

Public Perception in Thai Native Chicken (Pradu Hang-Dum Chiang Mai) via Food Contests

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Abstract

Thai native chicken variety Pradu Hang-Dum Chiang Mai (PD-CM) was developed and bred in the year 2002-2007 from a joint-cooperation between the Department of Livestock Development (DLD), Ministry of Agriculture and Cooperatives, and Thai Research Fund (TRF). The chicken meat had lower fat, cholesterol and triglyceride contents as compared to those of crossbred and broiler meats. In addition, the appearance of the whole chicken meat was appraised by some of the Northern Thai people, particularly the hill tribes, for religious ceremony purposes. A survey data from 207 consumers revealed that chicken's meat was the second popular meat for cooking. For northern people, the most favorite dish prepared from the meat was "Kang Kai", which was a thick-chili soup with green cabbage. This present study was aimed to promote the PD-CM chicken as a native chicken to Thai people and to encourage the utilization of the meat as a source of delicious and healthy meat through food competitions. Three food contests were organized in Chiang Mai within several months interval. Based on the audience assessment, the contests tended to increase the perception of the PD-CM chicken in all targeted sample groups. The perception of the ordinary people who attended the contest was increased from 25.5% in the first contest to 69.4% in the last contest. A survey in both farmers who produced chicken and administrative staffs of DLD indicated that the perception percentages were also improved.

Key words: food contest, native chicken, Pradu Hang-Dum Chiang Mai

Introduction

Thai domestic fowl is diverse in terms of both phenotype and variety. Twelve varieties of Thai native chicken were characterized by The Department of Livestock Development (DLD), Ministry of Agriculture and Cooperatives and distributed to

chicken-raising farmers (Amnuay *et al.*, 2010a). However, without controlling of cross breeding, some of these purebred chickens were reduced in number.

Pradu Hang-Dum Chiang Mai (PD-CM) is one of the Thai native chickens which faced the same situation of problem relevant with the number of purebred. Therefore, the variety was recalled under a well organized research work during the year 2002-2007 from a joint-cooperation between the DLD and Thai Research Fund (TRF). The work was aimed to conserve the variety and to utilize the meat as a high quality protein source (Amnuay *et al.*, 2011).

Naturally, most of the Thai native chickens are fighting cock. Therefore, they are raised mainly for sport not for food materials. However, the quality of the native chicken's meat in particular PD-CM was much better than those of crossbred and broiler. This was because the meat of PD-CM contained lower content of fat, cholesterol and triglyceride (Sanchai *et al.*, 2011). In addition, the appearance of the whole chicken meat was appraised by some of the Northern Thai people, particularly the hill tribes, for religious ceremony purposes. From these potential characteristics, the PD-CM meat was chosen as a frontier food material from native chicken to be introduced to consumer. Acceptability of the consumer could lead to the marketing opportunity and consequently sustainability of purebred variety.

The food contest was proved to be one of the most effective activities for promoting consumer perception. The enjoyable food prepared from PD-CM meat and impressive environment might increase public perception in the chicken as food material. Therefore, this present study was aimed to promote the PD-CM chicken as a native chicken to Thai people and to encourage the utilization of the meat as a source of delicious and healthy meat through food competitions.

Materials and Methods

Survey on utilization of chicken meat as food ingredient

A survey was carried out at 5 fresh markets in Chiang Mai province around one month before the first food contest started by interview. A questionnaire was developed and tested before the survey. Two groups of consumer (each of 100) were randomly selected. The first group was the people originally from Northern part of Thailand and the second group was the people from other parts of the country.

Public perception in PD-CM via food contests

The food contests were organized 3 times in Chiang Mai. The menus used in the contests were based on the previous survey. Sensory properties of boiled PD-CM meat (from 3 month's old chicken with a weight between 1.0 and 1.5 kg) were determined from panelists who attended the contest. A perception assessment about PD-CM was also carried out from the audience attended in each contest. In the first food contest 94 audiences were interviewed, whereas in the second and third contests the number of people interviewed was 107 and 124, respectively.

Results and Discussion

Utilization of chicken's meat as food ingredient

A survey data in Chiang Mai province from 207 consumers revealed that the consumer from both Northern and other parts of Thailand preferred to consume the meat from pork and chicken as food materials (Table 1). A traditional Northern style hot and spicy soup with vegetables namely *Gang Kare* was the most popular menu to be prepared from chicken's meat in the Northern of Thailand, while people from the other parts of the country preferred to use chicken's meat in a hot and spicy (thick and clear) soup called *Tom Yum* (Table 2).

The meat from native chicken was accepted more than broiler's meat by Thai consumer (Apichai, 1993; Amnuay, 2010b). This trend was similar to that of consumer in China (Tang *et al.*, 2009). Results from this study indicated that flavor, nutritional values and firmness of the meat were important factors as positive properties of the native chicken's meat while supply of the meat, price and stickiness produced the negative properties (Figure 1). Scientific evidences for this matter have been previously reported (Sanchai *et al.*, 2003; 2011).

Public perception in PD-CM via food contests

The food contests were organized 3 times in the city of Chiang Mai. The first contest was carried out on April 7th, 2010 at Northern cultural market, Faculty of Agriculture, Chiang Mai University. The second competition was organized on

Table 1 Popular meat for food preparation in Chiang Mai

Meat types	Number Chosen				Scored	Ranking
	1 st rank	2 nd rank	3 rd rank	4 th rank		
Northern						
Chicken	18	52	41	8	318	2
Pork	70	32	14	3	407	1
Beef and buffalo	4	11	18	86	171	4
Fish	27	24	46	22	294	3
Others						
Chicken	19	36	21	5	231	2
Pork	42	23	11	5	264	1
Beef and buffalo	5	2	13	61	113	4
Fish	15	20	36	10	202	3

Notice: Scored = (the no of the 1st rank x 4) + (the no of the 2nd rank x 3) + (the no of the 3rd rank x 2) + (the no of the 4th rank x 1).

