



Agribusiness and Economics Research Unit

A Lincoln University Research Centre.
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Profiles of NZ Bread Consumer Preference Groups: Willingness-to-pay for New Zealand Grown Grain as a Flour Ingredient

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December 2019



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Summary

- In a separate report, the Agribusiness and Economics Research Unit at Lincoln University and the Foundation for Arable Research, estimated willingness-to-pay values for selected attributes of bread by New Zealand consumers, with a focus on identifying preferences for New Zealand grown grain as a source of flour ingredient.
- That report identified three groups of bread loaf consumers with distinct preferences. The current report describes in more detail the members of each group for each of the survey questions asked.
- For brevity, this report avoids repeating the majority of content from the original study report, therefore the two reports should be considered in combination for correct comprehension of survey results.
- Group one is the largest with a membership probability of 51%. Of the three consumer groups, this group has the strongest preferences for New Zealand grain flour ingredient. The average member of this group is willing-to-pay \$0.49 more for a bread loaf that is made with New Zealand origin flour over one that is not.
- Group two is the smallest of the three with a membership probability of 13%. The average member of this group is willing-to-pay \$0.23 more for a bread loaf that is made with New Zealand origin flour over one that is not.
- Members of group three, with a 36% membership probability, do not hold significant preferences for New Zealand origin flour and are not willing-to-pay for this bread attribute.
- This report details those three groups using information including consumption behaviours and demographic variables collected in the survey.
- The main objective is to identify differences across the three groups that can contribute to targeted marketing strategies.
- Focusing on consumer group one as the reference for comparison we can say that these consumers are different from consumers in other groups:
 - In terms of sociodemographic characteristics, are more likely to be younger, female, more educated, with higher household income and members of larger households.
 - Group one consumers purchased the least number of loaves per fortnight on average at 2.5. Group two averaged 3 and group three 2.7.
 - Group one had the highest average spend at \$3.32/loaf, while Group 2 had the least (\$2.91) and Group 3 paid slightly more on average (\$2.95).
 - Group one had the largest proportion of consumers considering grain used as flour ingredient in the bread they buy to be important.
 - Group one has the highest rate of front and back label attention, compared with the other groups they also consider labels to be easier to understand, and are more interested in labels that convey information relevant to them.

1.1 Sample Characteristics

- Consumers in groups one and three are more likely to be younger than consumers in group two, while ages are similar between groups one and three.
- Group one and three members are more likely to be females compared with group two consumers (54%).
- Ethnicity is similar cross groups, with group one having a slightly higher proportion of Asian consumers (12%).
- Group one is relatively more educated than both groups two and three, with a larger proportion of consumers holding a tertiary qualification (59%) compared to consumer group two (37%) and three (50%). Group two members are also more likely to hold lower qualifications than group three.
- Distributions across urban, suburban and rural area are similar across groups.
- Group one members are more likely to have higher household incomes (average of \$73,000) than group two (\$61,050), and similar to group three (\$76,050).
- Group one and three consumers are more likely to be members of larger households than group two, with over 70% of group two consumers households made up of two or one members.

Demographic Variable	Class One Distribution (%)	Class Two Distribution (%)	Class Three Distribution (%)	
Age	65 years or more	17	26	19
	55 – 64 years	15	28	13
	45 – 54 years	17	18	24
	35 – 44 years	20	12	20
	25 – 34 years	18	13	16
	18 – 24 years	12	2	9
Gender	Female	54	40	48
	Male	46	60	52
Ethnicity	New Zealand European/European	76	80	83
	Māori	6	9	6
	Pacific Islander	2	2	1
	Asian	12	6	9
	Other	10	10	8
	None	1	2	3
Education	High school	24	36	24
	Trade/technical qualification or similar	16	24	21
	Undergraduate diploma/certificate/degree	42	29	38
	Postgraduate degree	17	8	12
	None	1	2	3
Area	Urban	42	39	39
	Suburban	44	43	46
	Rural	12	17	14
Occupation	Unemployed	7	12	7
	Retired	17	26	17
	Unpaid voluntary work	1	2	1
	Student	8	2	4
	Paid employment	56	52	61
	Home duties	9	4	9
	Loss	0	0	1
Household Annual Income	\$0 - \$20,000	9	15	6
	\$20,001 - \$40,000	21	28	20
	\$40,001 - \$70,000	25	21	24
	\$70,001 - \$100,000	16	21	20
	\$100,001 - \$150,000	19	9	17
	\$150,001 or more	10	7	12
Household Size	One	20	32	19
	Two	32	39	39
	Three	19	9	16
	Four or more	28	19	27
Region	Auckland	34	26	35
	Bay of Plenty	7	6	5
	Canterbury	13	12	14
	Gisborne	0	0	1
	Hawke's Bay	4	4	3
	Manawatu-Wanganui	6	7	4
	Marlborough	1	2	1
	Nelson	1	2	2
	Northland	3	6	4
	Otago	5	3	4
	Southland	2	6	1
	Taranaki	2	3	4
	Tasman	0.4	1	1
	Waikato	10	11	10
	Wellington	12	10	10
	West Coast	0.4	2	1

Table 1. Consumer groups sociodemographic characteristics

1.2 Consumption and Purchase Behaviour

- Respondents were able to construct up to three bread loaf formulations, with all respondents completing the bread loaf they most often buy, 55% of group one consumers constructed two loaves (42% of group two and 58% of group three), and 26% provided three (17% of group two and 24% of group three). In total 1,745 loaves were detailed.
- The number of items used to describe each loaf changed over the number of loaves described. Half of the main (first) loaves were described using two or more items, and a quarter used at least three items. While the majority of subsequent loaves were described using a single item.
- Wholegrain was the characteristic used by most consumers within each group (Figure 1). Groups one and three use similar rates of descriptors, while group two has a higher rate of dietary characteristics (dairy free, vegan).

