

**THE IMPORTANCE OF TYPES OF BIRDS AND OF
THEIR PRODUCTION AND MARKETING SYSTEMS FOR
POULTRY CONSUMERS IN VIET NAM**

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&

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ABBREVIATIONS

AI	Avian Influenza
DN	Đà Nẵng City
FAO	Food and Agriculture Organization
HCMC	HoChiMinh City
HH	Household
HPAI	High Pathogenic Avian Influenza
MT	Mỹ Tho City
VND	Vietnamese Dong, 1 US Dollar (USD) $\approx$ 17 000 Vietnamese Dong

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PREFACE

The preparation of this report was part of the activities for the FAO project "Future prospects for the contribution of village poultry production to food security in developing Asian economies" (GCP/RAS/228/GER) that was funded by the "Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ)". The outbreaks of Highly Pathogenic Avian Influenza (HPAI) in Southeast Asia and other regions have focused attention on the production and marketing systems of poultry. The exact type of poultry used in the small production systems including priorities and constraints and the marketing of its products is presently not well understood in many countries. This knowledge would be required to design and implement appropriate control strategies for the small poultry producers. Preferences of many consumers for purchasing poultry products from live bird markets pose a particular challenge for organizing safe marketing chains. Marketing systems for fresh slaughtered or frozen birds are less popular. As consumer preference affect the production and marketing systems their knowledge and understanding is required for introducing changes. This will help to achieve cooperation and proper involvement of small farmers in disease prevention and control programmes. It will also assist Governments to make appropriate plans for designing and implementing their disease control strategies. The present report investigates consumer preferences for specific poultry products, purchase and consumption patterns and their reaction to Avian Influenza in two cities of Viet Nam. We hope it will provide accurate and useful information to its readers and any feedback is welcome by the authors and the Animal Production Service (AGAP)¹ of the Food and Agriculture Organization of the United Nations (FAO).

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Keywords

Poultry products, Consumer preferences, Highly Pathogenic Avian Influenza, Poultry breeds, Marketing, Poultry and Culture

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EXECUTIVE SUMMARY

The poultry production systems and consumption patterns of poultry products in the Tiền Giang and Quảng Nam - Đà Nẵng provinces of Viet Nam were investigated through interviews with selected producers and consumers. This report describes the poultry consumption patterns of 250 consumers that were interviewed in Đà Nẵng City in Đà Nẵng province and Mỹ Tho City in Tiền Giang province by using structured questionnaires. Additional in-depth interviews and observation methods were used in combination with the surveys.

The aim of the study was to investigate the change of poultry consumption patterns before and after the major outbreaks of Avian Influenza. The types of birds purchased and their forms of products and purchase location are examined. The results can help to understand why native chicken raised in small farms and products from small farms are still popular despite government efforts to restructure the poultry industry in favour of large scale and confined production systems.

1. INTRODUCTION AND BACKGROUND

HPAI was identified as an important factor affecting poultry consumption patterns in Viet Nam. Two studies on the change of purchase patterns of poultry consumers in Hanoi and HoChiMinh City (HCMC) before and after AI (Figuie, 2007; Tam and Reardon 2007) have shown for those urban areas the following common tendencies:

- A lower consumption of poultry meat after AI.
- A slight shift from markets to supermarkets.
- A shift away from live or plucked & fresh backyard poultry, particularly in HCMC.
- Safety as the main reason for all the above changes.
- Backyard chicken meat was preferred to industrial chicken and was still dominant in household poultry meat consumption. Consumers were willing to pay a premium for quality backyard chicken.

The results are not surprising for Hanoi and HCMC that are big cities that had a great effort of Government interventions and private investment to restructure the poultry market towards modern systems with the emphasis on safety control from farm to table. However, there have not been studies yet in other smaller cities in Viet Nam to examine if consumers have been following the same patterns as in Hanoi and HCMC.

On the one hand, the recent increase of imported processed industrial chickens with cheap price has promoted the chicken sale from supermarkets in Viet Nam. On the other hand the urban poultry traders and caterers (i.e. poultry restaurants, poultry shops) have gradually diversified the forms of chicken products and clearly labelled chicken products. The labelling is claiming products to be of native breeds and traditional production methods such as "100 percent scavenging, native chicken" which are sold for a premium.

This report is part of a study on poultry production and marketing systems. Its aim is to assess the change in poultry consumption preferences in small cities in Viet Nam before and after AI and in particular the present importance of type of chicken for the consumers.

2. RESEARCH METHODOLOGY

The study was carried out by using methods of participatory observation, in-depth interviews and a survey with a structured questionnaire that was adapted from an earlier version used in the HCMC poultry consumers' survey of 2006. The interviews were carried out by Nong Lam University students whose families lived in the studied provinces.

For the survey, households were randomly selected in two cities: 150 persons in Đà Nẵng city (DN) in the middle part of Viet Nam, and 100 persons in Mỹ Tho city (MT) in the Mekong River Delta of Viet Nam (Table 1). At each site, the sub-samples were selected in three areas: (i) within 2 km of supermarkets, (ii) in the middle belt 2-8 km from the centre and (iii) peri-urban, 8-15 km from the centre. The location of the survey locations is shown by Figures 1 and 2.

Table 1: Number of households surveyed and their location

Đà Nẵng City		Mỹ Tho City	
Ward	Households	Ward	Households
Hai Chau 2	20	Phuong 1	25
Hoa Chau	20	Phuong 10	25
Hoa Phuoc	20	Tan Long	25
Hoa Tho Dong	15	Tan My Chanh	25
Hoa Thuan Dong	20		
Hoa Tien	20		
Khue Trung	15		
Phuoc Ninh	20		
Total	150		100

3. CHARACTERISTICS OF THE SAMPLE

The selected interviewees were the persons who are in charge of food purchases for their family. As a result, most of them were female with the same proportion of 95 percent for both cities (Table 2). Most of the interviewees (83 percent and 85 percent at Đà Nẵng and Mỹ Tho, respectively) were between 30 and 60 years old (Figure 3). The illiteracy rate was only 1 percent at both sites, and most people had lower high school education, however interviewees in Đà Nẵng city possessed a slightly higher education than those in Mỹ Tho city (Figure 4).

The average family size at both cities was five persons per household. The occupations of interviewees varied but 38 percent were small traders or family run shop owners and 26 percent were housewives.

The income levels of most respondents at both sides varied from 3 to less than 5 million VNĐ per month (or equivalent to 600 000 -1 000 000 VNĐ per month per capita).

