



Consumers: Healthy Eating/Ancient Grains

Survey Results



Methodology

What: Survey on eating preferences and grain awareness/familiarity

Who: 1,001 U.S. consumers, 18 years of age or older*

When: Fielded between August 19-23, 2022

How: Online survey

*Overall sample balanced to U.S. population on key characteristics (i.e., age, gender, ethnicity, region, household income, etc.)

Topics

Key Takeaways

Results Among Total Consumers

- Healthy Eating Participation
- Dietary Priorities
- Grain Status: Awareness
- Grain Familiarity
- Impact of Ancient Grains

Results By Age Groups

- Healthy Eating Participation
- Grain Status: Awareness
- Grain Familiarity
- Impact of Ancient Grains

Key takeaways

Eating healthy has no boundaries. Consumers of all ages are actively seeking healthy food options.

- Consumers across every age range (80%+) report they are actively seeking healthy eating.
- 47% of Americans say plant-based eating is important to dietary/eating goals.
- A mix of factors drive overall dietary/food choices – taste (98%) still matters most. Other important factors include making overall good choices (94%), seeking specific ingredients (92%), indulgence (89%) and convenience (88%).



Key takeaways

Awareness of what is or is not a grain is incomplete. While 96% of consumers identify wheat as a grain, awareness across other ancient grains is lacking.

- Among those surveyed, quinoa is not only the most widely-known grain (86%), but also has highest rate of favorable nutritional perceptions.
 - However, there is still an opportunity to educate consumers further, as 46% of consumers have heard of quinoa, but lack a broader understanding of the grain.
- Younger generations in particular have a higher familiarity with quinoa. Consumers aged 35-54 have the highest familiarity at 91%.
- While 96% of consumers are familiar with chickpeas, only 17% of consumers accurately identify chickpea as a grain.
- Of the ancient grains included, consumers are least familiar with teff (13%) and white Sonora (15%), providing ample opportunity in the industry to educate.



Key takeaways

Consumers are “hungry” to learn more. Interest is strong for all aspects of ancient grains – especially the nutritional/functional benefits – and purchasing intent is high.

- Consumers report wanting to learn more about most aspects of ancient grains led by an interest in the nutritional (85%) and functional (82%) benefits.
- Nearly 3/4 of consumers claim they are likely to eat more ancient grains over the next year.
- Over half (61%) of Americans say they definitely or probably would purchase an item with ancient grains from a grocer. The highest interest lies with younger generations (18-34 reporting 65%, 35-52 reporting 64%).

