Assessing Consumer Demand for Millets in India

Transform Rural India

DIU development intelligence unit

SAMBODHI

Table of

Contents

05 Section 1
Introduction

09 Section 2
Awareness and consumption of millets

19 Section 3
Procurement of millets for consumption

24 Section 4
Factors that influence the process of buying food products

28 Section 5
Psychographic testing among current consumers

37 Section 6
Profiling millets non-consumers

Section 1
Introduction

1.1 Preamble

For centuries, millets were the staples in India but gradually were relegated to the background and got marginalized post the green revolution as the agrarian emphasis shifted to increased food grain production & productivity using high-yielding varieties of wheat & rice in the identified green revolution geographies.

To create domestic and global demand and to provide nutritional food to the people, Government of India had proposed to the United Nations for declaring 2023 as the International Year of Millets (IYoM-2023). This proposal from India was supported by 72 countries and United Nations General Assembly (UNGA) declared 2023 as the International Year of Millets on 5th March 2021. This led to the Hon'ble Union Finance Minister making a Budget announcement on 1st February 2022 where she said "2023 has been announced as the International Year of Millets. Support will be provided for post-harvest value addition, enhancing domestic consumption and branding of millet products nationally and internationally".

Millets are small-grained, annual, warm-weather cereals belonging to the grass family. Jowar (Sorghum), Bajra (Pearl Millet) and Ragi (Finger millet) are the important millets cultivated in India. Small Millets such as Proso (Cheena), Kodo (Kodra, Arikelu), Fox tail (Kangni/Korra), Barnyard (Varai, Sawa), Little millet (Kutki) are also grown in our country. Millets are the staple crops of the semiarid tropics, as other food crops cannot be cultivated in that terrain due to low rainfall and poor soil fertility. They also have higher nutrient content compared to major cereal crops and ensure food and nutrition security. Further, millets are tolerant to drought and other extreme weather conditions and hence are endemic to such geographies.

With growing concerns about lifestyle diseases coupled with a 'refined' diet culture, modern consumers are slowly, but increasingly looking at the nutrient-rich millets as a suitable alternative to wheat and rice. In order to encourage the production and consumption of millets, Government of India had notified millets as Nutri-Cereals in April, 2018.

1.2 Research methodology

Assessing Consumer Demand for Millets in India is a pioneering initiative aimed at comprehensively assessing the millets landscape in India from the point of view of current consumers as well as non-consumers. The aim of the survey was to look at awareness levels regarding millets and their benefits, consumption trends, and motives and barriers towards consumption. This survey was conceived and executed by the Development Intelligence Unit (DIU), a collaborative venture involving Transforming Rural India (TRI) and Sambodhi Research and Communications Pvt. Ltd. The achieved sample was 11281 respondents across 21 states. 7276 samples were covered from urban areas and 4005 were from rural areas. The respondents were covered via a telephonic survey, wherein they were randomly chosen from a pool of empanelled households maintained by Sambodhipanels.

Fixed longitudinal panels tend to suffer from the Hawthorne effect, which renders their outputs questionable. Sambodhipanels, on the other hand, maintains several baskets containing sizeable respondent pools of similar profiles (age/gender/occupation/location) and for every survey, randomly choose respondents from each basket basis of a quota for each profile mix. Through this method, they get to minimize the Hawthorne effect since the probability of the same respondent receiving a call multiple times during the year is improbable. At the same time, such a diverse panel ensures more representative coverage. Empanelled callers on the payroll are located across the states to ensure all calls were conducted in the local vernacular.

1.3 Sample validity

The achieved sample has been validated using dietary habits/preference as the determinant and this has been compared to the findings from NFHS V. If talking on a weekly basis (we assume that people who reported preferring non-vegetarian food would have the same, at the very least, at least once a week), NFHS V data shows that 57.3 percent of men and 45.1 percent of women reported eating fish, chicken, or meat at least once a week.

Table 1: Dietary preference by gender

	Male	Female
Vegetarian	40.0%	51.4%
Non-vegetarian	58.1%	47.9%
Eggetarian	1.9%	0.7%

The survey findings, with regard to dietary preference, would seem to be in line with the NFHS V results.

1.4 Other aspects of dietary preferences

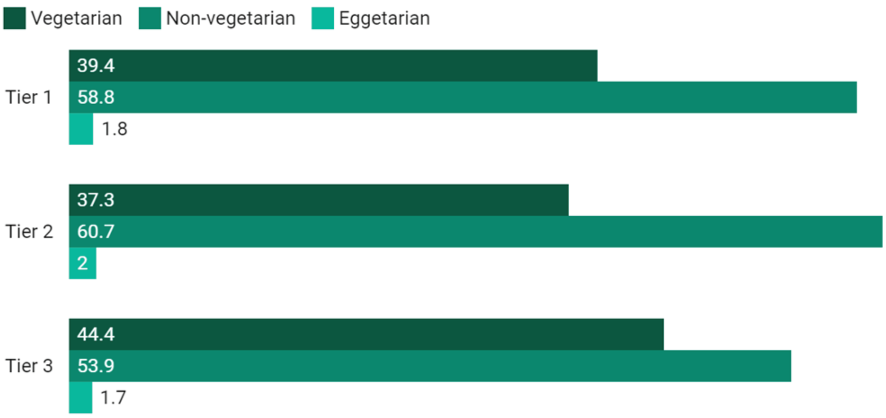
Figure 1

Dietary preference of India

The general trend across all surveys that looked at the diet preferences of Indians confirms that in relative terms, there are a higher proportion of vegetarians in rural India than there is in urban India. Here too we see that the difference is close to almost 10 percentage points. The proportion of people preferring only eggs as a non-vegetarian item in their diet is still less than two percent.

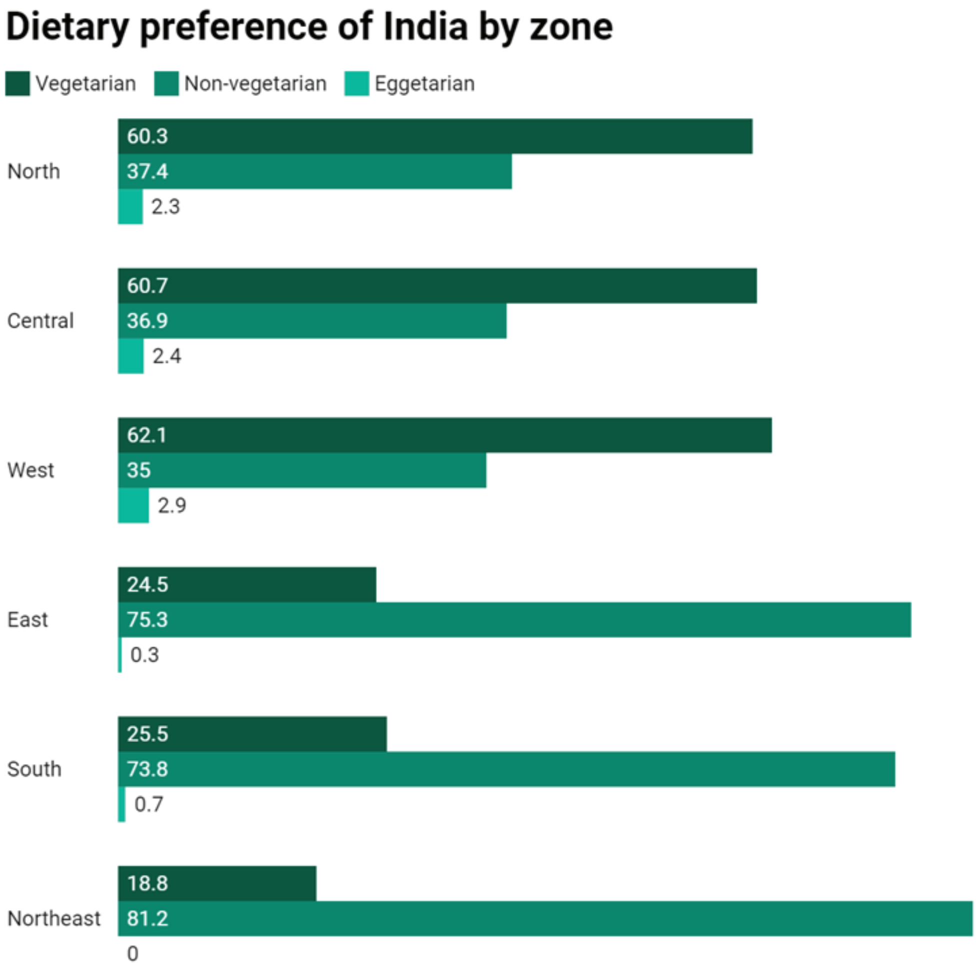
Figure 2

Dietary preference of urban India



As per the RBI, there are a total of 8 Tier 1 cities in India; they are what we call the super metros. Then there are over 110 Tier 2 cities, while the rest are Tier 3. We can observe in the figure above that non-vegetarianism is actually, in proportion terms, slightly more in the tier 2 cities than others. As expected, the share of vegetarianism was highest among the smaller cities and towns.

Figure 3



In line with popular understanding, the north, west, and central states are dominated by vegetarians but on the other hand, there are far more non-vegetarians in the Eastern, Southern, and Northeastern stats. Vegetarianism was lowest in the Northeastern states[1].

[1] *North: Punjab, Haryana, Himachal Pradesh, and Uttarakhand; Central: Uttar Pradesh, Chhattisgarh, and Madhya Pradesh; East: Bihar, Jharkhand, West Bengal, and Odisha; North East: Assam, Nagaland, and Tripura; West: Rajasthan Gujarat, and Maharashtra; South: Andhra Pradesh, Karnataka, Telangana, and Tamil Nadu.*

Section 2

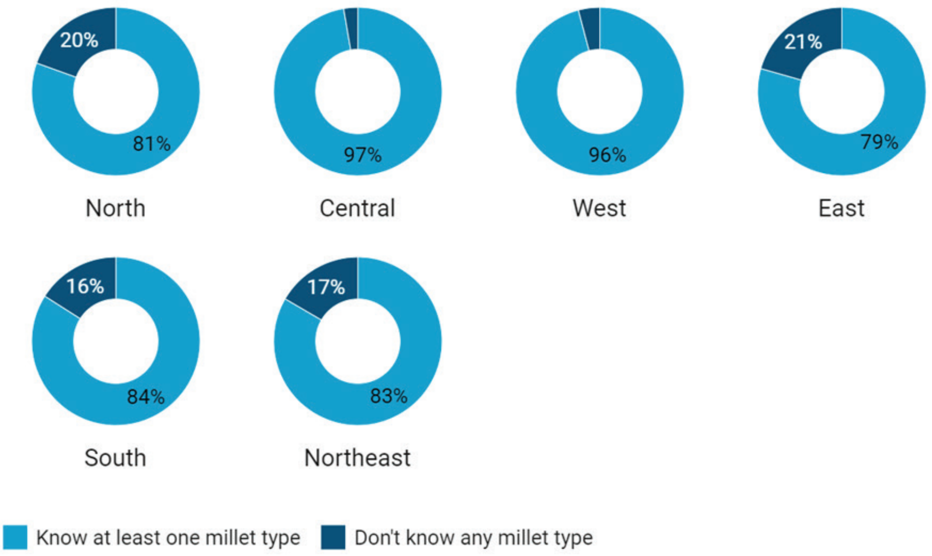
Awareness and consumption of millets

2.1 Awareness of millets

This section contains general awareness of millets, awareness regarding specific types of millets, sources of awareness, awareness regarding the health benefits of millets, and finally, consumption of millets in different parts of the country.

Figure 3

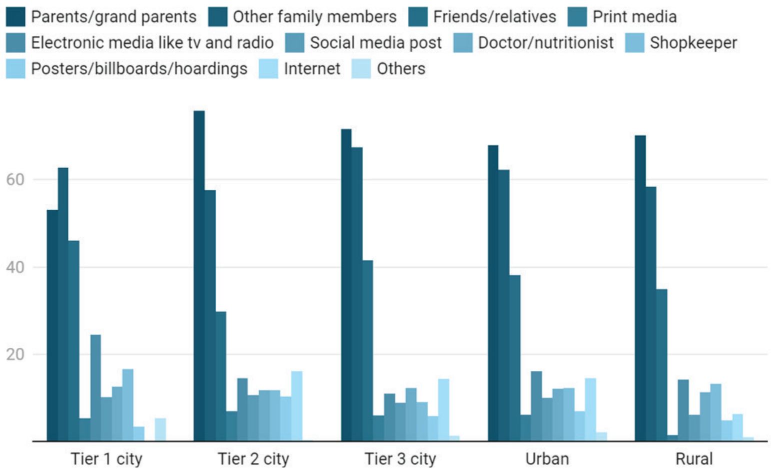
Awareness of millets



In India, awareness of millets is fairly widespread. The highest level of awareness was in the central and western states (including Madhya Pradesh, Chhattisgarh, and Rajasthan, Uttar Pradesh, Maharashtra, and Gujarat). Awareness was relatively lower in the east and northeast. It may be mentioned here that even though popular knowledge dictates that millet consumption is widespread in the northeastern states, our sample for that zone also included Assam and Tripura, two non-tribal states where millets are not part of the popular diet.

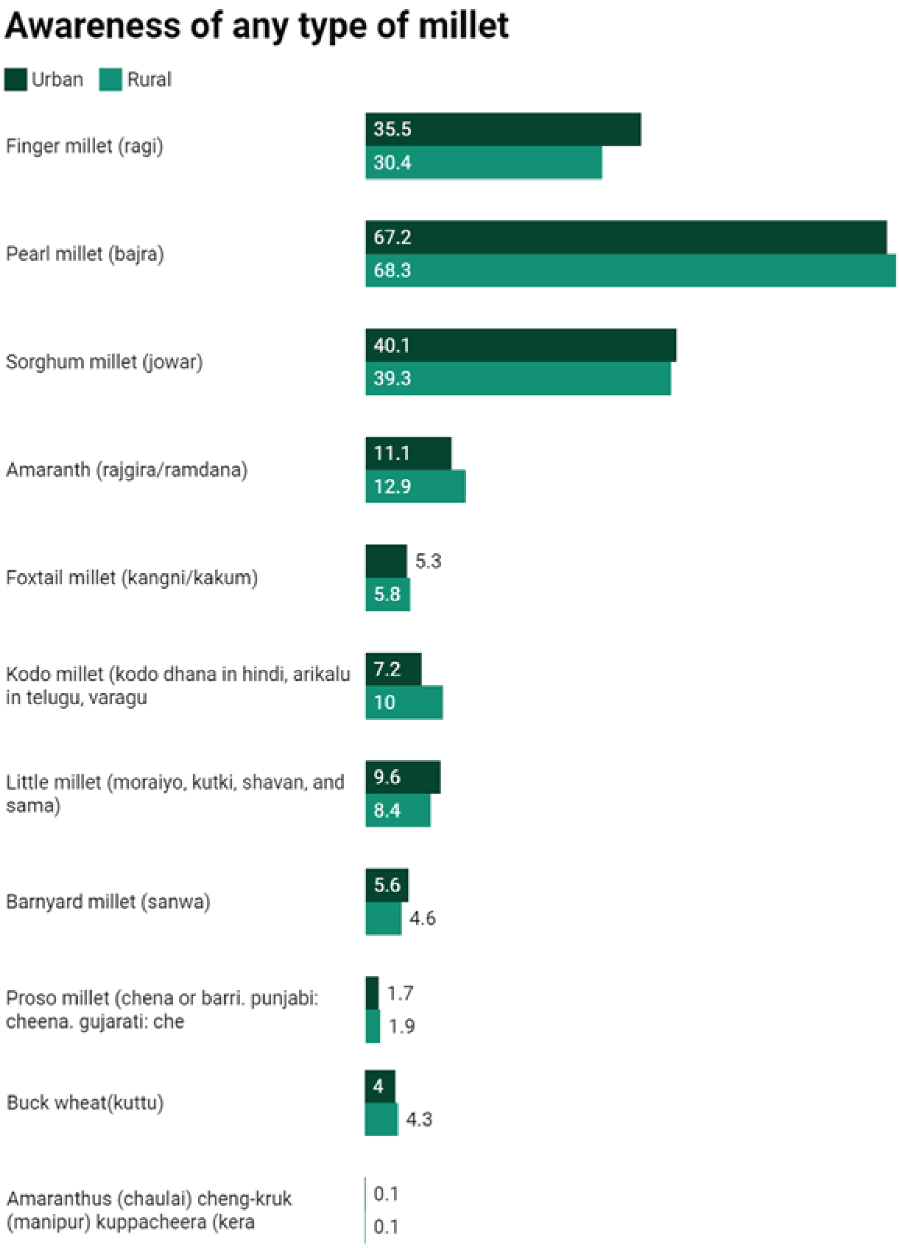
Figure 4

Source of awareness about millets



As the survey data suggests, the source of awareness regarding millets has primarily been word of mouth, with respondents having come to know about the product either from parents and grandparents, other family members and, to a lesser extent, even from friends and relations. This trend was similar across all three urban tiers as well as rural India. Social media has yet to show any significant traction regarding millets, and neither has the internet in general. Surprisingly, doctors are also not been endorsing the benefits of switching to millet consumption to their patients.

