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MINISTRY OF SCIENCE AND TECHNOLOGY

**SOCIALIST REPUBLIC OF VIETNAM**

**NATIONAL OFFICE OF INTELLECTUAL PROPERTY**

**Independence – Freedom – Happiness**

No. 385/QD-SHTT

*Hanoi, 31 May 2007*

**DECISION ON**

**The Registration of Appellation of Origin**

**DIRECTOR GENERAL**

**OF NATIONAL OFFICE OF INTELLECTUAL PROPERTY**

Pursuant to item 2 of the Article 220 of the Intellectual Property Law No. 50/2005/QH11 dated 29 November 2005;

Pursuant to item 1 and 2 of the Article 36 of the Decree No. 103/2006/ND/CP dated 22 September 2006 detailing and guiding the implementation of a number of articles of the Intellectual Property Law regarding industrial property;

Pursuant to the Articles 7, 9, 10 and 23 of the Decree No. 63/CP date 24 October 1996 on detailed provisions about industrial property, as amended, supplemented by the Decree No. 06/2001/ND-CP dated 01 February 2001;

Pursuant to the Charter on the Organization and the Functioning of the National Office of Intellectual Property issued in accordance with Decision No. 14/2004/QD-BKHHCN dated June 25, 2004 of the Minister of Science and Technology.

Pursuant to the results of examination of the application for registration of Appellation of origin,

Application No. : 6-2006-00004

Filing date : June 08, 2006

Applicant : Tam Xoan Rice Association of Nam Dinh province

Address : Village 14, Hai Anh commune, Hai Hau district, Nam Dinh province.

**DECIDES**

**Article 1:** To make a record in the National Register of Appellations of Origin of goods:

Registration Number : 00011

Appellation of origin : **HAI HAU**

Product : **Tam Xoan Rice**

Geographical territory : Communes Hai Duong, Hai An, Hai Anh, Hai Bac, Hai Cuong, Hai Giang, Hai Hung, Hai Long, Hai Minh, Hai Ninh, Hai Phuong, Hai Phu, Hai Phong, Hai Son, Hai Tan, Hai Tay, Hai Toan; Con and Yen Dinh towns of Hai Hau district, Nam Dinh province. (the map enclosed)

Special characteristics of the product:

**- Perceptive standard:**

- Appearance : quite long, narrow and well defined seed, deformed in one head
- Size : average length of the seed: 7.81 mm; average width of the seed: 2.47 mm
- Color : blue limpid
- Smell : naturally light fragrant and specific smell

**- Qualitative analysis standard:**

Standard	Content
Protein content (percentage)	9.79
Starch content (percentage)	88.43
Amylose content (percentage)	20.34
Mortar temperature	
Fading of the grain	0

**Article 2:** To stamp the following documents to be used as original documents for the purpose of control over the use of the appellation of origin:

1. The Description of the characteristics of Hai Hau Tam Xoan Rice and the manufacture processes of Tam Xoan Rice bearing the appellation of origin of Hai Hau, established by Hai Hau Tam Xoan Rice Association;
2. Geographical map of Tam Xoan Rice cultivated areas.

**Article 3:** To certify that:

1. The appellation of origin described in Article 1 is the national property and indefinitely protected by the State on the whole territory of Socialist Republic of Vietnam from the date of signing of this Decision;
2. The People Committee of Nam Dinh province is the body responsible for the management of the appellation of origin described in Article 1; only individuals and organisations authorised by the People Committee of Nam Dinh are entitled to use the appellation of origin for Tam Xoan Rice.

**Article 4:** To publish Articles 1, 2 and 3 of this Decision in the Official Gazette on Industrial Property No. 232, July 2007

**Article 5:** Heads of the Registration Division, Geographical Indication Division and the Intellectual Property Information Center have the responsibility for implementing this Decision.

