (dinner meal). These values approximate how much consumers are WTP on a $/lb basis for retail products and $/meal basis in food service and provide a measure of demand yielding insight into temporal and market-channel patterns domestically. Importantly these WTP values may exceed market offer prices (reflecting consumers gladly buying) or WTP values may be below market offer prices (suggesting consumers would not buy). This helps distinguish WTP as a demand measure that augments (and differs from) prior day consumption measures (which do not include price details) discussed earlier.

The next figure shows how these WTP values vary over segments during the March-September 2024 period conveying notable heterogeneity in retail demand. Culinary Adventures, Mindful Choicemakers, and Culture Celebrators all over-index in retail demand for the examined products. This suggests that if asked to buy a single retail package, these consumers are more likely to buy at higher prices than members of the other four segments. This further helps illustrate value vs volume aspects alluded to earlier; on an expenditure per package basis members of Culinary Adventures, Mindful Choicemakers, and Culture Celebrators segments likely rank highest. Note this is further consistent with the relatively lower ranking importance of Price (see Protein Values discussion) for these three segments.

Retail demand for Tasty Value Seekers is rather uniform in relation to national average demand. Across the eight examined retail goods, Tasty value Seekers are WTP 79-91% of the national average implying they value each product about 10% less than the national average; consistent with their high ranking PV score of Price. Recall that Confident Meat Eaters over-index on pork inclusion in prior day meals which is a consumption frequency measure. Here observing Confident Meat Eaters neither over- nor under-index in pork retail demand (vs. national average) suggests that Confident Meat Eaters may be more volume oriented (again consistent with elevated importance of Price in protein purchasing decisions).

Retail Demand Measure	National Average ($/lb)	Culinary Adventures	Mindful Choicemakers	Culture Celebrators	Tasty Value Seekers	Confident Meat Eaters	Simple Feeders	Meat Minimizers
Ribeye Steak	$ 17.63	119	114	110	88	95	91	95
Ground Beef	$ 8.74	126	130	118	80	89	95	92
Pork Chop	$ 7.19	131	133	119	81	96	84	75
Bacon	$ 5.94	125	123	118	82	102	97	64
Chicken Breast	$ 8.56	121	148	122	82	84	87	105
Plant-Based Patty	$ 8.29	112	136	112	79	87	87	98
Shrimp	$ 9.47	119	133	114	91	91	84	88
Beans and Rice	$ 3.27	134	161	139	70	68	75	132

Turning to food service demand we see a similar pattern in ordinal demand across segments but the magnitude of differences is lower than retail. Culinary Adventures and Mindful Choicemakers are WTP 10% or more per dinner meal than the national average for each examined entree while Culture Celebrators have at least 5% higher demand. Tasty Value Seekers under-index in demand for beef dinner meals away-from-home.

To appreciate magnitude differences across market channel consider the case of two larger segments. On average Culinary Adventures are WTP 13% more than the national average for dinner meals away-from-home and 23% more in retail. Meanwhile, Tasty Value Seekers on average are WTP 9% less than the national average for dinner meals away-from-home vs. 18% less in retail. This indicates much more variation in retail demand than in food service (dinner meal here) demand. While the exact reasons for this are not clear they have clear implications such as targeting efforts may be more fruitful in retail channels.

Food Service Demand Measure	National Average ($/dinner	Culinary Adventures	Mindful Choicemakers	Culture Celebrators	Tasty Value Seekers	Confident Meat Eaters	Simple Feeders	Meat Minimizers
Ribeye Steak	$ 27.17	115	116	105	90	98	93	92
Beef Hamburger	$ 20.52	116	117	110	88	93	97	98
Pork Chop	$ 16.07	116	118	108	93	97	93	85
Baby Back Ribs	$ 18.85	112	112	109	92	100	98	83
Chicken Breast	$ 18.57	110	127	108	94	92	95	94
Plant-Based Patty	$ 13.25	112	143	116	83	71	81	112
Shrimp	$ 18.35	112	125	109	95	93	90	93
Salmon	$ 19.79	113	138	109	95	82	83	98

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Summary and Key Implications

This report used over 21,000 observationss from March-September 2024 Meat Demand Monitor (MDM) data to support an extensive look at size and composition of segments in the U.S. population. Finding MDM data to corroborate insights from other segmentation assessments using a separate data source adds confidence to the accuracy of consumer segment conclusions. By extension, future efforts built upon these segmentation conclusions can be executed with more confidence.

Indeed the U.S. is a country characterized by a growing population that is evolving in many ways. Here distinctions across observable traits (e.g. age, gender, region of residence) are shown to matter but are far from the complete story. Also of key importance to understanding consumer heterogeneity is assessing importance of factors such as taste or convenience relative to nutrition or price. Here the Protein Values measure provided by the MDM is particularly helpful as it provides a relative measure not available in most other data sources showing wide differences across segments in what underlies protein purchasing decisions. These differerences across seven identified segments align with notable differences in prior day meat consumption, retail meat demand, and food service (dinner meal) meat demand as measured in the MDM.

There are a host of implications for stakeholders spanning the U.S. meat-livestock supply chain. Over time as the domestic population continues to evolve, periodic updating and expansion on this and similar efforts is encouraged.

Additional MDM Project details including survey questions, past report releases, and a description of methods are available online at: https://www.agmanager.info/livestock-meat/meat-demand/monthly-meat-demand-monitor-survey-data

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