JANGCHEON SERIES

Established Series
JYH, UKT
30 August, 1974

The Jangcheon series are members of the mixed, mesic family of Aquic Quartzipsamments [Hydragric Anthrosols (Eutric Oxyaquic Arenic) classified by WRB]. These soils have thin olive gray fine sand Ap horizons and olive brown and grayish brown fine sand, loamy fine sand, and medium sand C horizons. They occur on continental swale river bed.

Typifying Pedon: Jangcheon fine sand-paddy rice (Field description Seonsan Gun profile No. 37; colors are for moist soils.)

Slope: 0-2%

Elevation: m above m.s.l.

Soil moisture regime: Udic (Anthraquic)

Temperature regime: Mesic

Parent material: Alluvium

Diagnostic features: An ochric epipedon from a depth of 0 to 8 cm (An anthaquic horizon from a depth of 0 to 20 cm and a hydragric horizon from a depth of 20 to 120 cm by WRB).

Morphological properties of typifying pedon.

Ap - 0 to 8 cm. Olive gray (5Y 5/2) loamy fine sand; common fine distinct yellowish brown (10YR 5/4) mottles; structureless, massive; very friable, non sticky and non plastic; many fine to medium roots; common fine micas; clear smooth boundary; pH 6.0.

C1 - 8 to 20 cm. Olive brown (2.5Y 4/3) fine sand; few fine distinct dark yellowish brown

(10YR 4/4) mottles; structureless, massive; loose, non sticky and non plastic; few very fine to fine roots; micas as above; abrupt smooth boundary; pH 6.5.

C2 - 20 to 65 cm. Olive yellow to light olive brown (2.5Y 5.5/6) fine sand; few fine distinct dark yellowish brown (10YR 4/4) mottles; structureless, single grained; loose, non sticky and non plastic; common fine micas; no roots; gradual smooth boundary; pH 6.5.

C3 - 65 to 120 cm. Grayish brown (2.5Y 5/2) sand; many fine faint dark yellowish brown (10YR 4/4) mottles; structureless, single grained; loose, non sticky and non plastic; micas as above; pH 6.5.

Type Location: About 1 km. west from Dasig Village, Dasig Ri, Goa Eub, Gumi city, Gyeongsangbug Do.

Range in Characteristics: These soils have ochric epipedons. Soil depth is in excess of probably ranges from 2 to 3 meters or more over any very contrasting materials. The Jangcheon soils contain common fine mica flakes. Reaction ranges from strongly to slightly acid. Base saturation is over 60 percent except surface soils. Ap horizons are olive gray, grayish brown, or dark grayish brown fine sand, loamy fine sand, or sandy loam. C horizons are brown, yellowish brown, olive brown, olive yellow, light olive brown with gray mottles.

Competing Series and Their Differentiae: These are the Geumcheon, Nagdong, Sindab, Hwabong, Namgye, Gangseo and Opyeong series. The Geumcheon soils have coarser particle sizes and less moisture holding capacity. The Nagdong soils are similar except having better drainage. The Sindab soils are worse drainage and coarser texture. The Hwabong soils are better drainage and coarser particle sizes. The Namgye soils have skeletal throughout the profiles. The Gangseo soils are coarse loamy texture family. The Opyeong soils have coarse silty over sandy texture family.

Setting: The Jangcheon soils occur on nearly level to gently sloping undissected continental broad alluvial flood plains and on the concave side of river beds. Slopes range from 0 to 2 percent and dominant slopes are 1 to 2 percent.

Principal Associated Soils: These are the Geumcheon, Nagdong, Hwabong, Opyeong, Gangseo, and Bonryang soils. All of these soils are associated with similar physiographic positions.

Drainage and Permeability: Moderately well drained. Permeability is rapid or very rapid. Runoff is slow.

Use and Vegetation: Most areas are used for irrigated rice paddy.

Distribution and Extent: The Jangcheon soils are of small extent and occur on the broad flood plains throughout the country.

Series Established: Seonsan Gun, Gyeongsangbug Do, 1974.

Laboratory data sheets of typifying pedon.

Depth (cm)	Horizon	(--- Total ---) Clay LT .002	Silt .002 - .05	Sand .05 - 2	(-- Clay --) Fine LT .0002	Coarse LT .002	(-- Silt --) Fine .002 - .02	Coarse .02 - .05	(------- Sand -------) VF .05 - .10	F .10 - .25	M .25 - .50	C .5 - 1	VC 1 - 2
		- - - - - - - - - - - - Pct of < 2mm (3A1) - - - - - - - - - - - -											
0-8	Ap	2.9	6.4						8.8	64.1	13.1	0.5	0.2
8-20	C1	2.9	5.6						8.2	64.4	18.3	0.4	0.2
20-65	C2	1.5	2.0						5.5	72.0	19.0	0	0
65-120	C3	1.9	5.5						10.0	61.8	20.0	0.8	0

Depth (cm)	Coarse Fractions(mm) Weight 2-5	5-20	20-75	.1-75	>2mm Wt Pct of Whole Soil	Orgn C 6A1c	Total N 6B3a	Extr P 6S3	Total S 6R3a	(-- Dith -Cit --) Extractable Fe 6C2b	Al 6G7a	Mn 6D2a
	Pct of < 75mm (3B1)					Pct < 2mm		g/kg		Pct of < 2mm		
0-8						0.25						
8-20						0.18						
20-65						0.12						
65-120						0.12						

Depth (cm)	Ratio/Clay CEC 8D1	1500 kPa 8D1	Atterberg Limits LL 4P1	PI 4P	(Bulk Density) Field Moist 4A3a	33 kPa 4A1d	Oven Dry 4A1h	COLE Whole Soil 4D1	(- Water Content -) Field Moist 4B4	10 kPa 4B1c	33 kPa 4B1c	1500 kPa 4B2a	WRD Whole Soil 4C1
			Pct <0.4mm		- - g/cc - -			cm/cm	-- Pct of <2mm --				cm/cm
0-8										10.9	8.0	2.9	
8-20										10.7	7.5	2.7	
20-65					-					7.0	4.5	2.4	
65-120					-					10.6	6.8	2.9	

Depth (cm)	(NH4OAc Extractable Bases) Ca 5B5a 6N2e	Mg 5B5a 6O2d	K 5B5a 6Q2b	Na 5B5a 6P2b	Sum Bases	Acid-ity 6H5a	Extr Al 6G9a	(----- CEC -----) Sum Cats 5A3a	NH4-OAc 5A8b	Bases + Al 5A3b	Al Sat 5G1
	- - - - - - - - - - - - meq / 100g - - - - - - - - - - - -										Pct
0-8	1.29	0.35	0.08	0.07					3.05		
8-20	1.11	0.28	0.08	0.09					2.95		
20-65	2.00	0.43	0.10	0.07					2.75		
65-120	2.63	0.58	0.09	0.09					3.90		

Depth (cm)	(Base Sat) Sum 5C3	NH4-OAc 5C1	CO3 as CaCO3 <2mm 6E1g	Res 8E1	Cond 8I	(------ pH ------) NaF 8C1d	KCl 1: 1	CaCl2 .01M 8C1f	H2O 1: 1 8C1f	Acid Opt Den 8J	Oxalate Extraction Al 6G12	Fe 6C9a	Si 6V2
	---- Pct ----			ohms/cm	dS/m		1: 1	1: 2	1: 1		- Pct of <2mm -		
0-8		58.7					4.1		5.3				
8-20		52.9					3.9		5.4				
20-65		94.5					5.0		6.6				
65-120		86.9					4.7		6.6				