

## ALIMENTARY SYSTEM IN MONG PHU\*

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This article will present some research achievements resulting from a study on: “The interaction between the system of agricultural production and the alimentary system in one suburb of Hanoi, from the period 1993 – 2002”.<sup>1</sup> The reason why this topic was chosen originated from a study assumption, which stated that the agriculture production system and the peasant’s alimentary system are always interacting with each other. The Peasants’ means of sustenance is basically a subsistence system, despite the fact that they not only produce items to support themselves, but also barter with their neighboring markets. This subsistence assumes a closed connection between what is produced and what is consumed, it means the relationship between agricultural system and alimentary system.

The interaction between the two above-mentioned systems may be stably maintained for a long time, and then quickly changed to other forms. The appearances of new items in agriculture production often add more kinds of foodstuff to the traditional alimentary system. In turn, improvement in the alimentary system also leads to expanding production activities (Henri Mendras, 1976). The period 1993-2002 was

chosen because it was the time when social-economic renovation was taking place in Vietnam. During this period, Vietnam’s agricultural system witnessed deep changes in two basic sectors: production and distribution, and these sectors certainly had some impacts on consumption.

In order to study relationships between agricultural products made by Mong Phu peasants, and items they consumed during the period 1992-2003, we gave a list of 60 permanently available products in the area at study period. Households were asked to recall and tell us if they made or consumed these products during the indicated period. If their response was yes, we asked them about the trend of these products. This quantitative information that was collected, plus qualitative information from a prior survey, can verify the above-mentioned assumption. This information allows us to open our knowledge towards the alimentary systems of suburban peasants in Vietnam as well as the system’s problems, during the renovation period.

### 1. Changes of the Agricultural Production System

#### *1.1. Narrowness of Cultivating Areas, Trends to Diversify Intensive Agriculture in Mong Phu*

Mong Phu is one suburban village of Son Tay town. The narrowness of

<sup>1</sup> Mong Phu belongs to Duong Lam commune, Son Tay town, former Ha Tay province, around 45 km Northwest of Hanoi.

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cultivating areas not only results from the village's population growth, but also from the urbanization process which has shifted parts of agricultural land to construction purposes or industrial zones. In 1988, the population in the village was 1,285 persons and 329 households. In 2001, the population had grown to 1,525 persons, with 370 households, while the village's natural area remained a stable 1,070,000m<sup>2</sup>. In 13 years, the population had increased 19% and the areas for cultivation had dropped 28% (Nguyen Duc Truyen, 1993 et 2002).

To cover the shortage of cultivation areas, the villagers carried out intensive cropping on the fields, from one rice crop to two rice crops per year. The same situation occurred with vegetables, with intensive cultivation growing from one to two or even three crops per year. The total

areas of cultivating and intensive land, therefore, increased to 53% (Nguyen Duc Truyen, *ibid.* p. 9)

Apart from population growth, the development in production and market liberation processes also expedited the consumption and bartering demands. Both consumption and bartering increased in quantities and kinds of items. These new demands were satisfied by technical and ecological conditions and have changed the structure in local agricultural production. Table 1 here under shows that, Mong Phu peasants, on one hand, still try to maintain and improve rice and agricultural tree productivity per head annually. On the other hand, they also strive to increase vegetable productivity in order to make full use of their strength in commodity production in an urban village.

Table 1. Effects of agricultural production, period 1993-2002, in Mong Phu

Production growth, period 1992 and 2002 (kgs)				
Plants	Per household 1992	Per household 2002	Change	%
Rice	1,441.7	1,482.1	41.1	3.0
Agricultural trees (pea, peanut, sweet potato)	131.1	132.1	1	0.7
Vegetables (field cabbage, horse-radish, spinach)	101.1	118.1	17.2	17

### ***1.2. Decreasing Incomes from Agriculture and Expansion of Other Non-agricultural Income Sources in the Household Economy***

Before renovation, in the agricultural production system of Vietnam, cattle breeding was mainly used to provide manure for agricultural production, and also

to make use of daily household wastes. After renovation cattle breeding is not only a sector that is used to increase agricultural production, but also has become an independent sector, and become a main source of income in the household economy. After 10 years, annual average income has doubled and

incomes from cattle breeding have increased to 37% (Table 2). Besides breeding, other non-agricultural activities also play a big role in each household's income structure, and are replacing the essential role of Agricultural

production. Now incomes from rice plus agricultural trees account for only 23% of household income, while 77% of income is from breeding and subsidiary sectors (Table 2).

