As. J. Food Ag-Ind. **2009**, 2(04), 176-183

OPEN ACCESS

Asian Journal of Food and Agro-Industry
ISSN 1906-3040
Available online at www.ajofai.info

Research Article

Awareness of international/ethnic food amongst consumers in Bangkok, Thailand

B.E. Bell[1], K. Adhikari[1]*, E. Chambers IV[1], P.Cherdchu[1] and T. Suwonsichon[2]

[1]The Sensory Analysis Center, Department of Human Nutrition, Kansas State University, Justin Hall, Manhattan, Kansas 66506, USA.

[2]Department of Product Development, Kasetsart University, 50 Phaholyothin Road, Chatujak, Bangkok 10900 Thailand.

*Author to whom correspondence should be addressed, email: koushik@ksu.edu

This paper was originally presented at Food Innovation Asia, August 2009, Bangkok, Thailand.
Received 21 June 2009, Revised 4 February 2010, Accepted 6 February 2010.

Abstract

The consumption of international/ethnic food around the world has been on the rise as consumers seek out new food experiences. It is important for the food industry to be aware of such trends. Data from a questionnaire survey concerning knowledge of and use of international cuisines was collected from 100 consumers (44% male, 56% female) in Bangkok, Thailand. Additionally, consumers were asked to taste samples of rice containing various international/ethnic spice blends, including Mexican, Italian, Korean, Cajun, Thai and Indian blends, and to identify them by taste. Ninety-two consumers reported awareness of an international food aisle at grocery stores or super markets. Of those 92, 57 reported purchasing items from the international aisle at least occasionally. Almost all consumers had tried Japanese (93), Chinese (90) and Vietnamese (81) food, and nearly 75% of the consumers believed that international/ethnic foods are readily accessible. When asked about the ethnic restaurants visited in the last 3 months, 86 consumers identified Japanese, 72 indicated Chinese and 55 noted Vietnamese. When ranking a list of 15 ethnic food types according to perceptions of health benefits, consumers selected Thai, Japanese, and Chinese at the top of the list. Lastly, when asked about restaurant types currently unavailable

in Bangkok, consumers indicated a desire to see French (44), Italian (43) and Vietnamese (33) establishments. Interestingly, fewer than 60% of consumers were able to identify specific cuisines by taste alone. The percentage of consumers correctly identifying cuisines were led by Indian (56), Thai (53) and Italian (52), while Mexican (38), Korean (32) and ultimately Cajun (12) were identified by one-third or fewer consumers. Spices are essential to flavour in most international/ethnic food dishes and are now recognized for numerous health benefits. Results from surveys such as this will benefit the food industry as it seeks to meet the needs of today's health-conscious consumer.

Keywords: ethnic, spice, consumer test, health, survey, food preference, habits

Introduction

Ethnic food consumption is on the rise as consumers are seeking out new food experiences, ways to better obtain a balanced and more nutritious diet and as ethnic food restaurants and food become more readily available to the consumers. In the United States, the growth of ethnic food is increasing at a rate of over 7% annually [1]. However, the food consumption choices that consumers make largely reflect their culture. Food habits are heavily influenced by cultural traditions. As cultures evolve and the globe becomes more connected, so does the variability and availability of food. Food is not only used to satisfy hunger and nutritional needs, but also to fulfil social obligations and is sometimes used as a status symbol. As a culture becomes more diverse, so does its food as consumers assimilate food-related aspects from other cultures into their own diets [2].

Dietary diversification is essential in maintaining adequate health. Generally, as diets become more simplified, more health problems arise [3]. Maintaining diversity in food selection is an important step in preserving health. This diversity can be increased as ethnic food becomes more available and as knowledge to prepare such food is increased. There are currently 80,000 plants available to humans for consumption, but we concentrate largely on three: rice, corn and wheat. Different cultures can learn from each other about the effective use of plant materials that have proven health benefits [3].

