

Proposed by: F.R. Moormann et al-1962
Revised by: 1. B. Boonsompophan,
P. Hemsrichart, 1988
2. A. Suchinai,
S. Sukchan, 2004

SAKON SERIES

Field Symbol: Sk

Distribution: Occupies small extent in Northeast Plateau.

Setting: Sakon soils are formed from washed deposit over siltstone and/or shale and occur on the wash surface. Relief is level to nearly level. Slope is 1 percent or less. Elevation is from 150 m above sea level. The climate is Tropical Savanna (Köppen 'Aw'). Average annual precipitation varies from 1,300 to 2,000 mm. Mean annual air temperature is from 26 to 28°C.

Drainage, Permeability and Runoff: Somewhat poorly drained. Permeability is slow in order that sheet of laterite impedes water penetration. Surface runoff is slow. Ground water table falls below 2 meters during the peak of the dry period.

Vegetation and Land Use: Mainly low open dipterocarp forest and used for constructing material.

Characteristic Profile Feature: The Sakon series is a member of the loamy-skeletal over fragmental mixed, subactive, isohyperthermic, Petroferric Haplustults. They are shallow soil to sheet of laterite layer and are characterized by a very dark gray or very dark brown loam or sandy loam (gravelly) A horizon overlying a brown or strong brown gravelly loam or clay loam argillic B horizon which in turn overlies a sheet of laterite layer. The sheet of laterite layer occurs within 50 cm of the surface. Reaction is medium acid to slightly acid over strongly acid to very strongly acid.

Typifying Pedon: Profile code no. is NE-N-28/28 (moist colors unless otherwise stated).

Location: 1 km north of Ban Don Noi, Amphoe Mueang Changwat Sakon Nakhon.

Sheet Name: Amphoe Na Wa

Sheet No.: 5843 IV

Coordinate: 095104

Elevation: 150 m

Relief: nearly level

Slope: <1%

Physiography: wash surfaces

Parent material: washed deposit over siltstone and/or shale

Drainage: somewhat poorly drained

Permeability: slow

Runoff: slow

Ground water depth: <2 m

Flooding depth: -

Duration: -

Frequency: -

Annual rainfall: 1,587 mm

Mean temp: 26.1 °C

Climate type: Tropical Savannah

Natural vegetation and/or land use: open dipterocarp forest

Other:

Described by: C. Changprai et. al.

Date: 30 April 1971

Revised by:

Horizon	Depth (cm)	Description
A	0-10	Very dark brown (10YR 2/2) very gravelly loam; friable, slightly sticky, slightly plastic; many medium and coarse interstitial pores; coarse fraction consists of about 80% ironstone gravels; many fine, common medium and few coarse roots; slightly acid (field pH 6.5); clear, smooth boundary.
Bt	10-33	Dark brown to brown (7.5YR 4/4) very gravelly clay loam; sticky, plastic; moderately thick clay coating around the gravels and ped faces; coarse fraction consists of about 80% ironstone gravels; many medium and coarse interstitial pores; common fine and few medium roots; strongly acid (field pH 5.5); clear, smooth boundary.

C 33-40 Sheet of laterite with multicolored colors which are in shades of reddish, brownish grayish and whitish colors; strongly acid (field pH 5.0).

Range of Profile Features:

The thickness of A horizon varies from 10 to 15 cm and has 10YR or 7.5YR hues, values of 2 to 4 and chromas of 1 to 4. Structure is weak to moderate fine and medium blocky. Field pH values are from 5.5 to 7.0.

The B horizon occur as thin layer underlain by the layer of sheet of laterite and has 7.5YR or 5YR hues, values of 4 or 5 and chromas of 4 to 6 in 7.5YR and of 3 or 4 in 5YR. Structure is weak to moderate fine and medium blocky. Field pH values are from 4.5 to 5.5.

The C horizon is a layer of sheet of laterite and occur at variable depth, but within 50 cm of the surface. In place, it exposes at the surface.

The Sakon soils may have a layer of the paler color just above the sheet of laterite.