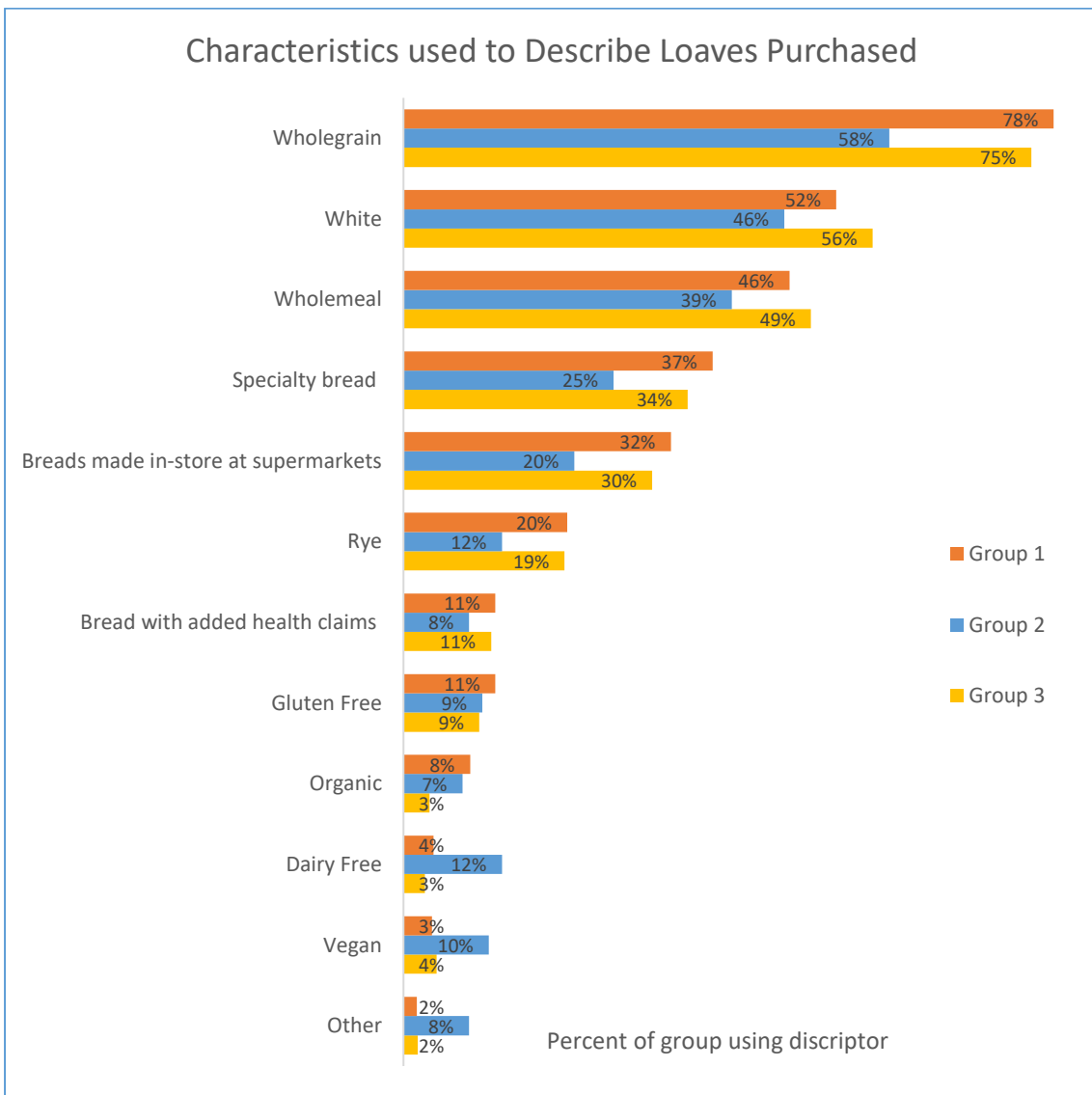


Figure 1. Characteristics used to describe loaves purchased

- The ranking of characteristics given as most important mimics the distribution of Figure 1, with wholegrain being the most important characteristic overall consumer groups. And dietary characteristics being important to group two consumers. (Figure 2).

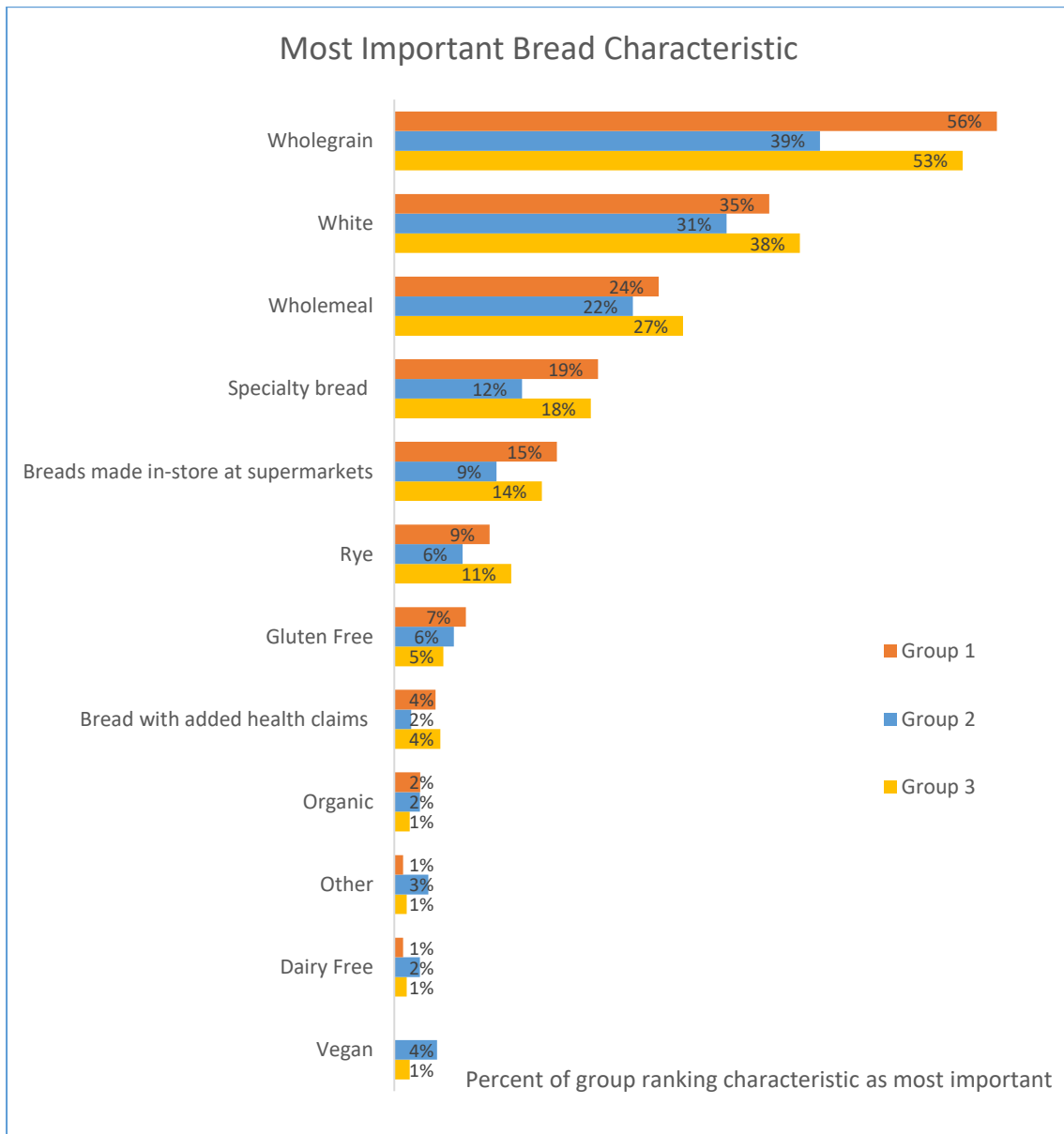


Figure 2. Characteristics ranked most important

- The number of loaves purchased in a fortnight ranged from 1 to 10, with an average of 2.33 loaves per fortnight over the whole sample.
- Group two consumers purchased the highest number of loaves on average (3) with 5% of Group two consumers purchasing ten loaves/fortnight
- Group one consumers purchased the least number of loaves on average (2.5). And group three averaged 2.7 per fortnight.
- Over half of all consumers bought two loaves or more a fortnight (Figure 3).

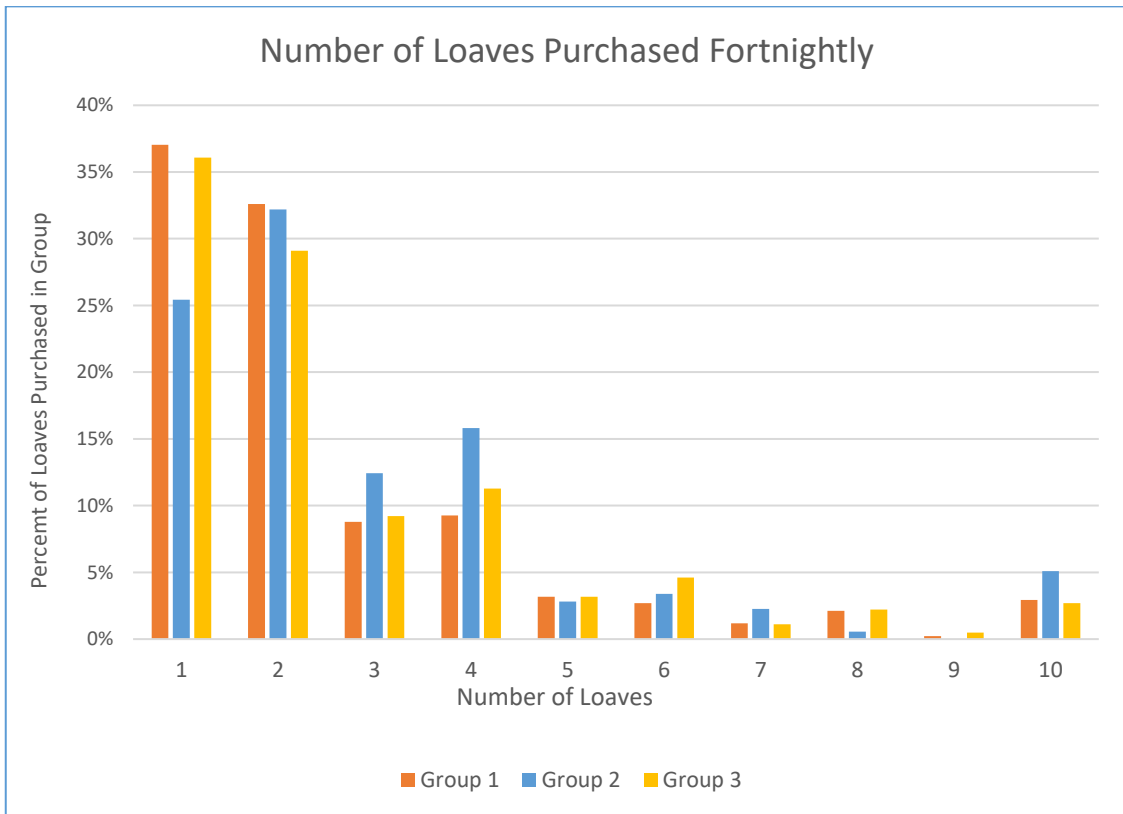


Figure 3. Number of loaves purchased fortnightly

- When we break down the purchase frequency by the main bread characteristic selected we can see that there is significant variation in purchase frequencies by each characteristic across consumer groups (Figure 4).
- Although Wholegrain was the most used and highest ranked characteristic, it sits in the middle range of purchase frequencies in all groups.
- Those in Group one who ranked wholegrain as the most important characteristic purchased 2.6 loaves/fortnight. Over the whole of group one the average is 1.5 loaves per fortnight.
- Those in group one who ranked Dairy Free as the most important characteristic have the highest purchase rates for this group at 3.5 loaves/fortnight. The average over the whole is group one is calculated by multiplying 3.5 by the proportion of those ranking Dairy Free as most important (1% from Fig. 2). This tells us that the average number of Dairy Free bread loaves purchased over the whole of group one is 0.031 loaves/person/fortnight.

