

School Farm

2023 NACTA Soils Judging Contest  
4-Year Division Scorecard

Master Copy

Contestant Name	
Contestant Number	
College	
Pit Number	
Number of Horizons	6 to a depth of 150 cm
Nail Depth	35

temperatures look similar sandy when cloudy

I. Soil Morphology

Score: \_\_\_\_\_

Prefix	HORIZONATION		BOUNDARY		TEXTURE			COLOR			STRUCTURE		CONSIST		SOIL FEATURES		SCORE		
	Master	Sub	No	Depth (cm)	Rock Frag Mod	Class	% Sand	% Clay	Hue	Value	Chroma	Grade	Type	Moist	RMF- Cone (Y/-)	RMF- Depl (Y/-)			
1	A	P	1	0-10	-	SL	55	13	10YR	3	2	3	PL	FR	N	N	(2)	(2)	(36)
1	A	P	2	10-20	-	SL	55	13	10YR	3	3	3	PL	FR	N	N	(2)	(2)	(36)
1	A	P	3	20-52	-	L	45	15	10YR	3	2	2	S&K	FR	N	N	(2)	(2)	(36)
1	B	W	1	52-83	-	SL	60	8	10YR	3	4	2	S&K	VFR	N	N	(2)	(2)	(36)
1	C		1	83-143	A	SL	65	5	10YR	4	3	0	MA	VFR	N	N	(2)	(2)	(36)
2	C		2	143-160	-	SIL	20	15	10YR	4	2	0	MA	FI	Y	Y	(2)	(2)	(36)

II. Soil Profile Characteristics

Score: \_\_\_\_\_

HYDRAULIC CONDUCTIVITY SURFACE (5)	CONDUCTIVITY LIMITING (5)	EFFECTIVE SOIL DEPTH (5)	WATER RETENTION (5)	SOIL WETNESS CLASS (5)	TOTAL SCORE
<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low	<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low	<input checked="" type="checkbox"/> Very deep (> 150 cm) <input type="checkbox"/> Deep (100 - 150 cm) <input type="checkbox"/> Mod. deep (50 - 99 cm) <input type="checkbox"/> Shallow (25 - 49 cm) <input type="checkbox"/> Very shallow (< 25 cm)	<input type="checkbox"/> Very low (< 7.5 cm) <input type="checkbox"/> Low (7.5 - < 15 cm) <input type="checkbox"/> Mod. (15 - < 22.5 cm) <input checked="" type="checkbox"/> High (22.5 cm)	<input type="checkbox"/> Class 1 (> 150 cm) <input checked="" type="checkbox"/> Class 2 (101 - 150 cm) <input type="checkbox"/> Class 3 (51 - 100 cm) <input type="checkbox"/> Class 4 (25 - 50 cm) <input type="checkbox"/> Class 5 (< 25 cm)	Part I _____ Part II _____ Part III _____ Part IV _____ Part V _____ Total _____

$20 \times 0.5 = 10$   
 $32 \times 0.2 = 6.4$   
 $91 \times 0.15 = 13.65$   
 $7 \times 0.22 = 1.54$   
 24.45

Horizon	pH	% Base Sat.	% Organic C	% CaCO <sub>3</sub>
1.	7.2	53	2	—
2.	7.2	52	1.5	—
3.	7.1	50	0.9	—
4.	7.0	47	0.6	—
5.	6.9	47	6.4	—
6.	6.8	46	6.2	—

Blue marker is in the third horizon at 35 cm.

Describe 6 horizons to a depth of 160 cm.

SITE NO. Pit 2

NACTA SOILS CONTEST  
4-Year Division  
SITE CARD

School Farm

III. Site Characteristics

Score: \_\_\_\_\_

PARENT MATERIAL (5 each)	LANDFORM (5)	SLOPE (5)	HILLSLOPE PROFILE (5)	SURFACE RUNOFF (5)
<u>Depression</u> ___ depression <u>Coastal &amp; Lacustrine</u> ___ beach ___ lakebed / playa <u>Eolian</u> ___ dune ___ loess bluff / hill / plain <u>Erosional</u> ___ upland head slope ___ upland side slope ___ upland nose slope ___ interfluvial/crest ___ base slope ___ eolian sand ___ loess ___ glacial till ___ glacial outwash ___ residuum ___ colluvium ___ volcanic deposit ___ alluvium ___ beach deposit ___ lacustrine / marine deposit ___ unconsolidated coastal plain sediments	<u>Fluvial</u> ___ alluvial fan ___ back swamp ___ floodplain ___ natural levee ___ stream terrace ___ drumlin / moraine / plain ___ esker / kame / crevasse filling ___ outwash plain / terrace <u>Glacial</u> ___	___ Concave ___ < 1% ___ 1 - 4.9% ___ 5 - 9.9% ___ 10 - 14.9% ___ 15 - 20% ___ > 20%	___ Summit ___ Shoulder ___ Backslope ___ Footslope ___ Toeslope ___ None	___ Negligible ___ Very low ___ Low ___ Medium ___ High ___ Very high

IV. Soil Classification

Score: \_\_\_\_\_

EPIPEDON (5)	SUBSURFACE HORIZON (5 each)	DIAGNOSTIC SOIL CHARACTERISTICS (5 each)	ORDER (5)
___ Mollic ___ Ochric ___ Umbric ___ None ___ Albic ___ Argillic ___ Calcic ___ Cambic ___ Duripan ___ Fragipan ___ Glossic	___ Gypsic ___ Kandic ___ Natric ___ Salic ___ Spodic ___ None ___ Abrupt Textural Change ___ Albic Materials ___ Andic Soil Properties ___ Durinodes ___ Fragic Soil Properties ___ Free Carbonates ___ Identifiable Secondary Carbonates ___ Lamellae	___ Lithic Contact ___ Lithologic Discontinuity ___ Paralitthic Contact ___ Plinthite ___ Slickensides ___ Spodic Materials ___ Volcanic Glass ___ None	___ Mollisol ___ Ultisol ___ Spodosol ___ Vertisol ___ Alfisol ___ Andisol ___ Aridisol ___ Entisol ___ Inceptisol

V. Interpretation

Score: \_\_\_\_\_

SUITABILITY AS A ROADFILL MATERIAL (5)	ABSORPTION FIELD (5)	ONSITE WASTE DISPOSAL	LOADING RATE (5)	HOUSES WITH BASEMENTS (5)
___ Slight ___ Moderate ___ Severe Reason Number (5): <u>None</u>	___ Slight ___ Moderate ___ Severe Reason Number (5): <u>4</u>	___	<u>0.84</u> gpd/ft <sup>2</sup>	___ Slight ___ Moderate ___ Severe Reason Number (5): <u>4</u>