

Dakota

2023 NACTA Soils Judging Contest  
4-Year Division Scorecard

Contestant Name	
Contestant Number	
College	
Pit Number	
Number of Horizons	_____ to a depth of _____ cm
Nail Depth	

I. Soil Morphology

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/-)	
(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(36)
1	A	p	1	0-8	AW	-	SL	65	8	10YR	2	1	GF	VFR	-	-	
1	A	p	2	8-30	GW	-	SL	70	8	10YR	3	1	SBK	FR	-	-	
1	B	w	-	30-56	GW	-	SL	73	8	10YR	3	1	SBK	FR	-	-	
1	B	t	1	56-92	GW	-	SL	73	8	10YR	3	1	SBK	FR	-	-	
1	B	t	2	92-140	GW	-	SL	60	8	10YR	4	1	SBK	FR	Y	Y	
1	C	-	-	140-170	-	-	LS	85	8	10YR	4	0	M	FR	Y	Y	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

II. Soil Profile Characteristics

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

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

NACTA SOILS CONTEST  
4-Year Division  
SITE CARD

SITE NO. Dakota Rd

Describe 6 horizons to a depth of 170 cm.

Blue marker is in the third horizon at no marker cm.

Horizon	pH	% Base Sat.	% Organic C	% CaCO <sub>3</sub>
1.	7.1	50	2.5	—
2.	7.1	53	2	—
3.	6.9	51	1.5	—
4.	6.9	49	1.5	—
5.	6.9	48	0.2	—
6.	6.8	48	0.1	—

Dakota B

III. Site Characteristics

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

PARENT MATERIAL (5 each)	LANDFORM (5)	SLOPE (5)	HILLSLOPE PROFILE (5)	SURFACE RUNOFF (5)
<u>Deposition</u> ___ eolian sand ___ loess ___ glacial till ___ glacial outwash ___ residuum ___ colluvium ___ volcanic deposit <u>X</u> ___ alluvium ___ beach deposit ___ lacustrine / marine deposit ___ unconsolidated coastal plain sediments	<u>Fluvial</u> <u>X</u> ___ alluvial fan ___ back swamp ___ floodplain ___ natural levee ___ stream terrace <u>Glacial</u> ___ drumlin / moraine / plain ___ esker / kame / crevasse filling ___ outwash plain / terrace	___ Concave <u>X</u> ___ < 1% ___ 1 - 4.9% ___ 5 - 9.9% ___ 10 - 14.9% ___ 15 - 20% ___ > 20%	___ Summit ___ Shoulder ___ Backslope ___ Footslope ___ Toeslope <u>X</u> ___ None	___ Negligible ___ Very low ___ Low ___ Medium ___ High ___ Very high
<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	<u>Mass Movement</u> ___ landslide / debris flow <u>Solution</u> ___ sinkhole <u>Tectonic / Volcanic</u> ___ lava flow / plain ___ volcanic feature			

IV. Soil Classification

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

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

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	___ Slight ___ Moderate ___ Severe	Reason Number (5): _____	Reason Number (5): _____ gpd/ft <sup>2</sup>	___ Slight ___ Moderate ___ Severe Reason Number (5): _____