Table 2. Popular menu prepared from chicken meat in Chiang Mai

Menu	Number Chosen				Scored	Ranking
	1 st rank	2 nd rank	3 rd rank	4 th rank		
Northern						
Yum	28	27	31	26	281	2
Gang Kare	33	34	24	21	303	1
Gang Om	18	32	40	22	270	3
Steamed chicken	33	19	17	43	266	4
Others						
Tom Yum	27	22	26	5	231	1
Gang	14	30	14	22	196	3
Grilled chicken	9	17	17	37	158	4
Fried chicken	30	11	23	16	215	2

Notice: Scored = (the no of the 1st rank x 4) + (the no of the 2nd rank x 3) + (the no of the 3rd rank x 2) + (the no of the 4th rank x 1).

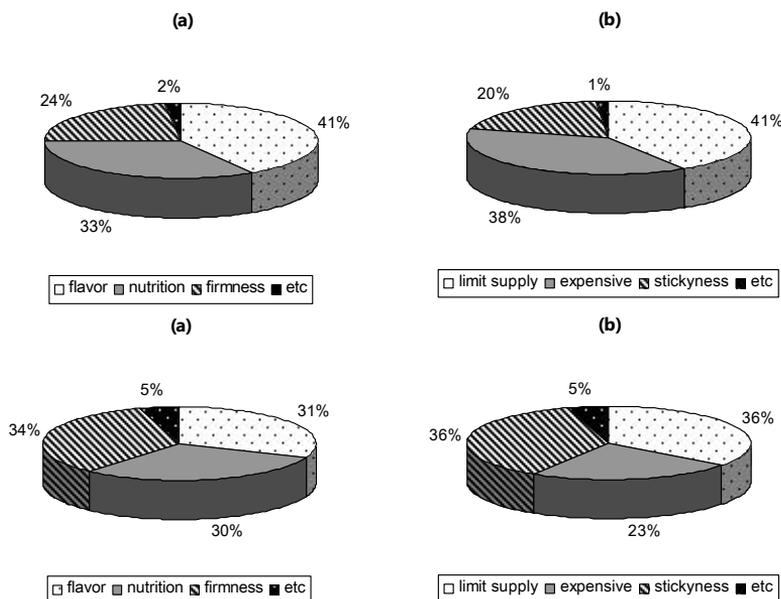


Figure 1. Opinions about advantage (a) and disadvantage (b) of native chicken's meat as food ingredient of people from Northern (top) and other parts (bottom) of Thailand

December 4th, 2010 at Agricultural Fair, Royal Flora Botanic Garden and the last one was accomplished on January 22nd, 2011 at Big C Supermarket. The last competition was done with a cooperation with Mae Heia Municipality.

Sensory properties of the boiled PD-CM meat that were evaluated by the panelists who attended the food contests are shown in Table 3. The overall acceptability of the meat was very good as a result from its texture and taste. These properties of the chicken were well in an agreement with previous finding observed by Amnouy *et al.* (2010). However, all volatiles might evaporate during a cooking process resulted in low score for odor attribute (Sanchai *et al.*, 2011).

Table 3. Sensory properties of boiled PU-CM meat

Sensory attribute	Scored
First food contest (95 panelists)	
Texture	4.03 ± 0.37
Odor	3.67 ± 0.64
Taste	4.02 ± 0.40
Overall acceptability	4.16 ± 0.41
Second food contest (107 panelists)	
Texture	4.04 ± 0.45
Odor	3.79 ± 0.71
Taste	4.09 ± 0.69
Overall acceptability	4.18 ± 0.72
Third food contest (122 panelists)	
Texture	4.02 ± 0.67
Odor	3.97 ± 0.76
Taste	4.13 ± 0.74
Overall acceptability	4.17 ± 0.76

Notice: values are expressed as mean ± standard deviation
 Scored 1=poor, 2=fair, 3= good, 4= very good and 5= excellent

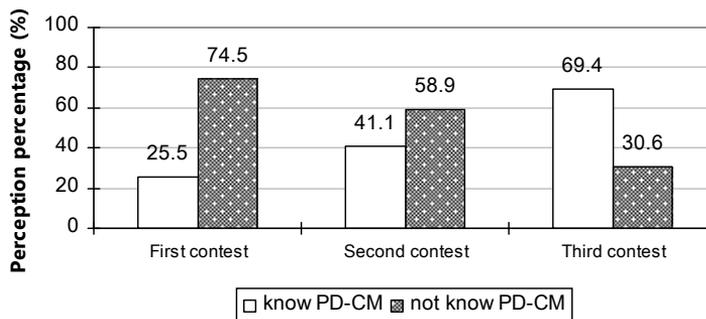


Figure 2. Evolution of perception in PD-CM chicken during the food contests

The perception of the public about PD-CM was increased after the food contests as showed in Figure 2. The obtained data indicated that a joyful activity that was incorporated with sensory trial of food products promoting good impression and enhanced the perception of the products (Pitoon, 1994; Siritorn, 2002).

Conclusions

Chicken's meat was one of the popular meats for Thai food. Flavor, nutritional value and texture of Thai native chicken's meat contributed to its quality. However, the supply in the market and price produced a negative feed back for its market potential. The meat quality of PD-CM was acceptable especially in terms of sensory. The food contest with entertainment activities dramatically improved the public perception in PD-CM chicken.

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