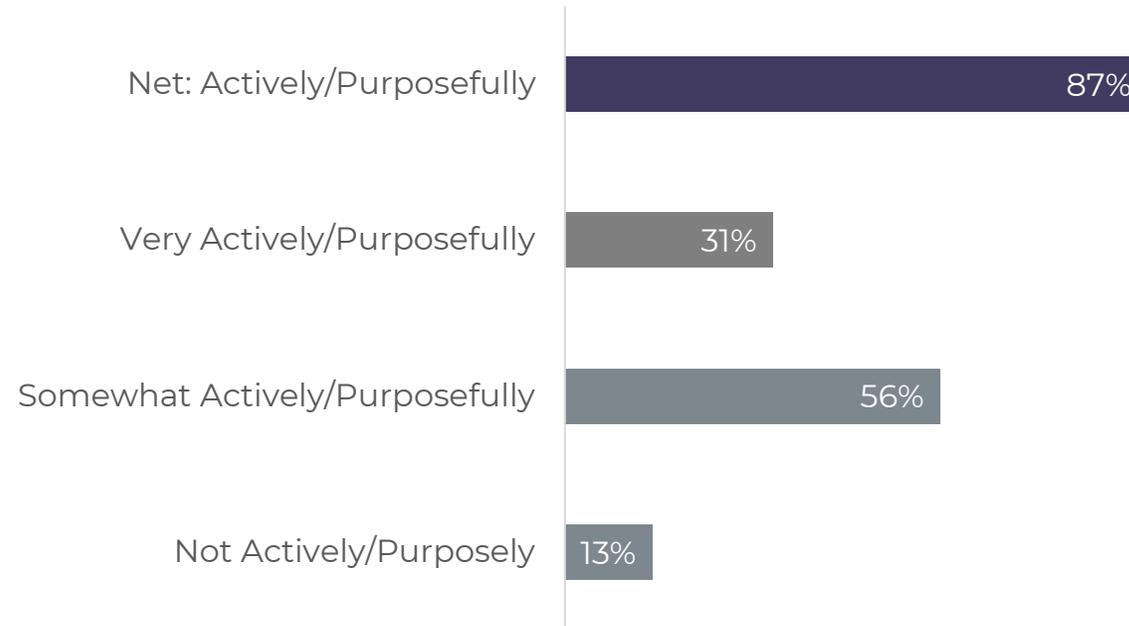




Eating Healthy

Nearly all consumers are taking an active/purposeful approach to eating healthy.

Approach to Choices to Ensure Eating Healthy



Great taste still matters most but intentional health and wellness behaviors play a key role.

Importance to Dietary/Eating Goals and Priorities

Factor	Net: Important	Very Important	Somewhat Important	Not Important
Great Tasting Foods	98%	80%	18%	2%
Making Overall Good/Smart Choices	94%	58%	36%	6%
Seeking Ingredients/Foods You Think are Good for You	92%	52%	40%	8%
Rich in Vitamins/Nutrients	90%	48%	42%	10%
Indulging/Treating Yourself	89%	32%	57%	11%
Foods that are Convenient/Make My Life Easier	88%	37%	51%	12%
Avoiding Ingredients/Foods You Think are Bad For You	88%	41%	46%	12%
Boosting Immune Health	86%	42%	44%	14%
Weight Management/Loss	77%	29%	47%	23%
Supporting Planetary Health/ Sustainability	69%	22%	47%	31%
Avoiding Ingredients/Foods Due to Intolerances/Sensitivities	55%	27%	28%	45%
Avoiding Ingredients/Foods Due to Allergies	48%	28%	20%	52%
Plant-Based Eating	47%	11%	36%	53%

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Grain Identification

Beyond wheat, consumer awareness of what is/is not a grain is incomplete.

Grain Identification

Grain/Pulse/Oil Seed	True	False	Don't Know
Wheat	96%	1%	3%
Buckwheat	83%	5%	11%
Quinoa	66%	11%	22%
Millet	56%	6%	38%
Flax Seeds	45%	35%	21%
Chia Seeds	33%	40%	27%
Spelt	32%	7%	61%
Pumpkin Seeds	19%	64%	17%
Chickpeas	17%	62%	21%



Ancient Grain Familiarity/Impact

Consumers have limited/shallow familiarity with most of the specific ancient grains.

Familiarity

Grain/Pulse/Oil Seed	Net: Familiar	Very Familiar/Know Specifics	Somewhat Familiar/Have Heard of It	Never Heard of It
Wheat	99%	84%	15%	1%
Pumpkin Seeds	97%	60%	37%	3%
Chickpeas	96%	51%	44%	4%
Flax Seeds	91%	36%	56%	9%
Buckwheat	89%	27%	62%	11%
Chia Seeds	87%	34%	53%	13%
Quinoa	86%	40%	46%	14%
Millet	61%	13%	48%	39%
Sorghum	54%	10%	43%	46%
Spelt	37%	6%	31%	63%
Amaranth	30%	5%	25%	70%
White Sonora	15%	2%	13%	85%
Teff	13%	2%	10%	87%

