



## Preferences and Consumption Patterns of Foreign Residents for Korean Traditional Pork Dishes

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### Abstract

This study was conducted to survey the preference and consumption patterns of foreign residents who live in Seoul and Gyeonggi province about Korean pork dishes. The results of the survey showed that respondents took pork dishes below 2 times a week on average and they replied the best pork dishes were *Bulgogi* and *Samgyeopsal*. In the result of survey for the respondents only who have experienced Korean traditional pork dishes to evaluate about appearance, flavor, taste, texture and palatability, *Samgyeopsal* and *Bulgogi* showed higher score than other dishes as much as 4.02-4.21 and 3.90-4.26 each, while *Sundae* had lowest result in the every evaluation survey item as low as 2.79-3.04. The inquiry on the expected popularity for the foreign consumers to evaluate Korean traditional pork dishes with 5 scales resulted that *Bulgogi*, *Galbi gui*, *Samgyeopsal* showed higher popularity score than other dishes but *Sundae* was lowest in the list. The results of investigate of improvement for these dishes are as followed: too hot for *Jeyuk bokkeum*, poor taste, appearance, flavor, texture for *Jokbal* and *Sundae*, too sweet for *Bulgogi*, poor appearance, texture for *Bossam*, *Pyeonyuk* and *Samgyeopsal*.

**Key words:** Korean traditional pork dishes, preference, foreign residents in Korea

### Introduction

Korean government classified food industry with a future new market recently and announced the propulsion strategy which follows with the vision for the globalization of the Korean food which the world-wide could enjoy (Park *et al.*, 2009). The Korean food is recognized well as a healthy food for its scientific and natural characteristics which can harmonize every meat and vegetables. Also it has a good reputation for a nutrition balance as well as fine tastes (Park *et al.*, 2009).

The opinions for preference and globalization possibilities of the Korean food are different from the researchers, subjects and areas. But piece survey's result together, they evaluated that almost the Korea food's globalization is possible except for some foods. For example, *Bulgogi*, *Naengmyeon*, *Gimbap* are preferred to Chinese, *Bibimbap*, *Pajeon* (green onion pancake), *Naengmyeon*, *Bulgogi* to Japanese, *Bulgogi*, *Galbi gui*, *Japchae* to Westerners (Khoe *et al.*, 2007). Also according to survey of Lee *et al.*

(2010) which investigated preference of Korean foods, all respondents were preferred *Bulgogi* and *Galbi*.

There are many of the survey about preference and recognition of Korean food whereas not much studied specifically about meat dishes like *Bulgogi* or *Galbi* which have possibilities of development as world-wide food.

Thus, this study was conducted to investigate the dishes of using pork which preferred good taste and soft texture to Korean (Choi, 2009) and as 103,780,000 MT (metric ton), consumed more than other meat in the world (beef, veal are 55,620,000 MT and broiler, turkey are 86,361,000 MT. USDA 2012).

Also consumption ratio of pork also is higher than other meat like beef or chicken with competitive price and pork can be applied for various cuisines and processed foods (Choi, 2009; Kim *et al.*, 2010).

This study's purpose is to investigate the perception, preference and consumption pattern of foreign residents about Korean pork dishes, and to utilize the survey result as a basis for the development of processed pork products for exportation with using pork consumed the most in the world.

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## Methods

### Survey subject and period

The questionnaire consisted of questions designed by referring to previous references (Lee *et al.*, 2010; Yoon, 2005). A study was conducted by modifying and supplementing the preliminary survey. The survey was based on foreign residents in Seoul and Gyeonggi province from May 2010 to July 2010.

### Survey methods and contents

A total of 172 questionnaires were distributed, of which 128 questionnaires were returned (return rate 74.4%) and analyzed 113 questionnaires except questionnaires which were not qualified. After surveyors explained backgrounds of this study to respondents, the respondents started to complete the questionnaire in a self-reporting method. The questionnaire consisted of questions asking general information, the preference and propensity of consumers, expected popularity score of home country, the types and problems of products feasible for export. The preference for pork dishes and the feasibility for export were assessed using a 5-point scale. Factors to be improved in the pork dishes for export were surveyed by multiple answering to the question. The preference was assessed as 1, very dislike; 3, neither dislike nor like; and 5, very like. The popularity score was assessed as 1, would never be popular; 3, either will not be popular or be popular; and 5, will be popular (will gain huge popularity).