Table 2: Rate of income from cattle breeding against total household incomes, 1993-2002<sup>2</sup>

Year	Income from cattle breeding and % against total incomes		Total incomes
	Million dong	%	Million dong
1992	2.4	35	6.9
2002	5.0	37	13.5

Due to the exchange of production roles, agricultural production in Mong Phu was only to best satisfy the subsistence demands among peasant households. When agricultural production became a supplementary income, it only ensured the most essential subsistence foodstuffs in the family. Other sources of cash incomes, from breeding and non-agricultural activities, are used for non-basic spending,

or non-eating purposes. In the following Table 3, agricultural income accounts for 27.5% of total family income. It seems to coincide with economists' assessments which say that the rate of subsistence in the country accounts for approximately 30% of the people's total spending. We can verify this assumption in the following table, regarding structures of agricultural production in Mong Phu.

Table 3: Structure of household incomes in Mong Phu in 2002  
(Nguyen Duc Truyen, 1993 et 2002, p. 10)

(Unit: 1,000,000 VND)

Income from rice	%	Income from agricultural trees	%	Income from breeding	%	Non-agricultural income	%	Total income
3.0	22.3	0.7	5.18	5.0	37	4.8	35.5	13.5

<sup>2</sup> Same as above.

### ***1.3. Selection of Items in Agricultural Production in Mong Phu, Period 1993-2002***

Due to some difficulties in agricultural production, selection of items in agricultural production became a common trend, in order to best satisfy the subsistence demands and bring back economic value to the market.

Among 60 items listed in interview notes, the agricultural production of Mong

Phu peasants is concentrated on 16 items (26%) presented in Table 4 below. In order to reconfirm any item which is selected (not by incidental cultivation), this item must be cultivated by at least 5 households (5 – 9 households). Items selected by many households will rank higher in priority order, as items in groups “10-19 households,” and “20-29 households.” The biggest groups are in the “30-39 households” or “40 households” range.

Table 4: Agricultural items produced by household groups during the period 1993-2002

No.	Items	Allocation of agricultural products by household groups 1993-2002									
		5-9 households		10-19 households		20-29 households		30-39 households		40 households	
		92	03	92	03	92	03	92	03	92	03
1	Rice							39	39		
2	Sweet potato				16			33			
3	Corn (maize)			10	0						
4	Cassava		9	17							
5	Spinach					27	25				
6	Colza						22	30			
7	Beet					29	22				
8	Pea					25	21				
9	Pig							38	34		
10	Chicken							37	39		
11	Duck		9	11							
12	River fish	6	6								
13	Egg							32	32		
14	Peanut									40	40
15	Powder cake							33	32		
16	Malt sugar candy		9	12							

Among 16 selected items during the period 1993-2002, there are three groups of items with prioritized ranking from top to bottom as follows:

- The 6 items produced by the most number of households: rice, peanut, eggs, pigs, chicken and powder cake.

- The 5 items produced by the middle number of households: spinach, colza, beet, bean family and sweet potato.

- The 5 items produced by the least number of households: cassava, corn (maize), ducks, river fish and malt candy.

Prioritization of those listed items was classified by the number of households which take part in the production of each item. In order to explain the above prioritization of items made in the region, by direct observation we may give two reasons: first, the market value of an item is the most influential reason for its selection (market logic); secondly, value of consuming items which bring comfort, safety, and conformity to cultivating and consuming practices (subsistence logic). Finally, is the items' usage for a household's breeding.