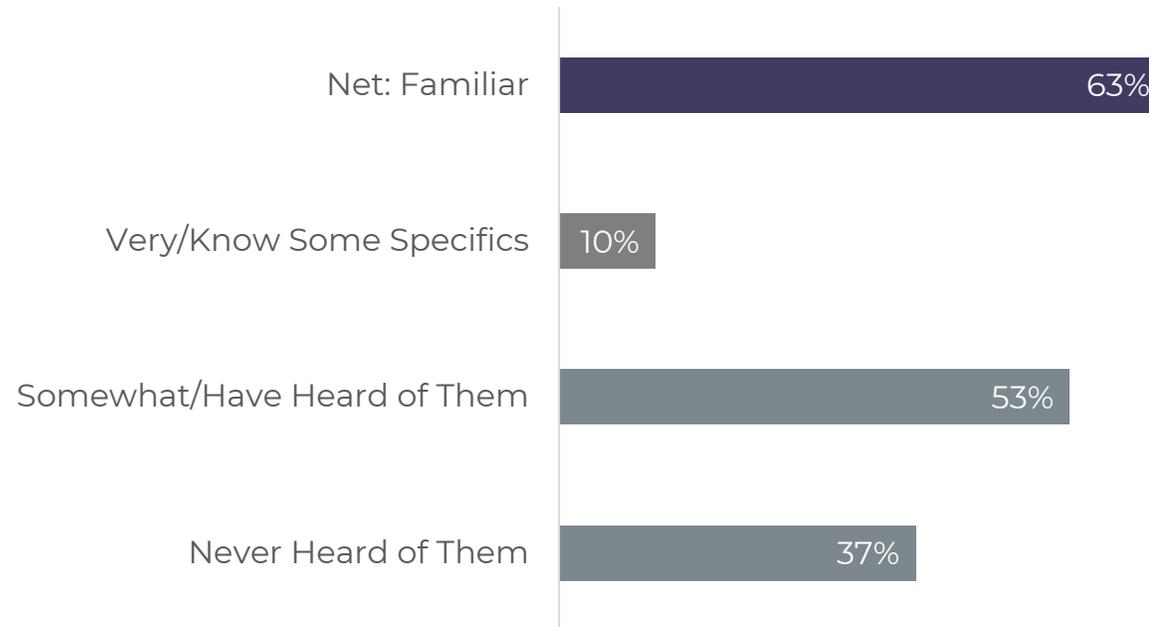
Quinoa, chickpea enjoy favorable nutritional perceptions but opportunity to “educate” further exists.

Nutritional Value Perceptions*

Grain/Pulse/Oil Seed	High Nutritional Value	Medium Nutritional Value	Low Nutritional Value	Do Not Know
Quinoa	58%	26%	2%	14%
Flax Seeds	55%	26%	3%	17%
Chickpeas	54%	29%	3%	14%
Chia Seeds	49%	26%	5%	20%
Pumpkin Seeds	39%	38%	7%	17%
Wheat	37%	42%	12%	9%
Amaranth	30%	22%	4%	44%
Buckwheat	29%	40%	6%	26%
Teff	27%	23%	8%	43%
Spelt	22%	28%	5%	45%
Millet	19%	37%	5%	39%
White Sonora	14%	26%	3%	56%
Sorghum	14%	33%	14%	40%

Two thirds of consumers know of ancient grains but few know specifics about the category.

Familiarity with Ancient Grains (Category)



Interest is strong for all aspects of ancient grains, especially the nutritional/functional benefits.

Interest in Ancient Grain

Ancient Grains Characteristics	Net: Interested	Very Interested	Somewhat Interested	Not Interested
Any NUTRITIONAL BENEFITS about ANCIENT GRAINS	85%	50%	35%	15%
Any FUNCTIONAL BENEFITS about ANCIENT GRAINS	82%	45%	37%	18%
What ANCIENT GRAINS add to the EATING EXPERIENCE	81%	40%	41%	19%
What BRANDS make food items that include ANCIENT GRAINS	80%	36%	44%	20%
Any benefits that ANCIENT GRAIN GROWING PROCESS brings to the ENVIRONMENT/PLANET	76%	34%	42%	24%
The STORY/HISTORY of ANCIENT GRAINS	73%	30%	44%	27%
Information about the FARMERS/GROWERS who grow ANCIENT GRAINS	69%	26%	42%	31%
Characteristics of the GROWING PROCESS for ANCIENT GRAINS (i.e., organic, regenerative agriculture)	68%	26%	41%	32%
OVERALL	83%	35%	48%	17%

Q: As a consumer, and given your own personal eating habits, how INTERESTED are you in the following aspects of the ANCIENT GRAINS?