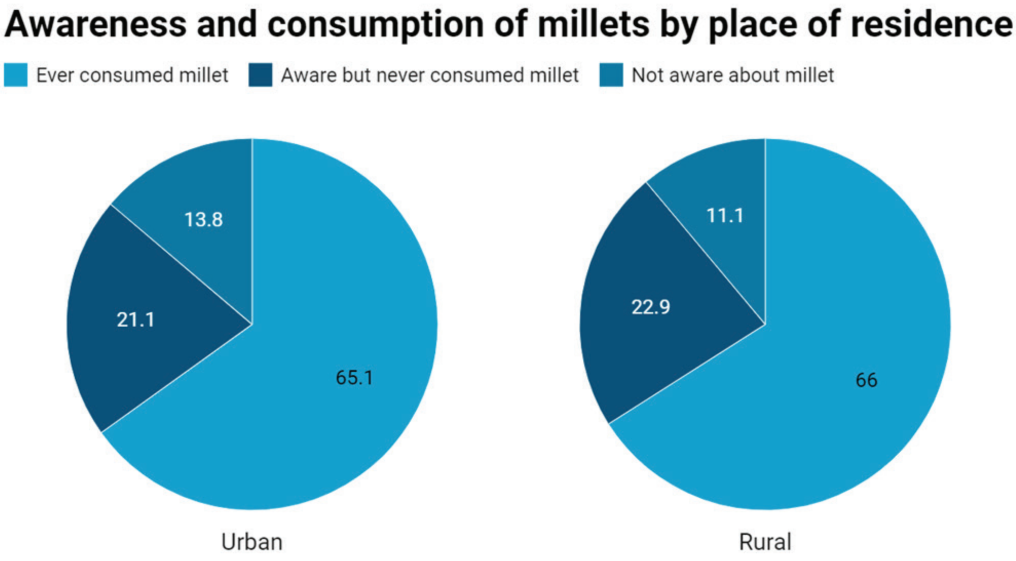
Figure 6



Across India, the types of millets that most people seem to be aware of are Pearl millet (popularly known as bajra), Shorgam millet (popularly known as jowar), and Finger millet (as known as ragi). Most of the other types of millets are very region specific or confirmed by one or two states and hence, known to the local population only.

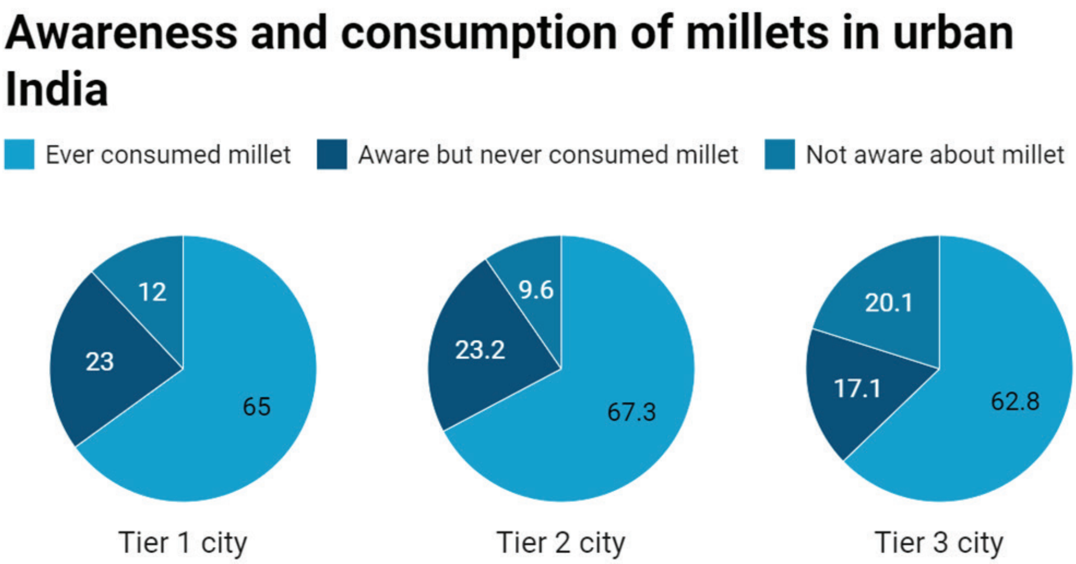
2.2 Awareness vs. consumption of millets

Figure 7



Nearly two out of three respondents from urban areas have consumed millets at some point in their lives and in any form (frequently or infrequently). A little over one in five are aware of millets but do not consume it. 14% were not aware of millets at all. Consumption of millets in rural India was very similar, even though the awareness levels are slightly higher, as also those consuming. One conclusion may be drawn that those aware of millets tend to mostly have consumed it at some point.

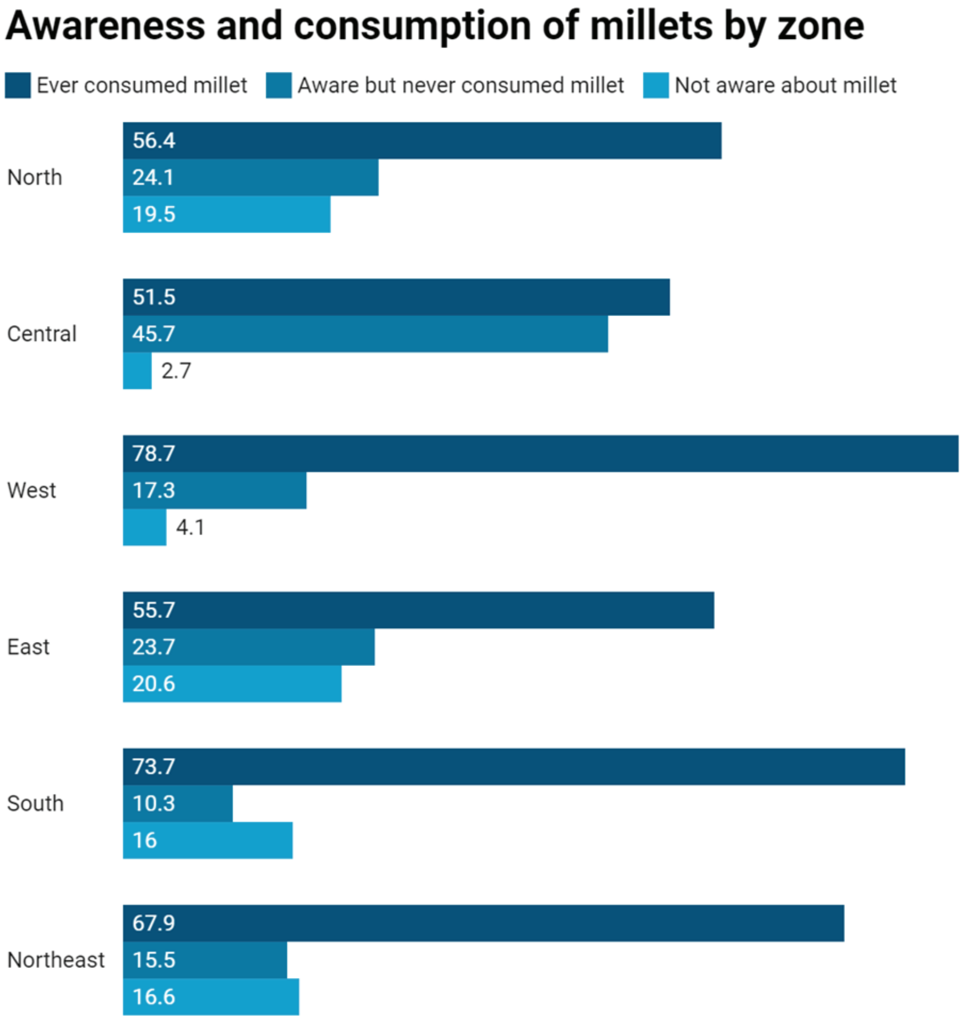
Figure 8



The awareness and consumption levels register similar trends across city sizes except for the fact that non-awareness was highest among Tier 3 cities, as also proportion of people who have ever consumed. As mentioned earlier, according to the survey estimates, millets penetration (ever consumed) was relatively higher among Tier 2 cities.

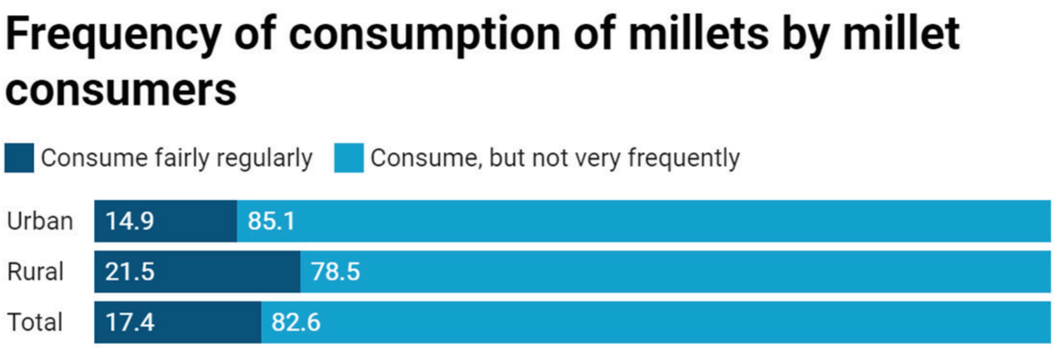
Another view of the same query involved looking at awareness and consumption by zones. The following figure presents the findings. What may be noteworthy is the relative proportion of those who are aware of millets but do not consume the same reside in the Northeastern, Southern, and Western states. From a purely marketing angle, one may conclude that investments into advertising and promoting the benefits of millets in these zones are likely to have the highest number of converters.

Figure 9



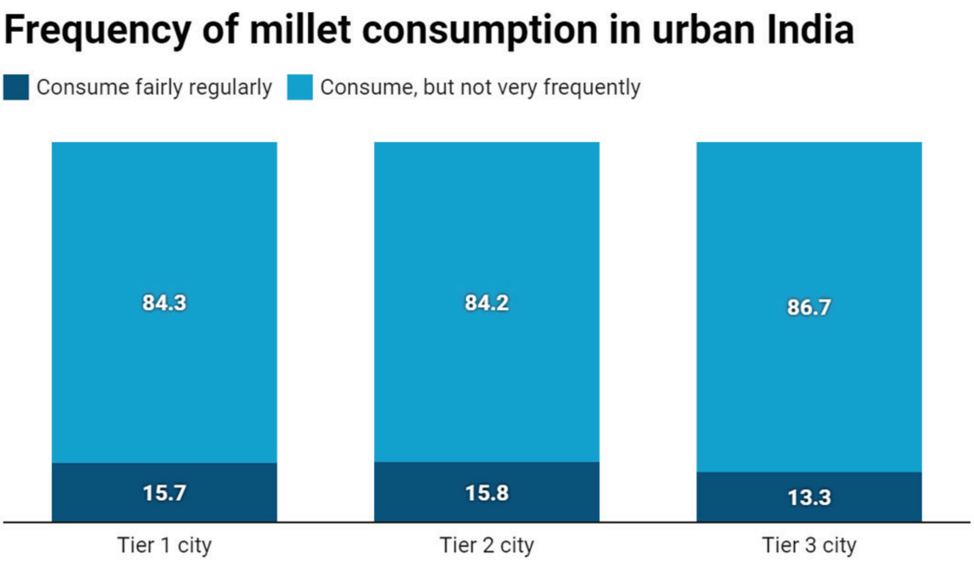
2.3 Frequency of millet consumption

Figure 10



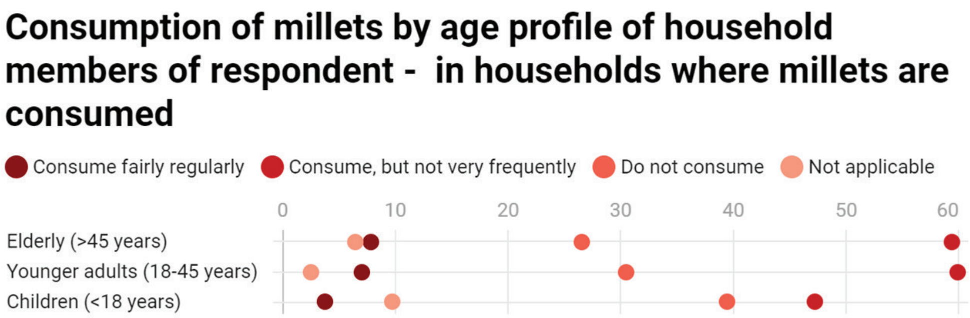
Across urban India, those who consume millets tend to do so infrequently while only 15% do so with any regularity. Regular consumers are higher in rural areas with close to 22% consuming millets regularly.

Figure 11



Consumption frequency was almost the same across Tier 1 and Tier 2 cities with regular consumption being slightly lower in Tier 3 cities.

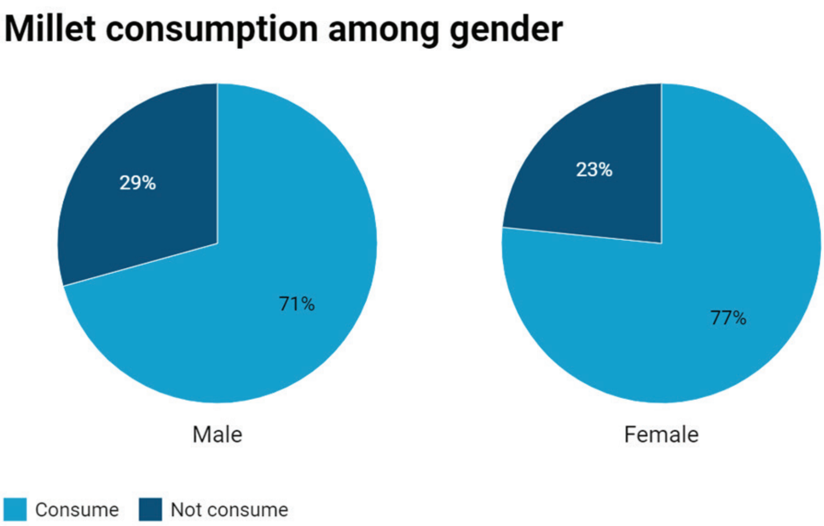
Figure 12



The survey reveals that in households where millets are consumed, over 60% of those who are above 18 years of age tend to consume but not very frequently. Regular consumers, irrespective of age groups, are less than 10% of the household members. Around 20-40% of the household members across different age groups are also non-consumers.

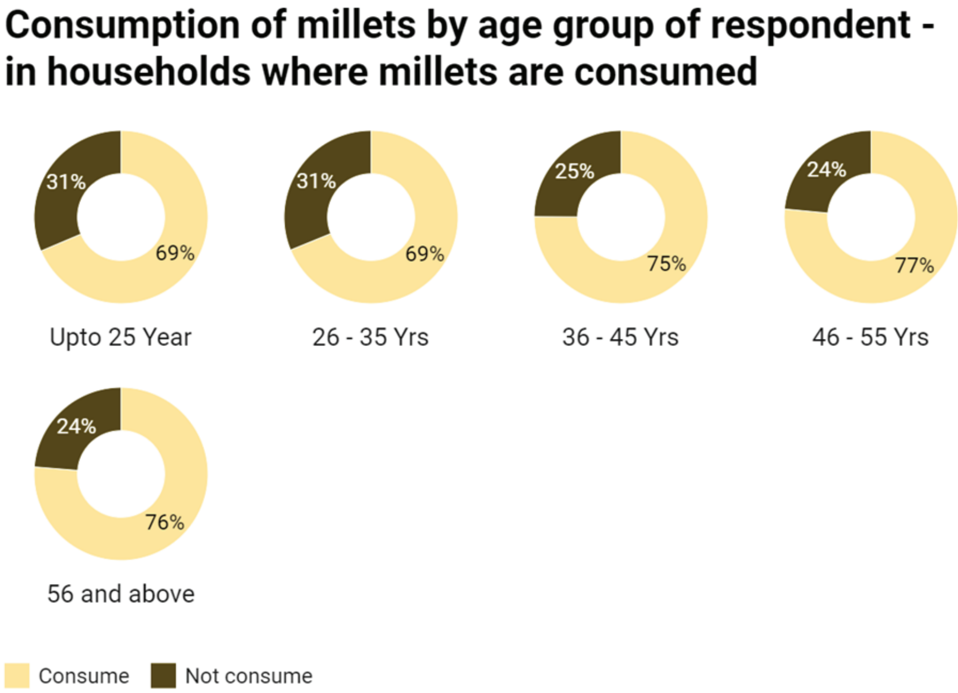
2.4 Profile of millet consumers

Figure 13



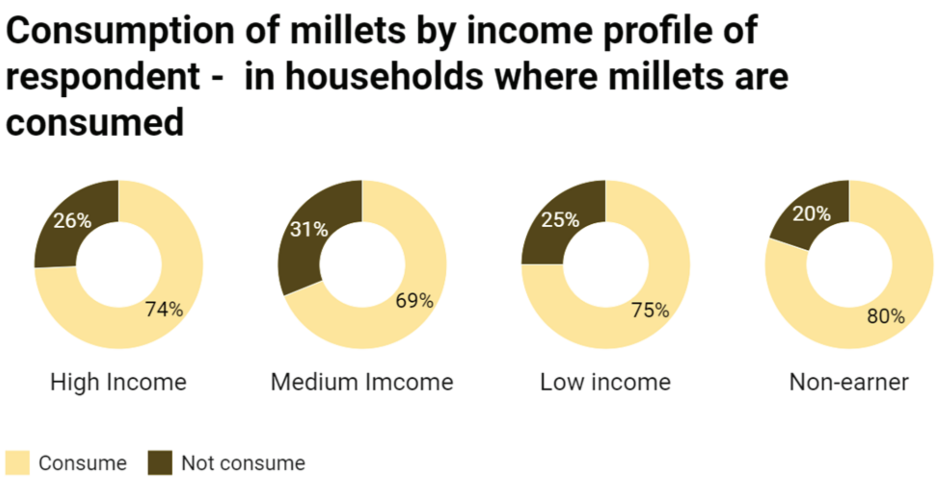
Among the male respondents in the survey, 71% had consumed millets at some point in their life. This proportion was higher among females (77%). It may be noted that this considers infrequent as well as frequent consumers and is not a generic commentary on regularity of consumption.

Figure 14



Consumption patterns within a household seem to indicate that there is no clear pattern of consumption by specific age groups, like the elderly. In fact, what the survey indicated was that once millets become a staple diet at home, everyone seems to consume the same irrespective of age. However, the data also shows that more people in the higher age group tend to consume millets than those below 25 (the difference being 10 percentage points).