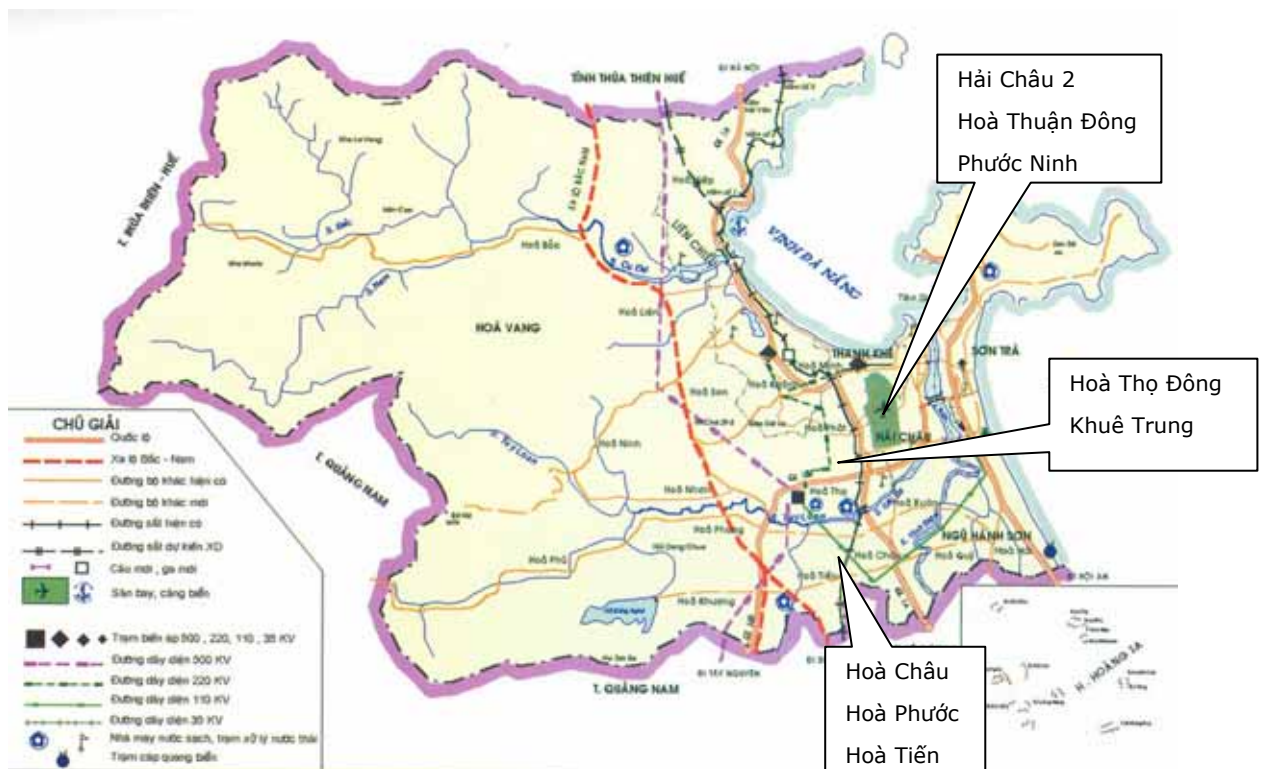
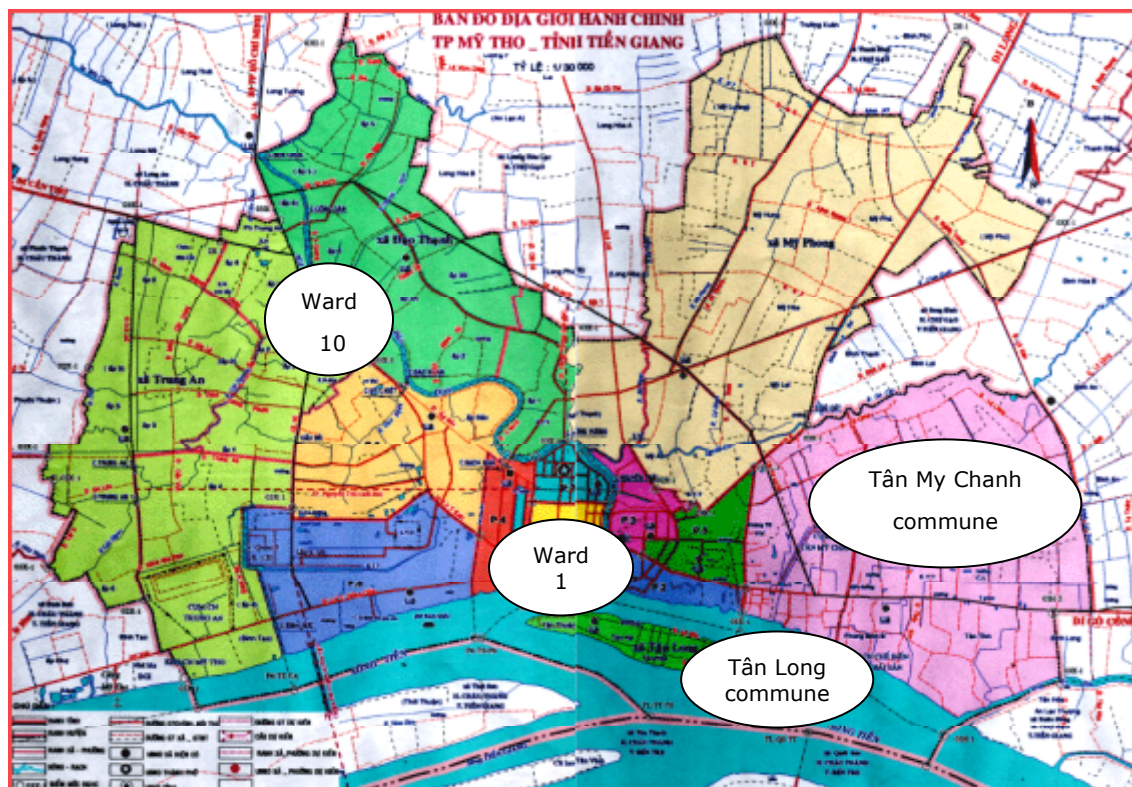
Figure 1 : Locations of the survey in Đà Nẵng**Figure 2 : Locations of the survey in Mỹ Tho**

Table 2: Number of interviewees by sex

Sex	Đà Nẵng		Mỹ Tho		Total	
	Number	Proportion	Number	Proportion	Number	Proportion
Male	7	5%	5	5%	12	5%
Female	143	95%	95	95%	238	95%
Total	150		100		250	