### Data analysis

Descriptive analysis, independent samples t-test, ANOVA, optimal scaling and correspondence analysis were conducted on data collected using SPSS 18.0 (for windows, SPSS Inc., Chicago, IL, USA). The results were denoted as the mean±standard deviation.

## Results and Discussion

### General characteristics on the subjects

The respondents, who participated in the survey, consisted of 55 male (48.7%) and 49 female (43.4%). 56 respondents (49.6%) belonged to age of 20-30 s and 29 respondents (25.7%) were in the age of 30-40 s. 32 respondents (28.3%) were in married status and 80 respondents (70.8%) were single. 66 respondents (58.4%) were students, 11 respondents (9.7%) were company employees. The respondents consist of 60 Asian (53.1%), 34

American (30.1%) and 12 European (10.6%). In the asking of residence period, 80 respondents (70.8%) were more than 6 mon and 30 respondents (26.5%) were under of 6 mon in Korea (Table 1).

### Consumption propensity regarding pork dishes

The result of the survey on the consumption propensity regarding pork dishes was presented in Table 2. In the survey, higher preference was shown in *Bulgogi* (30.1%) and *Samgyeopsal* (28.3%). For consumption frequency, 76 respondents (67.3%) responded that they consumed pork dishes below 2 times per week on average. For consuming place, the subjects responded Public restaurant (32.7%) > Home (25.7%) > Family restaurant (15.0%) in order. The average expense of less than 10,000 won per person accounted for the highest portion of the subjects, and the most preferred cooking method was identified as roasting (*Gui*).

**Table 1. General characteristics of respondents**

	Characteristics	Frequency	%
Gender	Male	55	48.7
	Female	49	43.4
	No response	9	8.0
Age	< 20	9	8.0
	20-30	56	49.6
	30-40	29	25.7
	≥ 40	10	8.9
	No response	9	8.0
Marriage	Single	80	70.8
	Married	32	28.3
	No response	1	0.9
Occupation	Student	66	58.4
	Company worker	11	9.7
	House wife	6	5.3
	Running business	2	1.8
	Teacher	7	6.2
	Specialist	7	6.2
	Others <sup>1)</sup>	12	10.6
	No response	2	1.8
Ethnicity	Asian	60	53.1
	European	12	10.6
	American	34	30.1
	Others <sup>2)</sup>	5	4.4
	No response	2	1.8
Residence period	< 6 mon	30	26.5
	6-12 mon	27	23.9
	12-24 mon	23	20.4
	≥ 24 mon	30	26.5
	No response	3	2.7

<sup>1)</sup> Army, government employees, sales

<sup>2)</sup> Australia, Iran, New Zealand

**Table 2. Consumption patterns of pork dishes**

	Frequency	%	
Favorite pork dishes	<i>Bulgogi</i>	34	30.1
	<i>Samgyeopsal</i>	32	28.3
	<i>Galbi gui</i>	8	7.1
	<i>Galbi jjim</i>	8	7.1
	<i>Bossam, Pyeonyuk</i>	2	1.8
	<i>Jeyuk bokkeum</i>	4	3.5
	Others <sup>1)</sup>	2	1.8
	No response	23	20.4
Intake frequency (wk)	2	76	67.3
	3-4	19	16.8
	≥ 5	13	11.5
	no response	5	4.4
Actual expense (won/1 person)	< 10000	44	38.9
	1-20000	40	35.4
	≥ 20000	12	10.6
	No response	17	15.0
Preferred cooking method	Roast	43	38.1
	Pan broiled	22	19.5
	Fry	14	12.4
	Steam	16	14.2
	Broth	8	7.1
No response	10	8.8	
Eating place	Family restaurant	17	15.0
	Special restaurant	9	8.0
	Public restaurant	37	32.7
	Home	29	25.7
	Cafeteria	5	4.4
	No response	16	14.2

Results are expressed as frequency (%).

<sup>1)</sup>Jokbal, Galbitang

**Intake experience and recognition of pork dishes**

The result of the survey on the recognition and intake experience regarding pork dishes was presented in Table 3. Pork dishes with the lowest intake experience were *Nirbiani* (10.6%) but dishes with most frequent experience were in order of *Bulgogi* (95.6%) and *Samgyeopsal* (91.2%). This result was similar to that of a study conducted by Kim *et al.* (2010) reporting that the intake experience of foreign residents were *Bulgogi* > *Galbi* > *Samgyeopsal*.