Based on commercial values of products in the market, we can explain the prioritization of breeding products in the first group, but can not explain why some breeding items were ranked in the third group despite their equal market values with those listed in group 1. Therefore, the interference of local production and consumption practice may help to clarify this query. Raising fish and duck has only become popular in recent years. The same situation is true of corn and cassava: when

living conditions improved, people do not have to eat corn and cassava as a substitute for rice as they did before, so they no longer want to grow these trees. They now concentrate on cultivating rice and other products with higher commercial values. With pure agricultural products like rice, corn, sweet potatoes, cassava and other bean vegetables - the changes in people's cultivating practices are mostly due to consumption habits and people's conveniences. Rice is usually considered the top item among grains. However, we need to verify whether besides the development of newer products with many advantages in the markets and consumption, people still maintain the cultivation of less valuable products as cassava, pea and sweet potato. These products may be maintained, though to limited extent, for medium purposes, such as using these items for breeding and sales.

## **2. Agricultural Production and the Alimentary System in Mong Phu**

Based on the already presented agricultural and breeding products, we can imagine that the alimentary system of Mong Phu peasants is mostly dependant on their local production capacity. However, in a market economy like Vietnam after 1993, the peasants can totally depend on products available at the market to establish a suitable alimentary system. Of course, when the peasants face difficulties in agricultural production, their subsistence portions are cut off and they have to buy more foodstuffs. In this case, their cash incomes can not afford the new spending, and they will hardly be able to establish their basic dietary needs. Therefore,

people's alimentary system is not only dependant on the structure of agricultural production, but on people's abilities to improve their income sources as well as on the supply of products in the market.

Vietnam's alimentary system, in traditional and common concepts, is understood as daily rice meals. The word "rice" is always attached to "meal," to emphasize that rice is the main food if it is not a unique item in the meals (alimentary system) of their daily lives. In studies of Vietnam people's alimentary systems, Nelly Krowolski commented: "Vietnamese meals, from North to South, in every class of people, are summed up in two factors: rice is the main food, and its supplementary foods are subsidiary. Rice, as explained, is material to keeping people alive, other subsidiary foods are supplementary items, which enable the meal to be more delicious." (Nguyen Duc Truyen, 1993 et 2002, p. 10). From the above concept about Vietnamese meals, we can understand the central role of rice in the meal, and in the alimentary system the role of paddy in Vietnam's agricultural production.

In the structure of a meal or alimentary system in Vietnam, in a normal meal, besides rice as the main food, there are four subsidiary or supplementary items, because they help people to "smoothly swallow" the rice portion (not always cooked by paddy rice) (Nelly Krowolski, 2005).

The four additional items include, firstly, "fish sauce" or "salt", with a certain vegetable or animal protein, but mainly with a high salt content in order to keep it

preserved year-round. Items in this category include: salted sesame, salted peanut, fish sauce, shrimp sauce, crab sauce, or other sauce. The second item is often a "vegetable" of some kind: eaten fresh, boiled, or cooked with oil or meat. The third item is "soup" with different styles of cooking, which contains varied nutritional components. Vegetable soup is another form of vegetable, but sea food soups and meat soup are other forms of animal foods or adding animal elements to the meal. The fourth item is called the "cooking dish," which mainly consists of meat, fish, shrimp, eggs or other products rich in protein or fat. A meal with vegetables and sauce without meat or fish is typical of the alimentary system of Vietnamese peasants before renovation. Nelly Krowolskie released a correct assessment when he emphasized that the core of the Vietnamese meal is "rice-sauce," "rice-sauce-vegetable," then comes "rice-sauce-vegetable-soup (fish, meat)" and finally "rice-sauce-vegetable-soup-cooking dishes."

In the alimentary system of Vietnamese people, there are two main systems, the "daily alimentary system" and the "Tet alimentary system." In contrast with the daily alimentary system, the Tet alimentary system can be called the "party" system. If rice is main item in the daily meal with supplementary items mostly being vegetables and sauce or only vegetable soup (without fish or meat), then during the party, dishes with meat or items that go with drinking or wine become the main parts, and rice becomes the subsidiary item (Nelly Krowolski, 2005, p. 3).

Before renovation, Mong Phu residents' concept about meals as well as their alimentary practices reflected the Vietnamese meal. But after renovation, especially after 1993, economic changes have had big influences on the people's income and hence indirectly impacted their eating systems.