From birth on, a child's dietary diversification is based on the culture of his/her family. In other words, children will eat what their parent's feed them and their dietary behaviours are heavily influenced at an early age. As the consumption of ethnic food becomes more available and socially acceptable, the percentage of ethnic food consumed will continue to increase as children are exposed to a wider variety of food [4]. It has been found that older adults are much more hesitant to try new food than are young children. Adults 55 years and older tend to be significantly more neophobic than their younger counterparts [5].

As international trade, migration and globalisation have grown, so has ethnic cuisine awareness and consumption. Foreigners and emigrants bring their culture with them in the form of food as they settle into a new country. As trade barriers dissipate, ethnic food is becoming more readily available. The longer consumers are exposed to ethnic food, the greater the chance is that they will diversify their diet to include such food. Taste and texture seem to be the drivers of ethnic food preference. If it tastes good and looks appealing, consumers are more willing to try it and

become repeat purchasers. However, a barrier to consumption of ethnic food occurs when the food is not clearly labelled in a language understood by most consumers in a particular region [5]. The objectives of this study were to (1) understand the awareness of international/ethnic food and spices amongst consumers in Bangkok, Thailand; (2) identify the accuracy of consumer identification of ethnic types of food; and (3) determine consumer's attitudes towards the health benefits of international and ethnic food.

Materials and Methods

Sample Preparation

Six spice blends were selected, including: Mexican (Spice Barn Gourmet Mexican Spice, Spice Barn, Inc., 40 Lewis Center, OH 43035 USA), Cajun (McCormick Cajun Seasoning, McCormick & Company, Inc., Hunt Valley, MD 21031 USA), Italian (McCormick Italian Seasoning, McCormick & Company, Inc., Hunt Valley, MD 21031 USA), Thai (Brand OJ Tom Yum Soup Powder, Multipro International Company Ltd., 6/10 Theparak Rd., Moo 11, Bangplee, Samultprakarn, Thailand), Indian (House of Spices Curry Powder, House of Spices (India) Inc., 127-40 Willets Point Blvd, Flushing, NY, 11368 USA) and Korean (Korean Kimchi Bowl Noodle Powder, Nongshim Company, Ltd., Sindaebang–dong 370, Dongjak-gu, Seoul, Korea). Enriched long grain rice (Great Value, Wal-Mart, USA) was prepared by weighing 375 g of rice and rinsing with 2 cups of distilled water. The water was drained and the rice was placed in a rice cooker (Automatic Rice Cooker, RC-18JM, Sharp, Japan). Six rice cookers were used, one rice cooker for every spice blend. Five cups of water were added to the rice, along with 2 g of salt. The rice took approximately 45 min to cook. After cooking, the rice cooker lid was opened to allow the steam to escape. After 5 min, the spices were added to the rice and stirred for 3 min to ensure a homogenous sample. For the Korean, Thai, Cajun and Mexican blends, 11.0 g of spice were added to pre-weighed cooked rice. For the Italian and Indian blends, 8.25 g of spice were added to the pre-weighed cooked rice. These blends were the result of a previous taste analysis that was done to ensure the levels of the spices were strong enough to taste, yet still palatable.

Consumer questionnaire and spice awareness test

One hundred Thai consumers (56% female and 44% male) were recruited from the Annual Festival (February 2-3, 2009) at Kasetsart University, Bangkok, Thailand. Participants were recruited on the basis that they regularly consumed rice (at least once a month), had no known allergies, and were within the age criteria. Age ranges were 18-24 (33%), 25-40 (41%), 41-55 (19%) and 56-69 (7%). Consumers were required to complete a questionnaire, which detailed questions about international/ethnic food awareness and health perceptions (Table 1).

The taste portion of the test required consumers to match a particular ethnicity to the ethnic blended samples provided. Long grain rice was the base for all six samples, with the samples being differentiated by the ethnic spice blend added to the rice base. The samples were served using a sequential monadic presentation that balanced order of presentation across the consumers. All samples were served in 96-ml (3.25 oz.) plastic cups labelled with the appropriate 3-digit code. Each consumer received bottled water (Nestle, Bangkok, Thailand) and unsalted crackers and was encouraged to cleanse his/her palate between samples. The entire test took approximately 45 min to complete.