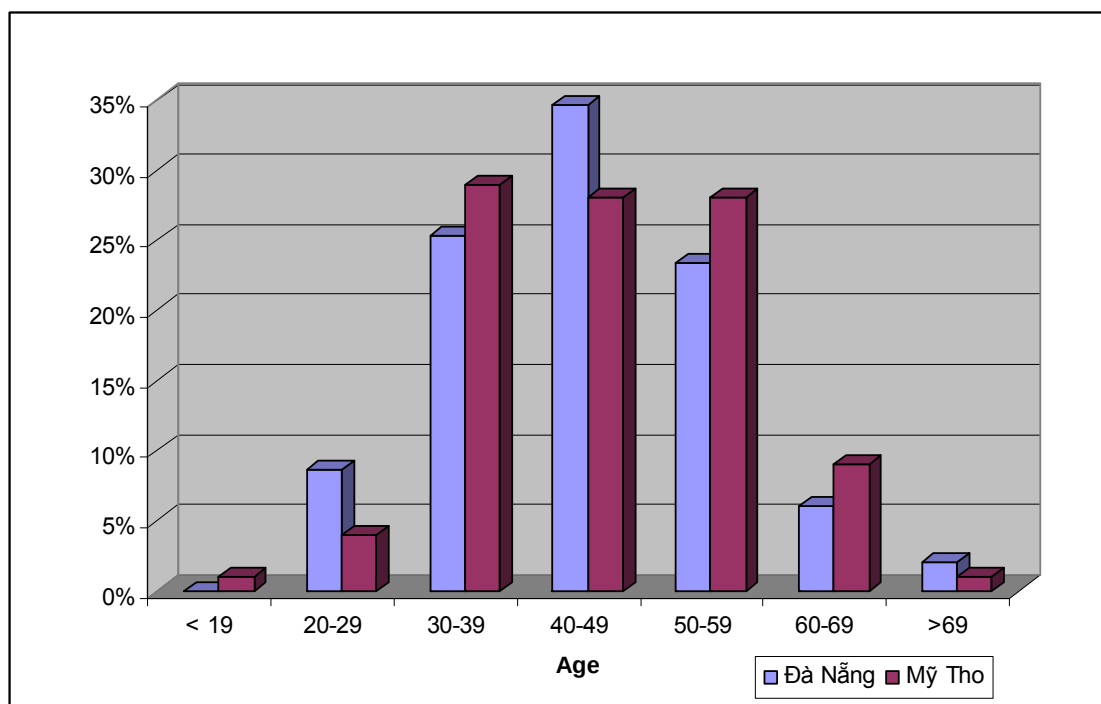
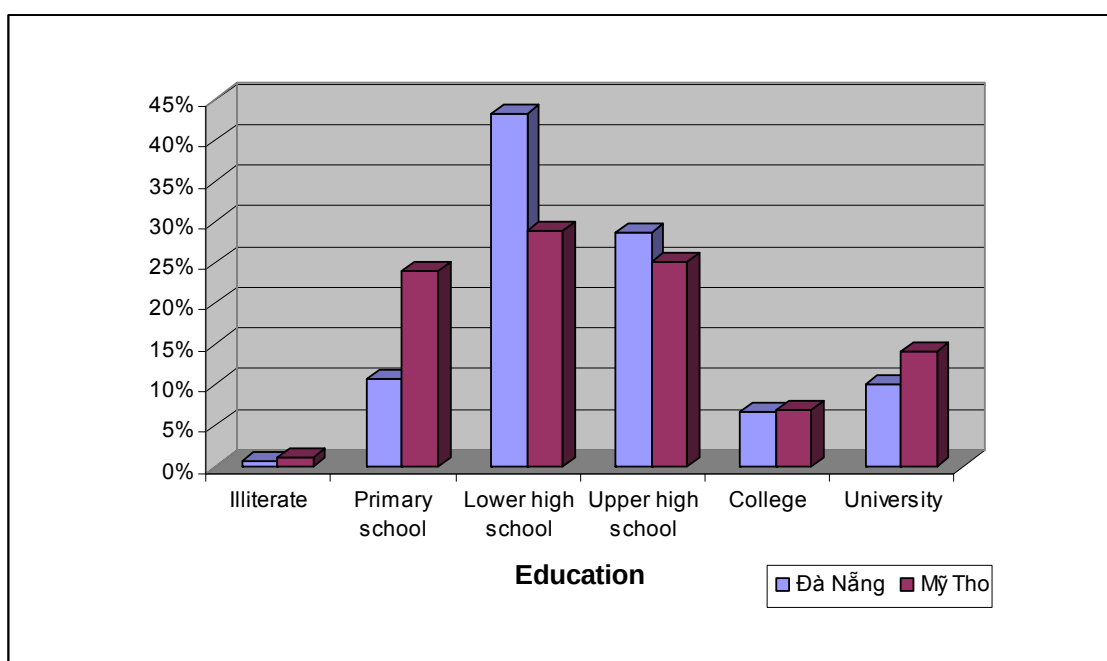
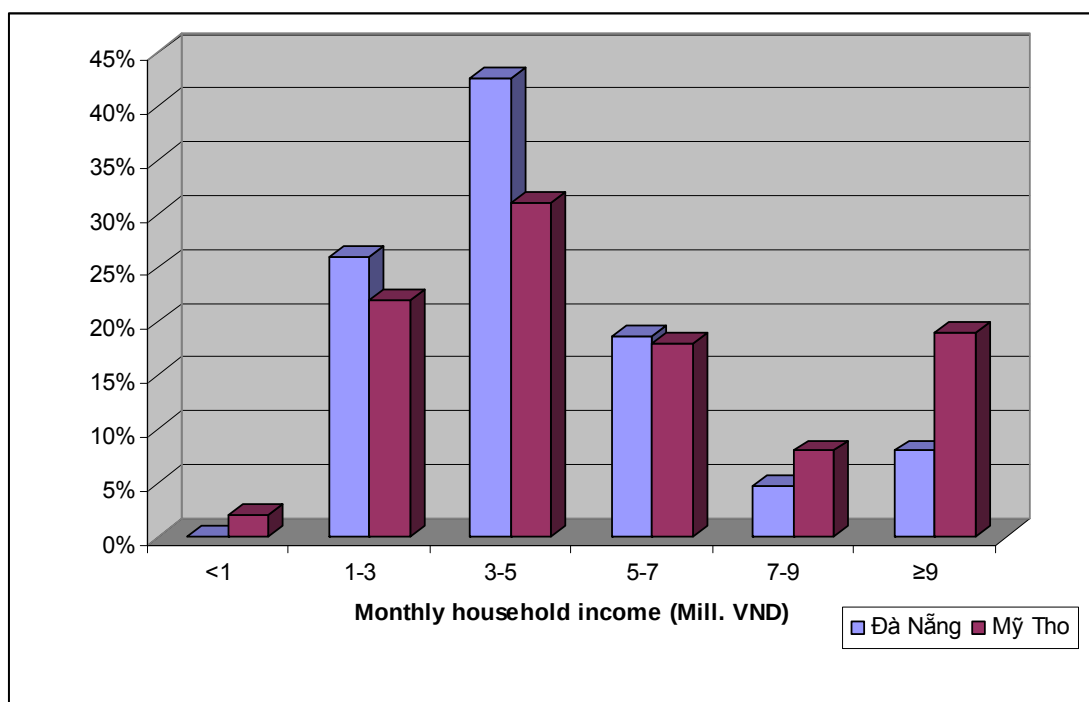
Figure 3: Distribution of age groups of the respondents**Figure 4: Distribution of educational level of the respondents**

Figure 5: Distribution of monthly household incomes of the respondents

4. RESEARCH FINDINGS

PLACE OF SELLING, TYPES OF CHICKEN, FORMS OF PRODUCTS AND PRICES

In the past, product forms such as live chicken, fresh whole chicken and fresh cuts were mainly sold at markets. A few food stores served frozen chickens in freezers, which were usually industrial chicken products. Nowadays one can find several product formats from a whole chicken to pieces; from fresh, cooled to frozen and from open displayed to well packed chickens in freezers. Native and crossbred chickens are available alive, fresh or in cooled forms as a whole or in parts while industrial chickens are available in cool or frozen parts with packing.

Formal and informal markets (i.e. unofficial, open markets usually with no stalls) always have a section for poultry meat. Plucked/fresh whole chickens and cooled/frozen chicken parts are displayed open together on a stall, which makes it convenient for consumers to choose. Live and native chickens were found at the outskirts of a market and there were also manual slaughtering services available right at the markets. Less often, consumers can buy live chickens from hawkers who deliver fresh food door-to-door. Supermarkets and poultry shops also offer a wide range of packed chicken products except live chicken. In particular, supermarkets in Đà Nẵng city distinguished native chicken from “garden scavenging chicken”. The price of native chickens was almost twice as high as that of “garden scavenging chickens” (Table 3). The label “native chicken” is obviously not identical to “garden scavenging chicken” as the former refers to genetic features while the latter refers to a production method. However, to most consumers that we have interviewed in both TG and DN, these two terms were interchangeable.