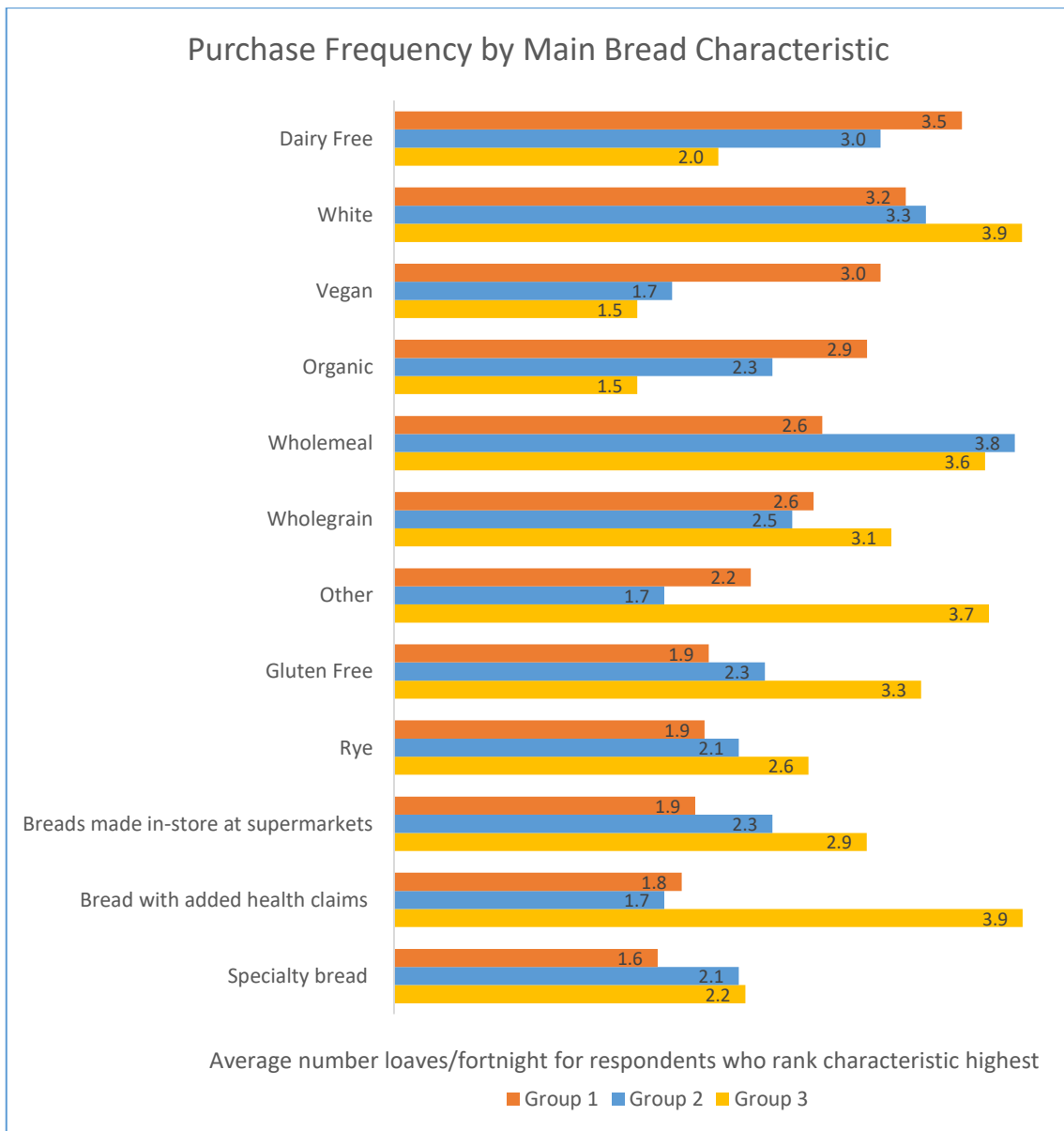


Figure 4. Purchase frequency by main bread characteristic

- Over the whole sample, respondents paid on average \$3.13/loaf.
- Group one had the highest average spend at \$3.32/loaf, while Group 2 had the least (\$2.91) and Group 3 paid slightly more on average (\$2.95) (Figure 5).

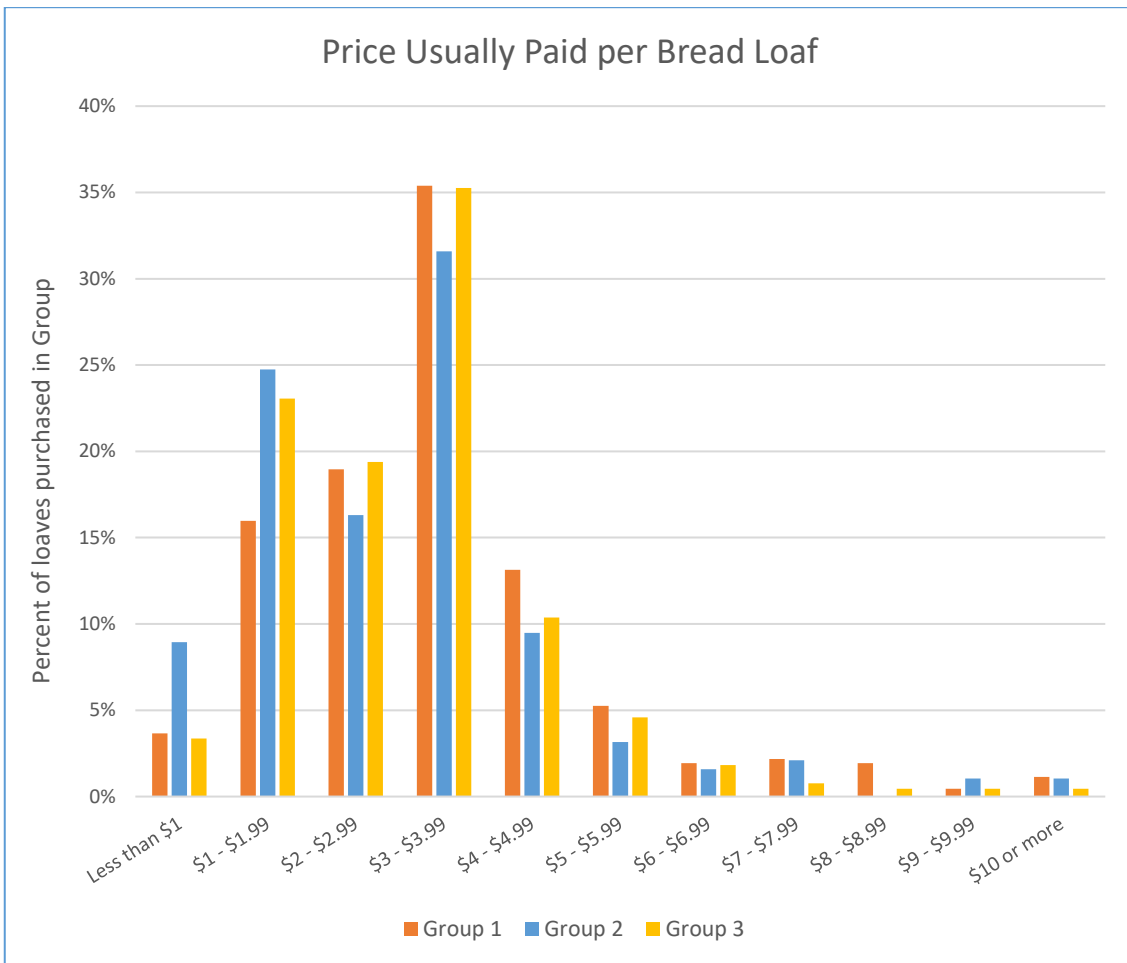


Figure 5. Price usually paid per loaf

- Breaking down price per loaf by the main bread characteristic shows that those consumers who prefer 'white' bread pay generally pay the least on average (Figure 6). While those with dietary requirements pay some of the highest prices.