Majority of consumers report positive purchase intent for ancient grain food items.

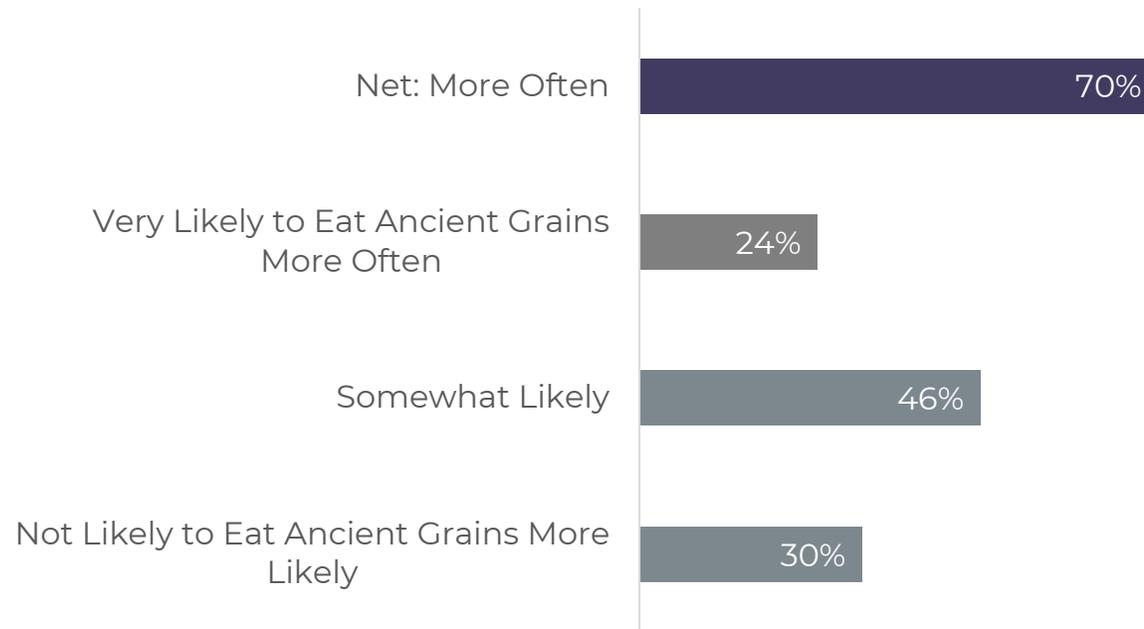
Purchase Intent for Ancient Grain Food Items

Food Item	Net: Definitely/ Probably Would	Definitely Would	Probably Would	Might/Might Not	Probably Would Not	Definitely Would Not
An item from the GROCERY STORE that included ANCIENT GRAINS as an ingredient (i.e., Bread made with an Ancient Grain Flour)	61%	25%	36%	28%	7%	5%
ANCIENT GRAINS intact as a stand-alone item bought from the GROCERY STORE to prepare at home (i.e., a side dish)	50%	22%	28%	30%	13%	7%
ANCIENT GRAINS intact as a stand-alone item as part of a RESTAURANT dish (i.e., a side dish)	47%	18%	29%	33%	13%	7%
A menu item from a RESTAURANT that included ANCIENT GRAINS as an ingredient (i.e., Pizza with a crust made with Ancient Grains)	56%	23%	33%	30%	8%	5%
OVERALL	58%	21%	37%	30%	8%	5%

Q: How likely would you be to PURCHASE/EAT the following types of ANCIENT GRAIN products?

Providing consumers with baseline context about ancient grains yields a strong claimed likelihood of increased consumption.

Future Ancient Grain Consumption Plans



Q: Over the next 12 months how likely are you to eat ANCIENT GRAINS with intent and purpose MORE OFTEN?