Figure 15

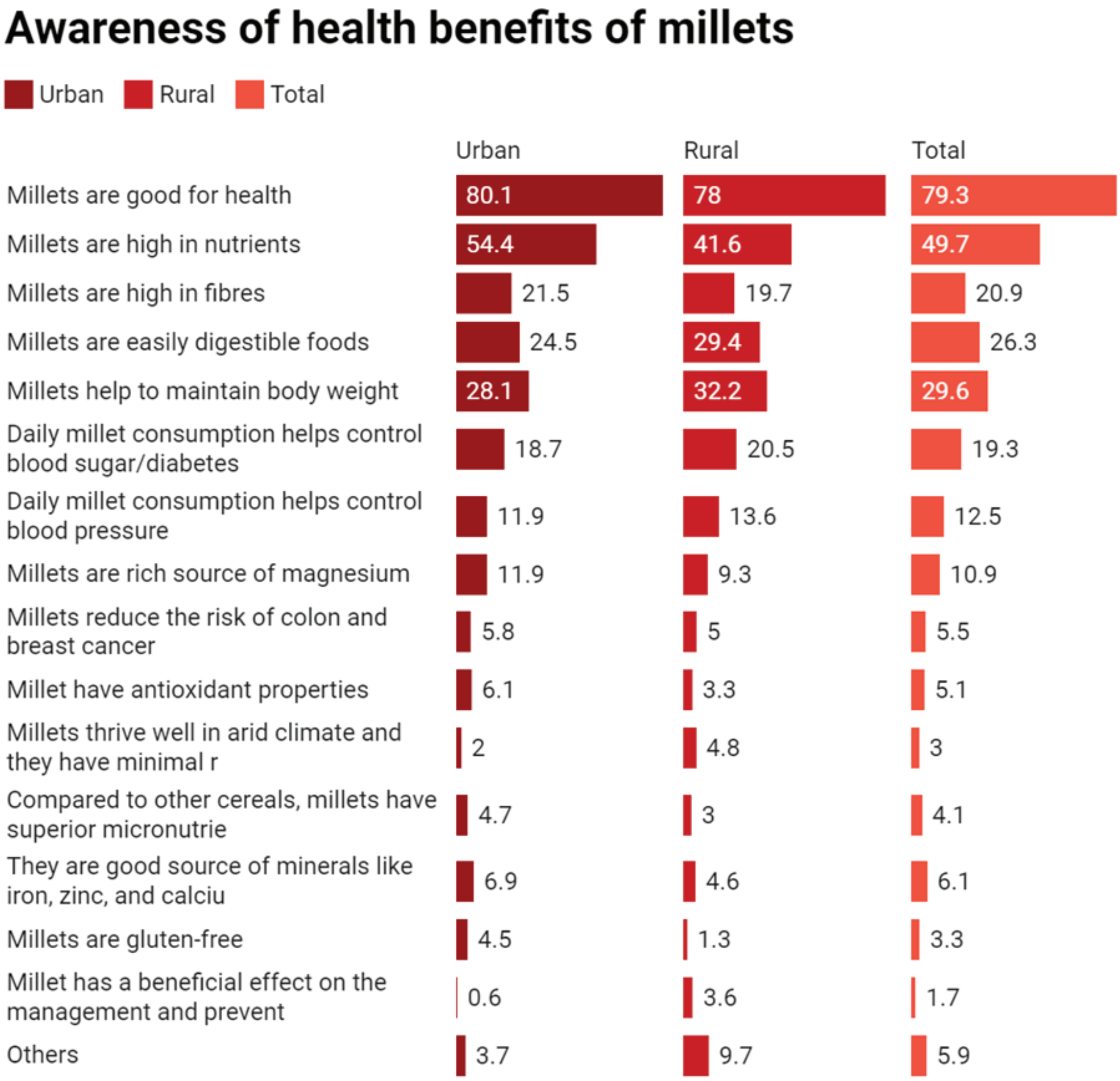


There does not seem to be any significant relationship between earning levels and the consumption of millets. This could possibly be an indication that millet consumption is not a lifestyle statement confined to the rich and neither is it a poor man’s food as often mistakenly connotated.

2.5 Awareness of health benefits

This was asked to those who were aware of millets. This was an unprompted question and responses were coded verbatim and then post-coded. The findings have been presented below.

Figure 16



Most people (over three in four) are aware of the fact that the consumption of millets is healthy but they necessary do not know the details. Close to half of the people interviewed were aware that they are high in nutrients. A few other elements that may be important to consider while developing any communication campaign around millets is that nearly 30% of those aware of millets endorsed the point of view that millets can help fight obesity. Little over a quarter of the respondents were also aware of the fact that millets are full of fibres, and that they are easily digestible foods. Around one in fove respondents believed that millets could help control blood sugar levels.

Figure 17

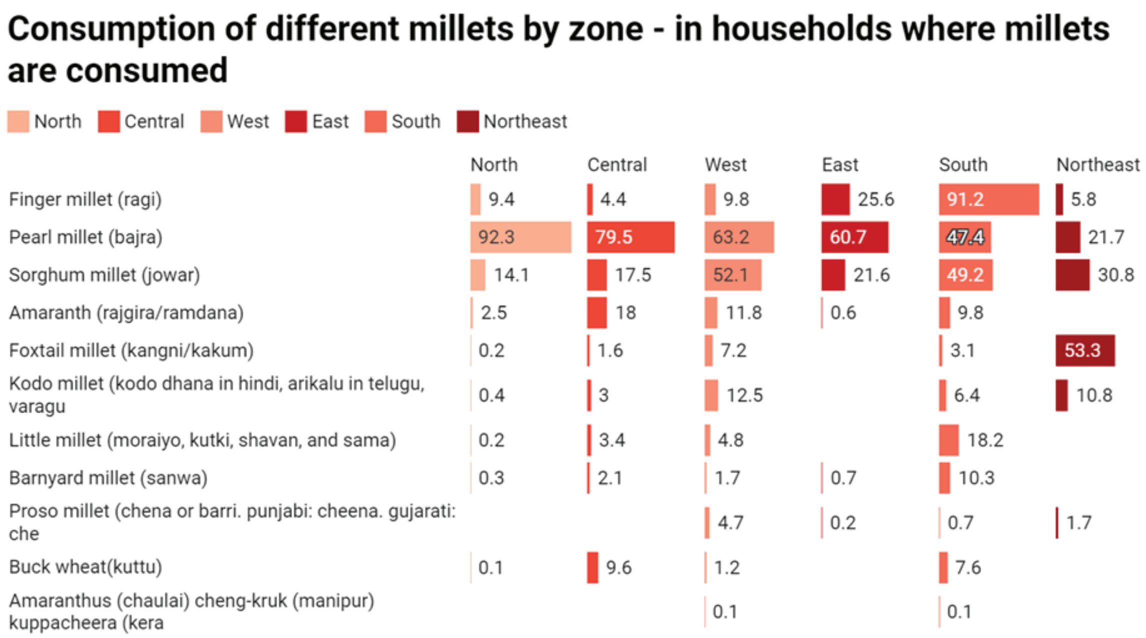
Awareness of health benefits of millets by zone

North · Central · West · East · South · Northeast

	North	Central	West	East	South	Northeast
Millets are good for health	80.9	78.5	75.1	82.5	80.1	89
Millets are high in nutrients	47.8	35.7	56.6	28.7	67.9	37
Millets are high in fibres	15.3	11.7	6.3	4.2	55.8	11.4
Millets are easily digestible foods	18.7	16.7	17.7	13.5	53.9	22.8
Millets help to maintain body weight	24.5	13.9	21.7	28.4	52.6	16.4
Daily millet consumption helps control blood sugar/diabetes	16	11.2	6.9	12.2	41.5	39.3
Daily millet consumption helps control blood pressure	7.8	3.7	4.3	3.1	33	35.6
Millets are rich source of magnesium	3.2	2.4	14.5	0.5	25.4	0
Millets reduce the risk of colon and breast cancer	0.8	0.2	1	0	19.9	4.1
Millet have antioxidant properties	0.6	0.7	5.2	0.2	14.1	0
Millets thrive well in arid climate and they have minimal r	0.4	0.9	2.3	0	8.7	0.5
Compared to other cereals, millets have superior micronutrie	0.2	0.4	1.2	0	14.6	0
They are good source of minerals like iron, zinc, and calciu	0.4	0.6	6.4	0.2	17	0
Millets are gluten-free	0.1	0.1	1.4		11.8	0.5
Millet has a beneficial effect on the management and prevent	0	0.1	0.3	0	6.4	0
Others	1.3	16.4	6.4	8.7	0	0

The same query has been looked at by zones. The data suggest that the southern states, with their generally higher levels of literacy (even though our sample excluded Kerala), had more respondents able to state different health benefits than respondents from any other zone. The only other noteworthy exception is the relatively high proportion of respondents from the northeast who were aware of the properties of millets in controlling blood sugar as well as control of blood pressure.

Figure 18



In India as a while, the most popular form of millets being consumed is Pearl millet or bajra. However, there are significant regional variations that marketers need to take cognisance of. First of all, even though bajra and jowar are consumed in the South, the most popular form of millets consumed in the Southern states is ragi (91%). Similarly, in the Northeast, the most popular millet in their diet is Foxtail millets (53%). This is followed by consumption of jowar (30%). In all other regions, the consumers seem to prefer bajra and to a lesser extent, jowar, and not much else.


freepik

Section 3

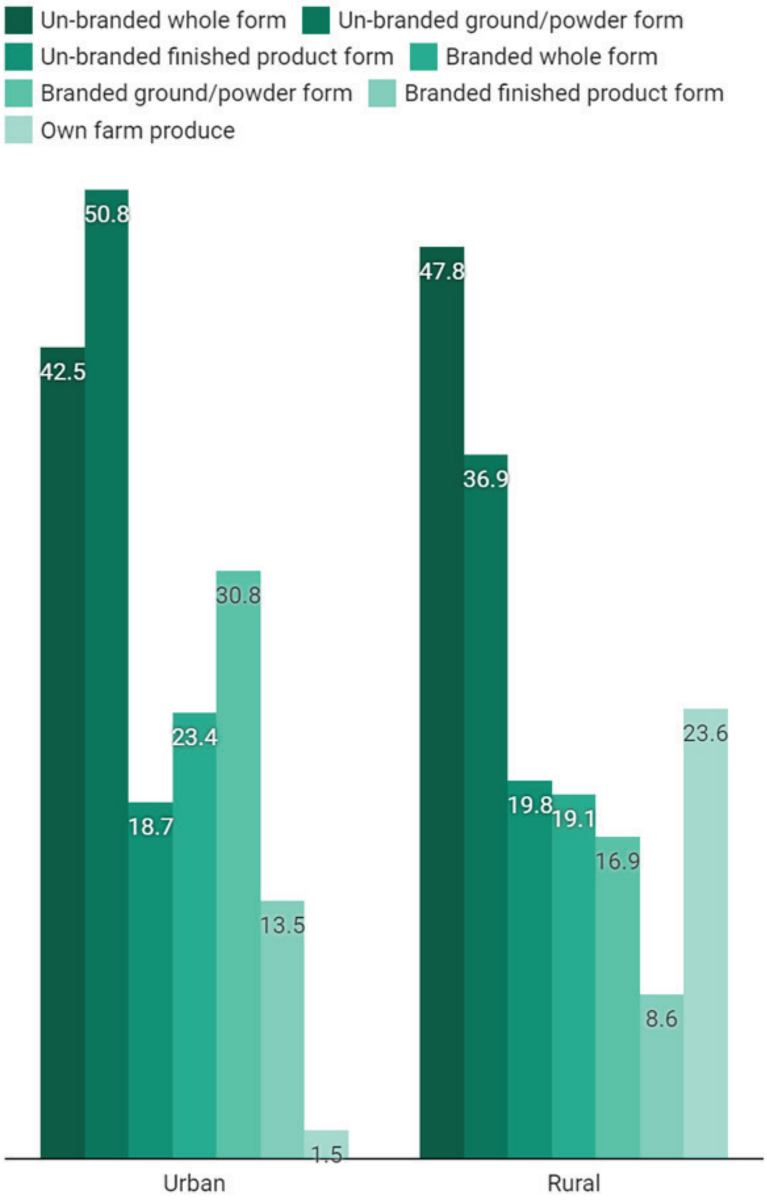
Procurement of millets for consumption

Three aspects are covered under this section, viz. the form in which millets are procured and brought home for consumption, the form in which they are consumed, and the outlet type from where millets are currently being procured or are likely to be procured in the future.

3.1 Form in which millets are procured for consumption

Figure 19

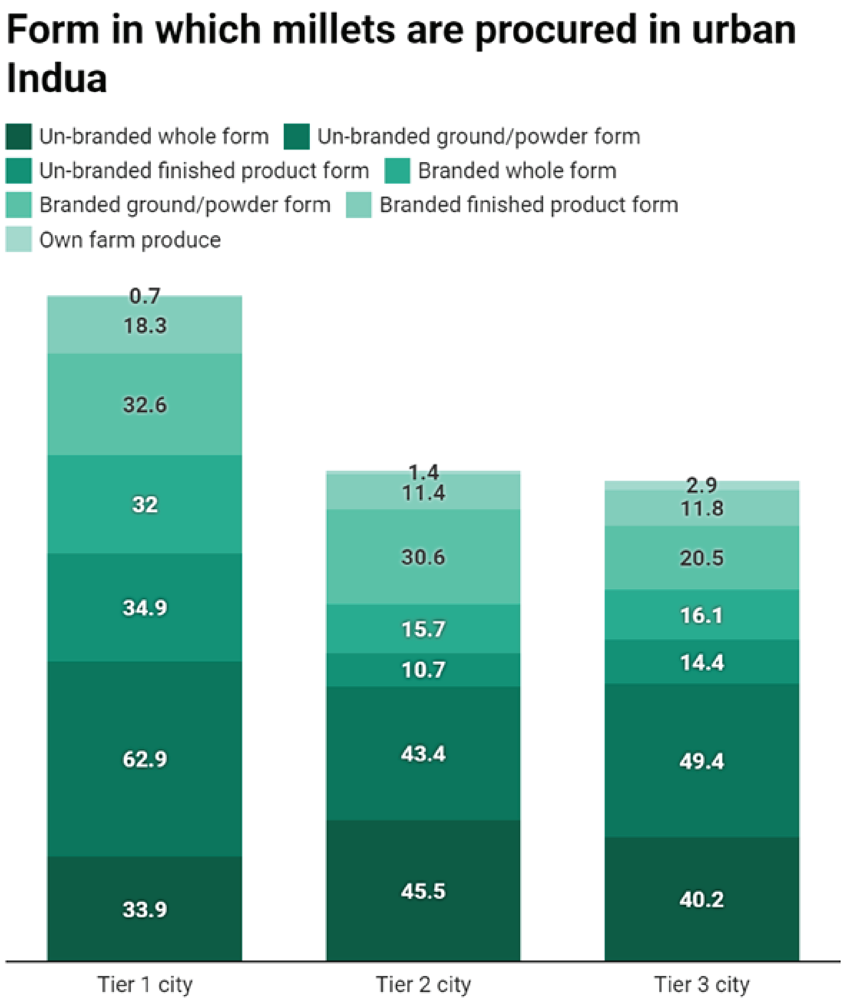
Form in which millets are procured



Across both urban and rural India, among those who are currently consuming millets, most people procure millets in the unbranded form. In urban India, the preference was unbranded but in the ground/powdered form, in rural India, it is un-branded in whole form. However, whole or grounded, these are the two clear choices across both urban and rural India.

Another view of forms in which millets are procured is by different tiers of cities.

Figure 20

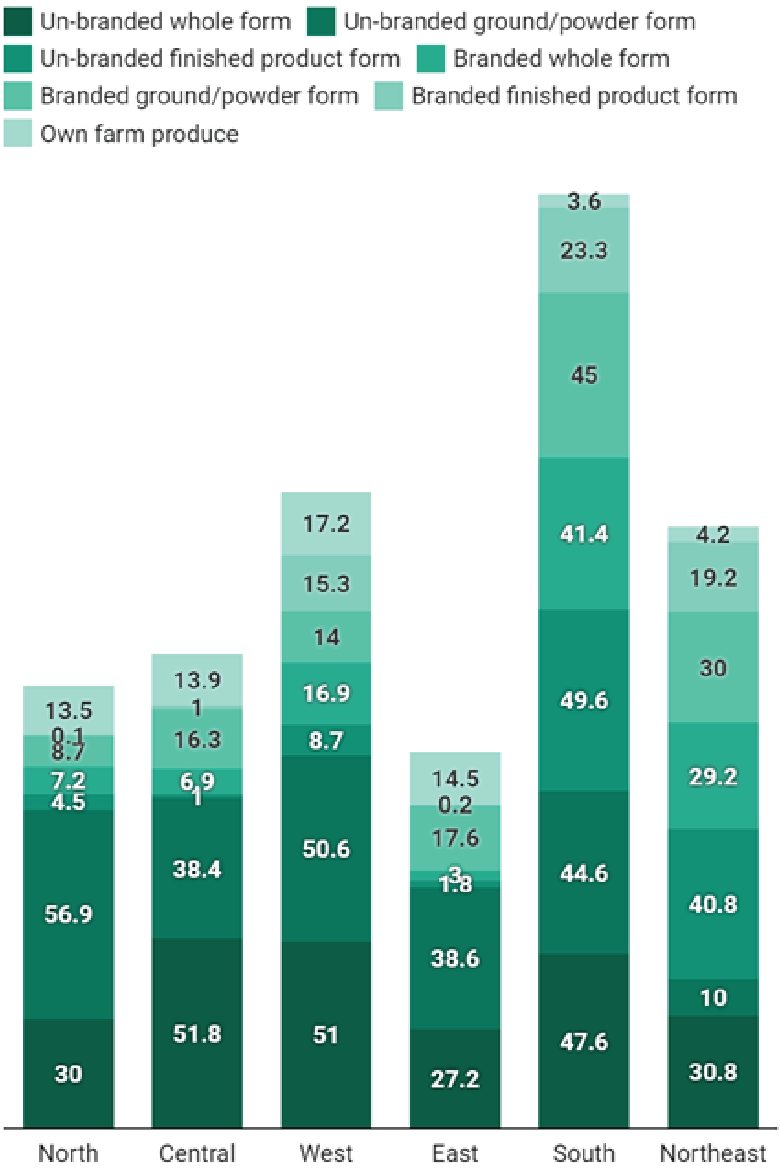


Across all typologies of urban settlements, unbranded/ground powder form is the most procured form, followed by unbranded whole. This is followed by branded ground/powdered form. It may be noted that branded formulations are more popular in tier 1 cities, possibly because of greater availability and/or purchasing power of residents (assuming branded millets are more expensive than their unbranded form.