Table 1. Survey questions.

Questions	Scaling instrument
Do you shop at any ethnic grocery stores?	*yes or no*
Are you aware of an international food aisle(s) at your local grocery store?	*yes or no*
Do you purchase items from the international aisle at your local grocery store?	*yes or no*
Check all of the ethnic types of food that you have tried.	*List of 15 ethnic types – check all that apply*
Which two ethnic types have you not tried but that you would most like to try?	*Two write-in lines*
How affordable is ethnic food?	*9-point scale (not at all affordable to extremely affordable), Do not buy option*
Do you think international/ethnic food is readily accessible?	*yes or no*
Check the ethnic food restaurants that you have eaten at in the past three months.	*List of 15 ethnic types – check all that apply*
Check the ethnic food restaurants that are within 40 km of your home.	*List of 15 ethnic types – check all that apply*
What ethnic food store(s)/restaurant(s) are not currently in your city that you would like to see made available?	*List of 15 ethnic types – check all that apply*
You will receive 6 samples of rice, ONE at a time. Each will have a different seasoning and is labeled with a 3-digit code. Please taste and identify the ethnicity you <u>most</u> associate with each sample.	*List of 15 numbered ethnic types – place number of perceived ethnic type in the box that corresponds with the 3-digit coded sample*

Statistical Analysis

Wherever applicable, the percentages and mean values were calculated for the questions. Pearson's coefficient of correlation was determined to see the relationship between the average ranking for the perception of healthiness of a particular ethnic cuisine with the following two survey questions: a) Check all of the ethnic types of food that you have tried, and b) Check the ethnic food restaurants that you have eaten at in the past three months. This analysis was performed using CORR procedure in SAS® (SAS Institute, Cary, NC, USA).

Results and Discussion

Most of the consumers (92%) who participated in the study were aware of an international aisle at their local grocery store or supermarket. Our data showed that nearly every consumer (94%) has shopped at an international grocery store and over half (51%) shop at one at least once a month. It was also noted that 57 of the consumers purchase items from the international aisle of the grocery store at least occasionally. These data suggest that international/ethnic food is an important player in the food industry in Bangkok, Thailand as many consumers are repeat customers. This also suggests that the Thai consumers are informed about some of the various international food choices that are available to them.

Table 2 identifies that Thai consumers are more likely to have tried ethnic food that is from nearby countries. Not surprisingly, 98% of consumers identified that they had tried Thai, with a large majority having tried Japanese (93%), Chinese (90%) and Vietnamese (81%). When asked to list two ethnic food types that consumers have not tried but would like to try, the most common responses were French (30%), Spanish (30%) and Caribbean (20%). This data suggests that there is a possible market void in terms of these ethnicities and that opening such an establishment might be appropriate. Consumers had eaten at Thai (99%), Japanese (86%) and Chinese (72%) restaurants the most frequently in the past three months before the survey. Results also show that 81% of consumers knew of a Japanese restaurant within 40 km of their home and 74% and 69% indicating the presence of a Chinese or a Vietnamese restaurant establishment, respectively. Consumers' desire to see Greek (46%) and Indian (43%) restaurants around their work/living area implied that opening one of these ethnic/international food establishments might fill a void in the market.

Table 2. Questions related to ethnic food (% consumers).

	QUESTIONS				
Ethnic Type	**Ethnic food you have tried before**	**New ethnic food you are most likely to try**	**Ethnic restaurants visited in last 3 months**	**Ethnic restaurants within 40 km of your home**	**Ethnic restaurants you would like in your area**
Mexican	26	16	14	13	30
French	25	30	7	14	44
Japanese	93	7	86	81	45
Italian	63	15	35	43	43
Indian	42	10	13	14	17
Chinese	90	3	72	74	34
Russian	1	9	0	1	11
Thai	98	1	99	98	40
Caribbean	1	20	1	2	20
Greek	4	19	0	3	12
Korean	71	4	37	50	25
Spanish	2	30	0	2	24
African-American	2	9	1	4	16
Vietnamese	81	3	55	69	33
Cajun	1	12	1	0	7

Sixty-one percent of the Thai consumers said that international/ethnic food dishes are quite affordable, with only 3 consumers admitting they do not purchase any international food items at all. This suggests either these types of food are competitive with national products or consumers are willing to pay a slightly higher price for diversity in their food selection. Also, 71% of the consumers thought that international/ethnic food was readily available in restaurants and grocery stores.

