Proposed by P. Vijarnsorn, 1969
Revised by :
P. Vijarnsorn and staffs, 1988
W. Sirichuaychoo, 2004

VISAI SERIES **Field Symbol: Vi**

Distribution: Occupies a small extent in Peninsular Thailand and some area in Southeast Coast of Thailand.

Setting: Visai soils They are formed from alluvium on alluvium plain (low terrace) at the elevation from 10 to 20 m above mean sea level. The relief is mainly level to nearly level with slope less than 2 percent. The climate is Tropical Rain Forest (Koppen 'Af') or Tropical Monsoon (Koppen 'Am') climate. Average annual precipitation is from 1,800 to 3,000 mm. Average annual air temperature is from 26 ^{o}C to 28^{o}C.

Drainage, Permeability and Surface Runoff: Drainage is poorly drained, permeability is estimated to be rapid over moderate and surface runoff is slow. The soil profile is usually saturated with water for 2 to 4 months during rainy season.

Vegetation and Land Use: Mostly used for paddy rice but some areas used for para rubber, fruit trees and some upland crops. When abandoned, revert to low secondary shrubs.

Characteristic Profile Features: Visai series is a member of the fine-loamy, mixed, semiactive, isohyperthermic Typic Plinthaquults (soil taxonomy, 2003). They are very deep soils and are characterized by a dark grayish brown or brown sandy loam surface or A horizon overlying a light brownish gray sandy clay loam upper argillic B horizon which underlain by a light gray clay loam or clay lower argillic B or BC horizon at the depth between 100 to 150 cm from the soil surface. Mottles occur throughout the soil profile in the shade of brownish, yellowish and reddish color. Plinthite that forms a continuous phase or constitutes of more than 50 percent of the soil matrix within 1.5 m of the soil surface. Very strongly acid to strongly acid, reaction values range from 4.5 to 5.5.

Typifying Pedon: Visai sandy loam, from an area in Chumphon Agricultural Collage, Amphoe Sawi, Changwat Chumphon, 1 to 2 percent slopes, 10 to 30 cm flooding depth, less than 1 meter ground water table depth.

Profile Code Number: S-58/4, described by P. Vijarnsorn, 30 September 1969 (moist colors unless otherwise stated).

Horizon	Depth (cm)	Description
Apg	0-10/12	Dark grayish brown (10YR4/2) sand loam; weak fine and medium subangular blocky structure; friable, slightly sticky and nonplastic; common interstitial pores; plentiful fine roots; slightly acid (field pH 6.5); clear wavy boundary.
Bg	10/12-32	Light gray (10YR7/1) sand loam; few fine distinct strong brown (7.5YR5/8) mottles; moderate fine and medium subangular blocky structure; friable, slightly sticky and nonplastic; many fine interstitial pores; very few fine roots; neutral (field pH 7.0); clear smooth boundary.
Btg	32-54	Light brownish gray (10YR6/2) sandy clay loam; many medium distinct strong brown (7.5YR5/8) mottles; moderate medium subangular blocky structure; sticky and slightly plastic; continuous cutan along ped faces; many fine to medium interstitial pores; very few fine roots; very strongly acid (field pH 5.0); gradual smooth boundary.
Btgv	54-100	Light gray or gray (10YR6/1) clay loam; many medium distinct strong brown (7.5YR5/8) mottles, accompanying with plinthite of red (2.5YR4/8) that formed as constitutes of more than 50% of soil matrix; strong medium subangular blocky structure; firm, sticky and plastic; continuous cutan along ped faces; common medium interstitial and tubular pores; very strongly acid (field pH 5.0).

Type Location:

Name of village, Ban Visai, Tambon Visai, Amphoe Sawi, Changwat Chumphon.

Range of profile Features:

The surface or A horizon sandy loam ranges between 1 to 15 cm in thickness and has 10YR or 7.5YR hues, values 3 to 5 and chromas 2 or 3. The soil structure is weak fine and medium subangular blocky. Very strongly acid to strongly acid, reaction values range from 4.5 to 5.5.

The upper argillic B horizon sandy clay loam average clay content ranging between 18 to 35 percent, has 10YR or 7.5YR hues, values 3 to 5 and chromas 2 or less. The lower argillic B or BC usually formed at the depth between 80 to 150 cm from the soil surface. Mottles occur throughout the soil profile in the shade of brownish, yellowish and reddish color. Plinthite that forms a continuous phase or more than half of the matrix within 1.5 m of the soil surface. The structure is moderate fine and medium subangular blocky. Very strongly acid to strongly acid, reaction values ranges from 5.0 to 5.5.

Similar Soil Series:

Sathon series (Stn): fine-loamy, mixed, semiactive, isohyperthermic Typic Plinthaquults, gravelly layer between 50 and 100 cm of the soil surface.

Nam Krachai series (Ni): coarse-loamy, mixed, semiactive, isohyperthermic Typic Plinthaquults, lighter texture with high sand fraction in subsoil.

Principal Associated Soils:

These include Nam Krachai and Sathon series. The Nam Krachai soils occur on higher position adjacent to middle terrace. Sathon series occurs on the same topography but gravelly layer is present in subsoil.

ANALYSIS RESULTS (oven dry basis)

Profile code No.: S-58/4

Soil series: Visai series (Vi)

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_4OAc
			USDA grading			Sand-fraction grading					Lab	Field	1:1	1:1			
			sand	silt	clay	vc	c	m	f	vf	result	estim^{n}	water	KCl			
P-1622	0-10/12	A	50.0	47.5	2.5						sl	sl	5.0	3.9	0.3	1.6	21
P-1623	10/12-32	Bg	50.5	45.5	4.0						sl	sl	6.2	4.5	0.0	1.9	10
P-1624	32-54	Btg	38.0	40.0	22.0						l	scl	5.7	3.0	0.2	1.4	30
P-1625	54-100	Btgv	30.0	39.5	30.5						cl	cl	5.7	3.4	0.3	1.4	42

Depth (cm)	Air dried to oven dried	C %	N %	Exchange capacity and cations ($cmol_{(+)}$ kg^{-1})									Base satur^{n} (%)		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_4OAc (C)	CEC 100g Clay	B/Cx100	(Bx100)/ (B+A)			
0-10/12	0.2	0.68	0.07	0.50	0.10	0.02	0.10	0.72	3.10	3.82	2.6	104.0	28	19			0.02
10/12-32	0.2	0.01	0.01	0.10	0.30	0.10	0.50	1.00	1.50	2.50	0.8	20.0	100	40			0.01
32-54	0.9	0.02	0.02	0.10	1.00	0.10	0.90	2.10	6.30	8.40	6.0	27.3	35	25			0.02
54-100	0.1	0.03	0.03	0.90	0.20	0.10	0.10	1.30	7.70	9.00	8.9	29.2	15	14			0.03

Surveyor: P. Vijarnsorn

Date: Sept. 30, 1969

Reported by: W. Sirichuaychoo

Date: Nov. 7, 1998