The recognition status for pork dishes also appeared similarly with above result, the response “Do not know” were 1 respondents in *Bulgogi* and 4 respondents in *Samgyeopsal*, whereas 66 respondents (58.4%) in *Nirbiani*.

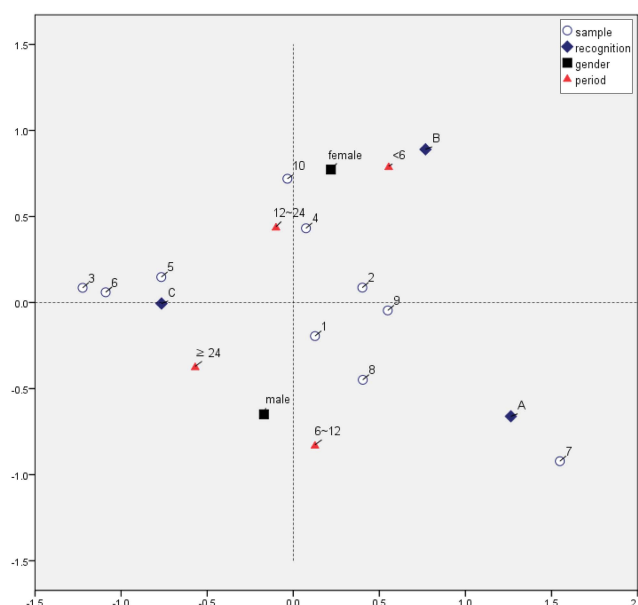
**Recognition by general characteristics**

The results of optimal scaling between recognition and general characteristics showed in Fig. 1. Optimal scaling

**Table 3. Recognition and intake experience of pork dishes**

	Don't know	Know		No response
		Not tried	Tried	
<i>Bossam, Pyeonyuk</i>	31(27.4)	17(15.0)	58(51.3)	7(6.2)
<i>Jokbal</i>	32(28.3)	26(23.0)	48(42.5)	7(6.2)
<i>Bulgogi</i>	1(0.9)	3(2.7)	108(95.6)	1(0.9)
<i>Galbi jjim</i>	22(19.5)	26(23.0)	59(52.2)	6(5.3)
<i>Galbi gui</i>	9(8.0)	10(8.8)	88(77.9)	6(5.3)
<i>Samgyeopsal</i>	4(3.5)	5(4.4)	103(91.2)	1(0.9)
<i>Nirbiani</i>	66(58.4)	25(22.1)	12(10.6)	10(8.8)
<i>Jeyuk bokkeum</i>	38(33.6)	16(14.2)	48(42.5)	11(9.7)
<i>Gukbap</i>	36(31.9)	25(22.1)	43(38.1)	9(8.0)
<i>Sundae</i>	16(14.2)	29(25.7)	60(53.1)	8(7.1)

Results are expressed as frequency (%).



**Fig. 1. Recognition by general characteristics.** Sample: 1, *Bossam, Pyeonyuk*; 2, *Jokbal*; 3, *Bulgogi*; 4, *Galbi jjim*; 5, *Galbi gui*; 6, *Samgyeopsal*; 7, *Nirbiani*; 8, *Jeyuk bokkeum*; 9, *Gukbap*; 10, *Sundae*. Recognition: A, don't know; B, know, not tried; C, know, tried. Period: Residence period.

shows correlation between factors on a 2-dimensional map. The correlation is high if between points of distance is close.

Most of participants don't know *Nirbiani*. But *Bulgogi*, *Galbi gui* and *Samgyeopsal* know and had been tried. Participants who residence period is below 6 month know about traditional pork dishes but haven't tried. Also answers of haven't tried of traditional pork dishes show high on female.