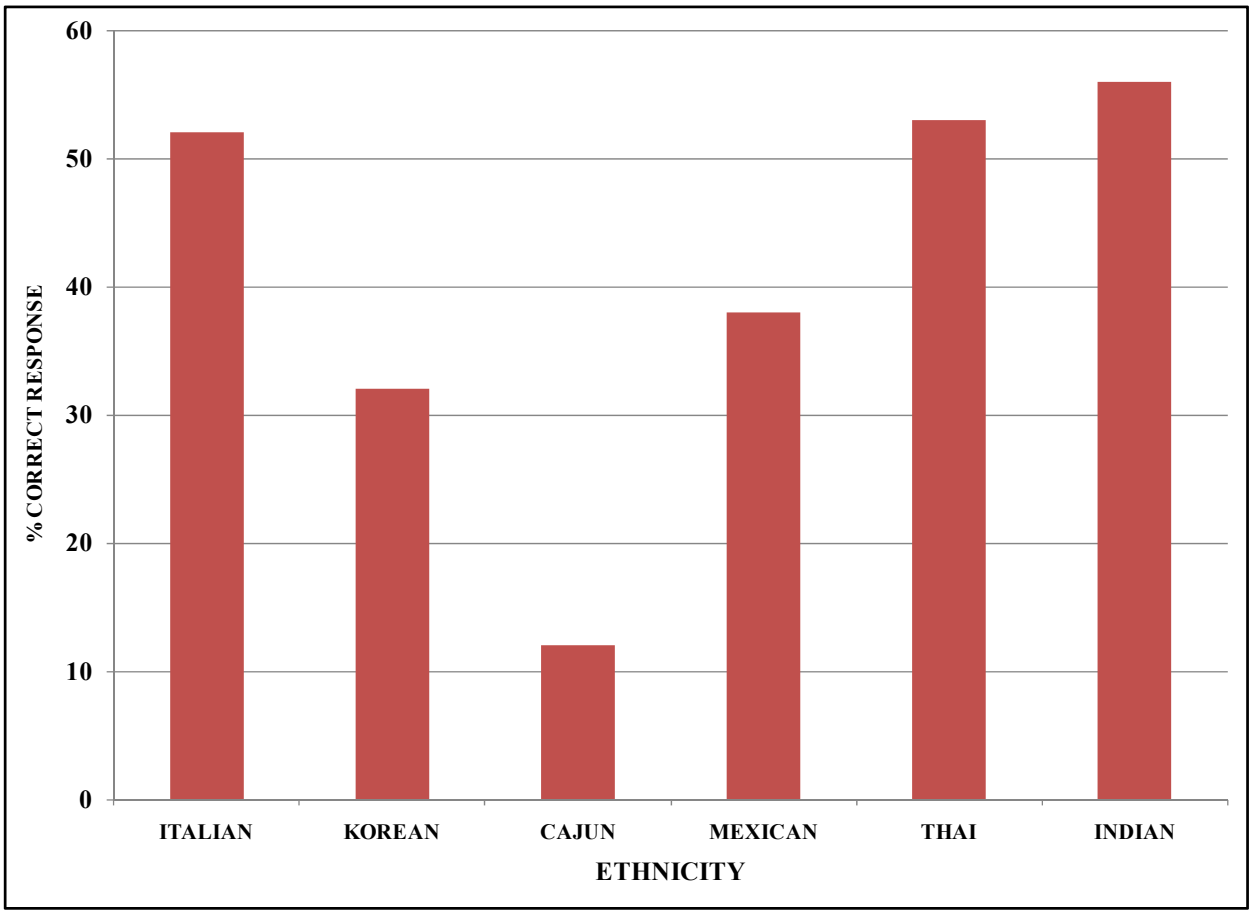

Figure1. Consumer responses for the identification of the six rice ethnic spice blends.