Table 3: Prices of different chicken products

Type of products	Price (VNĐ/kg)	Note
Cooled, whole "garden scavenging chicken"	53 500	About 1kg/bird
Cooled, whole "native chicken"	94 800	About 1kg/bird
Industrial chicken parts:		
Cooled wings	68 000	
Frozen wings	55 500	
Cooled thigh quarter	38 500	
Frozen thigh quarter	37 500	

Source: quoted at Big C supermarket, Đà Nẵng, July 24, 2008.

CHANGES IN THE GENERAL CONSUMPTION PATTERNS OF CHICKEN BEFORE AND AFTER AI

Quantity consumed

While very few respondents reported an increase in consumption, 36-56 percent of all respondents at MT and DN respectively revealed that their family's overall consumption of poultry meat was lower now than before AI. The main reasons were their fear of AI and getting used to eating no poultry meat. And particular in MT the expensive prices were another reason.

These figures are lower than those found by the earlier 2006 surveys in HCMC and Hanoi (76 percent and 86 percent of the households reported reducing poultry consumption after AI in HCMC and Hanoi respectively) (Figuie, 2007; Tam and Reardon 2007).

Table 4: Consumption of poultry meat before and after the HPAI crisis

Consumption of households	Đà Nẵng		Mỹ Tho	
	HH	Proportion	HH	Proportion
No change	59	39%	62	62%
Increase	7	5%	2	2 %
Decrease	84	56%	36	36%

Purchase location of chicken meat

Although with lower proportion after AI, the market was still the main location for poultry purchases while supermarkets ranked second. Most DN respondents bought chicken at more than one place. With 36 percent and 18 percent, respectively the portion of HHs buying chickens at supermarkets is higher in DN than in TG (Table 5).

There are four supermarkets in DN (Big C, Metro, Đà Nẵng and Nhat Linh) and three in MT (Co-op mart, Tiền Giang and Quang Dai). The shift to buying in supermarkets and less at markets was higher in DN than in MT (Table 6). The main reason for this shift was at both sites the concern about safety. Convenience of

buying in the supermarkets (opening time until late evening, cool condition...) was the second reason most important reason.

Table 5: Purchase location of chicken meat

Place of purchase*	Đà Nẵng		Mỹ Tho	
	Responses	Proportion	Responses	Proportion
Formal markets	136	42%	72	51%
Super markets	115	36%	25	18%
Grocery	29	9%	0	-
Store/Agency	14	4%	3	2%
Poultry shops	13	4%	8	6%
Informal markets	10	3%	16	11%
Street vendors	5	2%	3	2%
Other places	1	<1%	14	10%
Total	323		141	

* Multiple answers

Table 6: Change in purchase location of chicken meat

Place of purchase	Đà Nẵng			Mỹ Tho		
	Proportion Before AI	Proportion After AI	Change	Proportion Before AI	Proportion After AI	Change
Market stalls	68.6%	44.0%	-24.6%	52.2%	48.7%	-3.5%
Supermarkets	4.8%	36.6%	31.8%	7.6%	16.0%	8.4%
Own production	9.0%	6.9%	-2.1%	9.6%	9.0%	-0.6%
Poultry Stores	4.8%	5.1%	0.3%	3.8%	3.2%	-0.6%
Directly purchase from farmers	7.4%	4.6%	-2.8%	9.6%	9.0%	-0.6%
Gift	2.1%	1.4%	-0.7%	7.6%	5.8%	-1.9%
Other	1.1%	0.9%	-0.1%	5.7%	5.1%	-0.6%
Street vendors	2.1%	0.5%	-1.7%	3.8%	3.2%	-0.6%
Responses	188	216		157	156	

Purchase forms of chicken

Plucked carcass was the most dominant form of chicken purchases at both places, followed by live chickens. The change to plucked and fresh forms was positive in DN but negative in MT. The shifts away from live chicken to frozen/cooled, packed and stamped forms were significant at both sites, with a higher rate in DN than in MT (Table 7). Selling in frozen/cooled, packed and stamped forms still had modest shares (used by 27 percent and 10 percent of total HHs in DN and MT, respectively). This change is faster than in the HCMC study from 2006. The main reasons for a rapid move to cooled/frozen products were the concern about safety and the convenience of being ready-to-cook (Table 8). This shows the time

constraints of most women with job opportunities that are living in a rapidly increasing city.

Price was surprisingly not an important factor affecting the change of chicken purchase patterns, particularly in DN (Table 8). About 64 percent of all HH reported that chicken prices were reasonable and affordable, 75 percent reported that chicken prices were competitive with other meat substitutes (mainly fish and pork).