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Results by Consumer Age Groups

Healthy approaches to eating by age group

Approach to Choices to Ensure Eating Healthy

Behavior	18 – 34	35 – 54	55 – 64	65+
Net: Actively/Purposefully	89%	85%	84%	90%
Very Actively/Purposefully	31%	31%	25%	35%
Somewhat Actively/Purposefully	58%	54%	59%	55%
Not Actively/Purposefully	11%	15%	16%	10%

Chickpeas/Wheat: Grain identification by age group

Chickpeas Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	20%	15%	16%	19%
False	59%	66%	62%	63%
Don't know	22%	20%	22%	19%

Wheat Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	95%	96%	98%	95%
False	1%	2%	0%	1%
Don't know	4%	2%	2%	4%

Quinoa/Spelt: Grain identification by age group

Quinoa Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	65%	71%	63%	62%
False	11%	12%	10%	13%
Don't know	24%	17%	26%	26%

Spelt Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	32%	34%	30%	31%
False	8%	7%	8%	6%
Don't know	61%	58%	62%	64%

Buckwheat/Millet: Grain identification by age group

Buckwheat Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	82%	82%	84%	87%
False	5%	7%	5%	3%
Don't know	13%	11%	11%	11%

Millet Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	50%	56%	58%	63%
False	6%	5%	5%	7%
Don't know	45%	38%	37%	30%

Pumpkin seeds/Flax seeds/Chia seeds: Grain identification by age group

Pumpkin Seeds Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	19%	20%	13%	22%
False	60%	62%	72%	65%
Don't know	20%	18%	15%	14%

Flax Seeds Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	40%	46%	44%	50%
False	33%	37%	36%	32%
Don't know	26%	18%	20%	18%

Chia Seeds Grain Identification

	18 – 34	35 – 54	55 – 64	65+
True	31%	37%	31%	33%
False	41%	40%	43%	36%
Don't know	28%	24%	26%	31%

Quinoa: Familiarity by age group

Quinoa Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Quinoa: Net Familiar	85%	91%	83%	84%
Very – Know Some Specifics	50%	46%	27%	27%
Somewhat – Have Heard of It	35%	45%	56%	56%
Never Heard of It	15%	9%	17%	17%

Teff: Familiarity by age group

Teff Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Teff: Net Familiar	14%	16%	8%	10%
Very – Know Some Specifics	3%	2%	1%	3%
Somewhat – Have Heard of It	11%	14%	7%	7%
Never Heard of It	86%	84%	92%	90%

Amaranth: Familiarity by age group

Amaranth Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Amaranth: Net Familiar	31%	35%	25%	30%
Very – Know Some Specifics	6%	5%	5%	5%
Somewhat – Have Heard of It	25%	30%	20%	25%
Never Heard of It	69%	66%	76%	71%

Spelt: Familiarity by age group

Spelt Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Spelt: Net Familiar	33%	41%	34%	38%
Very – Know Some Specifics	7%	7%	4%	6%
Somewhat – Have Heard of It	26%	34%	30%	32%
Never Heard of It	67%	58%	66%	63%

White sonora: Familiarity by age group

White Sonora Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
White Sonora: Net Familiar	17%	17%	12%	9%
Very – Know Some Specifics	3%	2%	1%	1%
Somewhat – Have Heard of It	14%	15%	11%	8%
Never Heard of It	83%	83%	89%	91%

Buckwheat: Familiarity by age group

Buckwheat Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Buckwheat: Net Familiar	81%	93%	91%	92%
Very – Know Some Specifics	25%	23%	25%	38%
Somewhat – Have Heard of It	56%	70%	66%	54%
Never Heard of It	19%	8%	9%	8%

Sorghum: Familiarity by age group

Sorghum Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Sorghum: Net Familiar	36%	54%	67%	69%
Very – Know Some Specifics	9%	6%	14%	16%
Somewhat – Have Heard of It	27%	48%	53%	53%
Never Heard of It	64%	46%	33%	32%