**Receivers:**

- Applicant
- As mentioned in Article 5
- Kept in files, archives

**Director General**

*(signed & sealed)*

**Tran Viet Hung**

PEOPLE COMMITTEE OF NAM DINH PROVINCE

**HAI HAU TAM XOAN RICE ASSOCIATION**

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**DESCRIPTION FOR REGISTRATION  
OF APPELLATION OF ORIGIN “HAI HAU”  
FOR TAM XOAN RICE VARIETY**

**Hai Hau, May 2006**



# DESCRIPTION OF SPECIAL CHARACTERISTICS OF HAI HAU TAM XOAN RICE

Appellation of origin: **HAI HAU**

Product bearing the appellation of origin: **Tam Xoan Rice**

Hai Hau Tam Xoan Rice is a traditional and well-known specialty cultivated in some areas of Hai Hau district- Nam Dinh province. Tam Xoan Rice is cultivated under specific natural and human factors, such as factors in terms of climate, cultivating soil, rice variety, cultivation conditions, cultivation and production process.

Such factors and conditions contribute to creating a Hai Hau Tam Xoan Rice with specific quality which distinguishes itself from all others. For this reason, during the feudal reign, Tam Xoan Rice was used as a gift to be donated to the Royal Court and it was then famous as “The rice to be offered to the King”. Tam Xoan Rice is still well known in the market today and is esteemed by consumers.

## I. QUALITY CHARACTERISTIC OF HAI HAU TAM XOAN RICE

### 1. Perceptiveness

According to the results in two research themes, one on “*Preserving and commercializing Hai Hau Tam Xoan Rice*” which is realized by Vietnam Institute of Agricultural Science and Techniques and the Department of Agriculture and Rural Development of Nam Dinh province under the sponsorship of French Embassy in Ha Noi, the other is a scientific research theme at ministerial level for the period 2002-2005 on “*Collecting and analyzing data on soil, climate, quality characteristics of the product for carrying out application procedures for registration of appellation of origin for 7 products* ” which is realized by National Institute for Agricultural Planning and Design, it is confirmed that Hai Hau Tam Xoan Rice has following easily recognisable perceptiveness characteristics:

- Appearance : quite long, narrow and well defined seed, deformed in one head
- Size : average length of the seed: 7.81 mm  
average width of the seed: 2.47 mm  
length/width proportion: 3/11
- Color : blue limpid
- Smell : naturally light fragrant and specific smell
- Other characteristic: evenly firm rice seed which is unbroken during rice husking

## 2. Qualitative analysis standards

Standard	Content
1. Protein content (percentage)	9.79
2. Starch content (percentage)	88.43
3. Amylose content (percentage)	20.34
4. Mortar temperature	Low
5. Fading of the grain	0

*Source: Results on content of substances provided by Vietnam Institute of Agricultural Science and Techniques which collected sample for analysis at the Centre for Quality control and Standardisation of agricultural products- Agricultural electro-mechanics and Post-harvest technology Institute, April 2004.*

## II. NATURAL AND HUMAN FACTORS HAVING IMPACT ON QUALITY CHARACTERISTICS OF HAI HAU TAM XOAN RICE

### 1. Overview of natural and human factors, farming habits having impact on the quality of Hai Hau Tam Xoan Rice

Research results of Vietnam Institute of Agricultural Science and Techniques and the Department of Agriculture and Rural development of Nam Dinh province show that the specific quality of Tam Xoan Rice depends particularly on natural factors of the rice cultivated areas, including: topography, climate, soil characteristic and the human impact such as farming, preservation and processing habits.

#### 1.1. Topography, geomorphology

Hai Hau district is a terrain formed and fortified by the alluvial system of Thai Binh river (soil is irrigated and enriched with silt from Ninh Co river). This is an agricultural delta with specific features of a coastline ecosystem among agricultural production areas of Red River Delta.

Hai Hau district's natural surface area is 226.4 km<sup>2</sup>, which is enriched by the river silt, thus having a gently sloping topography running in the North- South direction, in the Northwestern-Southeastern direction.