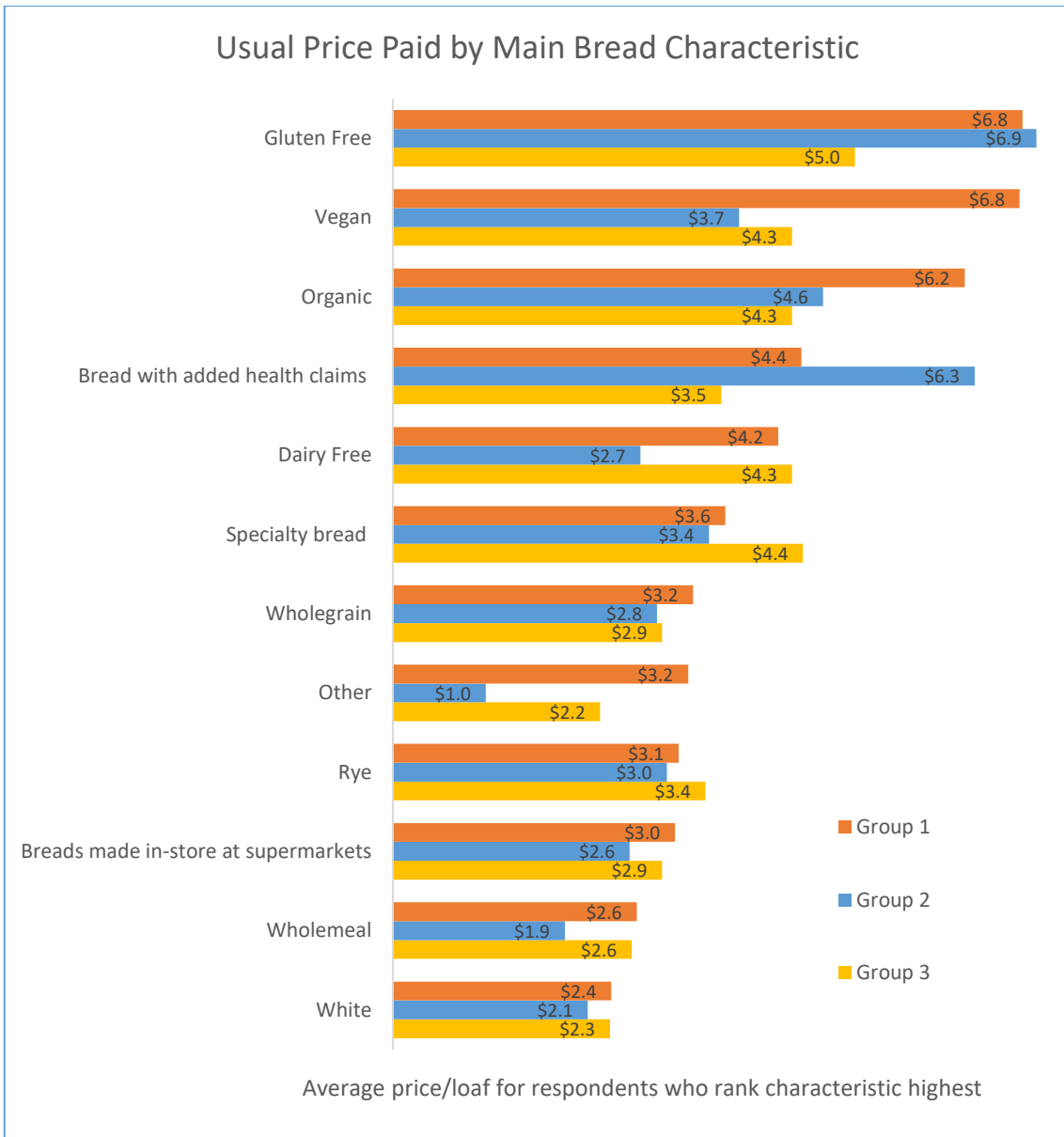


Figure 6. Usual price paid by main bread characteristic

- Those respondents who purchased breads with a 'wholegrain' characteristic were asked to indicate what if any health benefits that they consider 'wholegrain' bread to provide (Figure 7).
- Perceptions of benefits are overall similar across the three consumer groups with higher fibre, gut health and digestive benefits given as the main benefits.
- Approximately 25% of each group were unsure or thought that there were benefits but were not able to describe them.

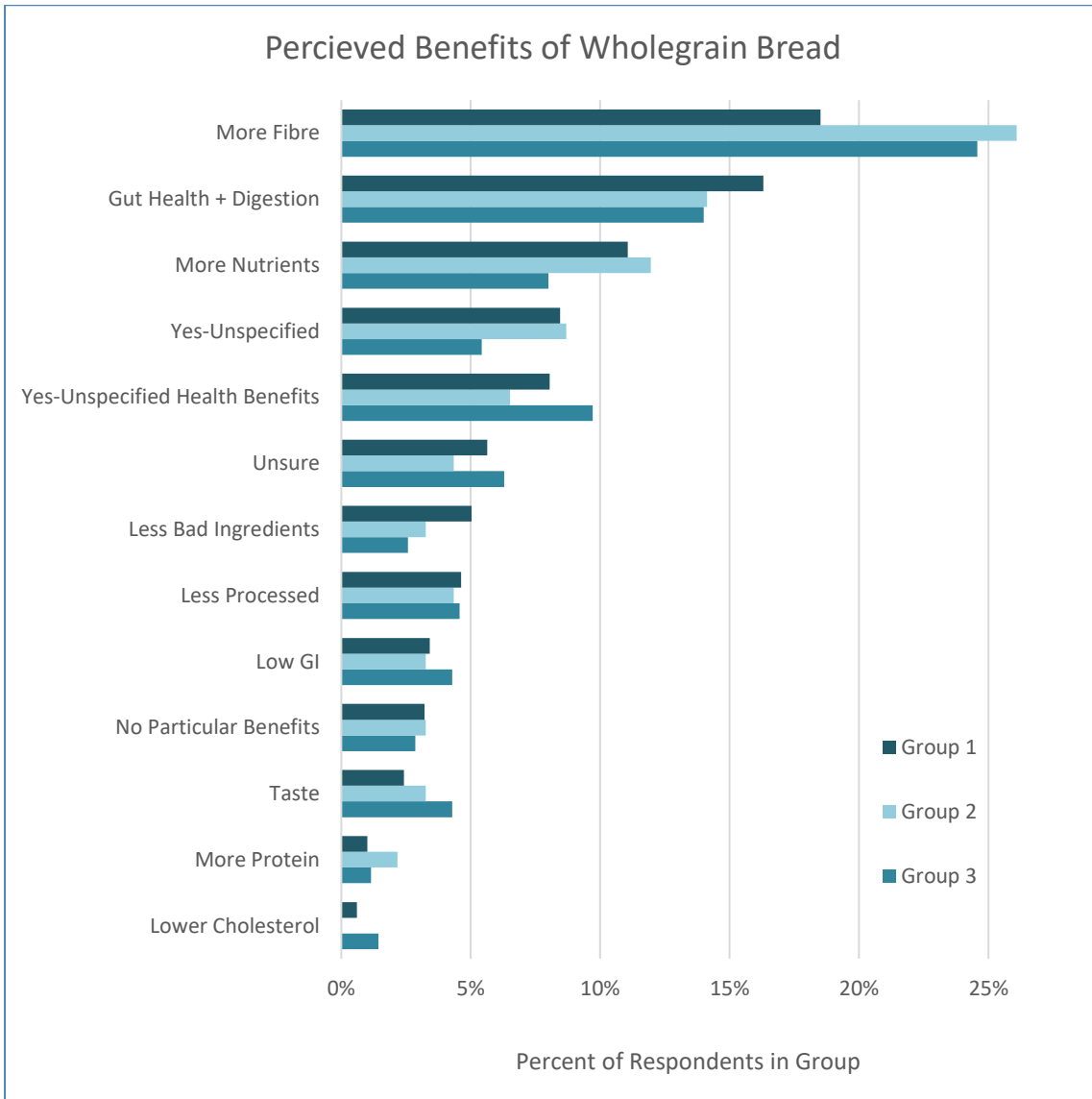


Figure 7. Perceived Benefits of Wholegrain Bread

- The rates of various channel use are similar across groups.
- The vast majority of consumers prefer to purchase their bread from supermarkets with the highest proportion of each consumer group only using this retailer (Figure 8).
- Group one had the highest rate of bakery channel use of the three groups.

