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Revised by: 1. P. Hemsrichart,
2. S. Sukchan, 2004

HUAI THALAENG SERIES

Field Symbol: Ht

Distribution: Occupies moderate extent in Northeast Plateau.

Setting: The Huai Thalaeng soils are formed from washed deposit of sandstone and occur on middle part of peneplain. Relief is gently undulating which slopes range from 2 to 6 percent. Elevation ranges from 150 to 240 m above sea level. The climate is Tropical Savanna (Köppen 'Aw'). Average annual precipitation varies from 1,100 to 1,400 mm. Mean air temperature varies from 26 to 28°C.

Drainage, Permeability and Runoff: Moderately well drained soils. Permeability and runoff are rapid.

Vegetation and land used: Originally dry dipterocarp forest and mixed deciduous forest. Parts are cleared for upland crops such as kenaf, water melon, corn, cotton, beans, castor bean, cassava, etc. and settlement areas.

Characteristic Profile Features: The Huai Thalaeng series is a member of the coarse -loamy, mixed semiactive, isohyperthermic Typic Paleustults. They are deep soils and are characterized by a dark brown or brown sandy loam or loamy sand A horizon overlying a brown,pale brown or light yellowish brown sandy loam argillic B horizon. Reaction is slightly acid over very strongly acid to strongly acid.

Typifying Pedon: Profile code no.: NE-S-20/225

Elevation: 243 m

Relief: gently undulating

Slope: 3%

Sheet Name: Changwat Nakhon Ratchasima

Sheet No.: 5438 IV

Coordinate: 852418

Elevation: 243 m

Relief: gently undulating

Slope: 3%

Physiography: middle part of peneplain

Parent material: washed deposit from sandstone

Drainage: well drained

Permeability: moderate to rapid

Runoff: rapid

Ground water depth: >2.0 m

Flooding depth: -

Duration: -

Frequency: -

Annual rainfall: 1,100-1,300 mm

Mean temp: 26-28 °C

Climate type: Tropical Savannah

Natural vegetation and/or land use: cassava

Described by: J.Lorchai

Date: 26 June 1984

Revised by:

Horizon	Depth (cm)	Description
Ap	0-14	Dark brown to brown (7.5YR4/2) sandy loam; weak fine and medium subangular blocky structure; friable, nonsticky, nonplastic; many fine and medium roots; slightly acid (field pH 6.5); clear, smooth boundary.
AB	14-46	Dark brown to brown (7.5YR4/2) and reddish brown (5YR5/4) sandy loam; weak fine and medium subangular blocky structure; friable, nonsticky, nonplastic; common fine roots; slightly acid (field pH 6.5); clear, smooth boundary.
Bt1	46-115	Brown (7.5YR5/4) sandy loam; moderate fine and medium subangular blocky structure; firm, slightly sticky, plastic; patchy thin clay coating on ped faces and in pores; few fine roots; some pieces of charcoal; very strongly acid (field pH 5.0); clear, smooth boundary.
Bt2	115-150	Brown (7.5YR5/2-4) sandy loam; moderate medium and coarse subangular blocky structure; friable, slightly sticky, slightly plastic; patchy thin clay coating on ped faces and in pores; some pieces of charcoal, strongly acid (field pH 5.5).

Type Location: occupy mainly in the Changwat Nakhon Ratchasima

Range of Profile Features:

The thickness of an A or Ap horizon varies from 10 to 30 cm it has 7.5YR or 10YR hues value of 3 to 5 and chroma of 2 to 4. Structure is weak to moderate fine to medium blocky. Field pH value varies from 5.5 to 6.5