Millet: Familiarity by age group

Millet Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Millet: Net Familiar	53%	61%	65%	69%
Very – Know Some Specifics	13%	12%	12%	15%
Somewhat – Have Heard of It	40%	49%	53%	54%
Never Heard of It	48%	39%	36%	32%

Chickpeas: Familiarity by age group

Chickpeas Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Chickpeas: Net Familiar	91%	98%	97%	98%
Very – Know Some Specifics	52%	58%	44%	47%
Somewhat – Have Heard of It	39%	40%	53%	51%
Never Heard of It	9%	2%	3%	3%

Wheat: Familiarity by age group

Wheat Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Wheat: Net Familiar	98%	100%	99%	97%
Very – Know Some Specifics	85%	82%	86%	81%
Somewhat – Have Heard of It	13%	18%	13%	16%
Never Heard of It	2%	0%	1%	3%

Pumpkin seeds: Familiarity by age group

Pumpkin Seeds Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Pumpkin Seeds: Net Familiar	96%	99%	99%	97%
Very – Know Some Specifics	60%	62%	58%	61%
Somewhat – Have Heard of It	36%	37%	41%	37%
Never Heard of It	4%	2%	1%	3%

Chia seeds: Familiarity by age group

Chia Seeds Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Chia Seeds: Net Familiar	88%	91%	84%	81%
Very – Know Some Specifics	45%	38%	17%	24%
Somewhat – Have Heard of It	43%	53%	67%	57%
Never Heard of It	11%	10%	16%	20%

Flax seeds: Familiarity by age group

Flax Seeds Familiarity

Grain/Pulse/Oil Seed	18 – 34	35 – 54	55 – 64	65+
Flax Seeds: Net Familiar	85%	94%	94%	94
Very – Know Some Specifics	39%	39%	24%	37%
Somewhat – Have Heard of It	46%	55%	70%	57%
Never Heard of It	15%	6%	6%	6%

Ancient grains: Interest by characteristics

Net: Interested in Aspects of Ancient Grain

Ancient Grains Characteristics	18 – 34	35 – 54	55 – 64	65+
What BRANDS make food items that include ANCIENT GRAINS	83%	82%	72%	80%
Any NUTRITIONAL BENEFITS about ANCIENT GRAINS	85%	87%	81%	83%
Any FUNCTIONAL BENEFITS about ANCIENT GRAINS	82%	85%	76%	83%
The STORY/HISTORY of ANCIENT GRAINS	74%	76%	68%	73%
Information about the FARMERS/GROWERS who grow ANCIENT GRAINS	71%	72%	58%	69%
What ANCIENT GRAINS add to the EATING EXPERIENCE	82%	83%	78%	80%
Any benefits that ANCIENT GRAIN GROWING PROCESS brings to the ENVIRONMENT/PLANET	78%	81%	65%	76%
Characteristics of the GROWING PROCESS for ANCIENT GRAINS (i.e., organic, regenerative agriculture)	71%	73%	57%	64%
OVERALL	84%	86%	80%	79%

Q: As a Consumer, and given your own personal eating habits, how INTERESTED are you in the following aspects of the ANCIENT GRAINS?

Ancient grains: Purchase intent

Net: Definitely/Probably Would Purchase Intent for Ancient Grain Food Items

Food Item	18 – 34	35 – 54	55 – 64	65+
An item from the GROCERY STORE that included ANCIENT GRAINS as an ingredient (i.e., Bread made with an Ancient Grain Flour)	65%	64%	52%	58%
ANCIENT GRAINS intact as a stand-alone item bought from the GROCERY STORE to prepare at home (i.e., a side dish)	54%	56%	41%	43%
ANCIENT GRAINS intact as a stand-alone item as part of a RESTAURANT dish (i.e., a side dish)	50%	51%	39%	41%
A menu item from a RESTAURANT that included ANCIENT GRAINS as an ingredient (i.e., Pizza with a crust made with Ancient Grains)	61%	58%	47%	54%
OVERALL	63%	63%	45%	53%

Q: How likely would you be to PURCHASE/EAT the following types of ANCIENT GRAIN products?

Thank you



Arden Mills.

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