Fruit Yard - 1

Master Co. Practice Pit: Fruit Yard Pit 1 Ord

2023 NACTA Soils Judging Contest
4-Year Division Scorecard

Contestant Name	
Contestant Number	
College	

Pit Number	
Number of Horizons	5 to a depth of 150 cm
Nail Depth	45

Jennifer Woods, Amber Stanley

I. Soil Morphology

Score_____

HORIZONATION				BOUNDARY		TEXTURE				COLOR			STRUCTURE		CONSIST	SOIL FEATURES		SCORE
Prefix	Master	Sub	No	Depth (cm)	Dist	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)	(2)	(36)
-	A	-	1	0-5	C	-	SL	55	12	10YR	3	2	2	GR	FR	-	-	
-	A	P	2	8-25	C	-	SL	60	10	7.5YR	3	3	2	SBK	FR	-	-	
-	B	W	1	25-74	G	-	SL	65	8	7.5YR	3	4	1	SBK	VFR	-	-	
-	B	w	2	74-104	G	-	LS	80	5	7.5YR	3	4	1	SBK	VFR	-	-	
-	B	w	3	104-150	-	-	SL	70	5	7.5YR	3	4	1	SBK	VFR	-	-	

II. Soil Profile Characteristics

Score: _____

HYDRAULIC CONDUCTIVITY SURFACE (5)	HYDRAULIC CONDUCTIVITY LIMITING (5)	EFFECTIVE SOIL DEPTH (5)	WATER RETENTION (5)	SOIL WETNESS CLASS (5)	TOTAL SCORE
X High	X High	X Very deep (> 150 cm)	___Very low (< 7.5 cm)	X Class 1 (> 150 cm)	Part I _____
___Moderate	___Moderate	___Deep (100 -150cm)	___Low (7.5 - < 15 cm)	___Class 2 (101 -150 cm)	Part II_____
___Low	___Low	___Mod. deep (50 - 99 cm)	___Mod. (15 -< 22.5 cm)	___Class 3 (51 -100 cm)	Part III_____
		___Shallow (25 - 49 cm)	X High (22.5 cm)	___Class 4 (25 -50 cm)	Part IV_____
		___Very shallow (< 25 cm)		___Class 5 (<25 cm)	Part V_____
					Total_____

94+46 = 120 : 20 x 0.15 = 18

NACTA SOILS CONTEST
4-Year Division
SITE CARD

Fruit Yard

SITE NO. Pit 1

Describe 5 **horizons to a depth of** 150 **cm.**

Blue marker is in the third horizon at 45 **cm.**

Horizon	pH	% Base Sat.	% Organic C	% $CaCO_3$
1.	7.0	52	3	—
2.	6.9	50	2	—
3.	6.8	49	.5	—
4.	6.8	48	.4	—
5.	6.7	45	.1	—
6.				

III. Site Characteristics

Score: _____

PARENT MATERIAL (5 each)	LANDFORM (5)			SLOPE (5)	HILLSLOPE PROFILE (5)	SURFACE RUNOFF (5)
___eolian sand ___loess ___glacial till ___glacial outwash ___residuum ___colluvium ___volcanic deposit X alluvium ___beach deposit ___lacustrine / marine deposit ___unconsolidated coastal plain sediments	***Depression*** ___depression ***Coastal & Lacustrine*** ___beach ___lakebed / playa ***Eolian*** ___dune ___loess bluff / hill / plain ***Erosional*** ___upland head slope ___upland side slope ___upland nose slope ___interfluve/crest ___base slope	***Fluvial*** ___alluvial fan ___back swamp ___floodplain ___natural levee X stream terrace ***Glacial*** ___drumlin / moraine / plain ___esker / kame / crevasse filling ___outwash plain / terrace	***Mass Movement*** ___landslide / debris flow ***Solution*** ___sinkhole ***Tectonic / Volcanic*** ___lava flow / plain ___volcanic feature	___Concave X < 1% ___1 - 4.9% ___5 - 9.9% ___10 - 14.9% ___15 - 20% ___> 20%	___Summit ___Shoulder ___Backslope ___Footslope ___Toeslope X None	X Negligible ___Very low ___Low ___Medium ___High ___Very high

IV. Soil Classification

Score:_____

EPIPEDON (5)	SUBSURFACE HORIZON (5 each)		DIAGOSTIC SOIL CHARACTERISTICS (5 each)		ORDER (5)	
X Mollic ___Ochric ___Umbric ___None	___Albic ___Argillic ___Calcic X 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 ___Paralithic Contact ___Plinthite ___Slickensides ___Spodic Materials ___Volcanic Glass X None	___Alfisol ___Andisol ___Aridisol ___Entisol X Inceptisol	___Mollisol ___Ultisol ___Spodosol ___Vertisol

X V. Interpretation

Score:_____

SUITABILITY AS A ROADFILL MATERIAL (5)	ONSITE WASTE DISPOSAL ABSORBTION FIELD (5)	LOADING RATE (5)	HOUSES WITH BASEMENTS (5)
_____Slight _____Moderate _____Severe Reason Number (5): None	_____Slight _____Moderate _____Severe Reason Number (5): None	1 gpd/ft²	_____Slight _____Moderate X Severe Reason Number (5): 5