Through our survey on 7/2003, we found that the number of foodstuffs consumed by Mong Phu people during the period 1993-2002, verified the above comment. In this study, the number of items consumed in Mong Phu, are much higher (3.2 times) than the items produced, as mentioned in the prior section. We have recorded 49/60 permanently consumed items by household group (from 5 households up, the same as the data reading of the produced items).

Among 49 products popularly consumed in Mong Phu, they consist of both

locally made items, and some items that people do not produce or rarely produce recently such as “dry provisions” and “rice noodles.” The popular products for consumption also include other agricultural products and items from other regions which are available in the market, and some industrial products.

Prioritization of three groups of consumed products is as follows:

- The group of items with the highest number of consuming households (30 – 40 households): 31 items.
- The group of items with a medium number of consuming households (10 – 29 households): 14 items.
- The group of items with the least number of consuming households (5 – 9 households): 3 items.

**2.1. Group of products consumed by the biggest number of households**

Table 5: Most favored products consumed by Mong Phu peasants during the period 1993-2002

No.	Priority of consumed items	Items consumed by number of households									
		0-9		10-19		20-29		30-39		40	
		92	03	92	03	92	03	92	03	92	03
1	Rice									40	40
2	Cauliflower							35	35		
3	Cabbage							36	36		
4	Kohlrabi							38	38		
5	Spinach**								35	40	
6	Colza**							39			40
7	Potato							37	36		
8	Tomato							37	37		

9	Beet**							39	37		
10	Watermelon							36	37		
11	Mandarin							38	38		
12	Pineapple							37	35		
13	Grape-fruits							38	37		
14	Banana							38	39		
15	Orange							39	38		
16	Pork*									40	40
17	Chicken*									40	40
18	River fish***									40	40
19	Eggs*									40	40
20	Pork fat									40	40
21	Meat pie							35	36		
22	Peanut*									40	40
23	Soya cake									40	40
24	Fish sauce									40	40
25	Wine							31	31		
26	Tea							39	39		
27	Rice noodle									40	40
28	Instant noodle									40	40
29	Seasoning									40	40
30	Rice powder cake*							39	38		
31	Candy***							35	35		

Among 31 of the most favored consumed items, we can see that 11/31 (35%) of the items are made in Mong Phu (\*), including six items belonging to the biggest group,<sup>3</sup> three items (\*\*\*) belonging to the second group<sup>4</sup> and two items (\*\*\*) belonging to group three. So, we can say that 68% (11/16) of locally made products are among the most-favored consumed items. There are only 5 locally made items, such as “beans, corn, cassava, duck and sweet potato,” which are not included in these most favored consumed products, but instead listed on the medium or limited consumption list.

If we make a comparison of total products which are made in the region with total products which are consumed in the region, we can see that, there is only 1 item (corn), which was not considered as a food source in 2002. In fact, people still grew corn in 1992, but in 2002 no one grew it.

The remaining 94% of produced items are on the list of items that are consumed in the region. This means that locally made products in Mong Phu are used and consumed by local people themselves or belong to the subsistence system.

Also, among these most favored consumed items, the meal structure was clearly reflected by local products such as: rice (paddy, cassava, maize), sauce (peanut salt, fish sauce), vegetable (spinach, colza, beet, bean), and cooked dish (pork, chicken, duck, river fish, eggs). In the sauce, traditional sauce was replaced by fish sauce (not a local product), and peanut salt is still a traditional dish in the region.

Hence, we can say that agriculture production in Mong Phu, during the period 1992 - 2002, mostly satisfied subsistence foodstuff demands, although it could only meet a limited portion (32% or 16/49) of local consumption demands.

**2.2. Group of Products Consumed by a Medium Number of Households**

Table 6: Consumed products by a medium number of households in the period 1993 - 2002

No.	Consumed items	Items by groups of consuming households									
		0-9		10-19		20-29		30-39		40	
		92	03	92	03	92	03	92	03	92	03
1	Sweet potato				14	29					
2	Taro					26	24				
3	Large cucumber					27	28				
4	Cucumber						28	33			

<sup>3</sup> Same as above.