As a coastal and estuary zone, the district's topography is relatively flat, with the land height from 0.5m to 0.7m. The district's soil is very fertile with average soil composition. This is a favourable condition for cultivating rice in general and Tam Xoan rice variety in particular.

#### 1.2. Rivers

Hai Hau is surrounded by Ninh Co and So river system and a number of channels such as Muc river, Tre river, Cua Khuc river, Xe Giua river, Xe Tay river, Xe Dong river...With 32 km

length of sea dykes and 31 km length of river dykes, Hai Hau possesses a good irrigation system which creates favourable conditions for developing agricultural production.

The district owns a relatively good irrigation system with the fishbone- shaped river system which provides for a gravity irrigation system with which 90% of the surface area is irrigated by tide and the remaining 10% of highland surface is watered by both tide and pumps. Moreover, the district has the irrigation system which can ensure rapid drainage and annual watering times (about 17-18 times) which provide fields with silt, thus contributing to improving the soil quality. Thanks to such irrigation system, the district's agricultural production sector can proceed with rice intensive cultivation which is particularly suitable for Tam Xoan rice.

### ***1.3. Climate***

Hai Hau has the typical climate of a coastline ecosystem of Red River Delta, with the monsoon climate with 2 seasons clearly divided in a year.

- Dry season comes from October to March of next year, with Northeastern monsoon, drizzling rain, lack of lighting and humidity;
- Raining season comes from April to September, with Southeastern monsoon, high temperature, abundant rainfall and storm;

Annual average temperature is 24.1 C, annual average rainfall is 132.9 mm per year, annual average evaporation quantity is 72.7 mm, annual average humidity is 83.3%, annual average humidity for the last three months of the year (October to December) is 95-100%.

In general, the district's climate is convenient for agricultural production. As a costal area with the paddy-field system of high layer and low layer, and with a small saline area, the district has favourable conditions for cultivating crop plants, especially rice.

As a kind of rice having periodic optical response and especially suitable to short daylight, Tam Xoan rice can only be cultivated under winter crop condition. One more special characteristic is that Tam Xoan rice is suitable to weather condition with high difference in temperature between day and night and to northeastern monsoon at the period of rice ripening.

The comparison results on climate characteristics between 2 stations (Van Ly – Hai Hau station and Nam Dinh station) show that the climate characteristics in Tam Xoan rice cultivated areas are relatively different to those in other areas of the province in terms of temperature, monsoon, humidity and water evaporation speed. Highest and lowest temperature, particularly temperature distribution between day and night from October to December present important factors as it helps to prolonge rice ripening time during the rice blossoming period. The monsoon regime with high humidity of 95-100% in October-December with mist during the blossom period is the ideal condition for the low ripening of the rice and accumulation of the fragrance. These climate characteristics are suitable to the requirements for the growth and development of Tam Xoan rice from transplant period to the harvest time.

### ***1.4. Land***

#### ***a. Land properties***

70% of the district's natural surface area is agricultural land, agglomerated and extended by Thai Binh river system, being divided into various regions depending on the agglomerating time of the alluvium. The district's land is located within the influenced areas of sea and rivers system. In

general, land in Hai Hau district has average mechanical component (accounting for 70% of the area) and 91.4% of the area is nutritional land.

Tam Xoan rice cultivated land area is composed of neutral alluvial soil with FLe-g layer (Fle-g), rich in humus and organic substance. Tam Xoan rice cultivated land area has the following agro-chemistry characteristics:

- Neuter acidity pH<sub>KCl</sub> is from 6.0 – 7.0
- Mechanical component is from average soil to rich soil:
  - Ratio of sand: 25% - 30%
  - Limon: 50% - 55%
  - Clay: 20% - 25%

Irrigation water for Tam Xoan rice field is mainly alluvial water from Ninh Co river, flowing past Xuan Truong district – Nam Dinh. Thanks to being annually watered with alluvial water at high intensity (minimum 14-18 times/harvest), Tam Xoan rice cultivated land is regularly improved with high content of nutriment in the land.

