



Title: Consumer Attitudes towards Pan and Pita Breads Made from Canadian Red and White Spring Wheats

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Consumer Attitudes Towards Pan and Pita Breads Made from Canadian Red and White Spring Wheats

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INTRODUCTION

With the development of hard white wheat varieties there is an opportunity to develop new markets for Canadian wheat. White wheats (WW) offer the advantage of increased milling extraction with brighter flour colour compared to red wheats (RW). Studies done in the U.S. using sensory difference tests showed that bread made from WW was sweeter and less bitter than bread made from RW. How these differences affect consumers' preferences is not understood. Therefore, this study was undertaken to examine consumers' attitudes towards pan and pita breads made from Canadian red and white spring wheats.

MATERIALS & METHODS

Milling:

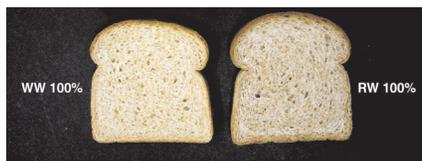
A composite wheat sample of No. 1 CWRS (13.8% protein) and a sample of WW (*cv.* BW 263/AC Ivory, 14.4% protein) were milled in the CIGI pilot mill to produce high extraction (85%) and whole wheat flours (100%).

Baking:

Pan and pita breads were prepared in the CIGI pilot bakery following commercial practices. All baked products were bagged and kept frozen (-18°C) until required. Pan breads were removed from the freezer the day before testing, while pita breads were removed from the freezer the morning of testing.

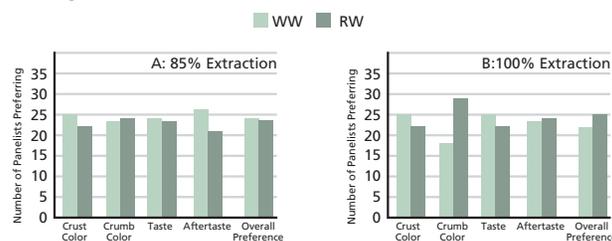
Focus Groups:

Consumers were selected through use of a screening questionnaire. Five focus groups for each product, consisting of 7-10 consumers, were held over the course of two weeks. At each session, consumers evaluated two sets of either pan or pita breads. Slices of pan bread (2) or pita bread (1/4 of a whole pita) were placed in zip-lock bags labelled with three-digit random numbers. Panelists were presented with two sets of either pan or pita breads for evaluation. Each set of samples consisted of the baked product made from each type of wheat at the same extraction level. The presentation of the sets, and samples within a set, were randomized and balanced. Each focus group session began with panelists individually completing a force-choice, paired preference test where panelists indicated which of the two samples they preferred for color, taste, aftertaste and overall preference. After completing the preference tests a group discussion was held to further explore the panelists' attitudes about the samples and to learn more about their bread consumption habits.



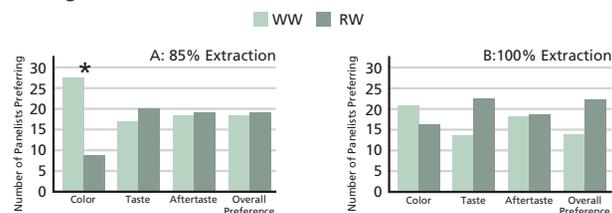
PAN BREADS

Figure 1: Paired Preference Results for Pan Breads (n=47)



PITA BREADS

Figure 2: Paired Preference Results for Pita Breads (n=37)



* - To be considered significant at a 5% probability level, the value must be greater than or equal to 25.

RESULTS

Pita Breads:

No significant differences in preference were found between the pan breads made from either WW or RW regardless of extraction level (Figures 1A & 1B). Some panelists commented that the pan breads made from the RW (85% extraction) appeared "dirty" or "gray-looking". Others felt the darker color of the RW (100% extraction) pan breads was "healthier" and "looked more nutritious". Comments regarding the taste were also divided, with some panelists indicating that the WW pan breads were "sweeter" while others said "bitter". Comments for the RW pan breads were "bitter" and "strong flavor".

Pita Breads:

A significant difference in preference was observed for color for pita breads made from the 85% extraction flour (Figure 2A). Panelists preferred the color of the WW pitas as compared to the RW pitas. Panelists thought the color of the WW pitas at the 85% extraction level looked "brighter" and more "yellow" than the RW pitas. Color of the RW pitas was thought to be "dirty" and "grayish, rather than brown". No other significant differences in preference were observed regardless of extraction level (Figures 2A & 2B). The most interesting comment made by some of the panelists was that texture was the most important factor. The amount of chewiness or toughness was often a deciding factor in the panelists overall preference.

CONCLUSIONS

Consumers were divided in their preferences, with some consumers preferring the pan and pita breads made from WW since they preferred the color of these products and found them to be less harsh tasting with less aftertaste. Other consumers preferred the breads made from RW since they are more typical in color and flavor to products they were already consuming. The results from this study suggest that Canadian WW will provide additional opportunities in the marketplace. Further research is needed to determine the acceptability of WW in the export market for use in both the baking and noodle industries.

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