Among zones, the south zone accounts for the largest varieties of millet form being procured commercially. The West is a distant second. The least in terms of varieties being procured is in the East zone, which is also one of the lowest consumers of millets.

Figure 21

Form in which millets are procured by zone



3.2 Form in which millets are consumed

The survey also looked at in what form, millets are ultimately consumed. The survey data suggests that across most zones, the most common form in which millets are consumed is in the form of chapati roti. This is expected as the most common form in which they are procured at in the ground/powdered form which is essentially the consistency required to prepare rotis. In the Northeast, however, the most popular form is to have them as rice substitutes.

Figure 22

Form in which millets are procured by zone

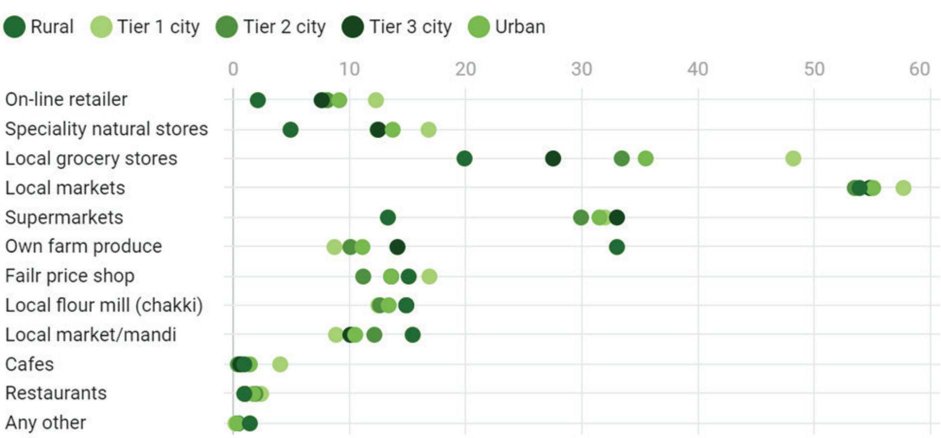
	North	Central	West	East	South	Northeast
Ready-to-eat food like sweets, biscuits, bread, cakes, etc.	3	19	3	1	36	40
Breakfast porridge/muesli	24	18	27	24	29	15
Ready-to-cook packaged food	1	2	5	1	26	11
Dosa/idily	2	2	11	3	54	4
Boiled like rice	8	16	12	9	33	85
Drink	0	0		1	16	2
Upma	4	4	9	0	39	4
Chapati or roti	90	78	77	70	48	48
Pancake	0	1	0	0	5	2
Halwa	2	7	6	5	8	1
Pasta	0	1	7		7	
Flakes (like corn flakes but made of millets)	0	2	9	1	4	2
Puff	1	0	6		0	
Noodles/vermicelli	0	4	7	0	4	3
Gruel/khichri	12	14	28	3	12	3
Any other form	0	11	5	15	1	2

3.3 The outlet types where millets are being procured

The current consumers of millets across urban and rural India were asked to specify their source of procurement currently (or they plan to buy in the immediate future). The survey indicated that the most common source is the local market, including the local grocery store. Some of the higher order urban centres also buy from supermarkets. A niche set of consumers do buy from local flour mills/chakkis and even from fair price shops in states where millets are distributed under PDS.

Figure 23

Outlet type where currently buying or likely to buy millets - by location



Section 4

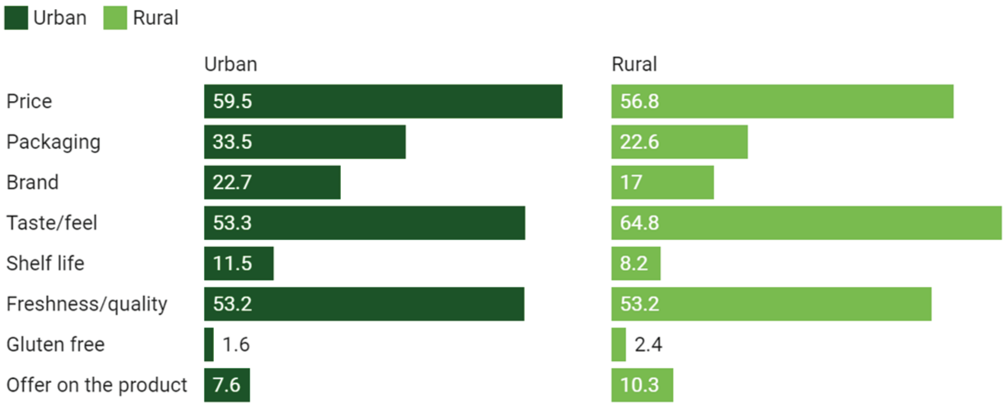
Factors that influence the process of buying food products

4.1 Whether factors vary by location

From the sales and marketing point of view, it is important to understand what factors come into play when consumers go out to purchase food products. An understanding of this, especially for those who are current millets consumers, can act as crucial input for those who are product manufacturers, as well as sales and marketing strategists.

Figure 24

Factors those influence while buying food products

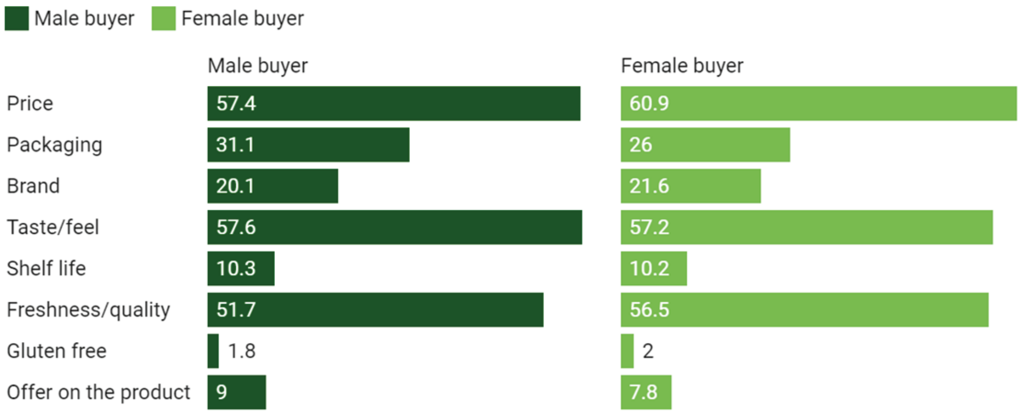


As far as food products are concerned, whether it be in urban or rural areas, the greatest influencers of choice are price, taste/feel, and freshness/quality. These three are universal. However, on top of this, it may be noted that for one out of three buyers, packaging matters whereas this is less important for rural consumers, possibly because they buy far less branded food products than their urban counterparts.

4.2 Whether factors vary by profile of buyers

Figure 25

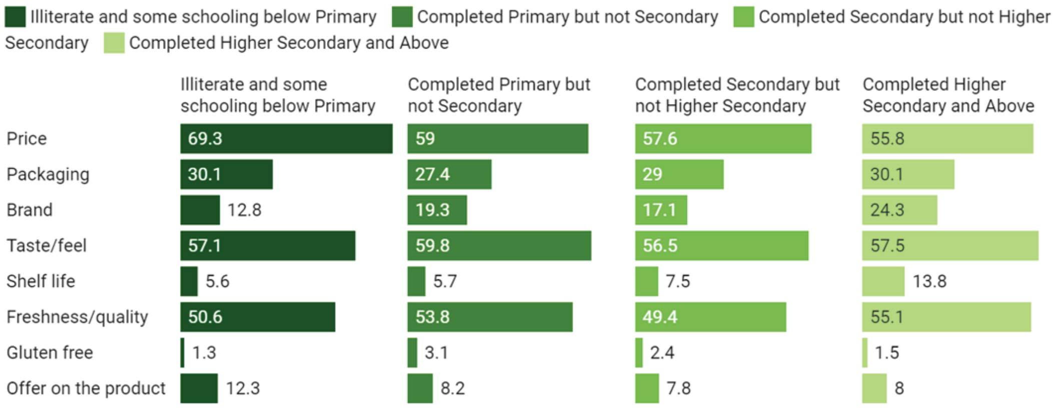
Factors those influence while buying food products - by gender of buyer



The trends are absolutely similar whether it is a male or a female buyer. However, freshness and quality, and price seem to have a slightly highest influence on female buyers than their male counterparts. In the final segment under this section, we also slice this data by another background variable, this time the education levels of the respondents (current consumers of millets).

Figure 26

Factors those influence while buying food products - by income profile of buyer's household

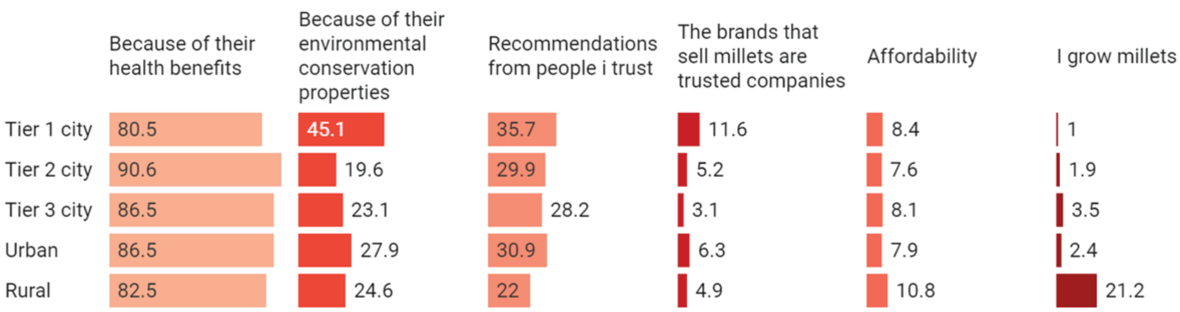


Once again, we see that the same three factors remain as the key influencers of purchasing behaviour, followed by packaging as a distant fourth. From a social marketing (or even classical marketing) point of view, it would seem that companies seeking to operate in the millets space need to find a way to make them price competitive as compared to common staples, possibly push cooking options via social as well as conventional media that show that even millets can be tasty options, and have packaging options that retain their freshness. For unbranded and non-packaged options, having a continuous supply chain that ensures fresh produce reaches the market at all times will be critical.

As an input for developing a marketing strategy to popularise millets, it is also important to understand why a proportion of Indians consume millets to begin with.

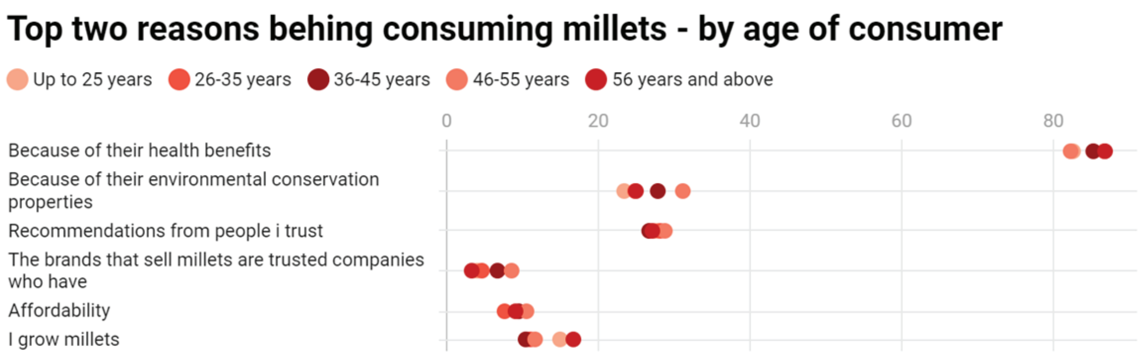
Figure 27

Top two reasons behind consuming millets - by location



Most people seem to be consuming millets because they know it has health benefits. About a quarter of the people are influenced by their environmental conservation properties even though this would not be common knowledge except for people in larger urban centres or for those who grow millets themselves. Recommendations from people they trust also seem to be an important factor, especially for those living in urban areas but not so much in rural.

Figure 28



Across all age groups, it is the health benefits of millets that have influenced consumption behaviour. All other factors are have influenced less than 25% of the current consumers, be it the young, the middle aged, or the elderly.

Section 5

Psychographic testing among current consumers

5.1 What is psychographics?

Psychographics is a method of investigation that is used extensively in market research. It seeks to answer two critical questions, - What do you know about your customers? Do you know what actually makes them buy or why they choose you?

Conventional wisdom says you can get to know your target audience by studying demographics such as age, ethnicity, and education. A few marketers go beyond that by taking psychographic criteria into consideration, such as attitudes, values, and desires.

But this is still misleading: if you want to define strategies to engage your customers, you need to truly understand their buying decisions. Psychographics is the qualitative methodology of studying consumers based on psychological characteristics and traits such as values, desires, goals, interests, and lifestyle choices. Psychographics in marketing focus on understanding the consumer's emotions and values, so you can market more accurately.

What this section aims to do is provide insights on understanding why people buy, how they buy, and how to use these insights to make an impact with your marketing.

The construct has been a series of statements, asked of current consumers and non-consumers alike (but with different statements for each group) wherein survey participants had to indicate, on a 5-point ordinal scale, the extent to which they agree or disagree with each statement.

5.2 Motives for the consumption of alternative staples

5.2.1 Awareness of health

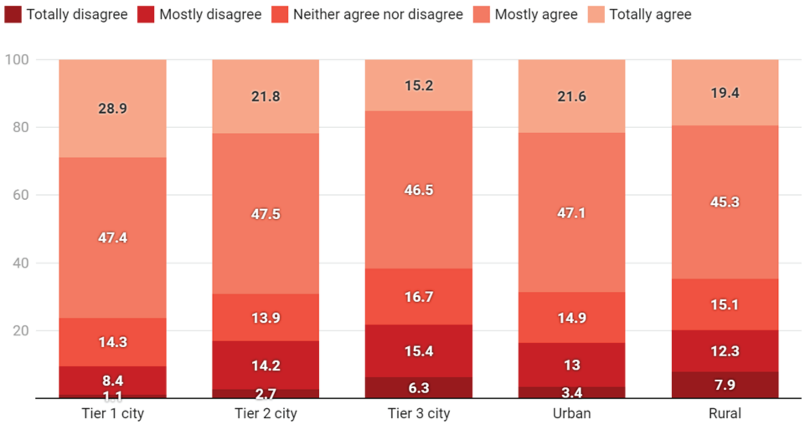
Prior studies have suggested that many consumers cited a lack of previous awareness, but, after discovering the benefits of alternative staples, they significantly changed their consumption preferences. Consumers are even willing to pay a premium price due to the various health attributes of these grains, especially if they are seeking weight loss.

On the other hand, while consumers were aware of the nutritional value and benefits of pulses, but this does not always result in higher consumption due to an aversion to the taste, the perceived difficulty of preparation, and the negative image of this food.

The statements that were tested under awareness of health and the responses from the participants have been depicted below.

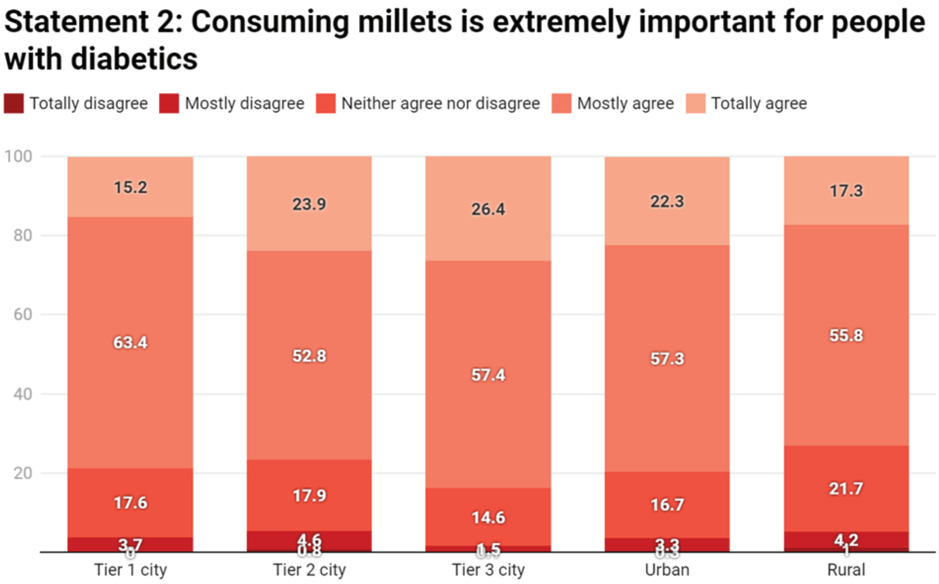
Figure 29

Statement 1: It is difficult to prepare because it takes a long time to cook as compared to rice/wheat



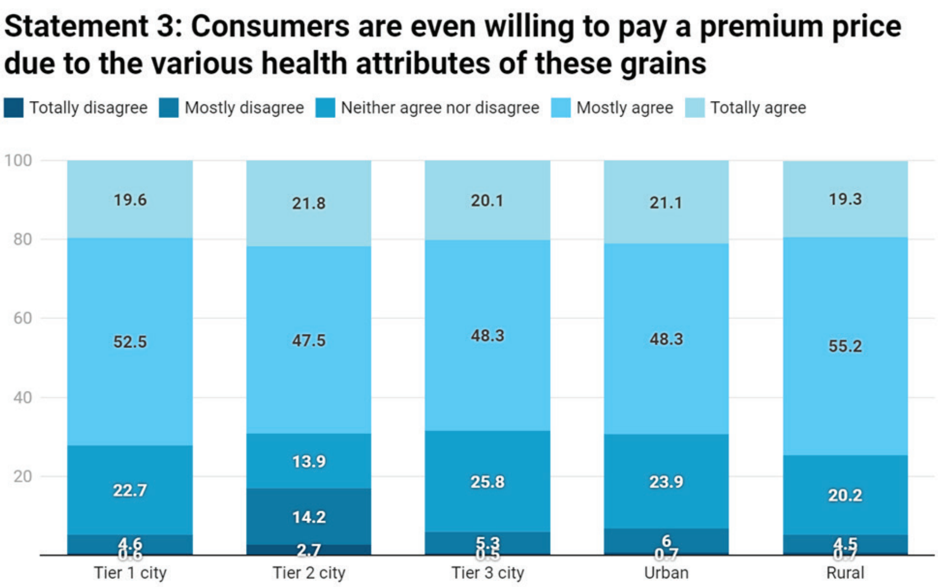
Even among current consumers, cooking time is an issue and that is perhaps why among current users, a relatively limited percentage (around 20%) are regular consumers of millets.