For the tasting portion of the survey, fewer than 60% of the consumers were able to identify specific cuisines by taste alone. The percentage of consumers correctly identifying cuisines were led by Indian (56%), Thai (53%) and Italian (52%), while Mexican (38%), Korean (32%), and ultimately Cajun (12%) were identified by one-third or fewer consumers (Figure 1). Interestingly, the Indian blend was identified by more consumers than was the Thai blend. The Thai spice blend used was a generic "Tom Yum" soup blend, which although it was made by a Thai company may not have conveyed the right flavour perception to some Thai consumers as they ate it on rice. This could also be attributed to the fact that curry powder (Indian spice blend) is very common to most Indian food that is available in Thailand and other countries, while Thai spice blends vary much more in Thailand and do not have only one particular spice that is unanimously associated with the culture. The Thai sample often was misidentified as Korean or

Chinese. Italian also was identified by a large number of consumers probably because the Italian spice blend was unique; some consumers did misidentify it as "Greek." This is probably because of the presence of oregano in both spice blends. Cajun was a term which was foreign to the consumers because Thai consumers seem largely unaware of this American cuisine.

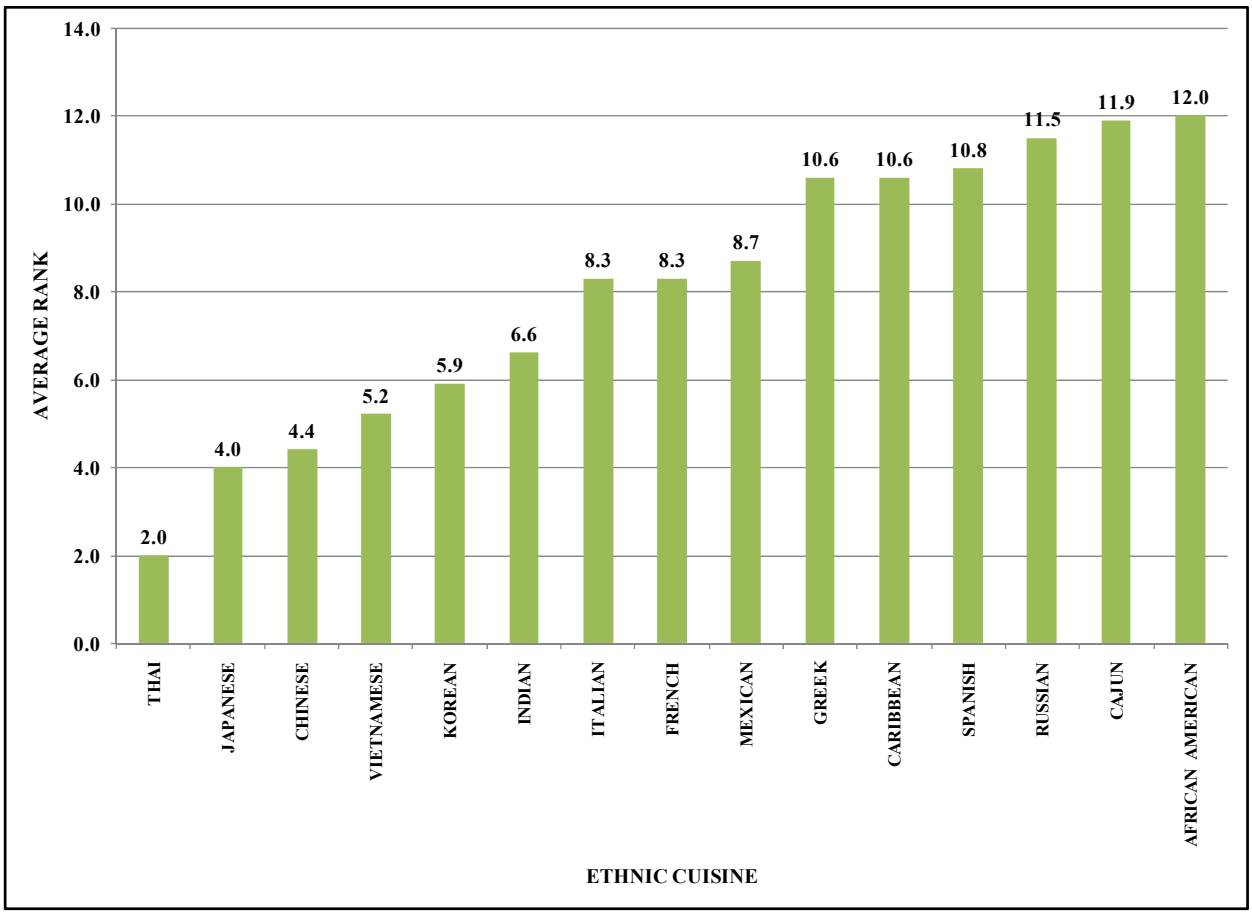

Figure 2. Consumer ranking (from healthiest to least healthy) of the perception of health benefits for each ethnic cuisine type.

Lastly, consumers ranked the 15 ethnic types in the questionnaire (Figure2) according to perceptions of health benefits, with a 1 being healthiest and 15 the least healthy. Consumers selected Thai, Japanese and Chinese cuisine at the top of the list. It is evident that Thai consumers feel very strongly that their food provides numerous health benefits, with an average ranking of 2.0 (lower the rank, healthier the perception). Interestingly, all 6 listed Asian ethnic types (Thai, Japanese, Chinese, Vietnamese, Korean and Indian) were perceived as healthier (rank averages of 2.0 to 6.6) than all other listed ethnic types. Again, consumers seemed unaware of the term Cajun, so it was ranked nearly last, along with African-American, the other United States' ethnic cuisine.