### *b. Classification of land region*

According to the results from the soil investigation carried out by Fao-Unesco, with such properties, the agricultural production area in the district is divided into 3 main regions as follows (shown in the following map):

#### *(i) Region 1: Highland region*

The land in the region has the height of above 0.7m compared to sea water level, accounting for 34.4% of the total of 11,430 hectares of agricultural land, mainly concentrating in the northern and eastern communes of the district and along several banks of the river. This strip of land is less aluminous, poor phosphorous, with little humus, light mechanical component, and a 15 cm-25 cm soil cultivating depth. Thus, this region is suitable for the development of the high-yield crop plants, particularly high-yield rice. Due to the highland terrain, it is difficult to cultivate the high trunk rice variety, especially the winter crop because of the land's limited ability of anti-falling.

#### *(ii) Region 2: Plain region*

This region makes up the highest ratio of 56.3% of the district area surface (in which around 50% of the area is for cultivating rice). The land in the region is rich in nutriment, with land height from 0.5m to 0.7m compared to the sea water level, low PH level (PH=5.5-6.0), high ratio of humus, 70 cm soil cultivating depth and the mechanical component mainly of rich soil and heavy soil. The region includes the communes in the western and the center of the district.

The region is enclosed by Ninh Co river system and channels system through which the sea water annually rises and flows into the mainland. Despite the fact that the sea water can not overflow into the cultivation area, the land in the region still becomes saline because of artesian waters. The salinity of the land in the depth of 50 cm often reaches 0.02 % - 0.05%. The survey on the cultivating habits of the farmers in the region and the assessment result of the physico-chemical properties of the special perfumed rice cultivated area (which was carried out by Nam Dinh Department of Agriculture and Rural Development and the provincial Paedology Agro-chemistry Station in 1999) shows that this factor has made the region especially suitable for developing special perfumed rice, particularly Tam Xoan rice.

#### *(iii) Region 3: Low-lying land and saline land*

This region consists of 2 main areas: Low-lying and sunken land area and saline land area

The low-lying and sunken land area accounts for 6.8% of the district's area surface. This area is 0.5m lower than the sea water level. This area mainly concentrates along the banks of the river and the coastal communes. With the soil cultivating depth of 20 cm-25 cm, land in this area has not been fully raised. With the land's light mechanical component, the limited ability to absorb the nutriment, the poor ratio of phosphor and humus, and a high salinity, the land is only suitable for cultivating crop plants which are able to grow in saline area.

Accounting for 2.5% of the district's area surface, the saline area is influenced by the leaking out of sea water, with the soil poor in nutrients and a high salinity of over 0.15%. This makes it difficult for this area to develop agriculture, especially to cultivate water rice. This area is only suitable for aquaculture development and exploitation.

The actual survey and study have shown that Tam Xoan rice cultivated in the land in region 2 will have the highest quality thanks to the land's characteristics including neutral alluvial soil, less aluminous soil, medium to heavy mechanical soil component and a low salinity.

### ***1.5. Cultivating techniques***

Vietnam Institute of Agricultural Science and Techniques and The Department of Agriculture and Rural Development of Nam Dinh province have jointly studied, set up and provided guidance for implementing cultivating procedure and techniques for Hai Hau Tam Xoan rice. This is a traditional cultivating procedure with the application of technical and scientific progress to improve the productivity and quality of Tam Xoan rice.

*a. Tam Xoan rice variety:* Tam Xoan rice variety cultivated in Hai Hau is selected from rice varieties currently used by the people and revigorated by the selective production process of rice varieties with technical support from consultant bodies.

*b. Rice seedlings growing technique:* The time for rice seedlings soaking and covering is simultaneous (approximately from 05-10 of June, time for rice seedlings sowing from 10-15 of June). 3-7 days before soaking and covering, the rice seeds must be exposed again under light sunshine and the devices used for soaking and covering must be washed; the flat and half-flat seeds must be removed; fungus must be disposed by soaking into water (2 boiled water + 3 cold water) or into pure lime water.