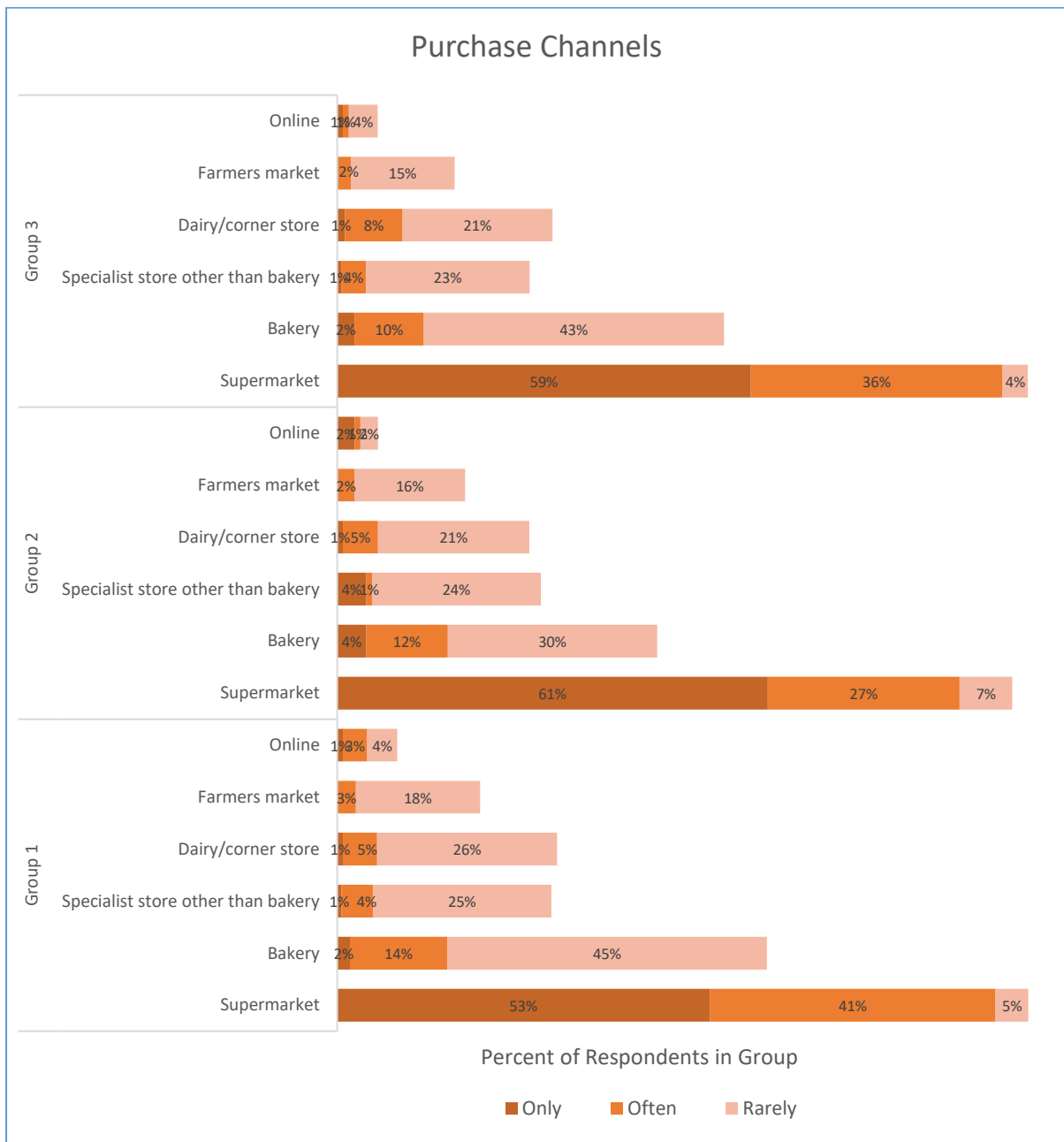


Figure 8. Frequency of purchase channels

- The rates of brand purchase frequency are broadly similar across groups.
- Reflecting the substantial use of supermarkets for bread purchases, store brand bread had the highest rate of 'only' purchase frequency across all groups

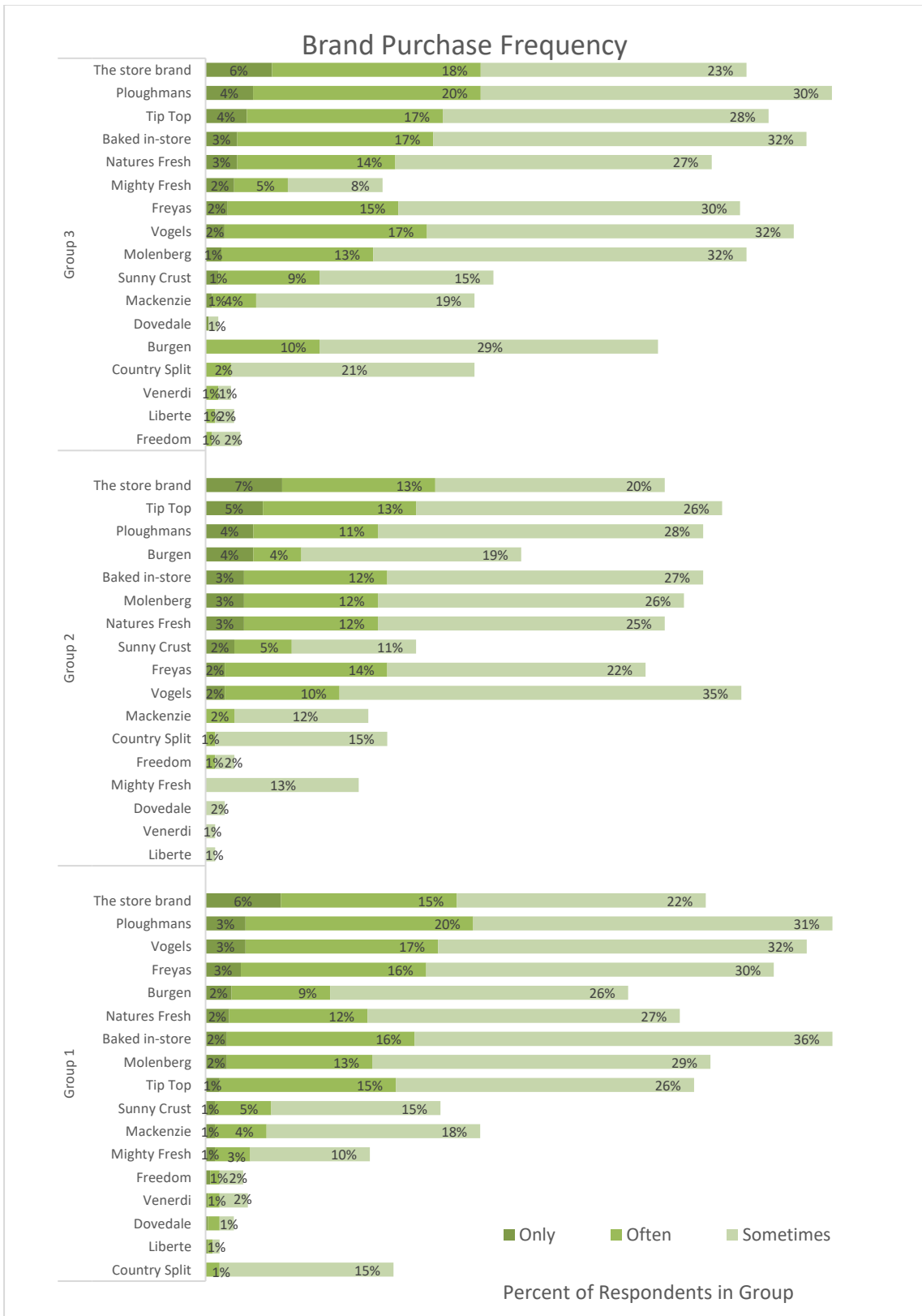


Figure 9. Brand purchase frequency

- The rates of expenditure changes are practically indistinguishable between the three consumer groups (Figure 10).