There was a positive correlation ($R^2 = 0.74$, $P = 0.0016$) observed between the average rankings for perception of healthiness of a particular ethnic cuisine and the international/ethnic food tried

by the consumers. Furthermore a positive correlation (R^2 = 0.84, P < 0.0001) also existed between the average rankings for healthiness and the ethnic restaurants visited by the consumers in past three months before taking the survey. This showed that familiarity with a particular ethnic cuisine might have a bearing on its perception of healthiness.

Conclusions

The awareness of international/ethnic food and spices amongst consumers in Bangkok, Thailand is relatively high as many consumers purchase international/ethnic food from culturally diverse restaurants and grocery stores. Overall, Thai consumers are moderately able to identify the ethnicity of some spice blends based on the flavour alone, while other cuisines, such as Cajun were misidentified quite often since consumers are not familiar with them. Also, Asian cuisines, especially Thai, are perceived to have the greatest health benefits to Thai consumers. There was a positive correlation between the perception of healthiness and familiarity with the ethnic cuisines.

Acknowledgments

The authors would like to thank the Sensory Analysis Center at Kansas State University for funding the research, as well as the faculty and graduate students at Kasetsart University for helping with the administration of the test.

References

1. Jones, L. (1997). Ethnic foods launch growing market. **Food Processing,** 8, 63.

2. Tian, R.G. (2001). Cultural awareness of the consumers at a Chinese restaurant: An anthropological descriptive analysis. **Journal of Food Products Marketing,** 7, 111-130.

3. Frison, E.A., Smith, I.F., Johns, T., Cherfas, J. and Eyzaguirre, P.B. (2006). Agricultural biodiversity, nutrition, and health: Making a difference to hunger and nutrition in the developing world. **Food and Nutrition Bulletin,** 27, 167-179.

4. Bril, B., Hombessa-Nkounkou, E., Bouville, J.-F. and Ocampo, C. (2001). From milk to adult diet: A comparative study on the socialization of food. **Food and Foodways,** 9, 155-186.

5. Verbeke, W. and Lopez, G.P. (2005). Ethnic food attitudes and behavior among Belgians and Hispanics living in Belgium. **British Food Journal,** 107, 823-840.