Figure 6: Change of poultry purchases after Avian Influenza in Đà Nẵng

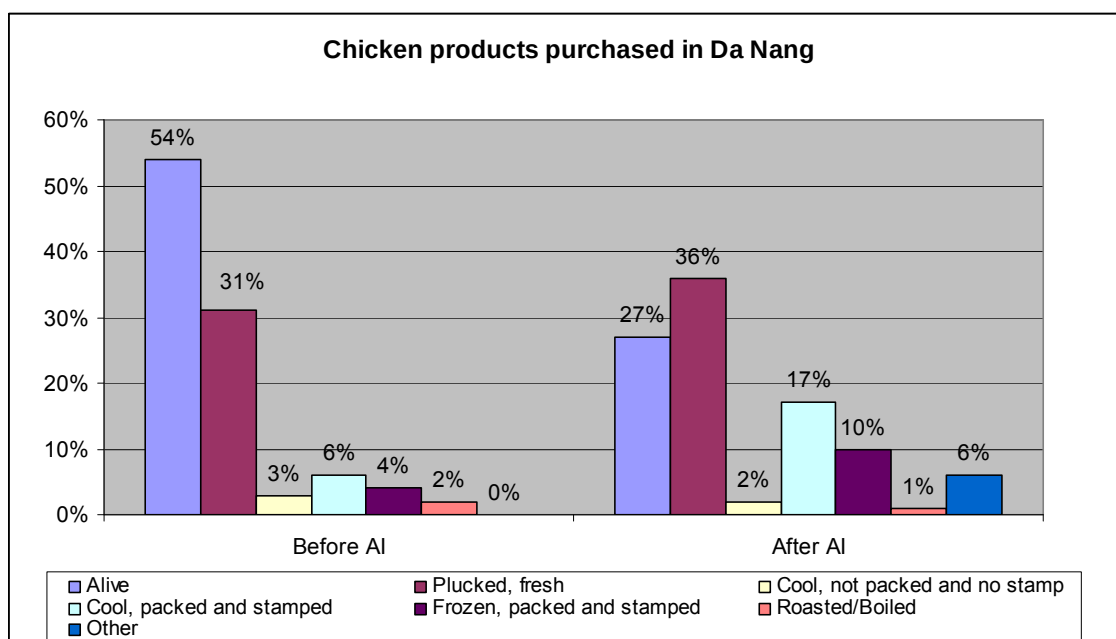


Figure 7: Change of poultry purchases after Avian Influenza in Mỹ Tho

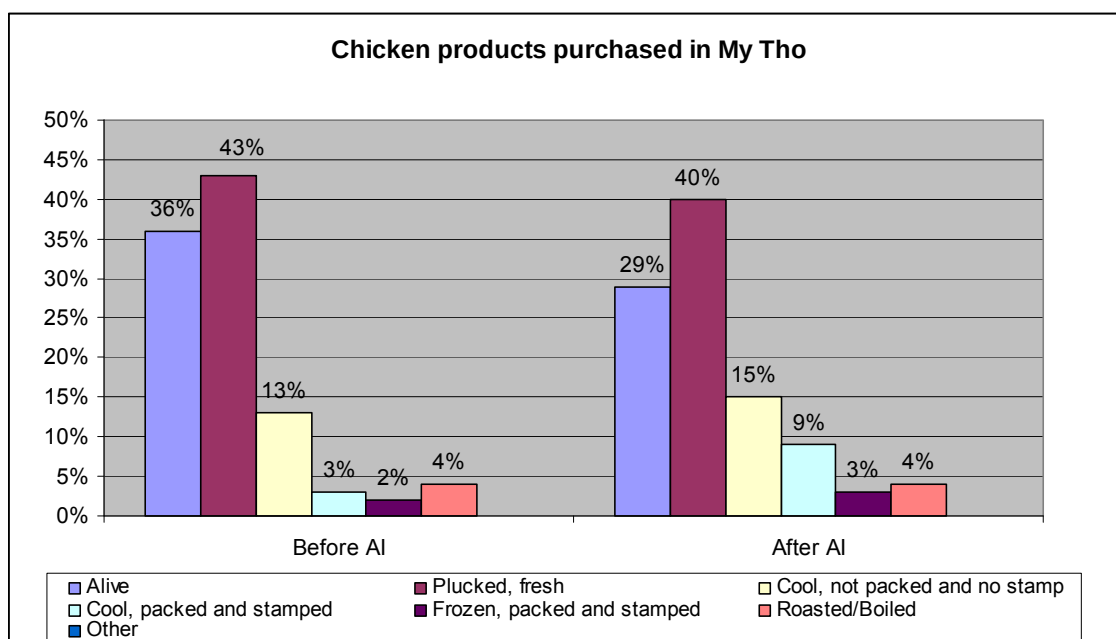


Table 7: Change of chicken meat purchases after the HPAI crisis

Type of product	Đà Nẵng			Mỹ Tho		
	Proportion Before AI	Proportion After AI	Change	Proportion Before AI	Proportion After AI	Change
Live chicken	54.1%	26.7%	-27.4%	36.2%	28.9%	-7.3%
Plucked, fresh	31.4%	36.2%	4.8%	42.5%	39.8%	-2.7%
Cool, unpacked no stamp	2.9%	2.4%	-0.5%	12.6%	14.8%	2.2%
Cool, packed and stamped	5.8%	17.1%	11.3%	3.1%	9.4%	6.2%
Frozen, packed and stamped	4.1%	10.5%	6.4%	1.6%	3.1%	1.6%
Roasted/Boiled	1.7%	1.0%	-0.8%	3.9%	3.9%	0.0%
Other forms	-	6.2%	6.2%	-	-	-
Total	172	210		127	128	

Table 8: Reasons for changing the form of purchased poultry meat

Reason for change	Đà Nẵng		Mỹ Tho	
	Responses	Proportion	Responses	Proportion
Safety	59	69%	6	30%
Cooking convenience	20	23%	5	25%
Cheaper price	5	6%	4	20%
Freshness	2	2%	1	5%
Other (change of living place)	0	-	4	20%
Total	86		20	

Safety awareness and buying behaviours

Food safety is the biggest concern of poultry consumers. A sign of inspection is one of the many ways that consumers use to judge the safety of chicken meat (Table 10). However, the proportion of HH relying on this method was only 34-37 percent. The reasons for lack of confidence in inspection were (i) shortage of human resources for efficient inspection by the government and (ii) the believe that dishonest traders could make a fake stamp. Consequently only 40 percent to 54 percent at MT and DN respectively believed in inspection signs.

The second most common way to judge safety was visual self inspection (26-30 percent of all HH). For live chicken, consumers selected a healthy looking chicken (i.e. active, no nose mucus or spittle, clean bottom). For carcasses, they looked for a light coloured meat; dark colour or spotted meat was commonly considered as a sign of sickness. When seeing no flies around carcasses some consumers assumed that the meat had been treated with borax (a chemical commonly used by traders to keep meet fresh looking).

Buying from trusted sellers was also a common way (19-26 percent of all HH) to get safe (and good) chicken meat.

More consumers in DN were aware of brand names than in MT (29 percent and 7 percent of HH respectively). However, brand name was not a common way for the consumers to seek for safety, only 2-8 percent of the HH were choosing this way as safety measure (Table 10).

Table 9: Selected brands by location of sale and product

Đà Nẵng	Brands	Products
Sold at poultry shops	Hòa Linh	Chicken/duck meat, chicken/duck eggs
	Hòa Phú	Chicken meat, chicken eggs
	Hòa Phước	Chicken meat, chicken eggs
	Vinafood	Chicken meat, chicken/duck eggs
	Trại Gà Văn Chương	Chicken meat, chicken/duck eggs
	Xuân Chinh	Chicken/ Duck meat
	Vissan	Duck meat, duck eggs
Supermarkets	Hòa Linh	Chicken/duck meat, chicken/duck eggs
	Hòa Phước	Chicken meat, chicken eggs
	Xuân Chinh	Chicken meat, chicken eggs
Market facilities	Duy Lưu	Chicken meat
	Hòa Phước	Chicken meat
	Hòa Linh	Chicken/duck meat, chicken/duck eggs
	Hòa Phú	Chicken meat, chicken eggs
	Nam Sơn	Chicken meat, chicken eggs
	Trung Quảng Ngãi	Chicken/ Duck meat
Mỹ Tho	Brands	Products
Sold at poultry shops	Phú Phong	Chicken meat, chicken eggs
Supermarkets	CP	Chicken/duck meat, chicken/duck eggs
	VC	Chicken meat, chicken eggs

Table 10: Methods of consumers to identify safe chicken meat

Method	Đà Nẵng		Mỹ Tho	
	Responses	Proportion	Responses	Proportion
Signs of official inspection	90	37%	47	34%
Visual inspection	73	30%	37	26%
Trusting the seller	45	19%	36	26%
Brand name of processor	20	8%	3	2%
Consume own products	10	4%	9	6%
Others	4	2%	8	6%
Total	242		140	

CONSUMERS' PREFERENCES FOR TYPES OF BIRDS

Native chickens are still dominating chicken consumption. As mentioned before, most consumers both at MT and at DN do not differentiate between "native chicken" and "garden scavenging chicken" – or semi-confined chicken and they think that the latter are also from native breeds. In fact, garden chicken may be a native, crossbred or exotic one and the price of garden chickens was about half of a pure native chicken. There were 31-44 percent of HH buying only native/garden scavenging chicken. These figures were less for industrial chicken, ranging from 16-31 percent (Table 11). At DN 53 percent HH purchased both types of birds while at MT only 26 percent did so. In total, there were 84 percent HH at DN buying native/garden chicken while there were 70 percent HH at MT buying these. This seems in contrast with purchasing patterns between DN and MT as more DN consumers shifted to supermarkets, increased buying industrial chicken and looked for safeties based upon formal measures (inspection, brand name) than trusting the traders. However, a closer look showed that most DN consumers, in fact, diversified their purchased product forms and purchase location rather than shifting from one to another. The reason why they did so was their stronger religious purpose to use native chicken as an offer for worship as discussed below. Table 18 shows that at DN city, business people including traders, shop owner, at home sellers accounted for 52 percent of the surveyed HHs. And most of them bought both native and industrial chickens at traditional markets and supermarkets as well.