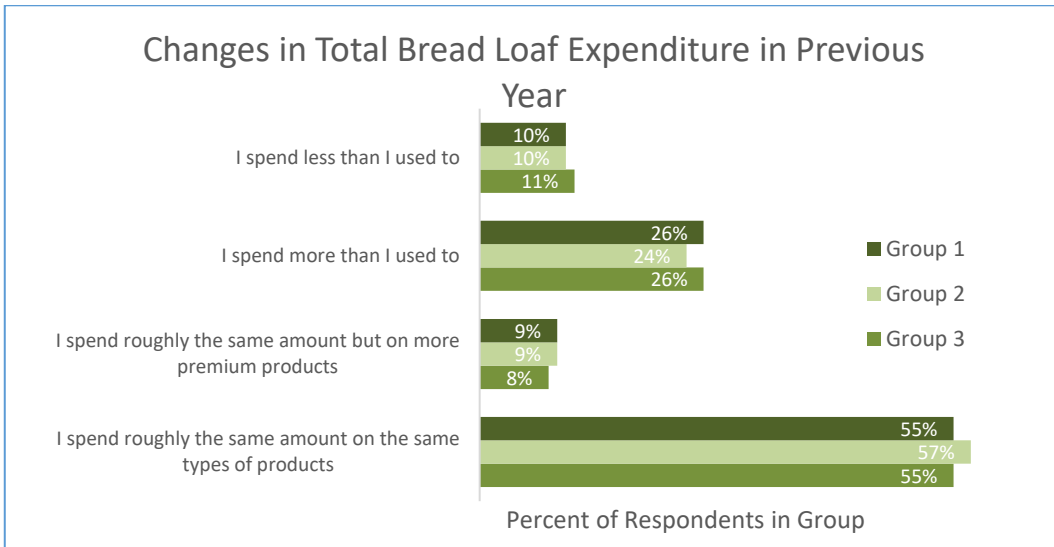


Figure 10. Changes in total bread loaf expenditure in previous year

- The main reason for decreases in bread expenditure was a change in diet (Figure 11).
- Change in diets was also a main reason for increases in expenditure, and price increases were also stated as an important driver of increased expenditure.

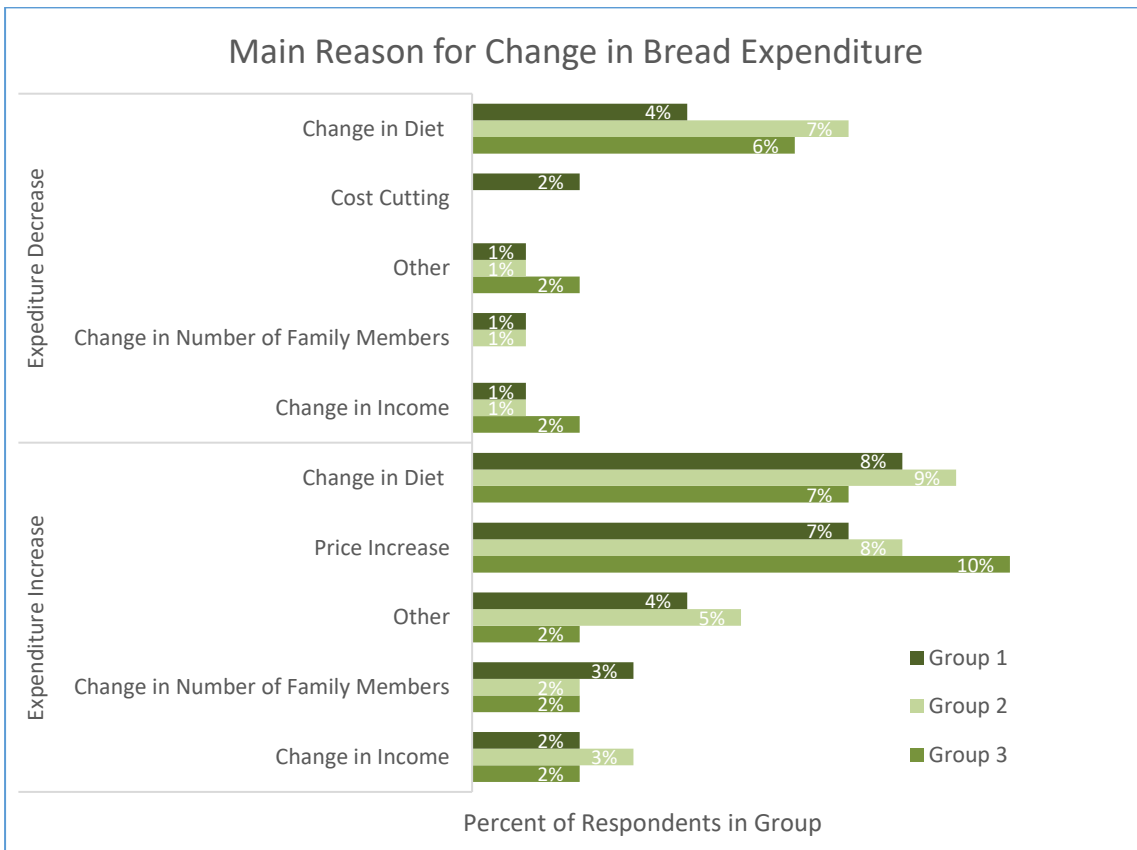


Figure 11. Main reason for change in bread expenditure

- Group one had the largest proportion of consumers considering grain used as flour ingredient to be important (37%) (Figure 12). Group three attitudes are similar, while group two placed less importance on this consideration than the other groups.

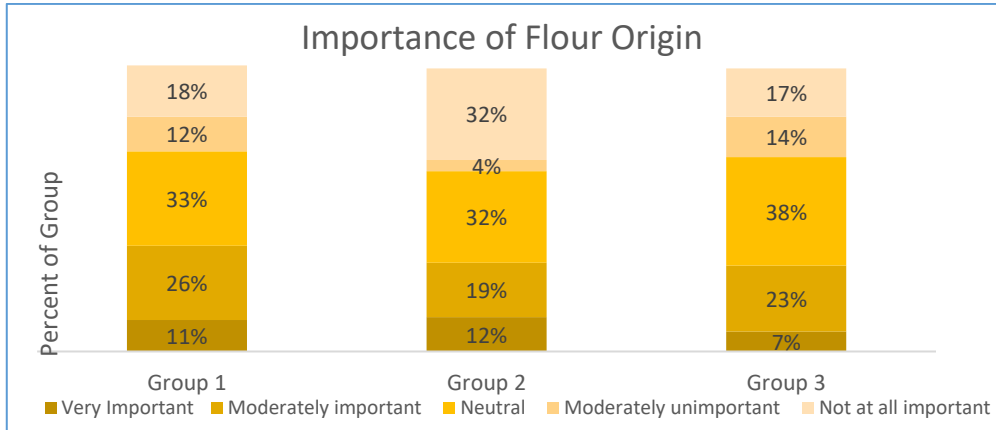


Figure 12. Importance of flour origin

- Respondents who indicated that it was important were asked to describe *where* they thought the grain comes from, and *why* it matters to them (Figure 13).
- Indications of origin were typically given with a degree of uncertainty, with qualifiers including 'probably' and 'maybe used in most cases.
- A majority of each consumer group thought that New Zealand or Australia was the origin (54% group one, 60% group 2, 58% group 3).