**Preference of pork dishes**

The survey which was for only respondents who have

**Table 4. Preference of pork dishes<sup>1,2)</sup>**

	Appearance	Flavor	Taste	Texture	Palatability
<i>Bossam, Pyeonyuk</i> (n=48)	3.58±1.07 <sup>b</sup>	3.67±0.93 <sup>b</sup>	3.98±1.04 <sup>bcd</sup>	3.50±0.97 <sup>bc</sup>	3.56±1.03 <sup>bc</sup>
<i>Jokbal</i> (n=38)	3.66±1.10 <sup>b</sup>	3.66±1.05 <sup>b</sup>	3.63±1.08 <sup>b</sup>	3.45±0.95 <sup>b</sup>	3.39±1.03 <sup>b</sup>
<i>Bulgogi</i> (n=87)	4.09±0.91 <sup>b</sup>	4.26±0.86 <sup>d</sup>	4.26±0.92 <sup>d</sup>	3.90±0.93 <sup>bc</sup>	3.99±0.95 <sup>bc</sup>
<i>Galbi jjim</i> (n=45)	3.96±0.80 <sup>b</sup>	3.91±0.76 <sup>bcd</sup>	4.04±0.88 <sup>bcd</sup>	3.67±0.83 <sup>bc</sup>	3.80±0.92 <sup>bc</sup>
<i>Galbi gui</i> (n=74)	4.14±0.82 <sup>b</sup>	4.19±0.75 <sup>cd</sup>	4.24±0.82 <sup>cd</sup>	3.92±0.82 <sup>bc</sup>	3.85±0.87 <sup>bc</sup>
<i>Samgyeopsal</i> (n=82)	4.15±0.82 <sup>b</sup>	4.17±0.84 <sup>bcd</sup>	4.21±0.86 <sup>cd</sup>	4.02±0.90 <sup>c</sup>	4.07±0.89 <sup>c</sup>
<i>Nirbiani</i> (n=7)	3.71±0.76 <sup>b</sup>	4.14±0.69 <sup>bcd</sup>	4.00±1.00 <sup>bcd</sup>	3.86±0.38 <sup>bc</sup>	3.71±0.76 <sup>bc</sup>
<i>Jeyuk bokkeum</i> (n=41)	3.63±0.92 <sup>b</sup>	3.90±1.00 <sup>bcd</sup>	3.83±0.83 <sup>bcd</sup>	3.83±0.74 <sup>bc</sup>	3.73±0.78 <sup>bc</sup>
<i>Gukbap</i> (n=34)	3.74±0.93 <sup>b</sup>	3.71±1.00 <sup>bc</sup>	3.71±1.09 <sup>bc</sup>	3.68±0.91 <sup>bc</sup>	3.53±0.93 <sup>bc</sup>
<i>Sundae</i> (n=52)	2.79±1.36 <sup>a</sup>	3.04±1.14 <sup>a</sup>	3.02±1.13 <sup>a</sup>	2.90±1.07 <sup>a</sup>	2.85±1.16 <sup>a</sup>
F-value	10.103***	3.284***	8.946***	7.333***	7.947***

<sup>1)</sup>Analysis for respondents who answer all items and have intake experience of pork dishes.

<sup>2)</sup>1, very dislike; 3, neither dislike nor like; 5, very like

<sup>a-d</sup>Means± SD with different lowercase superscripts in the same column are significantly different ( $p<0.05$ ).