The consumers prefer native breeds to exotic chickens. They can quite clearly distinguish between the meat quality of native and exotic chickens. Overall, 98 percent of the respondents considered the meat quality of native breeds as better than those of the exotic ones (Table 12). Those who had knowledge about breeds, always ranked native ones higher than the exotic breeds like Tam hoàng or Lương phượng that are imported from China and these were considered better than other exotic ones such as Hubbard, Plymouth, Ross....The preferred quality of native chicken meat is firm, tough, with good smell and sweet (Table 13). It is obvious that these characteristics are not preferable to western consumers who prefer soft meat. In the same way, bony parts like chicken wings and feet are preferred to chicken breast by the Vietnamese.

Table 11: Preferred type of chicken that is purchased by consumers

Purchases	Đà Nẵng		Mỹ Tho	
	Households	Proportion	Households	Proportion
Only native/garden scavenging chicken	46	31%	41	44%
Only industrial chicken	23	16%	29	31%
Both types	79	53%	24	26%
Total	148		94	

Table 12: Consumer preferences for local chickens

The taste of native chickens compared to exotic breeds is.	Đà Nẵng		Mỹ Tho	
	Responses	Proportion	Responses	Proportion
Better	146	97%	98	98%
Worse	2	1%	2	2%
Same	0	-	0	-
No view	2	1%	0	-

Table 13: Reasons for preference of meat from native chicken

Reasons	Đà Nẵng		Mỹ Tho	
	Responses	Proportion	Responses	Proportion
Firm	85	33%	39	23%
Chewy or tough	48	19%	39	23%
Sweet	47	18%	28	17%
Good smell	37	14%	47	28%
Less fat	15	6%	6	4%
Less retained water	10	4%	2	1%
Not friable when separating muscle after cook	10	4%	1	1%
Healthy	4	2%	5	3%
Soft	1	0%	2	1%
Fat	1	0%	0	0%
Total	258	100%	169	100%

In term of product forms, most consumers preferred the fresh form to cooled/frozen ones. The cooled or frozen ones were considered less quality because of being friable, not sweet, not tasty and not fresh (Table 14). Native chicken were usually bought live or plucked/fresh as a whole chicken rather than as cooled/frozen parts. Most native chicken were bought from markets. In contrast,

industrial chicken were bought mostly in cooled/frozen parts at both markets and supermarkets

Table 14: Reasons why consumers do not like cooled/frozen poultry meat

Reasons	Đà Nẵng		Mỹ Tho	
	Responses	Proportion	Responses	Proportion
Not fresh	50	36%	9	10%
Friable	37	27%	39	43%
No good taste	36	26%	11	12%
Not sweet	15	11%	32	35%
Total	138		91	

Table 15: Type of birds consumed and their form of product (% of total responses)

Type of product	Đà Nẵng			Mỹ Tho		
	Native/garden scavenging chicken	Industrial chicken	Total	Native/garden scavenging chicken	Industrial chicken	Total
Whole chicken	51.6%	5.8%	57.5%	44.4%	8.3%	52.6%
Chicken parts	4.2%	38.3%	42.5%	14.3%	33.1%	47.4%
Total	55.8%	44.2%		58.6%	41.4%	
Responses	134	106	240	78	55	133

Table 16: Type of birds consumed and their location of purchase (% of total responses)

Type of product	Đà Nẵng			Mỹ Tho		
	Markets	Super Markets	Total	Markets	Super Markets	Total
Whole chicken	51.6%	5.8%	57.5%	44.4%	8.3%	52.6%
Chicken parts	4.2%	38.3%	42.5%	14.3%	33.1%	47.4%
Total	55.8%	44.2%		58.6%	41.4%	

Table 17: Form of product purchased for native chickens

Form of product	Đà Nẵng		Mỹ Tho	
	Responses	Proportion	Responses	Proportion
Alive	73	58.9%	37	62.7%
Plucked, fresh	40	32.3%	19	32.2%
Cool (packed, stamped)	9	7.3%	2	3.4%
Frozen (packed, stamped)	1	0.8%	1	1.7%
Roasted/Boiled	1	0.8%	0	0.0%
Total	124		59	

Table 18: Type of chickens purchased by different customers (% of total responses)

Type of consumer	Đà Nẵng			Mỹ Tho		
	Native/garden chicken	Industrial chicken	Both types	Native/garden chicken	Industrial chicken	Both types
Employee of Int. companies	2%	1%	3%	1%	1%	2%
Small trader shop owners	-	-	1%	-	1%	-
Small retailers	11%	5%	23%	3%	6%	2%
Civil servants or employee of small company	1%	1%	1%	-	-	-
Home employed	5%	1%	7%	3%	2%	2%
Craftsman, skilled worker	2%	3%	3%	1%	1%	-
Unskilled worker	-	-	1%	1%	-	1%
Farmer	2%	-	4%	-	2%	-
Housewife	6%	4%	4%	21%	12%	12%
Student	-	1%	-	-	-	-
Other	2%	1%	5%	13%	5%	6%
Total	31%	16%	53%	44%	31%	26%
Responses	46	23	79	41	29	24

CHICKEN MEAT AS A CULTURAL OBJECT

Chicken meat is used commonly in Tiền Giang (Mỹ Tho) and Quảng Nam – Đà Nẵng (QN-DN), not only for home consumption but also through an extensive market system including cooked food vendors, family-run restaurants of which some are specialised in “native chicken”. One example is the well known “Madame Luận’s restaurant of chicken” at Tam Ky, Quảng Nam. A well-known dish in QN-DN is “Quảng rice noodle” that was traditionally cooked with prawn, pork and gradually modified by chicken meat.

Chicken meat is considered good quality if it tastes sweet, is rather tough, with crispy skin and with no fat. It was found that all factors such as breeding, production method (i.e. fully scavenging, semi-confined or industrial one), type of feed and the length of production are affecting the meat quality. Given the existing production technology in Viet Nam, only native, scavenging chicken fed mainly with local feed (paddy, rice bran, corn, vegetable) over a long period (more than 4 months) can meet this requirements of taste. As achieving these attributes requires experience, consumers must rely on confident retailers or caterers to obtain the desired products. As a consequence, food houses and restaurants in the studied sites always order live chicken from reliable traders.

Chicken is a common dish in dinners, feasts and festivals. It is also used for offering in worship. Consumers are always very discerning good characteristics

from bad ones for this type of religious use. Only live chicken are selected and manually slaughtered few hours before worship. In various areas in Viet Nam, cooked whole chicken (together with its intestine) that is used as an offering must be displayed in a conventional form (Figures 8 & 9). The chicken must be neatly displayed in a tray or a large dish, therefore; live chicken selected for this purpose is within 0.8-1.5kg per bird. The cooked chicken must have a large, up straight comb and yellow feet. Chicken is offered to ancestors before and after the lunar New Year, 7th month (i.e. lunar calendar) in the year. In particular, business people offer chicken to spirits twice a month (2nd and 16th day of a month). In QN-DN chicken feet are commonly used for foretelling during the New Year. Feet must come from a young cock that has yellow, 4 toed feet. After cooking, a down-curving feet is a good fortune (see cover photo).