<sup>4</sup> Cell “rice, peanut, egg, pig, chicken and dumpling pie.”

6	Cantaloupe					21	20				
7	Bean						28	30			
8	Cow			18	15						
9	Duck					29	28				
10	Canned milk					22	21				
11	Sea fish			17	16						
12	Vegetable oil			12	18						
13	Beer					23	25				
14	Sugarcane					25	21				
15	Coffee					20	20				

Most products consumed by a medium number of households are mainly items which supplement or replace the familiar consumed items in the region. Two traditional items (beans and sweet potatoes) are among those supplementary products which prove that they are no longer important in the alimentary system here, because rice portions were sufficient for meals. Therefore, the number of households that produce and cultivate these two items is declining (Table 4 - Agricultural items produced by household groups during the period 1993 - 2002)

Other products that appear on the list reflect the current trend where people want to diversify or expand their local foodstuffs sources. However, when the local living standard is poor, these items are not really important for them. Items with rich protein such as: beef, duck, canned milk, sea fish, and vegetable oil are also available here in the table because the meal structure of local people included some locally made items which are cheaper, more active and more

familiar. The same situation occurs with vegetable and bean items. In particular, drinks are only used by certain groups and circumstances, for example, children and people in general only drink milk when they are sick, and men only drink beer or coffee during parties.

### ***2.3. Group of Items Consumed by the Least Number of Households***

Items belonging to this group are considered of less nutritional value and protein and will be used only in hard circumstances. In Vietnam in the past, a buffalo was fostered as a pulling power, not for meat. People killed buffaloes only when they were too old to pull the plough or had an accident, therefore buffalo meat is normally not favored as much as other kinds of meat. Cassava is also considered a supplementary food in cases of shortages of rice or other cooking items. Sesame is sometimes used to supplement or replace peanut. When material life improves, these items are listed in the least-favored group (Table 7).

Table 7: Products with limited consumption in Mong Phu, in the period 1993 - 2002

No.	Items with limited consumption	Items consumed by number of households									
		0-9		10-19		20-29		30-39		40	
		92	03	92	03	92	03	92	03	92	03
1	Buffalo meat	9	6								
2	Cassava		7	13							
3	Sesame	6	5								

### 3. Markets and the Alimentary System in Mong Phu

As mentioned above, the meal structure or daily alimentary system in Mong Phu did not change much during the period 1993 - 2002. If there were any changes they were to improve and diversify the daily meal dishes within the people's financial ability. In general, rice is still the main item, but the change is that it is no longer mixed with nor replaced by other grains (such as corn, sweet potato). In the sauce dish, "fish sauce" is quite popular, replacing traditional sauce. Other vegetables, soup and cooking items are supplemented and diversified by different kinds of vegetables, roots, animal products from other regions and industrial products supplied in the market.

Due to some restrictions on agricultural production in Mong Phu, as stated above, the changes to the alimentary system are mainly through the bartering and purchasing of items in the markets. Our

survey data in 2003 shows that there are 48 items brought from the market, by group from 5 to 40 households (12.5% – 100%). Compared with the list of consumed items here, only "bean" is not named in the list of purchased items.

There are 24 items that are bought by more than 30 households (>70%) (Table 8). Among these most favored purchased items, there is no priority for any of the four groups of items listed in the table: "vegetables," "fruits," "meat," or supplements. It seems to be incidental that each group has 6 items: vegetables (01-06), fruits (07-12), fish and meat products (13-18), and supplements (19-24). It is remarkable that these items are rather familiar for Vietnamese peasants, but are not included in the locally made products, with the exception of "pig," "fat," "wine," and "river fish." They contain commercial values rather than subsistence value.

