Proposed by P. Vijarnsorn, 1968
Revised by :
P. Vijarnsorn and staffs, 1988
W. Sirichuaychoo, 2004

SAI BURI SERIES **Field Symbol: Bu**

Distribution: Occupies moderate extent in Peninsular Thailand and some areas in Southeast Coast of Thailand.

Setting: Sai Buri soils are formed from alluvium on the lower part of river levee or alluvium plain. Relief is nearly level to gently undulating with slope less than 5 percent. Elevation ranges from 5 to 20 m above mean sea level. The climate is Tropical Rain Forest (Koppen 'Af') or Tropical Monsoon (Koppen 'Am'). Average annual precipitation is above 1,500 mm. Average annual air temperature is from 26 ^{o}C to 28^{o}C.

Drainage, Permeability and Surface Runoff: Drainage is somewhat poorly to moderately well drained, permeability is estimated to be moderate and surface runoff is slow. Ground water level lies below 1 meter almost throughout the year. Flooding may occur due to flash flood or heavy rain but within a few days.

Vegetation and Land Use: Mainly used for para rubber, oil palm and fruit trees growing. Parts used for paddy rice and vegetables.

Characteristic Profile Features: The Sai Buri series is a member of the fine-silty, kaolinitic, isohyperthermic Aquic Kandiudults (Soil Taxonomy, 2003). They are very deep soils and are characterized by a very dark grayish brown to brown silt loam surface or A horizon overlying a brownish or yellowish silt loam or silty clay loam upper kandic B horizon which inturn overlies a grayish silty clay loam lower kandic B horizon (silty clay may occurred in deeper subsoil). Mottles of brownish, yellowish occur throughout subsoil and gray color occurred within 75 cm from the soil surface and reddish mottles may occurred. Very strongly acid to strongly acid in surface, reaction values range from 4.5 to 5.5 and very strongly acid, reaction values range from 4.5 to 5.0 in subsoil.

Typifying Pedon: Sai Buri silty loam – para rubber plantation, Na Pau, Tambon Na Pau, Amphoe Muang, Changwat Nakhon Si Thammarat, 23 m above mean sea level, 1 percent slopes (sheet name Changwat Nakhon Si Thammarat, sheet number 4936 II, coordinate 959218).

Profile Code Number: S-62/53, described by P. Hemsrichart, 12 March 1975 (moist colors unless otherwise stated).

Horizon	Depth (cm)	Description
A	0-8	Dark brown to brown (10YR4-5/3) silt loam; weak fine and medium subangular blocky structure; friable, slightly sticky and slightly plastic; many very fine, fine and few coarse roots; many fine mica flakes; strongly acid (field pH 5.5); clear smooth boundary.
BA	8-26	Brown to yellowish brown (10YR5/3-4) silt loam; moderate medium and coarse subangular blocky structure; friable, sticky and plastic; many very fine and fine interstitial pores, common medium tubular pores; common very fine and few fine roots; many fine mica flakes; very strongly acid (field pH 5.0); clear smooth boundary.
Bt	26-47	Mixed pale brown (10YR6/3), brown (7.5YR5/4) and strong brown (7.5YR5/6) silt loam; moderate medium and coarse subangular blocky structure; friable, sticky and plastic; broken thin clay films on ped faces; common very fine interstitial and tubular pores; few very fine and fine roots; many fine mica flakes; very strongly acid (field pH 5.0); clear smooth boundary.
Btg1	47-65	Light brownish gray to light gray (10YR6-7/2) silt loam; many medium distinct yellowish brown (10YR5/4), brown (7.5YR5/4) and strong brown (7.5YR5/8) mottles; moderate medium and coarse subangular blocky structure; friable, sticky and plastic; patchy thin clay films on ped faces; common very fine

		interstitial and tubular pores; few very fine roots; many fine mica flakes; very strongly acid (field pH 4.5); clear smooth boundary.
Btg2	65-100	Light gray (10YR7/2) silty clay loam; many medium distinct yellowish brown (10YR5/4), brown (7.5YR5/4) and strong brown (7.5YR5/8) mottles; moderate medium and coarse subangular blocky structure; friable, sticky and plastic; patchy thin clay films on ped faces; common very fine interstitial and tubular pores; few very fine roots; many fine mica flakes; very strongly acid (field pH 4.5).

Type Location:

Name of district, Amphoe Sai Buri, Changwat Pattani.

Range of Profile Features:

The surface or A horizon loam or silt loam is 10 to 20 cm in thickness and has 10YR or 7.5 YR hues, values 3 to 4 and chromas 2 to 4. Structure is moderate fine and medium subangular blocky. Very strongly acid to moderately acid, reaction values range from 5.0 to 6.0.

The upper argillic B clay loam or silty clay loam has 10YR or 7.5YR hues, values 5 or 6 and chromas 4 to 8 where as the lower argillic B horizon, which usually occurred below 40 cm but within 75 cm from the soil surfaces, has 10YR or 2.5Y hues, values 6 or 7 and chromas 2 or less. Structure is moderate medium subangular blocky. Mottles are brownish, grayish and/or reddish mottles commonly occur throughout subsoil. Very strongly acid to strongly acid, reaction values range from 4.5 to 5.5.

Similar Soil Series:

Rueso series (Ro): fine-silty, mixed, semiactive, isohyperthermic Typic Palehumults, well drained, occurred on higher part of river levee.

Phak Kat series (Pat): fine, mixed, semiactive, isohyperthermic Plinthaquic Paleudalfs, is the fine-clayey family and high base saturation.

Principal Association Soils:

These include Pak Kat series on the lower part and Rueso soils on the higher position. However, these soils may occur as a soil complex.

ANALYSIS RESULTS

(oven dry basis)

Profile code No.: S-62/53

Soil series: Sai Buri series (Bu)

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			
Pf-623	0-8	A	37.0	56.0	7.0						sil	sil	4.4	3.9	0.3	3.0	67
Pf-624	8-26	BA	34.0	49.0	17.0						l	sil	4.9	3.9	0.3	1.9	38
Pf-625	26-47	Bt	30.5	45.0	24.5						l	sil	4.9	3.8	0.9	1.2	35
Pf-626	47-65	Btg1	28.0	46.0	26.0						l	sil	5.1	3.8	0.3	1.2	47
Pf-627	65-100	Btg2	24.5	37.5	38.0						cl	sicl	5.1	3.8	0.0	1.4	53

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)			
0-8	0.9	1.34	0.08	0.40	0.20	0.20	0.20	1.00	8.40	9.40	5.1	72.9	20	11			0.23
8-26	4.3	0.95	0.04	0.20	0.10	0.10	0.20	0.60	7.90	8.50	5.3	31.2	11	7			0.06
26-47	3.6	0.45	0.03	0.30	0.10	0.10	0.30	0.80	7.90	8.70	5.0	20.4	16	9			0.04
47-65	1.6	0.38	0.03	0.30	0.10	0.20	0.20	0.80	8.20	9.00	5.3	20.4	15	9			0.04
65-100	1.2	0.61	0.02	0.30	0.10	0.10	0.40	0.90	8.50	9.40	5.7	15.0	16	10			0.04

Surveyor: P. Hemsrichart

Date: March 12, 1975

Reported by: W. Sirichuaychoo

Date: Nov. 24, 1998