Pmgfe Pit: Fruit Yard P.t 2, end of Alfalfa

2023 NACTA Soils Judging Contest
4-Year Division Scorecard

Contestant Name	
Contestant Number	Fruit Yard
College	Pit # 2

Pit Number	2
Number of Horizons	6 to a depth of 152 cm
Nail Depth	~~152~~ 33 cm

(cm and inches)

I. Soil Morphology

Score_____

HORIZONATION				BOUNDARY		TEXTURE				COLOR			STRUCTURE		CONSIST	SOIL FEATURES		SCORE
Prefix	Master	Sub	No	Depth (cm) (in)	Dist	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)	(2)	(36)
1	A	p	1	0-25	A	—	L	45%	12%	10YR	3	2	3	PL	FR	—	—	
1	A	p	2	25-33	G	—	L	45%	12%	10YR	3	3	1	PL ~~SBK~~	FI	Y	Y	
1	AB	—	—	33-52 (13-20.5)	C	—	L	45%	15%	10YR	3	3	2	SBK	FR	N	N	
1	B	w	1	52-79 (20.5-31)	G	—	L	45%	15%	10YR	4	3	1	SBK	FI	N	N	
1	B	w	2	79-134 (31-57)	A	—	L	45%	16%	10YR	4	4	2	SBK	FR	N	N	
1	B	kg	—	134-152 53-60	A	—	L	50%	15%	2.5Y	6	2	0	MA	VFI	Y	Y	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

II. Soil Profile Characteristics

Score: _____

HYDRAULIC CONDUCTIVITY SURFACE (5)	HYDRAULIC CONDUCTIVITY LIMITING (5)	EFFECTIVE SOIL DEPTH (5)	WATER RETENTION (5)	SOIL WETNESS CLASS (5)	TOTAL SCORE
_____High	___High	____Very deep (> 150 cm)	____Very low (< 7.5 cm)	____Class 1 (> 150 cm)	Part I _____
_____Moderate	___Moderate	____Deep (100 -150cm)	____Low (7.5 - < 15 cm)	____Class 2 (101 -150 cm)	Part II_____
_____Low	___Low	____Mod. deep (50 - 99 cm)	____Mod. (15 -< 22.5 cm)	____Class 3 (51 -100 cm)	Part III_____
		____Shallow (25 - 49 cm)	____High (22.5 cm)	____Class 4 (25 -50 cm)	Part IV_____
		____Very shallow (< 25 cm)		____Class 5 (<25 cm)	Part V_____
					Total_____

NACTA SOILS CONTEST

4-Year Division

~~SITE CARD~~

Pit

SITE NO. 2 Fruit yard

Describe 6 horizons to a depth of 152 cm.

Blue marker is in the third horizon at 33 cm.

Horizon	pH	% Base Sat.	% Organic C	% $CaCO_3$
1.	7.5	60	2	0
2.	7.4	62	2	0
3.	7.2	61	1.5	0
4.	7.2	54	0.4	0
5.	7.2	53	0.1	0
6.	7.3	55	0.1	2%

III. Site Characteristics

Score: _____

PARENT MATERIAL (5 each)	LANDFORM (5)			SLOPE (5)	HILLSLOPE PROFILE (5)	SURFACE RUNOFF (5)
___eolian sand ___loess ___glacial till ___glacial outwash ___residuum ___colluvium ___volcanic deposit X alluvium ___beach deposit ___lacustrine / marine deposit ___unconsolidated coastal plain sediments	***Depression*** ___depression ***Coastal & Lacustrine*** ___beach ___lakebed / playa ***Eolian*** ___dune ___loess bluff / hill / plain ***Erosional*** ___upland head slope ___upland side slope ___upland nose slope ___interfluve/crest ___base slope	***Fluvial*** X alluvial fan ___back swamp ___floodplain ___natural levee ___stream terrace ***Glacial*** ___drumlin / moraine / plain ___esker / kame / crevasse filling ___outwash plain / terrace	***Mass Movement*** ___landslide / debris flow ***Solution*** ___sinkhole ***Tectonic / Volcanic*** ___lava flow / plain ___volcanic feature	___Concave X < 1% ___1 - 4.9% ___5 - 9.9% ___10 - 14.9% ___15 - 20% ___> 20%	___Summit ___Shoulder ___Backslope ___Footslope ___Toeslope X None	___Negligible ___Very low ___Low ___Medium ___High ___Very high

IV. Soil Classification

Score:_____

EPIPEDON (5)	SUBSURFACE HORIZON (5 each)		DIAGOSTIC 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 ___Paralithic Contact ___Plinthite ___Slickensides ___Spodic Materials ___Volcanic Glass ___None	___Alfisol ___Andisol ___Aridisol ___Entisol ___Inceptisol	✓ Mollisol ___Ultisol ___Spodosol ___Vertisol

V. Interpretation

Score:_____

SUITABILITY AS A ROADFILL MATERIAL (5)	ONSITE WASTE DISPOSAL		HOUSES WITH BASEMENTS (5)
	ABSORBTION FIELD (5)	LOADING RATE (5)	
_____Slight _____Moderate _____Severe Reason Number (5): _____	_____Slight _____Moderate _____Severe Reason Number (5): _____	_____ gpd/ft²	_____Slight _____Moderate _____Severe Reason Number (5): _____