As a result of these values and belief, live and native chicken are indispensable to some people. The preferable chicken for offering is a young native cock with yellow feathers, yellow feet, yellow skin and full, up straight comb. Preferable characteristics for meat come from a native hen with the age varying from 6 months to 9 months depending on the type of cooking.

Figure 8: Cut chicken displayed for worship



Figure 9: Whole cooked chicken displayed for worship

5. CONCLUSIONS

- The change in poultry consumption pattern before and after AI in relatively smaller cities like Mỹ Tho and Đà Nẵng has followed the same pattern found in Hanoi and HoChiMinh City. However, the shift to supermarkets and to cooled/frozen industrial chicken parts appeared to be faster. This maybe caused by the later execution of the surveys than in Hanoi and HCMC. The present survey was done in 2008, two years after those in the other two locations.
- Low confidence of consumer's in inspection signs in Mỹ Tho city may have led to a relatively slower adoption of purchases from supermarkets than in Đà Nẵng and most of the Mỹ Tho consumers stick to traditional markets and to their habit of purchasing live or plucked/ fresh chicken.
- Native chickens are still preferred to exotic ones and dominate chicken consumption at both Mỹ Tho and Đà Nẵng cities despite of their much higher prices. Religious belief to use native chicken for ancestors offering and particular for foretelling in Đà Nẵng city are playing an important role and contribute to the persistence of the native chicken in Vietnamese's life.

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ANNEX 1: QUESTIONNAIRE

Q1. Questionnaire n°: /_____/

Q2. Name of interviewer:

Q3. Interview date: /____/____/ 2008

POULTRY CONSUMPTION SURVEY

July 2008

Are you responsible for food in your household?

1. Yes (continue)

2. No (stop interviewing)

A. GENERAL INFORMATION

Q4. Name of respondent:

Q5. Sex: 1. Male 2. Female

Q6. Age:

Q7. Address:street, ward:.....district: HCMC

Q8. Tel:

Q9. What is the education level of the respondent

0. No education (no diploma)

1. Primary diploma

2. Lower secondary diploma

3. Upper secondary diploma

4. Technical secondary diploma 5. College/ University diploma

6. Post graduate diploma

Q10. Occupation of respondent now or before retiring /____/ (see code in the table below)

Cross here if now retired ☐

1 Employed by International
companies/organisations or Joint-ventures

7 Unskilled workers

2 Small traders or shop owners

8 Farmers, Forestry and fishery

3 Small retailers

9 House wife

4 Civil servants or employed by small local
companies

10 Employed by state companies

5 Sellers, House worker

99 Others

6 Craftsmans, skilled worker

B. HOUSEHOLD CHARACTERISTICS

Q11. Position in your family?

- | | |
|------------------------|---|
| 1. Household head (HH) | 4. HH parents or parents in law |
| 2. HH spouse | 5. HH relative (uncle, nephew, cousin...) |
| 3. HH child | 6. HH members without kinship |

Q12. Total number of people living permanently in the household? |__| |__| head

Q13. How many persons enjoy meals at home together? |__| |__| head

Q14. Of all people living in your household how many are above 60 years of age?

|__| |__| head

Q15. Of all people living in your household how many are below 10 years of age?

|__| |__| head

Q16. Of all people living in your household how many often eat outside home? |__| |__| head

Q17. Do you have a helper? 1. Yes 2. No

C. PLACE OF PURCHASE

Q18. Do you purchase poultry or its products food at [...] ? (Read each row in column 1 and mark correspondingly in column 2) How often do you purchase at [...] ?

(1)	1. Yes 2. No (2)	How often do you purchase? (code 04) (3)
Q20.1a Street vendor	Q20.1b	Q20.1c
Q20.2 Informal market	Q20.2b	Q20.2c
Q20.3a Formal market	Q20.3b	Q20.3c
Q20.4a Grocery	Q20.4b	Q20.4c
Q20.5a Store/Agency	Q20.5b	Q20.5c
Q20.6a Poultry shop	Q20.6b	Q20.6c
Q20.7a Supermarket	Q20.7b	Q20.7c
Code 4:		
1. Daily 2. Weekly 3. Monthly 4. Special occasion 5. Never		

D. EATING OUT

Q19. How many meals do you eat outside in a week (including breakfast, lunch, dinner)?
(for respondent only).....times/week.

Q20. Which kind of meals (breakfast, lunch, or dinner) do you most often have outside?

1. Breakfast 2. Lunch 3. Dinner

Q21. If you like to eat outside your home food which includes poultry which place do you choose? (Before / after bird flu), (*corresponding to Q22*)?

Place	Before bird flu Q23.1	After bird flu Q23.2
1. A street stall		
2. Small restaurant specialised in poultry		
3. A family-run food house		
4. a luxury restaurant		
99. Other (<i>specify</i>)		

Q22. Did your eating out changed with the information (hearing about) of bird flu?

- 1 Yes, immediately after first occurrence
2 For some time
3 It is still different
4 No change.....

.....
.....

Q23. Have you considered the assurance of food providing from these caters?

1. Yes 2. No

Q24. If yes, what is important?

1. this is my acquainted place
2. the place looks neat and clean
3. they have " quarantined poultry" signs
4. the place is prestigious

99. Others (*specify*)_____

E. POULTRY CONSUMPTION

Q25.

What supplies of poultry (purchased and non-purchased) have you had at home now?	Form of product?	Why do you choose this form of product?	Where do you usually buy [...]?	Why do you choose this place?	How often do you buy? (Days in interval)	How much of [...] have you acquired per time?
	Code 01	Code 02	Code 03	Code 04	Code 05	(kg) or (egg)
1. Domestic/back-yard chicken						
+ A Whole unit/half (<i>underlined</i>)						
+ Part (<i>specify: thigh, wing, leg....</i>)						
2. Semi-scavenging chicken						
+ A Whole unit/half (<i>underlined</i>)						
+ Part (<i>specify: thigh, wing, leg....</i>)						
3. Industry chicken						
+ A Whole unit/half (<i>underlined</i>)						
+ Part (<i>specify: thigh, wing, leg....</i>)						
4. Semi-scavenging Duck /Goose						
+ A Whole unit/half (<i>underlined</i>)						
+ Part (<i>specify</i>)						
5. Semi-scavenging Duck /Goose						
+ A Whole unit/half (<i>underlined</i>)						
+ Part (<i>specify</i>)						
4. Chicken eggs						
5. Duck eggs						
99. Other (specify)						

Code 1. Form of Product	Code 02. Reason to choose a product form	Code 03. Place to purchase	Code 4. Reason to choose place of purchase	Code 5. Frequency of purchase
1. alive 2. Pluck, fresh 3. Cool (not packed and not stamped) 4. Cool (packed and stamped) 5. Frozen, packed and stamped 6. Roasted/Boiled 7. Others (specify)..... For eggs: 8. Package 9. Without package	1. Cheaper price 2. Safety 3. Freshness 4. Cooking convenience 5. Other (specify)..... ...	1. Own production 2. Gift 3. Directly purchase from farmers 4. Street vendor 5. Market stalls 6. Supermarkets 7. Poultry Store 8. Groceries store 99. Other (specify)...	1. Safety 2. Convenience 3. Cheaper price 4. Trusted seller 5. By habit 6. Near home 7. Honest scale 8. Neat and clean 9. Product diversity 99. Others (specify).....	1. (Ex: 2-3days between 2 purchases) 2. Special occasion 3. Never

F. COMPARE POULTRY CONSUMPTION BEFORE AND AFTER AI

Q26. Generally, the poultry quantity consumed now in your family in comparison with before AI is:

1. the same
2. increase. By how many percent? /_____/ %
3. decrease. By how many percent? /_____/ %

Q27. Please specify 3 main reasons for changes in quantity and rank them

Reasons (1)	3 main reasons (2)	Rank 1: most important 2. second important 3. third important (3)
Afraid of bird flu		
Afraid of obesity		
Price is high		
Frozen poultry is not delicious		
Get used to not eating poultry during AI		
Other (specify)		

Q28. Where were your places to purchase poultry products before AI? and now? (Mark ✓ on the corresponding place) What are the reasons for the change of purchasing place, if any?