**Table 5. Preference of pork dishes by gender<sup>1)</sup>**

		Appearance	Flavor	Taste	Texture	Palatability
<i>Bossam, Pyeonyuk</i>	Male (n=22)	4.00±0.93	4.09±0.61	4.41±0.59	3.77±0.69	3.91±0.81
	Female (n=21)	3.24±1.14	3.38±1.07	3.57±1.29	3.33±1.02	3.29±1.19
	T-value	2.416*	2.654*	2.721*	1.654	2.016
<i>Jokbal</i>	Male (n=21)	3.67±0.97	3.71±1.01	3.86±1.11	3.57±0.81	3.48±1.08
	Female (n=14)	3.43±1.28	3.57±1.22	3.36±1.08	3.29±1.20	3.29±1.07
	T-value	0.626	0.377	1.320	0.841	0.514
<i>Bulgogi</i>	Male (n=43)	4.12±1.03	4.12±0.98	4.14±1.10	3.79±0.99	4.00±0.95
	Female (n=38)	4.11±0.80	4.39±0.72	4.42±0.72	4.08±0.85	3.97±1.00
	T-value	0.053	-1.441	-1.339	-1.397	0.345
<i>Galbi jjim</i>	Male (n=25)	3.92±0.91	4.08±0.76	4.08±0.95	3.64±0.86	3.84±0.99
	Female (n=18)	4.00±0.59	3.72±0.75	4.00±0.84	3.78±0.81	3.72±0.89
	T-value	-0.379	1.530	0.285	-0.531	0.401
<i>Galbi gui</i>	Male (n=36)	4.17±0.85	4.17±0.81	4.36±0.87	3.94±0.86	3.94±0.89
	Female (n=32)	4.09±0.78	4.22±0.75	4.06±0.80	3.91±0.82	3.75±0.84
	T-value	0.369	-0.274	1.469	0.187	0.921
<i>Samgyeopsal</i>	Male (n=39)	4.31±0.73	4.38±0.75	4.38±0.88	4.21±0.89	4.31±0.80
	Female (n=37)	4.03±0.87	4.00±0.88	4.11±0.81	3.89±0.91	3.89±0.91
	T-value	1.530	2.055*	1.426	1.517	2.123*
<i>Nirbiani</i>	Male (n=6)	3.50±0.55	4.17±0.75	3.83±0.98	3.83±0.41	3.50±0.55
	Female (n=1)	5.00±0.00	4.00±0.00	5.00±0.00	4.00±0.00	5.00±0.00
	T-value	-2.535	0.205	-1.099	-0.378	-2.535
<i>Jeyuk bokkeum</i>	Male (n=22)	3.50±0.86	3.73±0.94	3.82±0.80	3.91±0.61	3.73±0.70
	Female (n=17)	3.65±0.93	4.06±1.09	3.76±0.90	3.76±0.90	3.71±0.92
	T-value	-0.511	-1.023	0.196	0.567	0.082
<i>Gukbap</i>	Male (n=22)	3.82±1.01	3.59±0.96	3.64±1.18	3.73±0.98	3.59±0.85
	Female (n=10)	3.60±0.84	3.70±1.06	3.70±0.95	3.50±0.71	3.50±1.18
	T-value	0.596	-0.289	-0.150	0.655	0.248
<i>Sundae</i>	Male (n=25)	2.76±1.36	3.20±1.08	3.24±1.20	3.12±1.09	3.08±1.22
	Female (n=23)	2.96±1.40	2.91±1.12	2.83±1.03	2.70±0.93	2.61±1.08
	T-value	-0.493	0.902	1.277	1.445	1.413

Results are expressed as Means±SD.

<sup>1)</sup>1, very dislike; 3, neither dislike nor like; 5, very like

\* $p<0.05$

eaten pork dishes evaluated about appearance, flavor, taste, texture and palatability of pork dishes (Table 4). The most preferred dishes are *Samgyeopsal* (4.02-4.21) and *Bulgogi* (3.90-4.26) whereas *Sundae* (2.79-3.04) had the lowest preference. Also showed statistically significant difference among samples ( $p < 0.001$ ). This result was similar to that of a study conducted by Kim *et al.* (2010) reporting that the answer; preference of like *Bulgogi* and *Samgyeopsal gui* was highly investigated 86.0%, 80.5% respectively.

In the preference survey of pork dishes by gender, *Samgyeopsal* (4.21-4.38) was shown to be high in for male but in *Bulgogi* (3.97-4.42, except for *Nirbiani*) for female. A significant difference was shown in appear-

ance, flavor, taste of *Bossam* and *Pyeonyuk* ( $p < 0.05$ ), flavor, palatability of *Samgyeopsal* ( $p < 0.05$ ) between male and female (Table 5).

*Bossam* is a dish which wrapped with *Kimchi* and *suyuk*, it is characterized light taste and tender texture (Kang, 2006). *Pyeonyuk* is decided by taste of sauce after removing smell of unique meat (Kim and Kim, 2009). These two dishes are characterized a light taste. Because female is more sensitive about taste than male, is considered that showed low preference on *Bossam* and *pyeonyuk*.

When the preference for pork dishes was surveyed according to native country, a significant difference was only found in the taste of *Jeyuk bokkeum* ( $p < 0.001$ , Table 6).

