

Proposed by: S. Panichapong, 1961
 Revised by : 1. C. Changprai, 1971
 2. B. Boonsompopphan,
 P. Hemsrichart, 1988
 3. A. Suchinai,
 S. Sukchan, 2004

BURI RAM SERIES

Field Symbol: Br

Distribution: Small extent in Northeast and Central Highlands.

Setting: Buri Ram soils are basalt derived and occur on lower parts of lava flow. Relief is level to nearly level which a range of slope is less than 2 percent. Range of elevation is 150 to 160 m above sea level. The climate is Tropical Savanna (Köppen 'Aw'). Average annual precipitation is 1,100 to 1,300 mm. Mean annual air temperature varies from 26 to 28°C.

Drainage, Permeability and Runoff: Moderately well drained, flooded by impounded rain water up to 30 cm for 2 to 3 months. Permeability is slow to very slow. Runoff is very slow.

Vegetation and Land Use: Mainly used for transplanted rice, but originally is low open dipterocarp forest.

Characteristic Profile Features: The Buri Ram series is a member of fine, smectitic, isohyperthermic Ustic Epiaquerts. They are deep soils which are characterized by a black, very dark gray or dark gray clay A horizon overlying a dark gray or very dark grayish brown clay cambic B horizon. They crack deeply and contain slickensides and pressure faces. Reaction is slightly acid to neutral over neutral to mildly alkaline.

Typifying Pedon: Profile code no. is NE-S-21/4. (moist colors unless otherwise stated).

Location: about km #1, right side of the road Buri Ram to Prakone Chai, Amphoe Mueang Changwat Buri Ram.

Sheet Name: Changwat Buri Ram

Sheet No. 5655 IV

Coordinate:

Elevation: 155 m

Relief: level to nearly level

Slope: <2%

Physiography: lower part of basaltic terrains

Parent material: residuum and colluvium from basalts

Drainage: moderately well drained

Permeability: slow to very slow

Runoff: very slow

Ground water depth: >1.5 m

Flooding depth: up to 30 cm

Duration: 2-3 month

Frequency: every year

Annual rainfall: 1,100-1,300 mm

Mean temp: 26-28 °C

Climate type: Tropical Savannah

Natural vegetation and/or land use: mainly used for transplanted rice

Described by: A. Chotimon

Date: 17 January 1971

Revised by:

Horizon	Depth (cm)	Description
Ap	0-23	Black (10YR 2/1) clay; many fine distinct strong brown along root channels and common coarse distinct strong brown (7.5YR 5/6) mottles on ped faces; moderate coarse subangular blocky structure; extremely firm, very sticky, plastic; common fine and few interstitial pores; many very fine and fine and common medium roots; slightly acid (field pH 6.5); clear, wavy boundary.
Bss1	23-43	Very dark gray (10YR 3/1) clay; common fine dark reddish brown (5YR 3/4) mottles on ped faces; weak coarse subangular blocky structure; firm, very sticky, very plastic; common very fine and fine interstitial pores; common fine root; few fine and medium slightly hard rounded iron-manganese nodules; slickensides; neutral (field pH 7.0); clear, wavy boundary.

Bss2	43-78	Very dark gray (10YR 3/1) clay; weak coarse subangular blocky breaking to strong medium subangular blocky structure; firm, very sticky, very plastic; few fine interstitial pores; few fine and medium slightly hard and hard rounded iron-manganese nodules; very few fine roots; slickensides; neutral; (field pH 7.0); gradual, smooth boundary.
Bss3	78-125+	Very dark grayish brown (10YR 3/2) clay; moderate medium subangular blocky structure; firm, very sticky, very plastic; few fine interstitial pores; common fine and few medium hard and rounded iron-manganese nodules; slickensides; few fine basalt fragments; neutral (field pH 7.0).

Type Location : Name of Changwat Buriram were first described at Amphoe Mueang

Range of Profile features:

The thickness of an A horizon varies from 20 to 30 cm and has 10YR or 7.5YR hues, values of 2 to 4 and chromas of 2 or less. Structure is weak and/or moderate medium and coarse blocky. Few to common strong brown and yellowish brown mottles may occur along root channels and on ped faces. The pH values vary from 6.0 to 7.0.

The B horizon has 10YR hue, values of 3 or 4 and chromas of 2 or less. Structure is weak and/or moderate medium and coarse blocky. Few soft weathering basalt fragments and few to common ironstone nodules may occur in the deeper B horizon. The pH values vary from 7.0 to 8.0.

Similar Soil Series :

Lop Buri series (Lb): Marl and limestone derived soils. Scattered lime concretion occurs throughout the profile.

Principal Associated Soils : These include Chai Badan, Surin and Sop Prap Series. They occupy on the higher position.

ANALYSIS RESULTS

Profile code NE-S-21/4

(oven dry basis)

Soil series : Buri Ram (Br)

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
	0-23	Ap	9.0	46.0	45.0						sic	c	5.5	4.5	1.4	17.1	82
	23-43	Bss 1	90.0	36.0	55.0						c	c	6.1	4.9	1.2	15.2	73
	43-78	Bss 2	10.5	30.5	59.0						c	c	6.7	5.4	2.4	12.1	73
	78-125+	Bss 3	16.0	29.0	55.0						c	c	6.9	5.9	2.4	4.7	79

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				CEC	CEC	B/Cx100	(Bx100)/
				cations	acid	(B)	(A)	(B+A)	NH ₄ OAc	100g	Clay	(B)	(A)	(B+A)				(B+A)	(B+A)		
0-23	5.6	0.89		19.0	12.6	0.2	0.8	32.60	15.4	48.00	39.3	87.3	83	68			0.03				
23-43	6.3	0.48		22.7	14.2	0.2	1.9	39.00	12.5	51.50	53.3	97.5	73	76			0.03				
43-78	6.6	0.40		24.4	16.1	0.2	2.4	43.10	8.2	51.30	53.0	89.4	81	84			0.04				
78-125+	6.0	0.28		20.0	15.6	0.2	2.7	40.50	5.7	46.20	42.7	77.6	95	88			0.05				