Figure 30



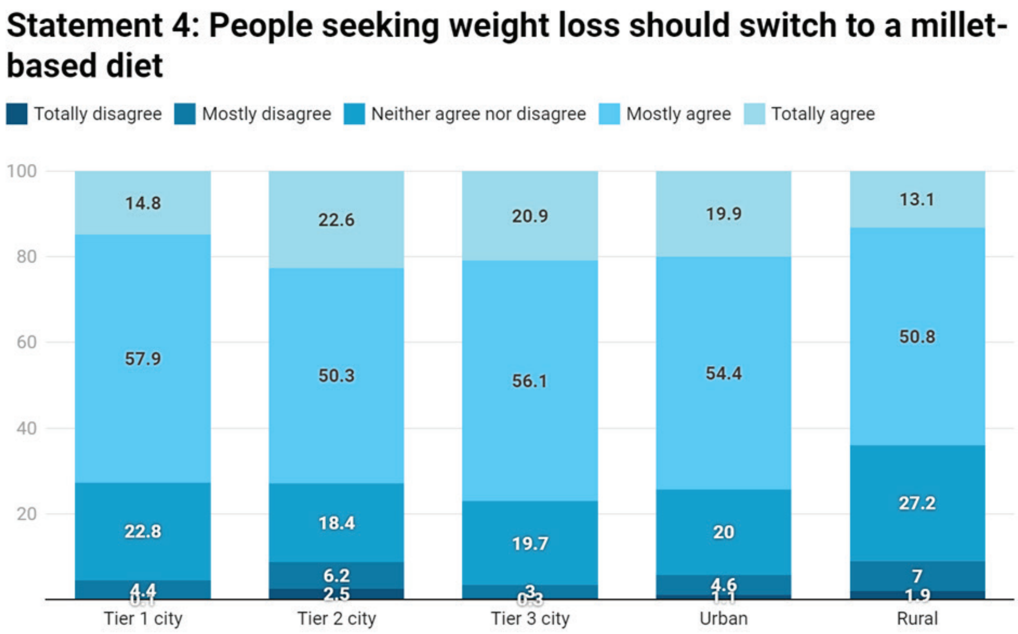
Blood sugar control seems to be an important selling point for millets as over 75% of those who consume millets are cognisant of this property. According to a pioneering study conducted through the Madras Diabetes Research Foundation in collaboration with the Indian Council of Medical Research (ICMR) and the Union Health Ministry (and published in The Lancet Diabetes & Endocrinology), there were 101 million people in India with diabetes in 2021. Given the preponderance of this lifestyle disease, highlighting its blood sugar-controlling properties would be a major pivot in marketing strategies.

Figure 31



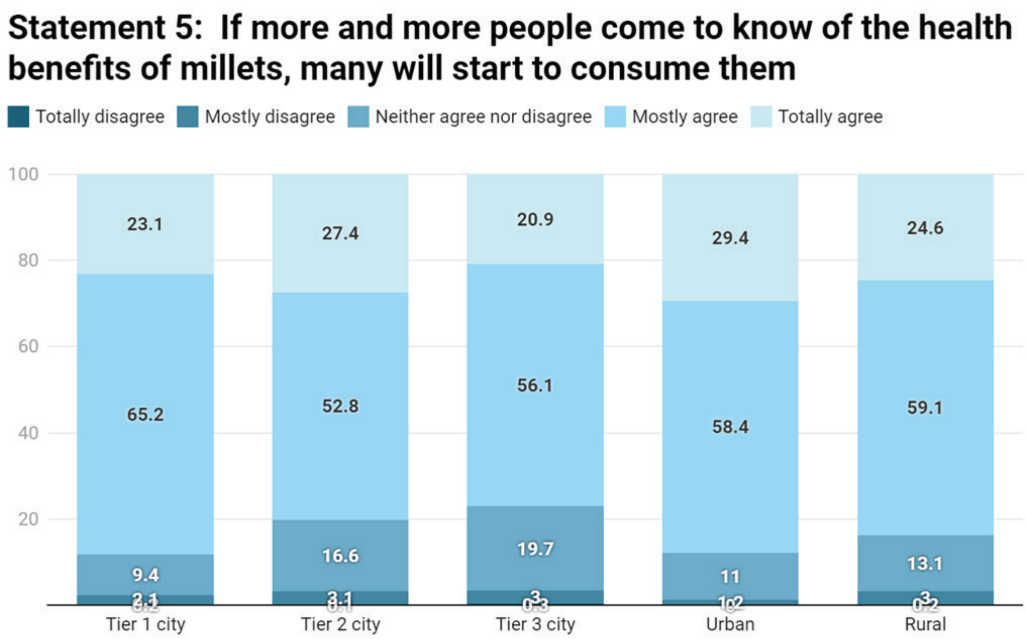
In line with global research findings, here too we see that most consumers are even willing to pay more to procure millets just because of their health benefits. However, it may be noted that price is a sensitive issue (as we will see later among non-consumers) and the above endorsement does not imply that millets could be sold at a price point way beyond ordinary staples.

Figure 32



Once again we see that most current consumers are aware of the fact that millets can help in losing weight. Since truncal obesity is a major cause of diabetes in India, the fact that millets help control weight as well as diabetes should be a unique selling proposition for the product and needs to feature in its marketing campaign.

Figure 33



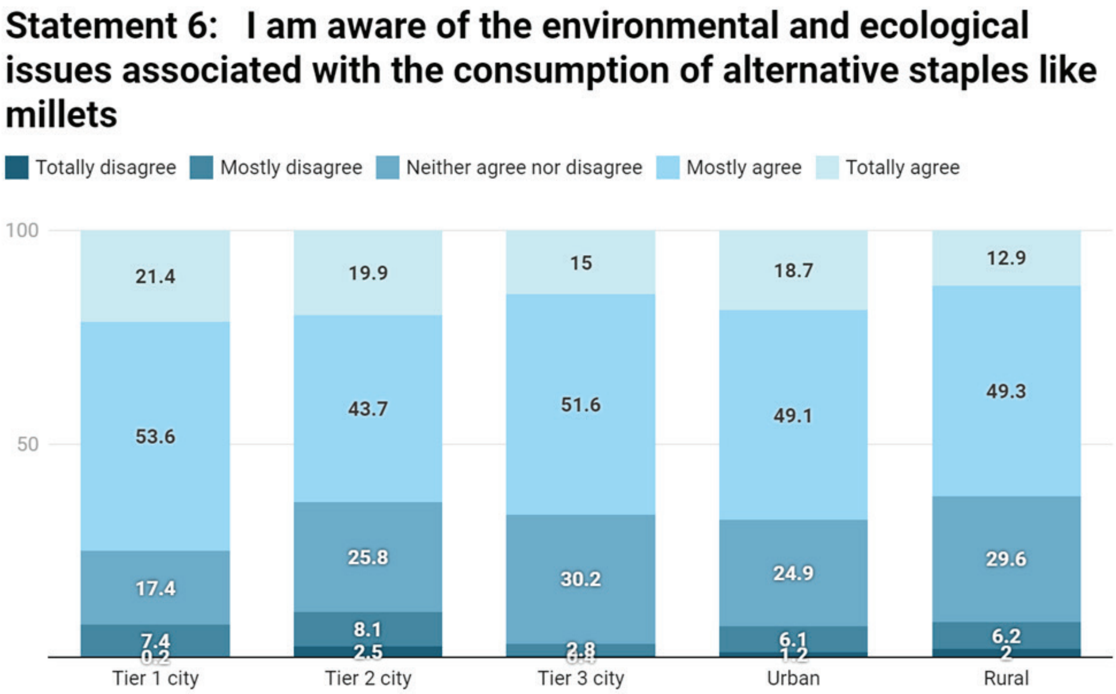
At least 75-80% of the current consumers were of the opinion that if more and more people were made aware of the health benefits of millets, many among them will start to introduce millets in their daily diet.

5.2.2 Awareness of the environment

Global research shows an awareness of environmental and ecological issues was associated with the consumption of alternative staples. With global challenges related to climate change, water scarcity, and population growth, the large-scale consumption of alternative staples is becoming a necessity. Extrinsic information on global climate challenges and sustainability has shifted consumer’s emotional responses in favour of alternative staples.

However, this is not universally true, and contradictory findings suggest that consumers did not modify their consumption in favour of pulses despite being aware of their environmental benefits, as they placed higher importance on sensory attributes.

Figure 34

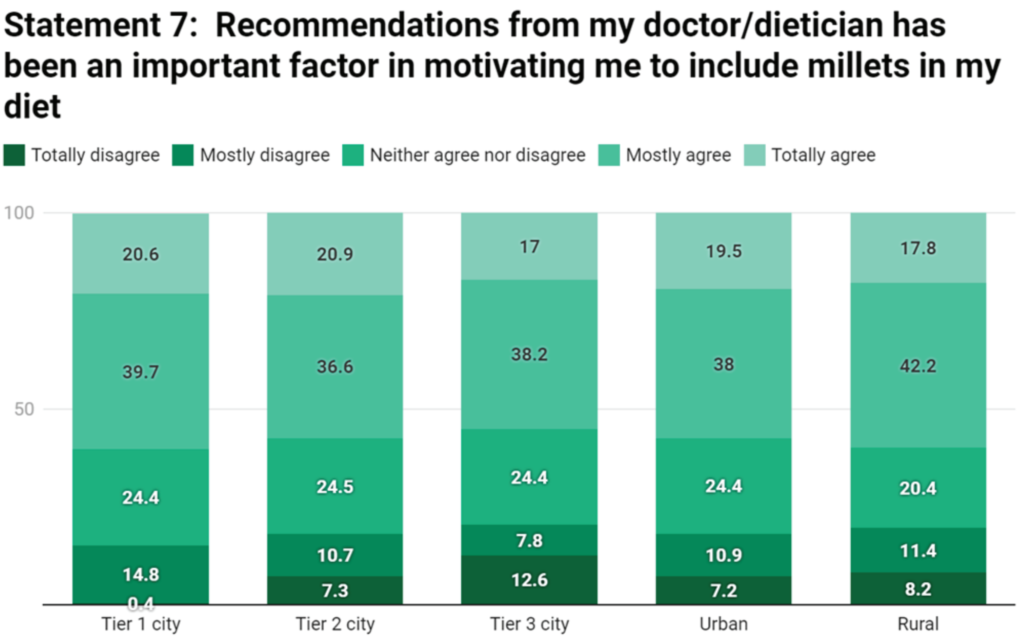


A fairly large proportion of those who currently consume millets (frequently or infrequently) were aware of the environmental and ecological issues associated with alternate staples like millets. Awareness was fairly high in the tier 1 cities and progressively lower in the smaller cities as well as rural. Even then, with just over 60% being aware of the resilient properties of millets to climate change even in rural areas, this is a positive reinforcement that augers well for its promotion campaigns.

5.2.3 Awareness through recommendations

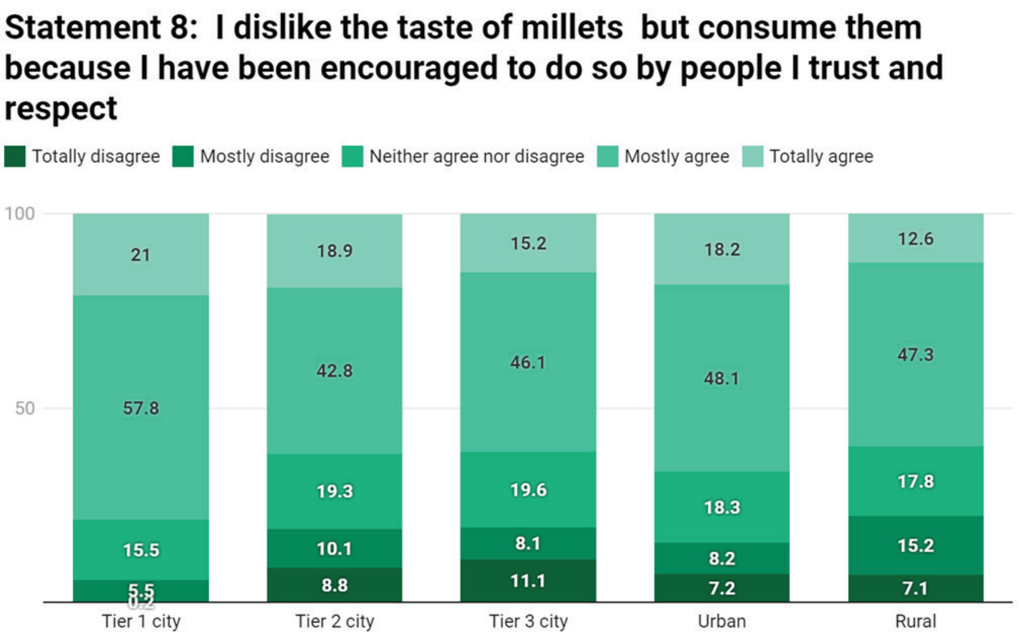
Recommendations or opinions of important others are significantly linked to awareness of alternative staples and are a salient factor in motivating consumers to include alternative staples in their diet. For instance, a global study showed that consumers with cardiovascular disease (CVD) were found to lack awareness of the health benefits of soy foods; however, on the advice of dieticians, they chose to consume them. Similarly, many consumers dislike the taste of millet or wholegrain sorghum but consume them when encouraged to do so by church leaders or doctors. Family members were also found to exert an important influence, particularly on the consumption habits of women in the family.

Figure 35



At an aggregate level, for 50-60% of the current consumers, a recommendation by a doctor or a dietician has been the motivating factor that has led to them including millets in their diet. The influence that doctors have had were very similar across all urban and rural geographies.

Figure 36

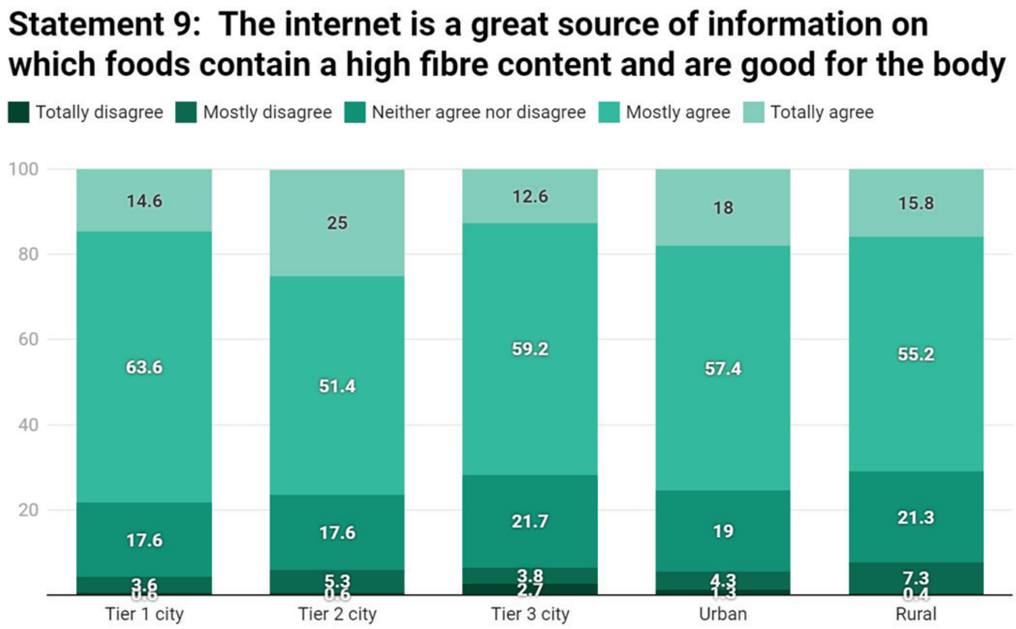


The survey seems to indicate two things, viz. most people dislike the taste of millets as compared to standard staples or rice and wheat, but it also indicates that they have been influenced to consume millets by people whom they trust. This is important to take note of because word-of-mouth dissemination of its intrinsic properties seems to be an important channel that needs to be exploited. It also needs to be noted that 41% of the consumers in rural India were an exception to this trend, meaning for them, no additional encouragement was required to get them to consume millets. The recommendation factor was most prominent in tier 1 cities.