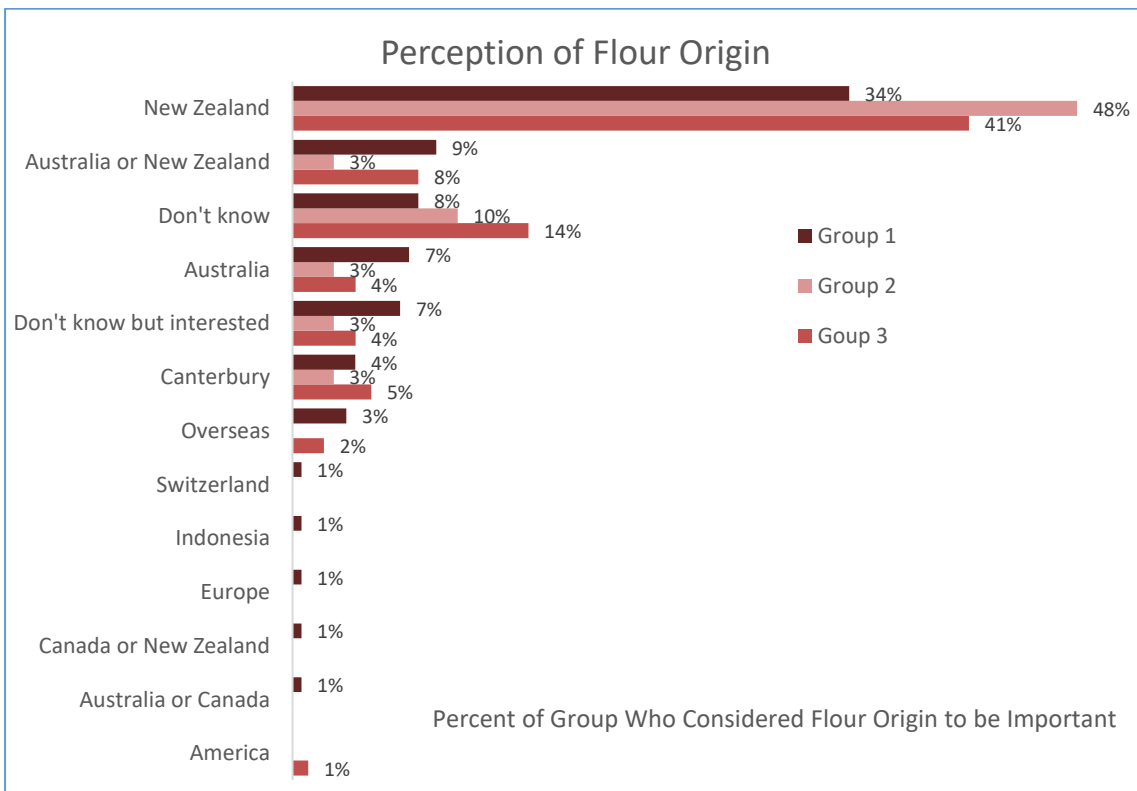


Figure 13. Perception of flour origin

- Consistent across the three groups, consumer considered origin important mainly to support local New Zealand enterprises and growers (Figure 14).
- The relevance of environmental impacts also comes through as a significant reason for local origin being important.

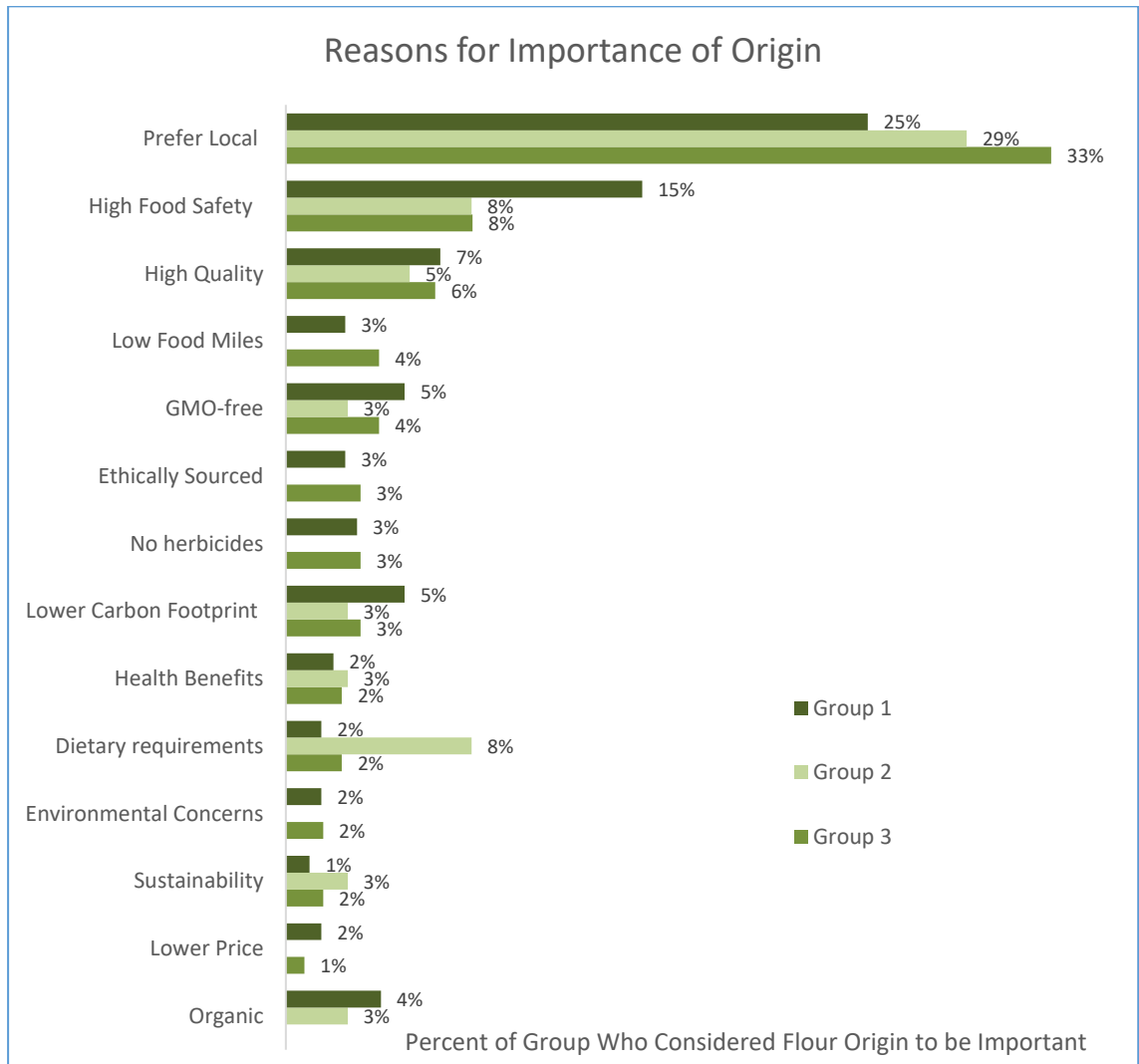


Figure 14. Reasons for importance of origin

- To further assess perception of grain origin, all respondents were then asked to indicate how much of the grain used to make flour ingredients in the bread they buy comes from various countries (Figure 15). Although India, China and the USA do not currently provide flour ingredient into New Zealand, they are included in the question design to avoid leading the respondent's selection.
- The rates of flour ingredient awareness are similar across groups.

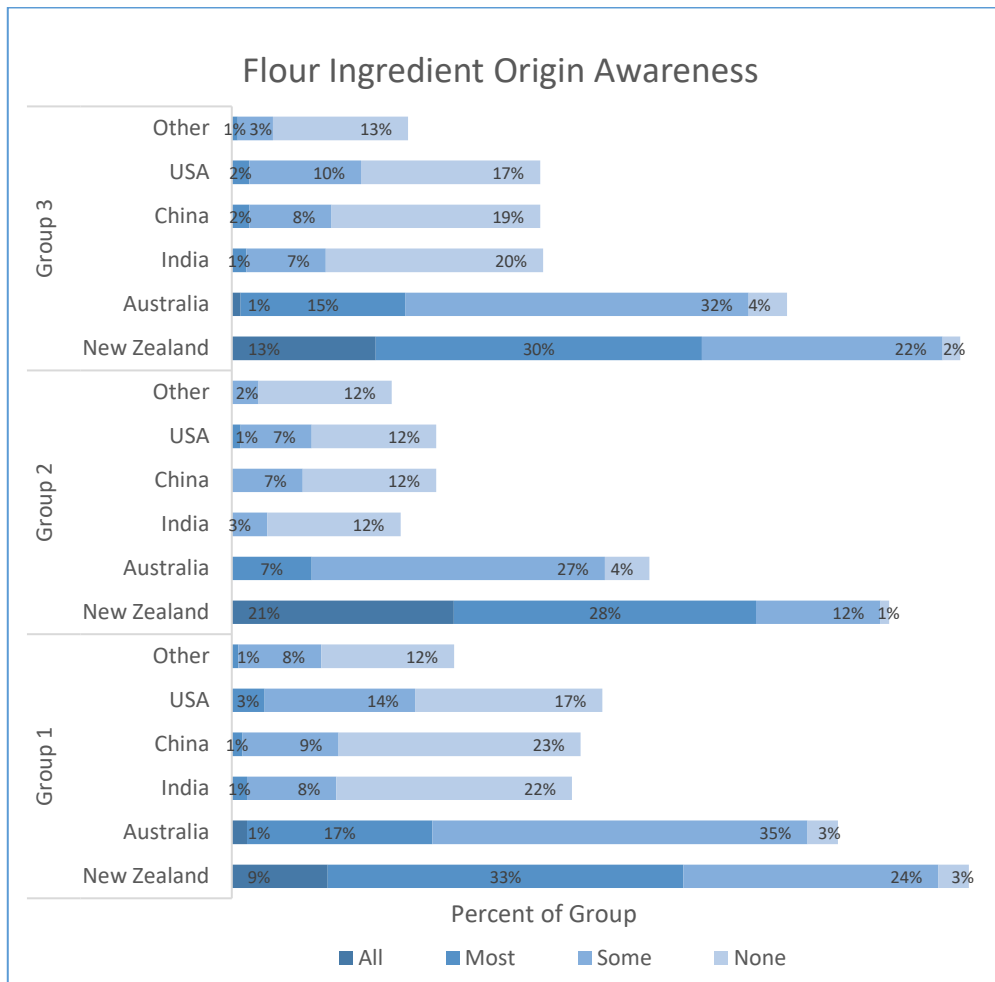


Figure 15. Flour ingredient origin awareness

- The rates of importance for bread attributes are similar across groups (Figure 16) with sensory attributes such as freshness, quality and texture ranking highest in importance to consumers in all three groups
- Familiarity and past experience is also important to all groups.