Preparing land for rice seedlings growing: Land for growing rice seedlings must be of good quality with enough water and enough light; the land must be deeply ploughed and carefully raked; weeds must be pulled up; muck must be basally fertilized before double raking; nitrogenous fertilizer and phosphate must be put down while furrowing.

Rice seedlings sowing: The rice seedlings should be evenly and sparsely sowed; the average amount of rice seedlings for a perch is 1.0 – 1.3 kg; sowing amount is 10 – 13 kg of paddy/perch.

Fertilizing – rice seedlings tending: fertilizer base for the rice seedlings: 1.5 – 2 quintals of rotten muck (or more than 300 kg fresh muck) + 10 kg of superphosphate; 100% basal fertilizing after furrowing, evenly spread the muck on the surface of the furrow and flat. Preventing the pestilent insects and diseases one week before the rice blossoms is to ensure the safety of the products.

The rice seedlings are cultivated at 40-45 day of age (5 to 6 rice seedlings' leaves). Requirements: big and strong rice seedlings.

*c. Cultivating techniques:* Cultivating time: July 10-15, cultivating density: 24 clusters/m<sup>2</sup>, distance between 2 rows: 23-25 cm; distance between 2 seedlings: 18-20 cm; cultivating 2-4 units/cluster, shallow cultivation in straight lines. Avoid cultivation when the field water is hot, seedlings should not be kept overnight.

*d. Fertilizing:* Vietnam Institute of Agricultural Science and Techniques and Nam Dinh Department of Agriculture and Rural Development have worked out and applied the most suitable dose and kinds of fertilizers to Hai Hau Tam Xoan rice basing on the studying and evaluating results from experimental procedures and farmers' experiences. The details are as follows:

**Table 1: Amount of fertilizer for 1 perch of Tam Xoan rice**

<b>Amount of fertilizer for 1 perch</b>	<b>Fertilizing method</b>
Muck: ≥ 300 kg Urea protein: 4.0 – 4.5 kg Superphosphate: 10 – 15 kg Kali: 3 – 4 kg	- Basal fertilizing: 100% muck + 100% phosphate + 1-1.5 kg Urea - 1 <sup>st</sup> top dressing: 1.5-2 kg of protein + 1.5-2 kg of kali mixing with rotten organic fertilizer, fertilizing 15-20 days after cultivation in combination with 1 <sup>st</sup> weeding. - 2 <sup>nd</sup> top dressing: mixing 1-1.5 kg of protein + 2-2.5 kg of the rest kali with rotten fertilizer, fertilizing when the rice is in the ear of rice corn. <i>Note:</i> Avoid fertilizing in the gloomy, misty weather, when there is water on the rice seedling leaf.

After the cultivation, farmers often use green manure (sesbania, squash, China-tree leaves...) to spread on the field to provide organic substances and microquantity substances for the rice. Experimental results show that the rice shall have the best fragrance when being fertilised with 100% of muck and green manure. With much of inorganic fertiliser, the rice's fragrance shall be noticeably decreased. Besides, during the period of rice branches sprouting and rice in the ear of rice corn, one week before and after the rice blossoming time, fertilizer for leaves and growing stimulants like chlorophyll, Komix, Antonik are often put down to manure Tam Xoan rice.

This cultivating techniques and habits present an important factor having impact on the quality and special fragrance of Hai Hau Tam Xoan rice.

*e. Tending:* Tam Xoan rice variety must be tended for the first time when it takes root (10-15 days after rice seedlings cultivation) and for the second time by the end of the period of rice branches sprouting and rice in the ear of rice corn (35-40 days after cultivation), in combination with weeding, mud scouring and turning up to the root.

*f. Watering:* The water level must be kept at 3-5 cm. Alluvial water should be irrigated to rice field from 14-18 turns/crop.

*g. Pestilent insect prevention:* IPM synthetic measures should be used to watch for, discover and treat pestilent insects.

*h. Impurities disposal:* Impurities disposal should be carried out in 4 periods: rice seedlings period, rice branches sprouting period, before and after rice blossoming time, and harvest preparation period.