5.2.4 Labels and source of origin.

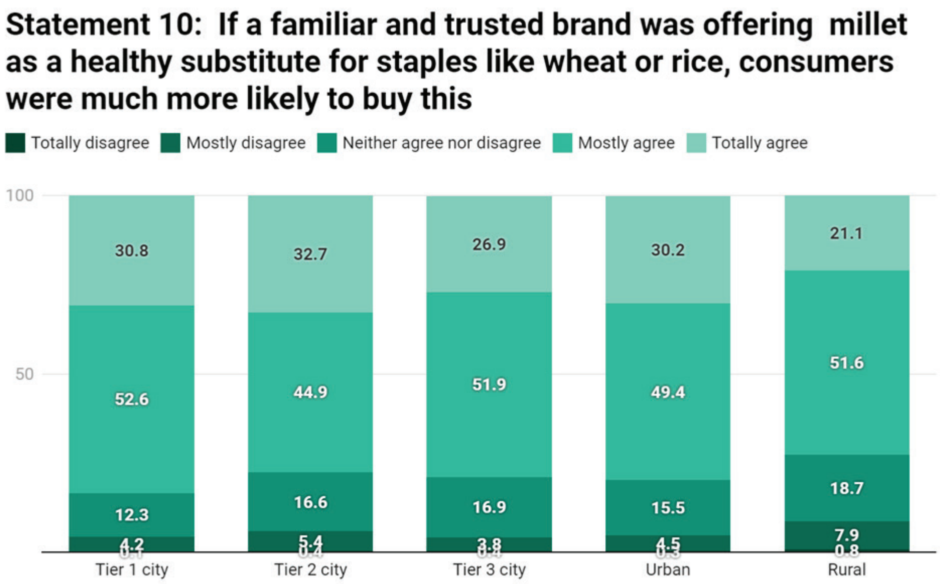
Brand awareness and loyalty have a notable role in the consumption of alternative staples. In a hypothetical auction, it was found that if a familiar brand offered a healthy substitute for their wheat or rice staples, consumers were much more likely to buy this than an unknown brand making similar claims. On a similar note, a study suggested that a retailer's CSR image positively influenced consumer attitudes and intentions in purchasing organic quinoa-based food.

Figure 37



As per a report brought out by Kantar on behalf of IAMAI, in 2022 for the first time more than half of Indians, 759 million citizens, are active internet users and access the internet at least once a month. According to the report, the active internet base in India is expected to grow to 900 million by 2025. More importantly, according to the report, out of 759 million 'active' internet users in India for 2022, 399 million are from rural India, while 360 million are from urban India, indicating that rural India continues to drive the growth of the internet in the country. With Indians increasingly relying on the internet for credible information at their fingertips, this fact is also endorsed by the survey which shows that across urban and rural India, it has come to be a great source of information on healthy foods.

Figure 38

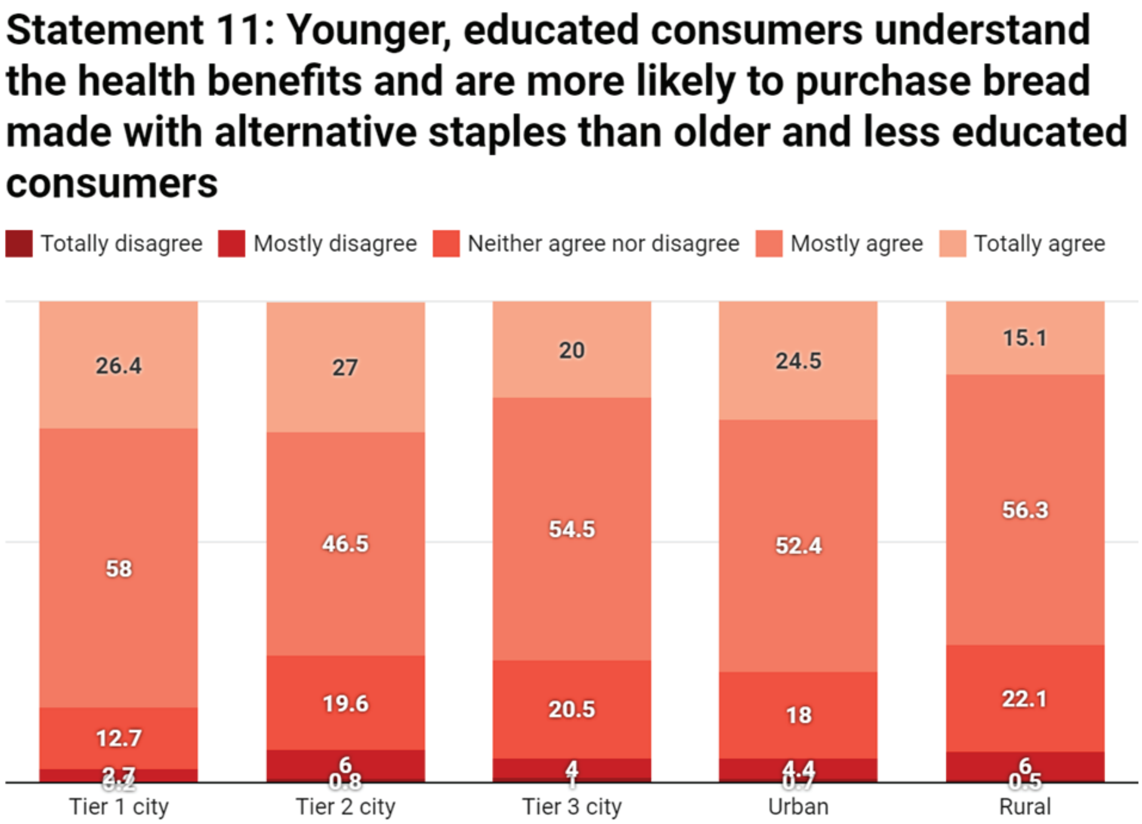


Most of India (more so in urban areas than rural) is very much influenced by brand loyalty and if trusted brands that are into food products and food related FMCGs get into millet sales, they are likely to meet with a certain degree of success. The scenario today is that most of India (more so in rural India) buys unbranded millets. The leading millet brands in India include Organic tattva, Conscious Food, Slurrp Farm, Yogabar, Organic Soul, TruNaturals, and B&B Organics. However, most of these remain niche brands available in larger cities.

But things are changing. As per the Union Budget of India unveiled by Finance Minister Nirmala Sitharaman on February 1, 2023. it was announced that the government would be turning the Indian Institute of Millet Research, Hyderabad into a centre of excellence to foster innovation. This step by the Indian government would further enable numerous FMCG brands to work with millets and bring forth innovation. India is the largest producer and second largest exporter of millets and 2023 has been declared as the 'International Year of Millet' by the United Nations, we expect more and more frontline FMCG brands to enter the millets space as a result of this thrust.

5.2.5 Age as a factor

Figure 39

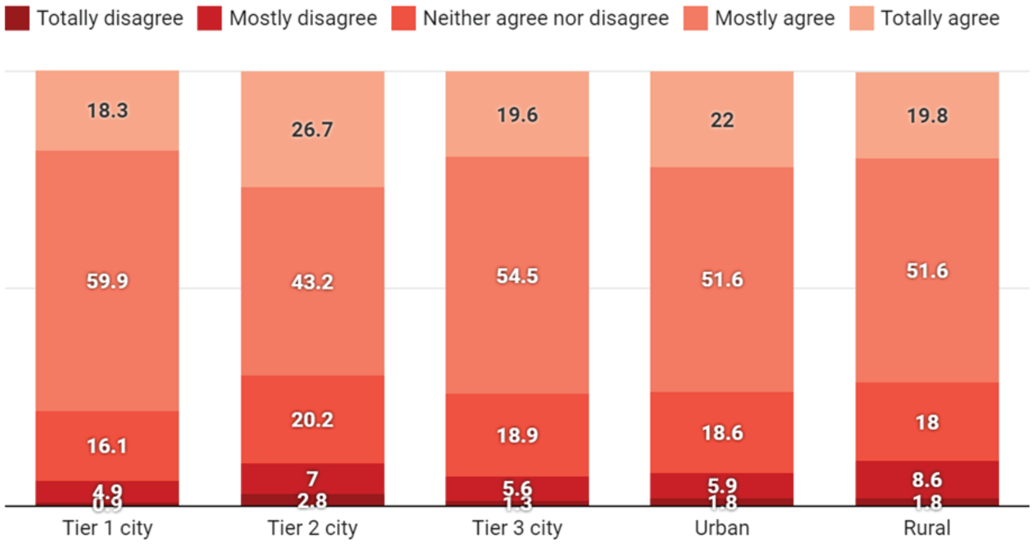


Most of India's millet consumers seem to endorse the idea that when it comes to the consumption of sliced bread, which is a staple part of most households, at least in urban areas, it is the younger and more educated consumers that are likely to shift from the bread made of whole wheat flour or refined flour to that made from millets.

At the same time, the prevalent majority opinion was that it is the older generation that is more aware of the health properties of millets as compared to the younger generation, who presently consume because it is given to them at home. It, is, possibly, not a choice which they exercise.

Figure 40

Statement 12: The younger generation are mostly unaware of the health-related benefits of millet as an alternative staple to rice/wheat and thus do not prefer to include them in their diet



Section 6

Profiling millets non-consumers

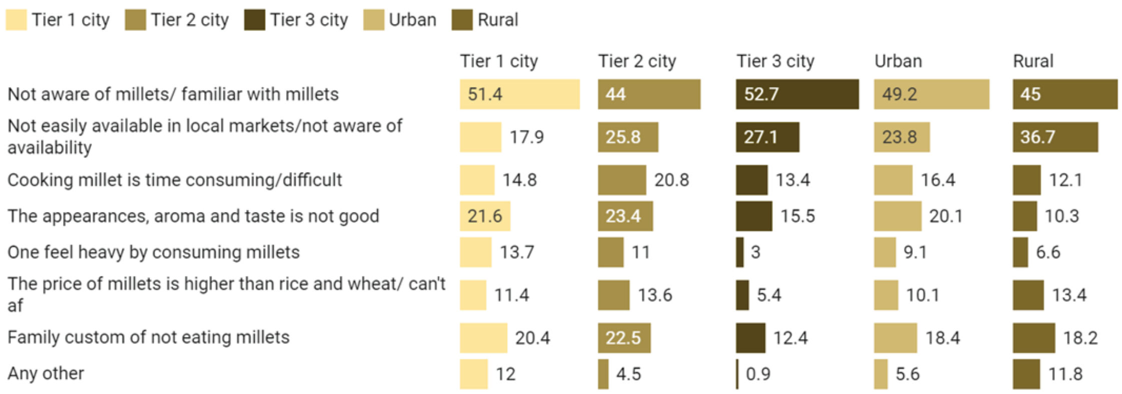
It may be recalled that 35% of Indian adults who were part of this survey have never consumed millets. It may also be recalled that within this cohort, 22% were aware of millets but never consumed them.

This concluding section of this handbook seeks to profile these non-consumers, covering reasons behind non-consumption, the non-consumers reactions to specific psychographic statements, their likelihood to become future consumers, their preferred form in which they are Lilley to buy millets and place of procurement.

6.1 Reasons behind non-consumption

Figure 41

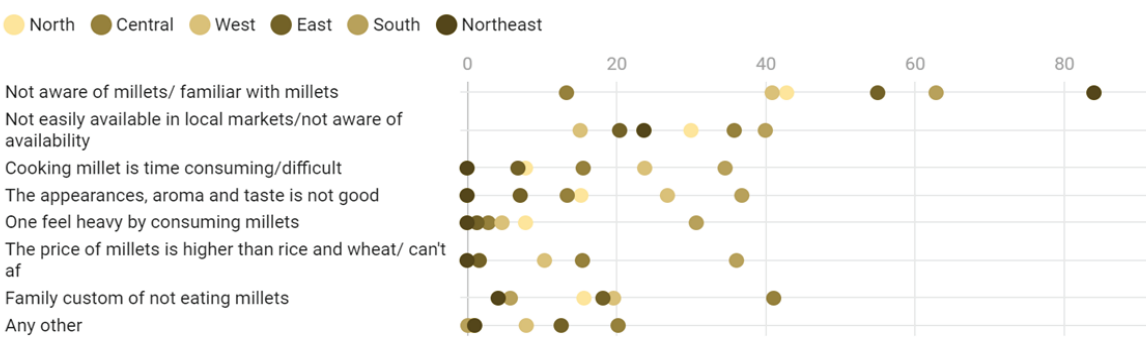
Reasons for not consuming millets - by location



Close to half of the respondents did not consume millets because they were unaware of the product. About a quarter of them, presumably those who did know what millets are, did not consume the same because the product is not easily available in their local market. Around one in five in urban areas (and around one out of ten in rural) do not consume millets because the appearance, aroma, and taste do not agree with them. Finally, one in five across both urban and rural India do not consume because there is no history in the family of consuming millets as part of their routine diet.

Figure 42

Reasons for not consuming millets - by zone



Over 80% of the current non-consumers who belong to the northeastern part of the country do not consume millets because they are not aware of the same. For all other zones, around 20-40% of the respondents cited a multitude of reasons including non-availability, and long cooking time. The price factor is only significant in the Southern states and no other zone.

6.2 Psychographic testing among non-consumers

It may be recalled that 35% of Indian adults who were part of this survey have never consumed millets. It may also be recalled that within this cohort, 22% were aware of millets but never consumed them.

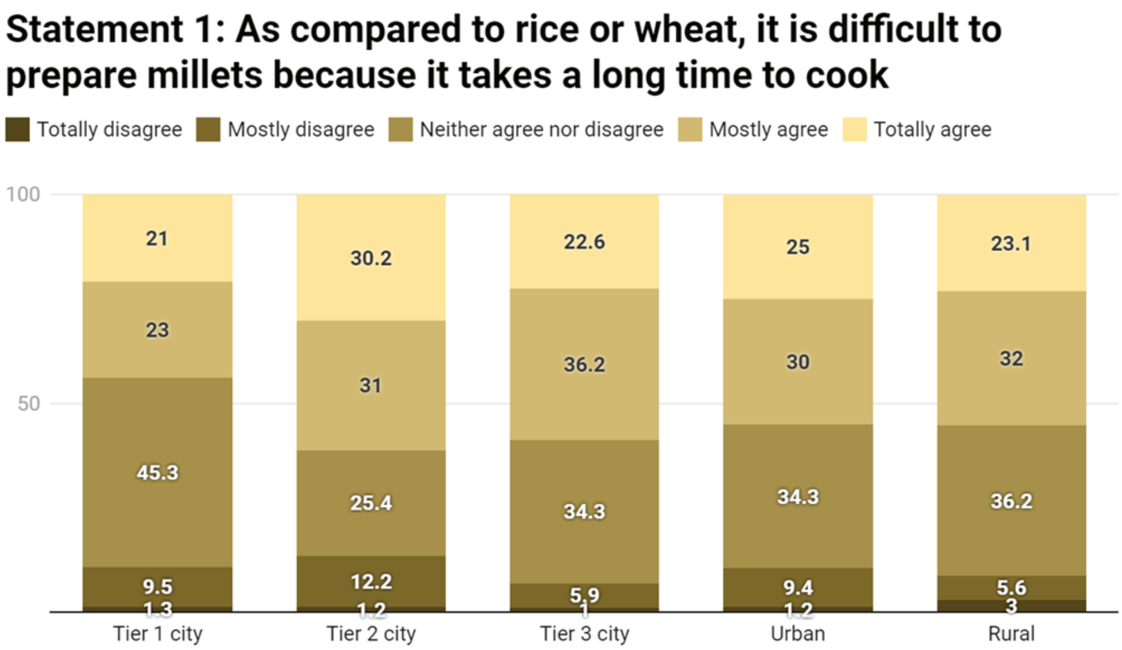
This concluding section of this handbook seeks to profile these non-consumers, covering reasons behind non-consumption, the non-consumers reactions to specific psychographic statements, their likelihood to become future consumers, their preferred form in which they are Lilley to buy millets and place of procurement.

6.2.1 Preparation difficulty

The need for convenience was a recurrent theme across many studies. There are studies conducted across Southeast Asia that have found that the purchase of coarse grains and the opportunity cost of women's time were inversely related. The market for convenience foods has increased with increased income. Convenience foods were defined as grains that required little preparation – cleaning, grinding, pounding – before they could be cooked. Similarly, an ethnographic study conducted in rural Uttarakhand, found that older women stated that younger women no longer use millets due to their lack of knowledge of the grinding and cooking processes. Instead, they choose easier options, such as rice.

Shorter cooking times were considered convenient and were found to influence the purchase of alternative staples in several studies. For instance, a study found that adolescent participants in the survey preferred a shorter cooking time for rice and considered this attribute as part of their convenience and quality criteria.

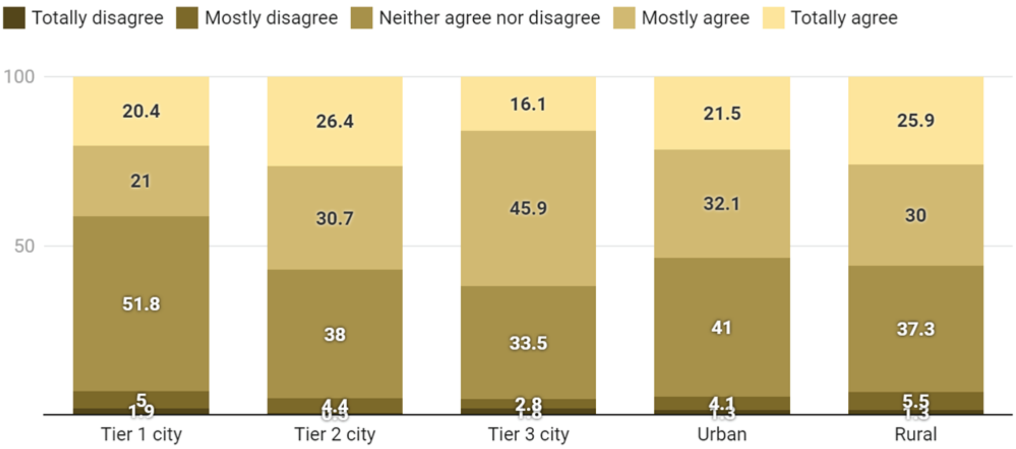
Figure 43



Around 55-60% of the respondents across non-metro cities and rural India, there is a general agreement that as compared to rice or wheat, millets take a longer time to cook. However, a sizeable chunk of people, ranging from 45% in the metros to 25% in tier 2 cities, could not put forward an opinion as they had never been exposed to actual cooking of millets (or see it being cooked at home).