**Table 6. Preference of pork dishes by ethnicity<sup>1,2)</sup>**

		Appearance	Flavor	Taste	Texture	Palatability
<i>Bossam, Pyeonyuk</i>	AS <sup>3)</sup> (n=43)	3.46±0.86	3.62±0.85	4.00±1.10	3.50±0.81	3.58±1.06
	NAS <sup>3)</sup> (n=38)	3.67±1.28	3.71±1.06	3.90±1.00	3.48±1.17	3.52±1.03
	T-value	-0.630	-0.348	0.309	0.082	0.172
<i>Jokbal</i>	AS (n=43)	3.76±1.18	3.71±1.10	3.52±1.17	3.57±0.98	3.57±1.12
	NAS (n=38)	3.44±0.96	3.56±1.03	3.69±0.95	3.25±0.93	3.13±0.89
	T-value	0.895	0.427	-0.458	1.011	1.310
<i>Bulgogi</i>	AS (n=43)	4.12±0.91	4.30±0.80	4.26±0.88	3.93±0.91	3.93±0.94
	NAS (n=38)	4.05±0.92	4.21±0.91	4.26±0.98	3.84±0.95	4.02±0.96
	T-value	0.354	0.501	0.000	0.464	-0.454
<i>Galbi jjim</i>	AS (n=43)	3.86±0.73	3.71±0.72	3.95±0.97	3.52±0.81	3.52±0.93
	NAS (n=38)	4.00±0.85	4.04±0.77	4.13±0.81	3.78±0.85	4.00±0.85
	T-value	-0.595	-1.466	-0.660	-1.029	-1.774
<i>Galbi gui</i>	AS (n=43)	4.19±0.84	4.24±0.80	4.24±0.89	3.97±0.87	3.86±0.89
	NAS (n=38)	4.06±0.79	4.11±0.71	4.22±0.76	3.83±0.77	3.81±0.86
	T-value	0.697	0.749	0.108	0.726	0.291
<i>Samgyeopsal</i>	AS (n=43)	4.14±0.80	4.14±0.86	4.23±0.87	4.05±0.84	3.98±0.83
	NAS (n=38)	4.13±0.84	4.18±0.83	4.16±0.86	3.97±0.97	4.16±0.95
	T-value	0.043	-0.236	0.389	0.361	-0.918
<i>Nirbiani</i>	AS (n=43)	3.75±0.96	4.25±0.50	4.25±0.96	4.00±0.00	4.00±0.82
	NAS (n=38)	3.50±0.71	3.50±0.71	3.00±0.00	3.50±0.71	3.00±0.00
	T-value	0.320	1.5549	1.741	1.633	1.633
<i>Jeyuk bokkeum</i>	AS (n=43)	3.55±0.80	3.64±1.09	3.45±0.74	3.68±0.78	3.64±0.66
	NAS (n=38)	3.72±1.07	4.22±0.81	4.33±0.69	4.00±0.69	3.89±0.90
	T-value	-0.596	-1.889	-3.864***	-1.354	-1.024
<i>Gukbap</i>	AS (n=43)	3.65±1.04	3.80±1.06	3.65±1.18	3.50±1.00	3.45±1.10
	NAS (n=38)	3.85±0.80	3.62±0.96	3.69±0.95	3.92±0.76	3.69±0.63
	T-value	-0.557	0.508	-0.108	-1.299	-0.803
<i>Sundae</i>	AS (n=43)	2.83±1.36	3.21±1.08	3.07±0.96	2.97±0.98	2.97±1.15
	NAS (n=38)	2.68±1.39	2.82±1.22	2.95±1.36	2.82±1.22	2.68±1.21
	T-value	0.374	1.203	0.352	0.478	0.853

Results are expressed as Means±SD.

<sup>1)</sup>Analysis for respondents who answer all items and have intake experience of pork dishes

<sup>2)</sup>1, very dislike; 3, neither dislike nor like; 5, very like

<sup>3)</sup>AS, Asian; NAS, Non Asian (American, European, Others)

\*\*\* $p < 0.001$

**Table 7. Popularity score of pork dishes<sup>1)</sup>**

	<i>Bossam, Pyeonyuk</i>	<i>Jokbal</i>	<i>Bulgogi</i>	<i>Galbi jjim</i>	<i>Galbi gui</i>	<i>Samgyeopsal</i>	<i>Nirbiani</i>	<i>Jeyuk-bokkeum</i>	<i>Gukbap</i>	<i>Sundae</i>
Popularity <sup>2)</sup>	3.79±1.11	3.63±1.20	4.34±0.91	3.95±0.84	4.34±0.80	4.32±0.88	3.36±1.63	3.63±0.93	3.46±1.17	2.76±1.26
Gender										
Male <sup>2)</sup>	4.04±0.98	3.57±1.12	4.35±0.93	4.04±0.79	4.42±0.73	4.44±0.92	3.50±1.60	3.59±1.05	3.28±1.31	2.89±1.28
Female <sup>2)</sup>	3.67±1.13	3.61±1.38	4.43±0.86	3.80±0.91	4.29±0.83	4.28±0.81	4.00±1.41	3.61±0.78	3.67±0.78	2.57±1.20
T-value	1.222	-0.099	-0.391	0.998	0.708	0.828	-0.400	-0.068	-1.121	0.917
Ethnicity										
AS <sup>2,3)</sup>	3.90±1.04	3.65±1.16	4.31±0.92	3.96±0.76	4.37±0.89	4.35±0.83	3.67±1.51	3.75±0.94	3.65±1.03	3.06±1.27
NAS <sup>2,3)</sup>	3.68±1.22	3.56±1.31	4.36±0.92	4.02±0.94	4.30±0.70	4.24±0.96	2.75±2.06	3.50±0.92	3.13±1.36	2.32±1.17
T-value	1.001	0.235	-0.296	-0.245	0.376	0.541	0.818	0.857	1.341	2.185*