### ***1.6. Preservation and harvest techniques***

- Tam Xoan rice can be harvested 30-35 days after the blossom of the rice, when the ripen ratio is 85% (1/3 end of the rice ear is half-ripe).

- Before the harvest, the rice quality must be checked according to a compulsory procedure. The moisture of the product fluctuates from 12-14%. After being harvested, the rice must be dried, cleanly fanned, packed and preserved in dry and clear place.

### ***1.7 Processing techniques***

Tam Xoan rice is processed by 2 methods: manual pounding and white rubbing. The manual pounding processing has now been innovated by using machinery basing on functioning principles of rice mortar with the requirement that Tam Xoan rice must be early harvested.

*a. Rice husk splitting:* Rice husk shall be splitted by splitting machine with the following requirements: the rice must not become hot after splitting, the ratio of rice paddy after splitting is below 5%, the rice after splitting must not be left over 12 hours before the next processing.

*b. White rubbing:* Tam Xoan rice can be rubbed by 2 methods: manual pounding and rubbing machine, the detailed process is as follows:

Pounding process: The rice shall be pounded in motor mortar; all the mortars are set with certain norms related to capacity and pounding time to ensure the same quality among the batches. Pounding time/mortar: 40-45 minutes, rice amount/mortar: 27-30 kg.

Rubbing process: the rice shall be rubbed by the machine; ensuring that the temperature of the rice must not exceed 30° C, with 3 rubbing times.

*c. Rice cleaning:* Rice cleaning phase includes activities such as splitting bran, grit, husk, rice with husk and weeds with detailed requirements as follows: ensuring that there will be no grit, husk, rice with husk and weed among the rice; ensuring certain ratio of broken rice to increase the fragrance of the rice without influencing the quality of cooked rice (ratio of broken rice is 10%).

*d. Packaging:* The processed rice shall be instantly packed, with following requirements: packed by vacuum machine or lined with one nylon layer in the bag, packed in nylon bags with the amount of 2-5 kg/package; the package must be labeled with the sample; each rice bag must have an using instruction sheet inside; the name of producing household (or code of the household for easy control and check) must be seen on the surface of the package; the packed rice must not contain husk, weed, etc.

## **2. Specific conditions having impact on the quality of Tam Xoan rice**

Pursuant to the study results, the following conditions have decisive influence on the specific quality of Hai Hau Tam Xoan rice:

### ***2.1. Topography, climate***

As a coastal and estuary zone, Hai Hau district's topography is relatively flat, with the land height from 0.5m to 0.7m. Hai Hau is surrounded by Ninh Co river system and a number of channels, thus creating a good irrigation system which is convenient for the irrigation and alluvium supply for the field land, especially suitable for the cultivation and development of Tam Xoan rice.

The climate in Hai Hau is the monsoon climate with 2 distinct seasons: dry season and rainy season and also with climate characteristics of the coastal ecological region. This type of climate is particularly suitable to the development of Tam Xoan rice which can only be cultivated under winter crop condition as it has periodic optical response and is suitable only to short daylight.

- Highest and lowest temperature, especially the difference in temperature between day and night from October to December present important factors as it helps to prolong rice ripening time during the rice blossoming period.

- The monsoon regime with high humidity of 95-100% in October-December with mist during the blossom period is the ideal condition for the low ripening of the rice and accumulation of the fragrance.

### **2.2. Land for cultivating Tam Xoan rice**

Land for cultivating Tam Xoan rice has mechanical component of medium to heavy soil, with low and high layer and a favourable irrigation system. The salinity ratio of the land in the depth of 50cm often reaches 0.02-0.05%. This factor makes the region especially suitable to the development of speciality rice, particularly Tam Xoan rice.

### **2.3. Rice variety, cultivation-harvesting-preservation-processing procedure**

The traditional experiences and actual advances in rice variety selection process have gradually revigorated Tam Xoan rice exactly like the original one.