Figure 44

Statement 2: Preparation time is too long because millets require cleaning, grinding, pounding – before they could be cooked

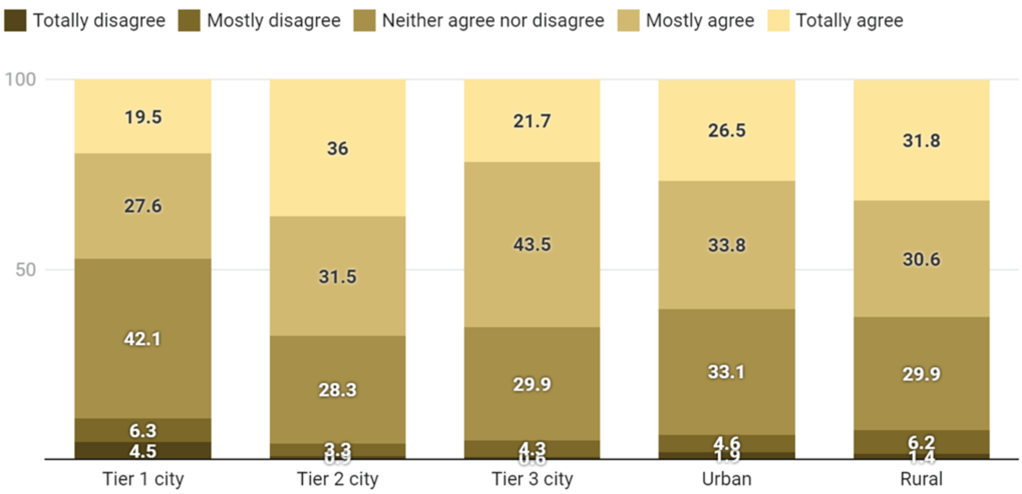


The findings regarding this statement mirror the findings for the previous statement, with a large share of respondents across categories (but especially in metro cities) not being able to put forth an opinion because of being unaware of the process involves in cleaning, grinding, and pounding of millets before they can be cooked. Of the people who knew, most seem to agree (40-60%) that millets require a very long preparation time. It may be recalled that around 15% of the current non-consumers did site prolonged preparation and cooking time as a genuine reason which has prevented adoption of millets in their regular diet.

As a corollary to the above, we had asked for their reactions to a similar statement.

Figure 45

Statement 3: Conventional staple foods are easier to clean, cook and prepare as compared to millets

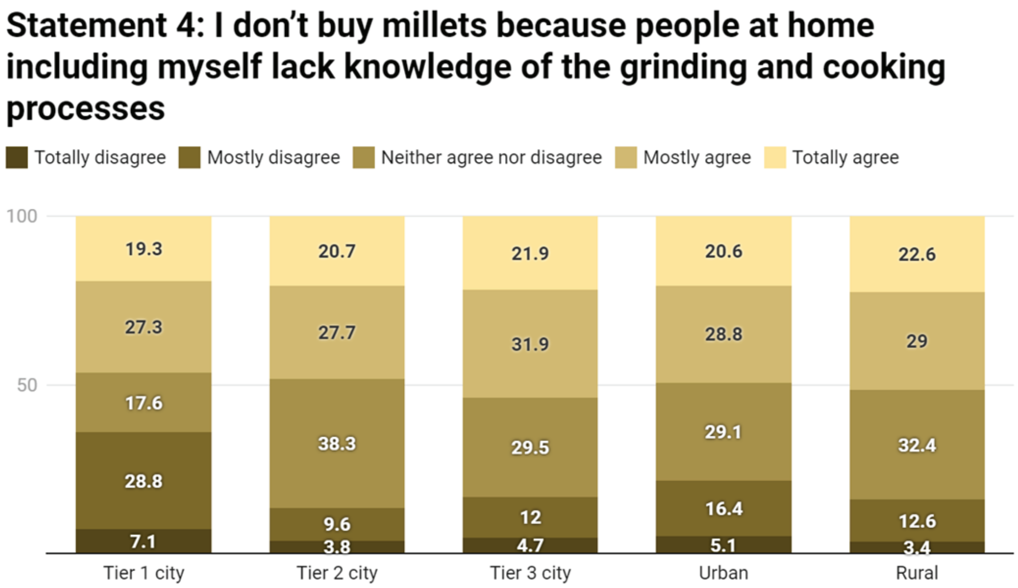


Apart from the metros, 60-65% of the respondents from all other location typologies were mostly in agreement with the statement that conventional staples are far easier to cook and prepare as compared to millets. Once again, we see that a significant proportion of the audience (especially in metros) being unaware of the process and thus unable to venture an opinion in the matter.

6.2.2 Lack of familiarity

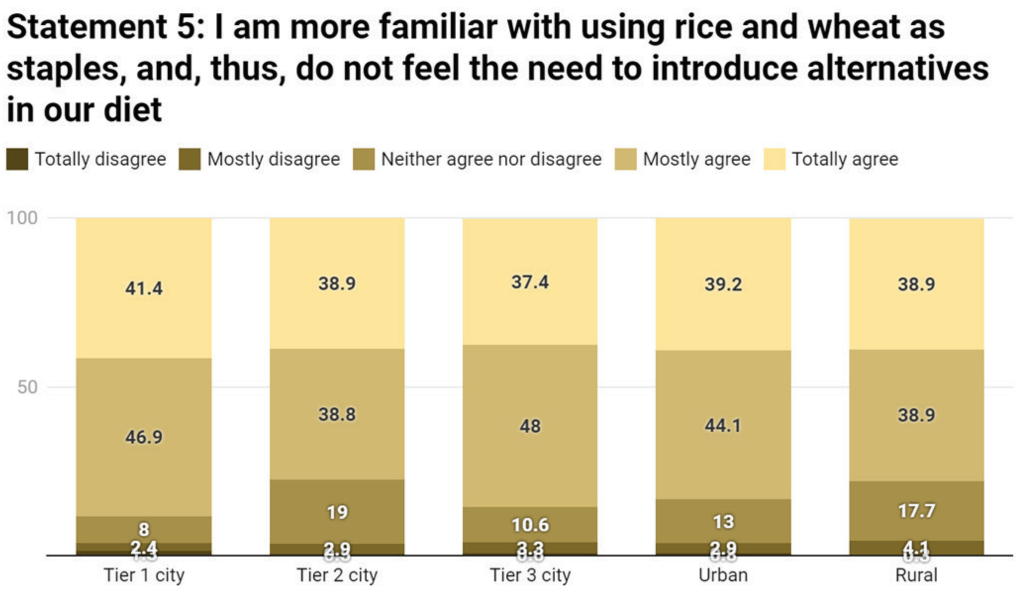
The attitude and intention of consumers toward alternative staples are greatly affected by product familiarity. This formed a significant barrier because most consumers were familiar with using rice and wheat as staples, and, thus, status quo bias made it difficult for them to accept alternative staples in their diet.

Figure 46



In a pattern that is very similar across all settlement typologies, around 45-50% of the non-consumers admitted that they do not buy millets because there was no one at home who had knowledge about the grinding and cooking processes. In metros, however, the data suggests that for 36% of the respondents, this was not a reason for not buying millets. For all other geographies, excluding those who could neither agree nor disagree with the statement, this does seem to have been a key determinant behind non-purchase.

Figure 47



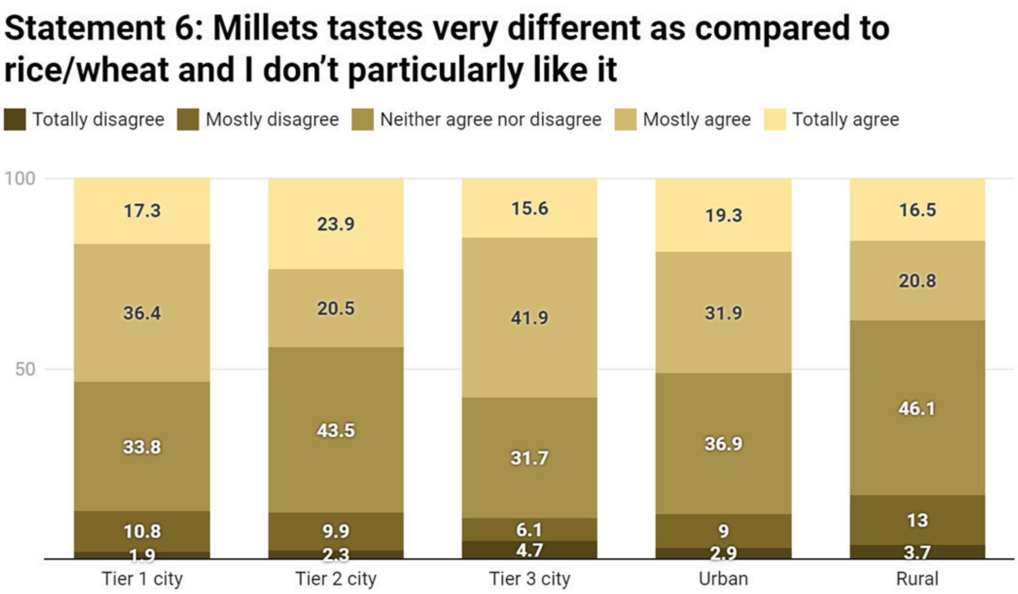
The majority of the non-consumers (75-85%) could confirm that one of the reasons responsible for them being non-consumers is because their familiarity with consuming rice and wheat has made the introduction of alternate staples in their diet redundant.

6.2.3 Sensory attributes - taste

Sensory attributes are attributes of food that are perceived through sight, smell, touch, and taste. Prior studies considered sensory attributes to be significantly correlated with the acceptability of alternative staples. The sensory attributes considered for this review pertain to appearance, aroma, and taste.

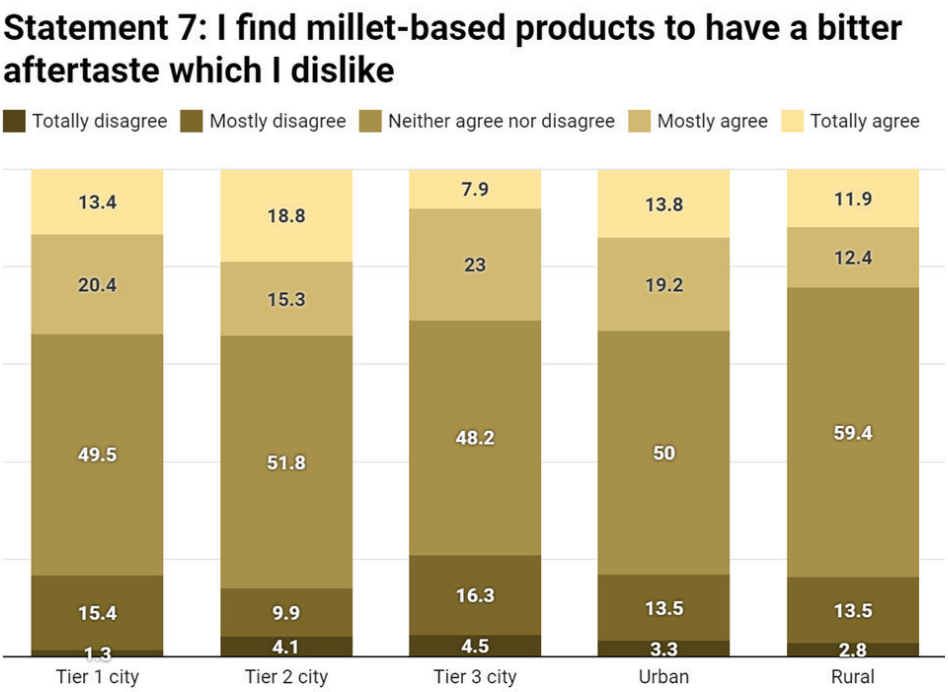
Taste has a significant influence on consumer preferences towards alternative staples: even when consumers knew of the health benefits and the environmentally sustainable credentials of food products, they still decided not to consume them because they disliked the taste. Studies have suggested that consumers associate alternative staples with an unfavourable taste; for instance, taste-conscious consumers avoided certain products if they had “soy” or “whole grains” listed among the ingredients.

Figure 48



In urban India, 45-50% of the non-consumers, on average, were averse to the taste of millets. Because it tastes so different from rice and wheat, the two staples they are familiar with, they did not like millet. In rural India, however, aversion to taste was reported by about a third of the sample but mostly preferred a neutral stand.

Figure 49

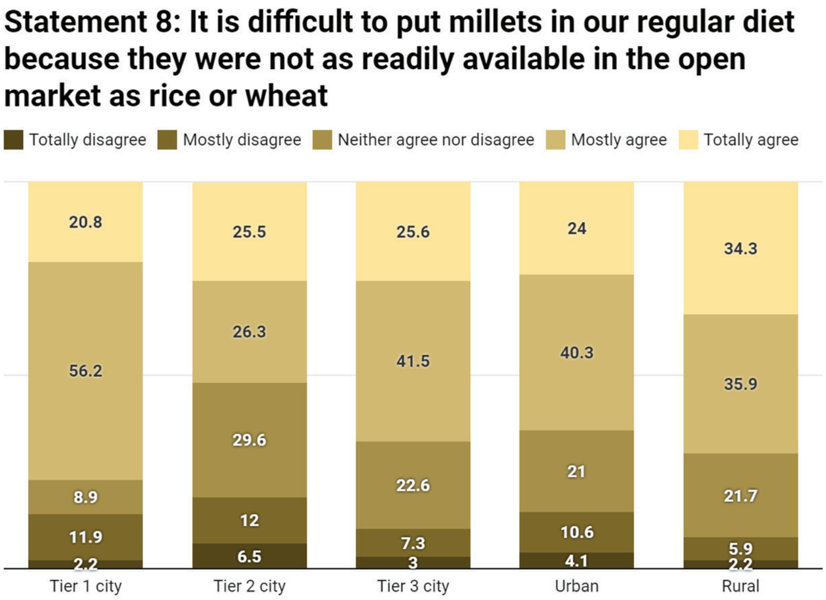


Given the fact that a large segment of the non-consuming respondents had never tried millets, it is understandable that 50% or more of them could neither agree nor disagree with this statement. Of those who could, presumable because they had tried millets at some point in their lives, the larger proportion agreed with the statement regarding bitter aftertaste.

6.2.4 Lack of availability

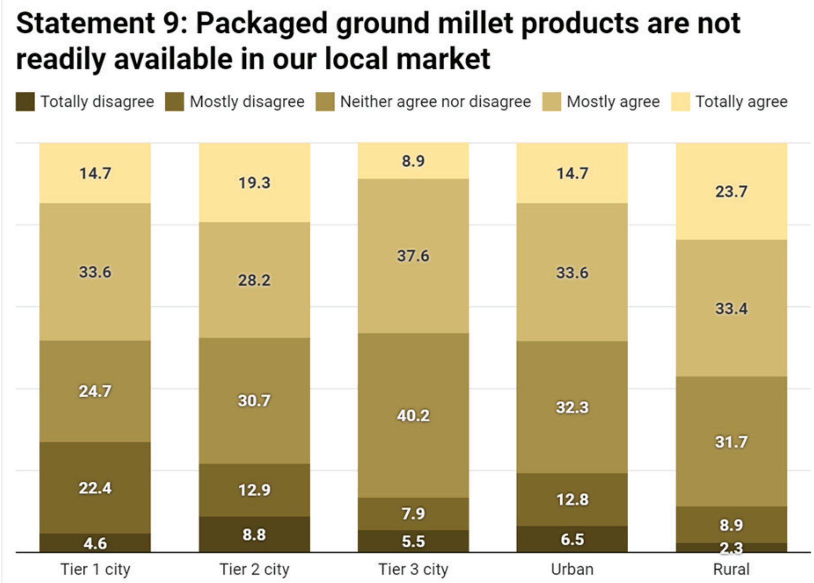
Many consumers did not incorporate alternative staple products in their regular diet because they were not as readily available as rice or wheat. Studies conducted in India reported the role of ration shops in this context. India has a public distribution system that distributes rations at a subsidised price to the poor. Most ration shops, or fair price shops, supply major staples only, which makes them widely available and thus preferred to alternative staples. The purchase of rice from heavily subsidised ration shops was favoured over local millet varieties, it was observed that consumers stopped purchasing millet and sorghum-based products due to their non-availability in local shops.

Figure 50



Apart from tier 2 cities, in all other geographies, the clear majority of the respondents felt one of the reasons behind the non-consumption of millets is because they are not readily available in the open market as is the case with rice or wheat. This statement was agreed upon in totality by over one in three respondents in rural areas and this proportion gets proportionately smaller as we move to higher order urban settlements.