Table 8: Purchased items in Mong Phu (1993-2002)

No.	Items	Purchased items									
		0-9		10-19		20-29		30-39		40	
		92	03	92	03	92	03	92	03	92	03
1	Cauliflower							34	35		
2	Cabbage							35	36		
3	Kohlrabi							36	37		
4	Potato					29			37		
5	Tomato							38	38		
6	Cucumber							33	33		
7	Water melon							36	37		
8	Mandarin							38	38		
9	Pineapple							37	35		
10	Grapefruit							34	34		
11	Banana							35	36		
12	Orange							37	37		
13	Pig									40	40
14	River fish							38	38		
15	Fat									40	40
16	Soya cake									40	40
17	Fish sauce									40	40
18	Meat pie							35	36		
19	Wine							31	31		
20	Tea							39	39		
21	Rice noodle							39	39		
22	Instant noodle							39	39		
23	Seasoning									40	40
24	Candy							33	33		

We can see from the list that the daily meal system is moving closer to the Tet meal standard through family meals on special events. Almost all households purchased foods in the market to improve their meals, adding more “drinking items” or “hors d’oeuvres,” and drinking wine during the meal, replacing the main role of rice. They will now consume rice after drinking and consuming hors d’oeuvres.

supplied in the market, many households also have to buy locally made items such as rice, corn, taro, spinach, colza, beet, chicken, duck and eggs. This may be a way to make up for the lack of family production, or a way to develop the household economy. We may refer to this matter in the next section. Apart from that, many households have started to try other new products, which are not yet popular in the country, such as “beer,” “coffee,” “beef,” “sea fish,” and “vegetable oil” (Table 9).

Besides frequently purchasing items

Table 9: Grouping of items purchased by a medium number of households

No.	Items	Purchased items										
		0-9		10-19		20-29		30-39		40		
		92	03	92	03	92	03	92	03	92	03	
1	Rice				18	20						
2	Corn					21	29					
3	Taro					23	24					
4	Spinach			18			22					
5	Colza			16			23					
6	Big cucumber					27	28					
7	Dua le					28	22					
8	Beet			15	19							
9	Cantaloupe					21	20					
10	Duck meat			19			20					
11	Eggs					26	26					
12	Beer					22	26					
13	Beef			18	15							
14	Sugarcane					24	20					
15	Sea fish			17	16							
16	Cooking oil			12	18							
17	Coffee			19	19							
18	Rice cake			12	12							
19	Chicken			11	10							
20	Canned milk			19			20					



Among a family’s products for sale, we easily recognized the breeding products like “pig,” “chicken,” “eggs,” and other vegetable products such as “peanuts,” “beans,” “beets,” “colza,” and “spinach,” were popular. Table 12 below shows that there are always between

25% and more than 75% of households selling these items in order to barter for other items or to raise incomes. Items that are seldom sold are “potato,” “sweet potato,” and “duck,” because there are few people who produce and consume them.

Table 12: Items for sale in Mong Phu

No.	Items	Items for sale									
		0-9		10-19		20-29		30-39		40	
		92	03	92	03	92	03	92	03	92	03
1	Potato	5	0								
2	Sweet potato	7	0								
3	Spinach			12	10						
4	Colza			15	12						
5	Beet			18	13						
6	Bean			17	15						
7	Peanut							36	36		
8	Pig					27	23				
9	Chicken					29	28				
10	Duck	5	5								
11	Egg					22	22				

**5. Conclusion**

The change in the eating standards of Mong Phu peasants, based on our study, shows that the alimentary system, on a basic level, still depends on the agricultural production system. People use rice as a main item, while they try their best to improve the quality and quantities of their

daily dishes. The change in daily meals, however, is notable not only with respect to people’s health and nutrition, but is also remarkable of its own accord as a result of social processes.

Together with the change in agricultural production, peasants can not

remain outside of market economy relationships. Their participation is due not only to market pressure, but also as a unique solution which allows them to counter with these pressures to enter the market economy. When agricultural production is decreasing, they concentrated on producing family foodstuffs to ensure a maximum subsistence system, and if possible they will take part in the production of commodity foodstuffs. The development of the breeding sector not only meets subsistence demands and improves eating standard, but also promotes the development of household economy.

However, changes in peasants' alimentary system nowadays depend on foods supplied in the market, rather than on their agricultural production. The separation between production and consumption are clearer, which emphasizes the role of foodstuff markets in the countryside. We should not only pay attention to the collection of foodstuffs from the countryside, to bring to the cities, but we also must provide the countryside with necessary products in order to enable country people to maintain a balance of food sources as well as to improve their alimentary systems.

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