Besides, the habits of fertilizing muck and green manure for the rice is the decisive factor for the specific quality of Hai Hau Tam Xoan rice.

Tam Xoan rice is harvested when 85% of the rice is ripe (1/3 end of the rice ear is half-ripe) and processed by the traditional pounding method. This will ensure the special fragrance of the rice and the nutriment on the surface of the rice seed.

Specific natural factors which have an impact on the quality of Hai Hau Tam Xoan Rice are summed up in the following table:

**Table 2: Sum-up table on specific natural factors having an impact on the quality of Tam Xoan Rice**

No.	Specific standards	Quality and quantity
1	Annual average raindrop (mm)	132.9
2	Annual average evaporation quantity (mm)	72.7
3	Annual average humidity (%)	83.3
	Annual average humidity in the last three months (October to December)	95-100
4	Annual average temperature (C)	24.1
5	Soil types	Neutral alluvial soil with Fle-g layer,

		enriched with dust and organics
6	Soil composition	Soil mechanical composition of medium and heavy soil with following component: Sand (%) 25-30 Limonite (%) 50-55 Clay (%) 20-25
7	Salinity (%)	0.02 - 0.05
8	pH KCl	6.0 - 7.0

## II. GEOGRAPHICAL TERRITORY CORRESPONDING TO THE APPELLATION OF ORIGIN “HAI HAU”

Geographical territory corresponding to the appellation of origin “HAI HAU” is the area with all specific factors as mentioned in Table 2 on specific natural factors having an impact on the quality of Tam Xoan Rice.

The geographical territory corresponding to the appellation of origin “HAI HAU” comprises 19 districts (details in the map enclosed in the Annex) as follows:

No.	District's name	Tam Xoan rice cultivated area surface	
		Areas specially suitable for rice cultivation	Areas suitable for rice cultivation
	<b>Total</b>	<b>2250.3</b>	<b>3520.2</b>
1	Hai Duong	552.0	-
2	Hai An	386.3	-
3	Hai Anh	-	434.9
4	Hai Bac	-	210.8
5	Hai Cuong	-	231.3
6	Hai Giang	-	120.4
7	Hai Hung	-	406.6
8	Hai Long	-	330.0

9	Hai Minh	-	385.5
10	Hai Ninh	164.0	113.4
11	Hai Phuong	-	298.0
12	Hai Phu	-	261.3
13	Hai Phong	234.6	156.4
14	Hai Son	277.5	-
15	Hai Tan	307.0	-
16	Hai Tay	-	347.7
17	Hai Toan	296.4	-
18	Con Town	32.5	129.9
19	Yen Dinh Town	-	94.0

*CERTIFIED BY COMPETENT AUTHORITY*

Hai Hau, 20 May 2006

*The Department of Science and Technology of Nam Dinh province certifies that the information provided for in the Description is the research results from two research themes, one on “Preserving and commercializing Hai Hau Tam Xoan Rice” which is realized by Vietnam Institute of Agricultural Science and Techniques and the Department of Agriculture and Rural Development of Nam Dinh province under the sponsorship of French Embassy in Ha Noi; the other is a scientific research theme at ministerial level on “Collecting and analyzing data on soil, climate, quality characteristics of the product for carrying out application procedure for registration of appellation of origin for 7 products” which is realized by National Institute for Agricultural Planning and Design.*

**HAI HAU TAM XOAN  
RICE ASSOCIATION**

**HEAD**

**Hoang Thi Nhan**

*On behalf of the Director*

*Deputy Director*

*(signed and sealed)*

*Nguyen Van Chinh*



# GEOGRAPHICAL MAP OF TAM XOAN IN HAI HAU DISTRICT

CỤC SỞ HỮU TRÍ TUỆ NATIONAL OFFICE OF INTELLECTUAL PROPERTY	
NGÀY DATE	08 -06- 2006
SỐ ĐƠN APL. No.	



## BẢN ĐỒ PHÂN VÙNG SINH THÁI HAI HAU DISTRICT