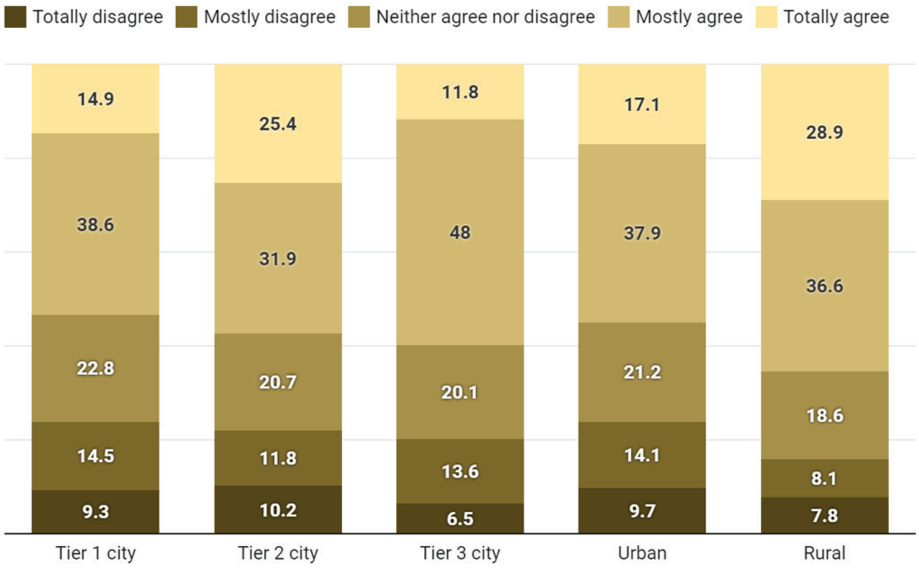
Figure 51



Packaged ground millets are not readily available in the rural market and this is endorsed by 57% of the rural nob-consumers. On the other end of the spectrum, 27% of the residents of the metropolitan cities indicated that they are. Apart from the metros, across all other geographies, a significant proportion of the respondents could not offer a stand on this topic, referring to staying neutral (25-40%). Given that 47% of the respondents across tier 1 and tier 2 towns could confirm of the non-availability of packaged ground millets in their local market is a reflection of the lack of marketing efforts being put in by existing brands who are in this space.

Figure 52

Statement 10: I get subsidised rice and wheat from our ration shop every month and that takes care of my needs



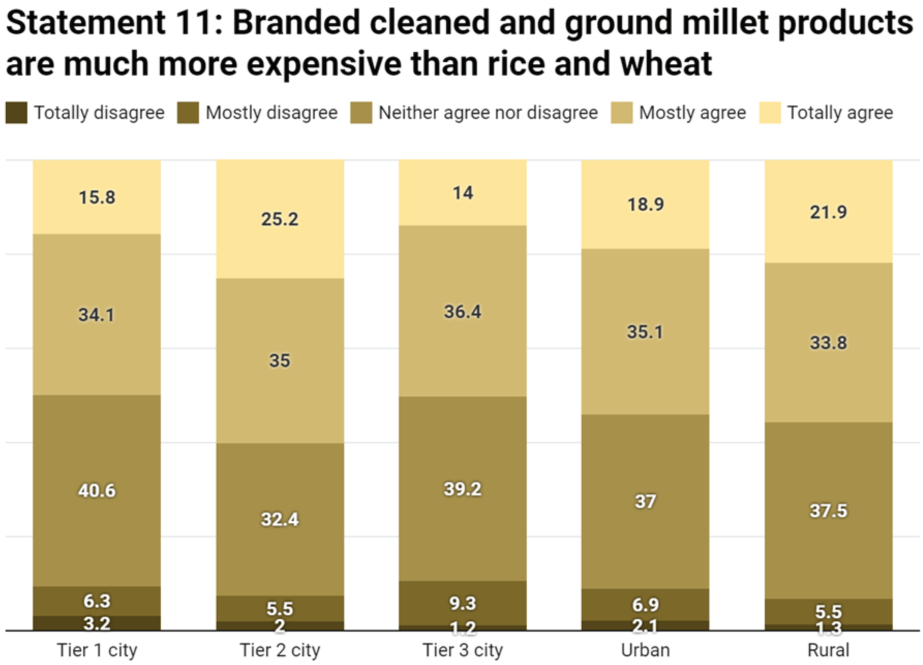
Apart from the southern states, ground millets are not made available in any other zone even though there is a plan to do so in the future. Given that fair price shop under PDS, by and large, sells/distributes subsidised rice and wheat across most parts of India, this supply is sufficient for most family's needs who are empanelled under the National Food Security Act (NFSA).

6.2.5 Lack of affordability

Affordability as a barrier was found to be a recurrent theme in many studies. Researchers have argued that the overall intent to purchase soy oils was influenced by price. It was also found that affordability and value for money were of significant importance to consumers.

When the prices of alternative staples were decreased, in controlled settings, purchasing behaviour was affected positively. For instance, it was reported that price subsidies for sustainable and healthy food products had the most significant effect on changing consumer choices. A recent study conducted in Indonesia noted that the Indonesian government subsidised white rice, and, thus, brown and black rice was expensive in comparison. Despite understanding the nutritional benefits associated with the latter, consumers chose to purchase the former due to its affordability issues.

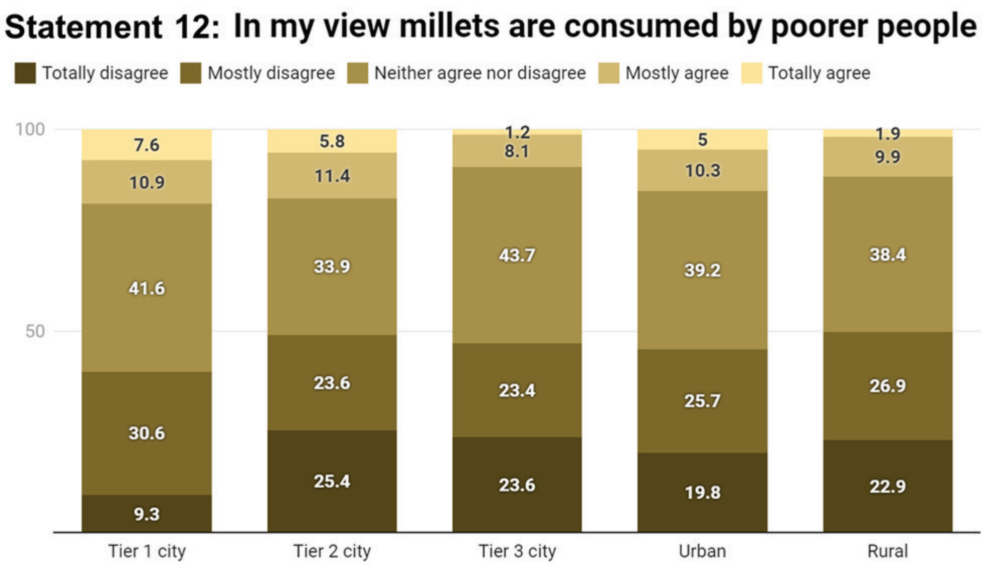
Figure 53



Because the largest section of the non-consumers were those who were not aware of the product, here we see a relatively large section of respondents unable to take a stand on the affordability issue and preferring the stay neutral. Of those who could, the popular belief across all geographies is that branded millet products are far more expensive than staples such as rice or wheat.

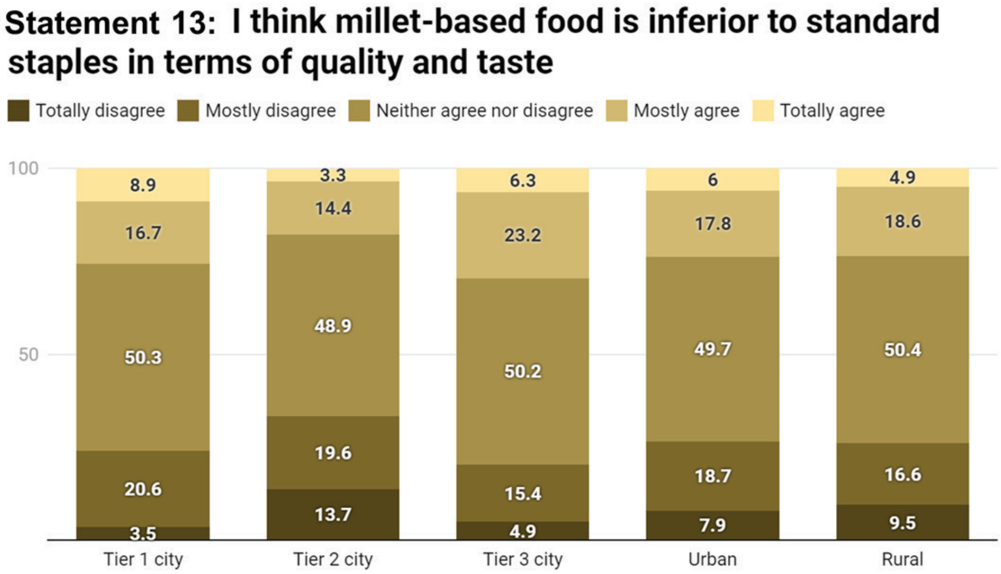
6.2.6 Image

Figure 54



Most of the respondents seem to have disagreed with the notion that millets are consumed by poorer people. While it may be argued that this might have certainly been the popular perception several decades ago, with the enhanced exposure these alternate staples have been getting in recent times has been responsible for the changed popular perception.

Figure 55

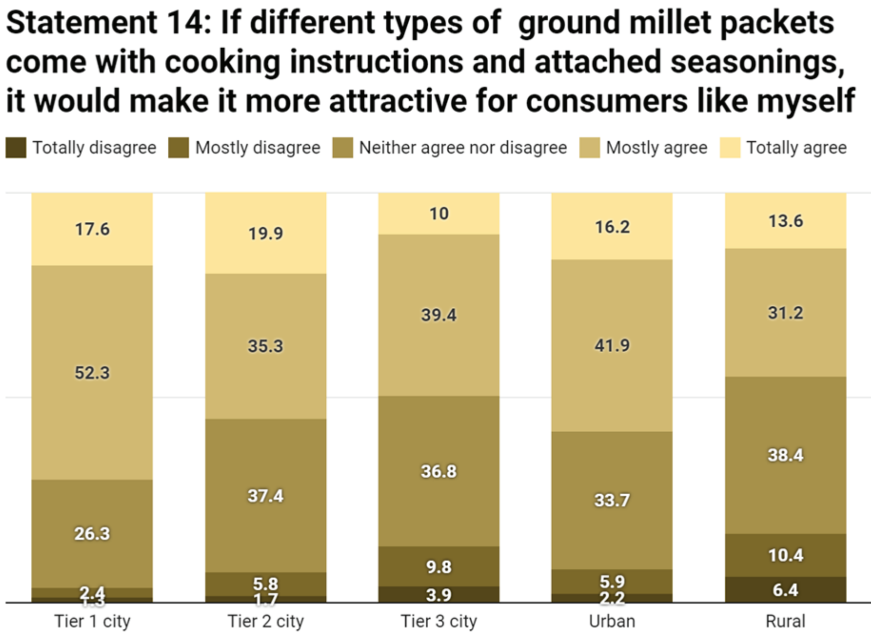


If we set aside the fact that most non-consumers were unaware of the product and hence could not rightly compare their quality with that of standard staples, of those who could, the larger share was in disagreement with the notion than in favour.

6.2.7 Alternative formulations

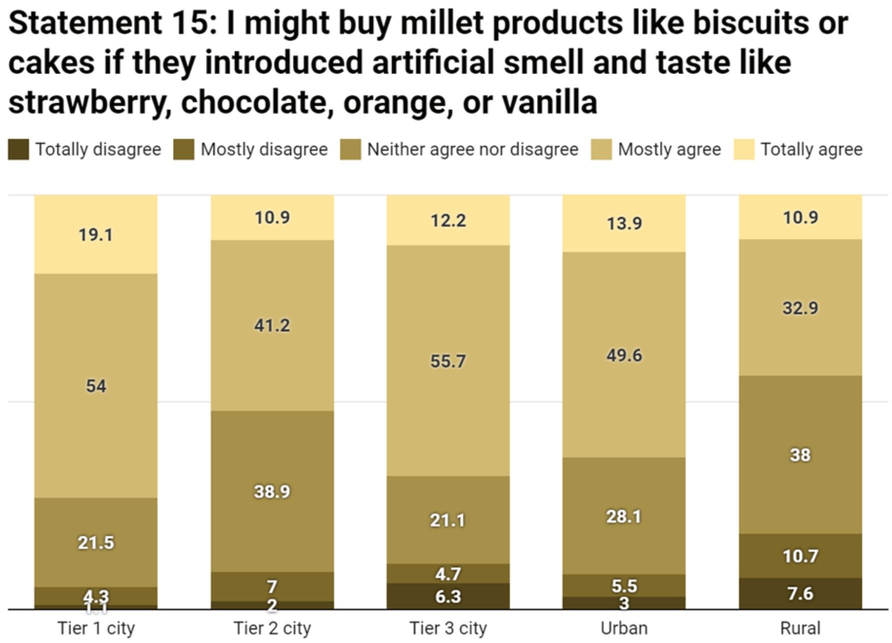
The non-consumers were asked if different types of ground millet packets are made available in the market but they came with cooking instructions as well as their own seasonings, would it be an attractive proposition for them to consider buying?

Figure 56



70% of the respondents from the tier 1 cities were in agreement that such products would indeed make it attractive for consumers like themselves. In all other urban geographies, the positive reaction to this offer was 50-55%. Demand was least in the rural geography, around 44%.

Figure 57

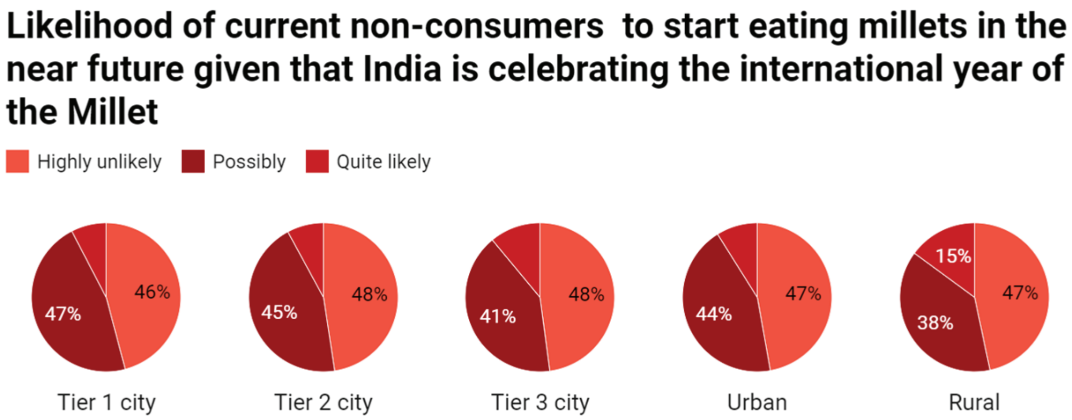


The data reveals that there is certainly a demand for flavoured biscuits and cakes made out of millets. As expected, the demand for such products was highest in urban areas than in rural where the majority was still undecided.

In summation, packaged and branded ground millets with their own cooking recipe and seasonings, and millet-based cakes and biscuits with artificial flavours are certain two directions that FMCG companies might think of exploring and developing the market.

6.3 Likelihood of non-consumer starting to eat millets in the future

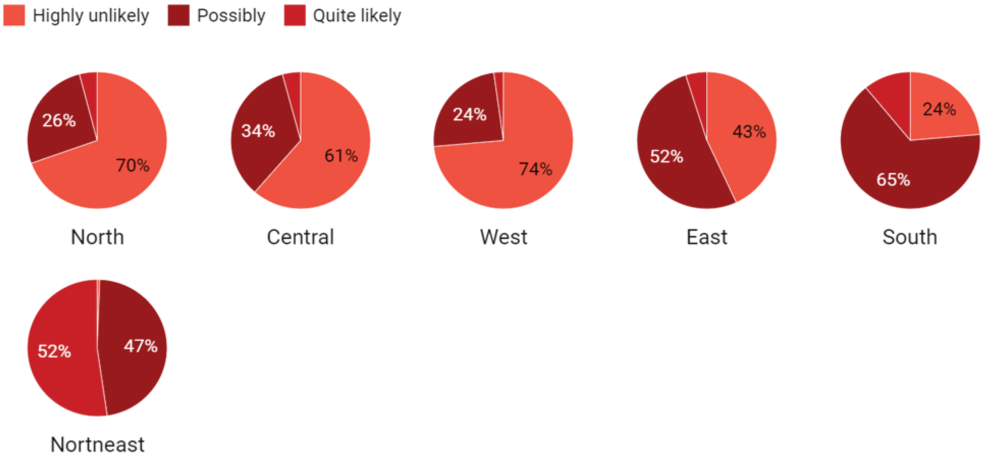
Figure 58



Close to half of the current non-consumers across all geographies were categorical in stating that it was highly unlikely that they would start eating millets just because this year India is celebrating the international year of the millet. However, on the bright side, an equal proportion had stated that they might. It is our ardent wish that users of this handbook will find enough insights to help them develop products as well as marketing strategies that will help popularise millets among the Indian audience, not just in niche urban markets but across all geographies including rural.

Figure 59

Likelihood of current non-consumers to start eating millets in the near future given that India is celebrating the international year of the Millet



Possibly the markets that are likely to open up faster than the others are in the southern states and the northeast, where millet consumption was highest in any case. In other zones, greater marketing efforts will have to be done to convert the current non-consumer to possible future clientele.

About the Development Intelligence Unit (DIU)

The Development Intelligence Unit (DIU) brings data and expert analysis to the intersection of opportunity and deprivation in rural India. The DIU supports stakeholders who navigate the increasingly opaque, complex and uncertain world of data to analyse social and economic developments, forecast trends and better understand development programmes and practices. Doing so provides actional insight to improve the efficacy and effectiveness of development initiatives.

The DIU platform is a clearing-house of rural information presented in a user-friendly format, addressing the needs of diverse stakeholders in public, private and civil society. It brings rural India into focus and furthers the field of rural analytics for understanding, positioning and informing stakeholders and decision makers.

DIU specialises in evidence-based insights that will create an impact for governments and non-profits. It has expertise to develop data-driven solutions to public policy challenges based on robust evidence, expert insights and data analysis. It is providing data, research and tools to amplify issues in order to help rural India gain a voice, spark deeper conversation and help shape the future of India.

Assessing Consumer Demand for Millets in India

tri Transform Rural India

DIU development intelligence unit

SAMBODHI