Place to purchase	Before AI	After AI	Reason of changes (if Before AI differ from After AI)- Code 6
1. Own production 2. Gift 3. Directly purchase from farmers 4. Street vendor 5. Market stalls 6. Supermarkets 7. Poultry Store 8. Groceries store 99. Other (specify)...			

Code 6- Reason of purchasing place changes

1. Safety	5. By habit	8. Neat and clean
2. Convenience	6. Near home	9. Product diversity
3. Cheaper price	7. Honest scale	99. Others (specify)...
4. Trusted seller		

Q29. Which forms of product did you purchase poultry before AI? and now? (Mark ✓ on the corresponding place) What are the reasons for the change of product form, if any?

Code 1. Form of Product	Before AI	After AI	Reason changes (if Before AI differ from After AI)- Code 7
For Poultry 1. alive 2. Pluck, fresh 3. Cool (not packed and not stamped) 4. Cool (packed and stamped) 5. Frozen, packed and stamped 6. Roasted/Boiled 7. Others (specify)..... For eggs: 8. Package 9. Without package			

Code 07 – Reason of product form changes		
1. Cheaper price	3. Freshness	5. Not available
2. Safety	4. Cooking convenience	6. Other (specify).....

Q30. How can you recognise safety of poultry products?

1. visual inspection	5. self-raise
2. trust to seller	6. Do not know
3. brand name of processor	7. See expiry date
4. signs of quarantine	99. Others (<i>specified</i>).....

Q31. Do you know any trademark? 1. Yes 2. No

Q32. If yes, which trademark do you know?

.....

.....

Q33. **When purchasing at poultry shop,**

Do you choose any trademark? 1. Yes 2. No

Q34. If YES, what trademark and kind of poultry product do you choose from this trademark?

Trademark	Chicken	Duck	Chicken eggs	Duck eggs
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
99. Other.....	☐	☐	☐	☐

Q34. Why do you choose this trademark?

Q35. **When purchasing at supermarket,**

Do you choose any trademark? 1. Yes 2. No

Q36. If YES, what trademark and kind of poultry product do you choose from this trademark?

Brand name	Chicken	Duck	Chicken eggs	Duck eggs
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
99. Other.....	☐	☐	☐	☐

Q37. Why do you choose this trademark?

Q38. **When purchasing at market,**

Do you choose any trademark? 1. Yes 2. No

Q39. If YES, what brand name and kind of poultry product do you choose from this trademark?

Trademark	Chicken	Duck	Chicken eggs	Duck eggs
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
99. Other.....	☐	☐	☐	☐

Q40. Why do you choose this trademark?

G. PRICE AND QUANTITY DEMANDED

Q41. Is the price of poultry now reasonable and acceptable regarding to your income?

1. Yes 2. No 3. Other (specify)

Q42. Is the price of poultry now reasonable and acceptable regarding to its substitution?

1. Yes 2. No 3. Other (specify)

Q43. How stable the price of poultry is in this year?

1. Very stable 2. Rather stable 3. Not stable 4. Very unstable

Q44. When the price of poultry increases, which kind of substitution do you buy?

1. Fish 2. Pork 3. Beef 4. Shrimp
5. Vegetable 6. Tofu 7. Can meet 8. Other (specify)

H. CUSTOMERS' TASTE, PRODUCT DIVERSIFICATION AND SATISFACTION

Q45. Do you think the taste of domestic poultry species compared with exotic poultry species is:

1. Better 2. Worse 3. The same 98. No idea

Q46. If worse or better, why?

.....

Q47. Do you think the taste of cooled poultry compared with fresh ones is

1. Better 2. Worse 3. The same 98. No idea

Q48. If worse or better, why?

.....

.....

- Q49. Have you recently purchased alive chicken? 1. Yes 2. No
If no, why not?
- Q50. Compare with before AI, the diversity of form of package now is
1. More 2. Less 3. The same 98. No idea
- Q51. Do you think that poultry products need package and label?
1. Yes 2. No 98. No idea 99. Other.....
- Q52. (If yes/no) Why or why not?.....
- Q53. Do you think that poultry retailers need fridge, chilling box?
1. Yes 2. No 98. No idea 99. Other.....
- Q54. (If yes/no) Why or why not?.....
- Q55. Do you think that we need box and label for eggs?
1. Yes 2. No 98. No idea 99. Other.....
- Q56. (If yes/no) Why or why not?
- Q57. If poultry are sold with package and label and the price is **10%** higher than now, will you purchase
1. Yes 2. No 3. No idea 99. Other.....
- Q58. If YES, If poultry are sold with package and label and the price is **20%** higher than now, will you purchase
1. Yes 2. No 3. No idea 99. Other.....
- Q59. If YES, If poultry are sold with package and label and the price is **30%** higher than now, will you purchase
1. Yes 2. No 3. No idea 99. Other.....

I. RESPONDENT'S IDEAS ABOUT POULTRY QUALITY AND SAFETY CONTROL

Q60. Do you think that the government intervention for AI control have assured consumers' safety?

1. Yes 2. No 3. No idea

Q61. (If yes/no) Why or why not?.....

Q62. Do you think that stamped eggs/poultry at markets are safe?

1. Yes 2. No 3. No idea

Q63. (If yes/no) Why or why not?.....

Q64. Which is your suggestion to the government and processing places in order to help increase your consumption of poultry products?

.....

Q65. What is your suggestion to improve the product safety for the consumers

.....

J. SOURCE AND LEVEL OF INFORMATION

Q66. **In the two recent years, have you...**

	...seen or heard recommendations on food safety in [...]?	...seen or heard recommendations on chicken safety in [...]?
1. Television	☐	☐
2. Radio	☐	☐
3. Newspaper	☐	☐
4. Billboards, brochure	☐	☐
5. Internet	☐	☐
6. Relatives, neighbour	☐	☐
99. Doctor/health care professional		

K. INCOME AND EXPENSE ON FOOD

Q67. Expense on food, how much do you spend for food per month in your family?
/_____/ (VND/month)

Q68. Information on your assets and of the group taking meals with you in the family.

Do you have?	Numbers
Refrigerator	
Gas stove	
Television	
Telephone	
Computer	
Motorbike	
Formal health insurance	

Q69. How much is your monthly household's income?

Income range (VND/1 month/1 household)	
< 1, 000,000	
1, 000,000 - < 3, 000,000	
3, 000,000 - < 5, 000,000	
5, 000,000 - < 7, 000,000	
7, 000,000 - < 9, 000,000	
> 9, 000,000	

--- Thank you very much for your time today!!! ---