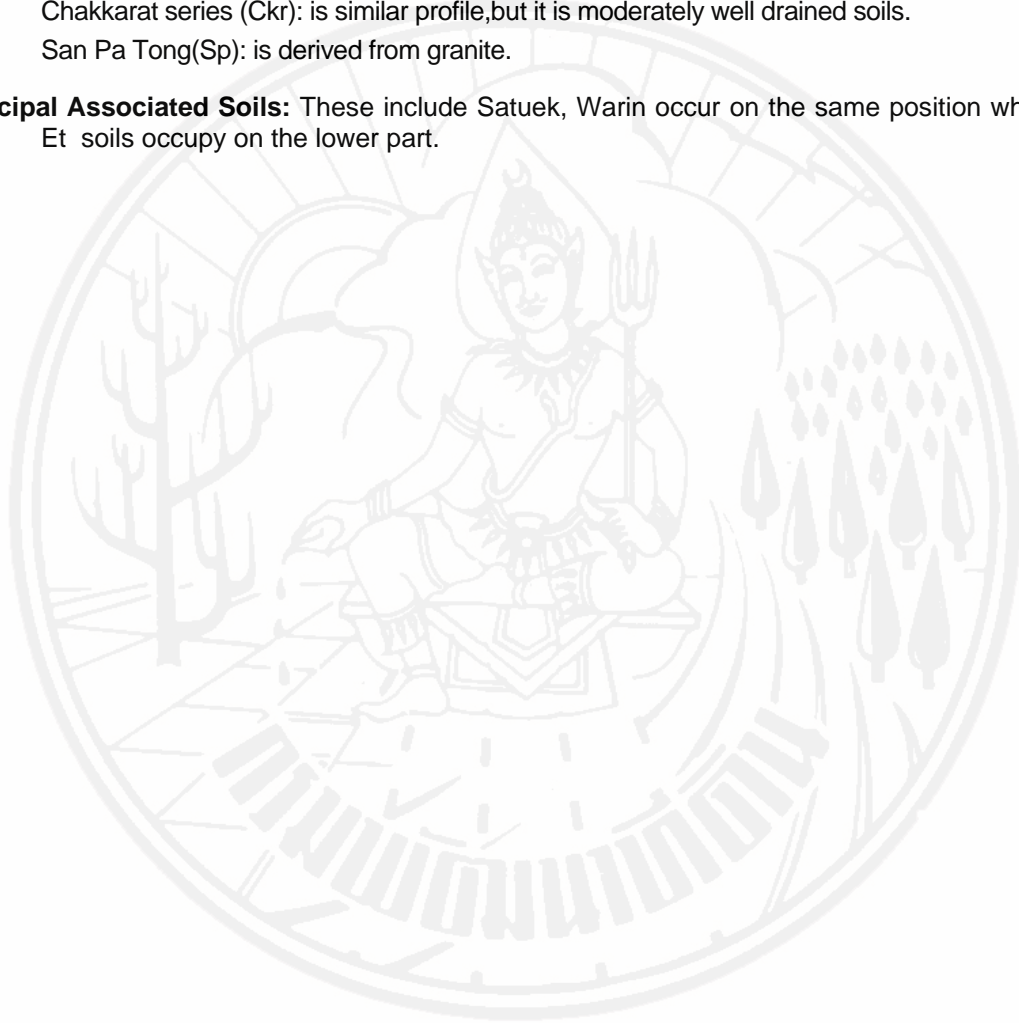
The B horizon has 7.5YR or 10 YR hues value of 4 to 6 and chroma of 3 to 4 in the upper part. The lower B horizon has similar hues, values of 5 to 7 and chroma of 2 to 4. The chroma 2 occurs below the depth of 75 cm from the soil surface. Structure of the B horizon is moderate fine and modium blocky. Few ironstone nodules may occur in the subsoils. Field pH values range from 4.5 to 5.5

Similar Soil Series:

Chakkarat series (Ckr): is similar profile, but it is moderately well drained soils.

San Pa Tong (Sp): is derived from granite.

Principal Associated Soils: These include Satuek, Warin occur on the same position whereas Roi-Et soils occupy on the lower part.



ANALYSIS RESULTS

Profile code no.:NE-S-20/225

(oven dry basis)

Soil series : Huai thalaeng (Ht)

Lab No.	Depth (cm)	Horizon	Particle size distribution analysis (% by weight)								Texture		pH		CaCO ₃ %	P, mg kg ⁻¹ Bray 2	K, mg kg ⁻¹ NH ₄ OAc
			USDA grading			Sand-fraction grading					Lab	Field	1:1	1:1			
			sand	silt	clay	vc	c	m	f	vf	result	estim ¹	water	KCl			
	0-14	Ap	70.3	27.7	2.0	1.0	2.5	6.6	1.6	58.6	sl	ls	6.5	5.8		7.8	57
	14-46	AB	72.1	21.9	6.0	0.4	1.5	6.9	0.8	62.5	sl	ls	6.0	5.0		6.3	28
	46-115	Bt1	67.8	20.2	12.0	0.6	2.3	7.9	1.3	55.7	sl	sl	5.0	3.7		3.6	34
	115-150	Bt2	63.7	25.8	10.5	0.3	1.4	5.7	0.9	55.4	scl	scl	5.5	3.6		4.2	25

Depth (cm)	Air dried to oven dried	C %	N %	Exchange capacity and cations (cmol ₍₊₎ kg ⁻¹)								Base satur ¹ (%)		ECEC cmol ₍₊₎ kg ⁻¹ (B+D)	Al KCl extr. cmol ₍₊₎ kg ⁻¹ (D)	Electrical conduct ^y (ECx10 ⁶) dS m ⁻¹	
				Ca	Mg	K	Na	SUM cations (B)	Extr. acidity (A)	SUM (B+A)	CEC NH ₄ OAc (C)	CEC 100g Clay	B/Cx100				(Bx100)/(B+A)
				0-14	0.1	0.42		2.20	0.80	0.10	0.20	3.30	1.10				4.40
14-46	0.1	0.25		1.50	0.60	0.06	0.30	2.46	1.30	3.76	1.40	23.3	100	65		0.01	
46-115	0.5	0.14		0.60	1.10	0.06	0.40	2.16	4.30	6.46	4.20	35.0	51	33		0.02	
115-150	0.5	0.09		0.60	0.60	0.06	0.30	1.56	3.50	5.06	4.10	39.0	38	31		0.03	