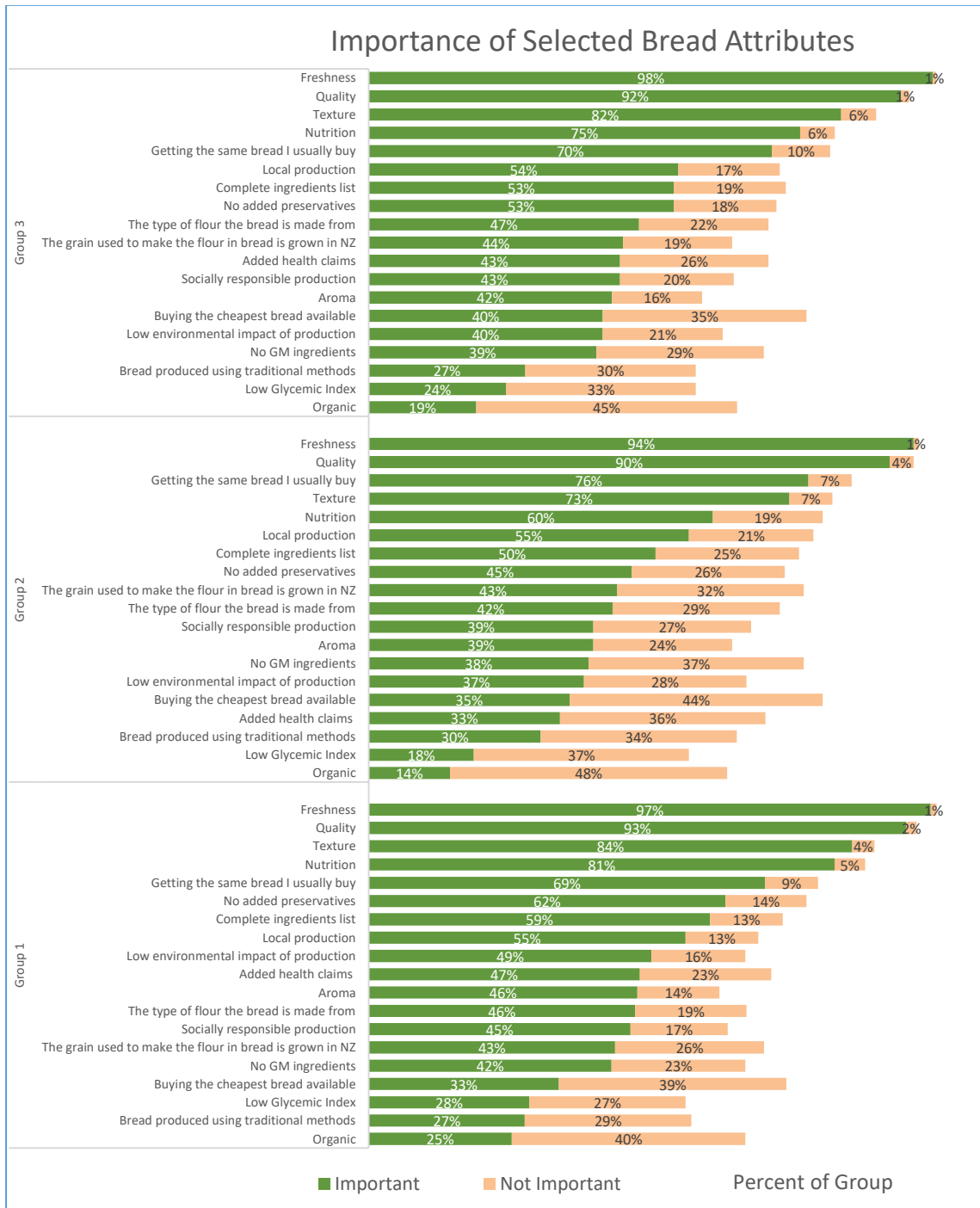


Figure 16. Importance of selected bread attributes

- Group one has the highest rate of front and back label attention, compared with the other groups they also consider labels to be easier to understand, and are more interested in labels that convey information relevant to them (Figure 17).

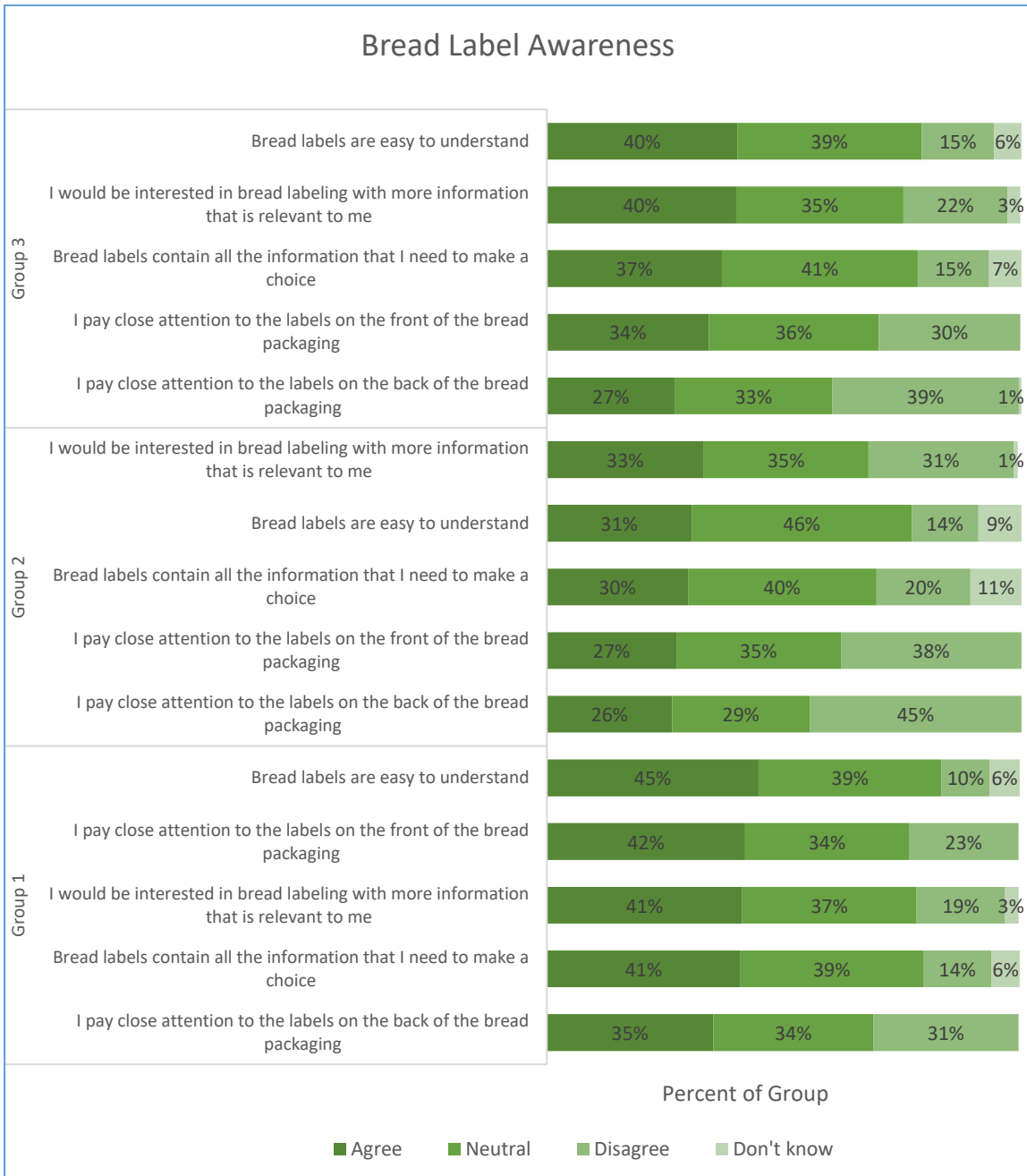


Figure 17. Bread label awareness



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