Similar Soil Series:

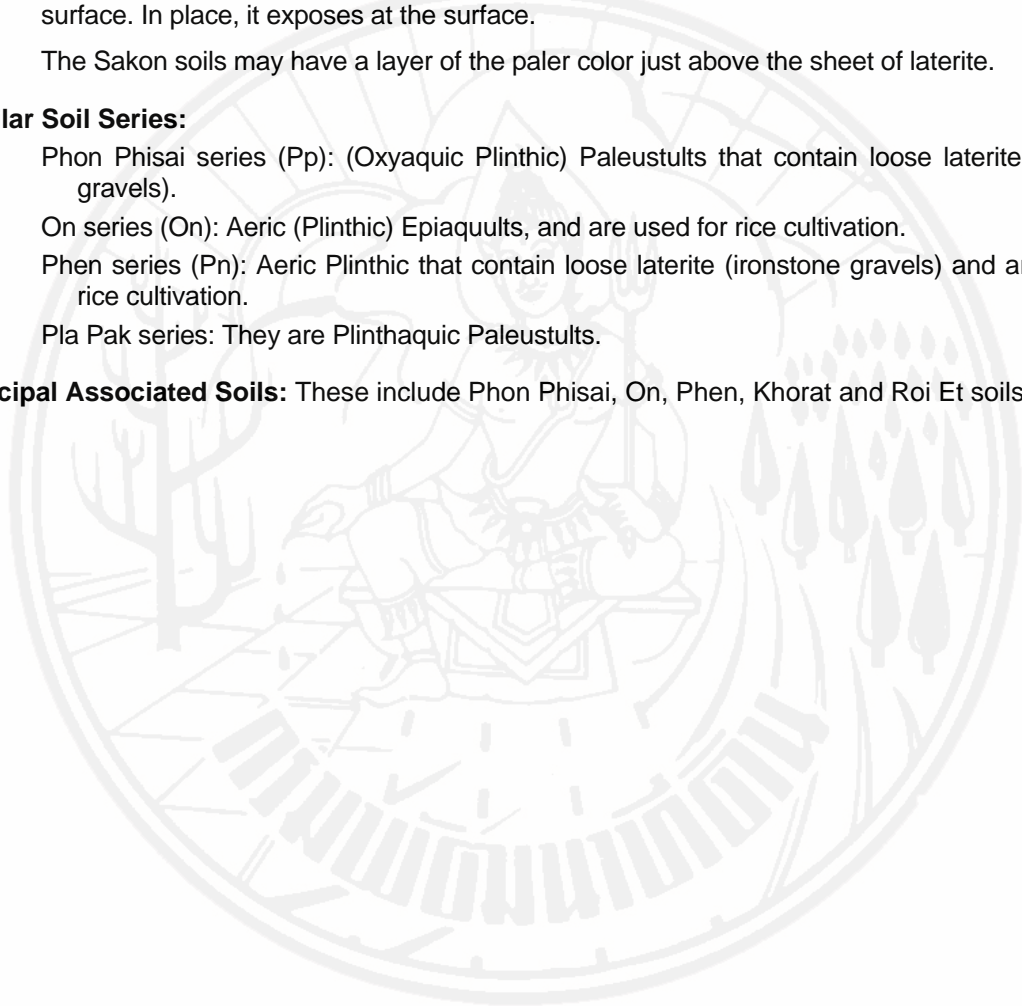
Phon Phisai series (Pp): (Oxyaquic Plinthic) Paleustults that contain loose laterite (ironstone gravels).

On series (On): Aeris (Plinthic) Epiaquults, and are used for rice cultivation.

Phen series (Pn): Aeris Plinthic that contain loose laterite (ironstone gravels) and are used for rice cultivation.

Pla Pak series: They are Plinthic Paleustults.

Principal Associated Soils: These include Phon Phisai, On, Phen, Khorat and Roi Et soils.



ANALYSIS RESULTS

Profile code no.:NE-N-28/28

(oven dry basis)

Soil series : Sakhon (Sk)

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				
P-242	0-10	A	47.5	41.5	11.0							I	vgl	5.9	5.1	1.2	3.8	155
P-243	10-33	Bt	37.0	42.5	20.5							I	vgcl	5.6	4.3	0.3	5.5	64
	33-40+	c	-															

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 ₄ OAc (C)	CEC 100g Clay	B/Cx100	(Bx100)/(B+A)				
				0-10	5.2	4.68		7.80	2.50	0.40	0.20	10.90	14.30	25.20	23.50			
10-33	3.8	1.00		2.90	1.60	0.20	0.10	4.80	9.80	14.60	13.00	63.4	37	33			0.01	
33-40+																		