Results are expressed as Means±SD.

<sup>1)</sup>Analysis by gender of respondents who have intake experience.

<sup>2)</sup>1, would never be popular; 3, either will not be popular or be popular; 5, will be popular

<sup>3)</sup>AS, Asian; NAS, Non Asian (American, European, and Others)

\* $p < 0.05$

### Popularity of pork dishes

The expected popularity of pork dishes has surveyed with 5 scales showed that the highest in *Bulgogi*, *Galbi gui*, *Samgyeopsal* (4.34, 4.34, 4.32) and the lowest in *Sundae* (2.76).

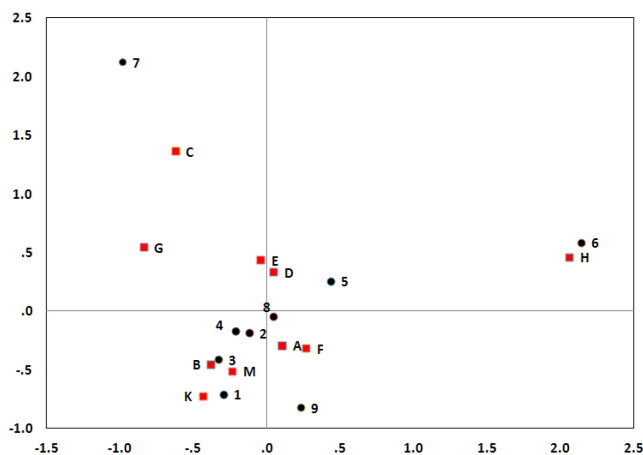
According to the result by gender and ethnicity, respondents give high score in *Samgyeopsal*, *Bulgogi* and *Galbi gui* in order. These dishes also had a high score in the result of the preference, so the higher preference in the survey can be evaluated the higher export chance. But *Sundae* was believed to have least chance to export. A significant difference was not found by gender and ethnicity (except for *Sundae* by ethnicity,  $p < 0.05$ ).

The results of this survey which showed high preference in *Bulgogi*, *Galbi gui*, *Samgyeopsal* were similar to survey of Kim (2011). The significant difference in *sundae*, it is considered the difference food culture between Asian group and Non-Asian group. This is thought that related with Kim (2011) survey. The results of investigation in adaptability of Korean food, East people have adapted well compared with Western people.

### Factors to be improved in the pork dishes for export

The results of improvement about each dishes by Correspondence analysis showed in Fig. 2. Correspondence analysis shows correlation between factors on a 2-dimensional map. The correlation is high if between points of distance is close.

*Jeyuk Bokkeum* is need to improvement of too hot taste, *Jokbal* and *Sundae* were investigated as poor taste, appearance, flavor, texture. Also *Bulgogi* is need to improve-



**Fig. 2. Improvement factors of pork dishes.** Sample: A, *Bossam, Pyeonyuk*; B, *Jokbal*; C, *Bulgogi*; D, *Galbi jjim*; E, *Galbi gui*; F, *Samgyeopsal*; G, *Nirbiani*; H, *Jeyuk bokkeum*; K, *Gukbap*; M, *Sundae*. Factor: 1, Poor taste; 2, Poor appearance; 3, Poor flavor; 4, Poor texture; 5, Too salty; 6, Too hot; 7, Too sweet; 8, Strong flavor; 9, Others (Price, Too fat).

ment of sweet taste, *Bossam, Pyeonyuk* and *Samgyeopsal* were investigated as poor appearance, texture.

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