

# EF44 - TANNERY FARM SOIL TESTING RESULTS - 2021

Approved By: General Manager

Version: 1

Issue Date: 24 March 2021

Review Date: 24 March 2024



Leather Naturally

\*Not Tested (NT) No Sample (NS)

ANALYSIS	IRRIGATION SECTOR 1				IRRIGATION SECTOR 2				IRRIGATION SECTOR 3				IRRIGATION SECTOR 4			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	5.9	5.9	6	5.93	5.5	5.4	6.1	5.67	5.7	5.3	6.4	5.80	5.2	4.4	5.8	5.13
Electrical Conductivity µS/cm	180	140	320	213.33	290	510	1050	616.67	130	300	520	316.67	500	1210	1240	983.33
TKN-N - mg/kg	1800	274	183	752.33	1150	308	99	519.13	1370	416	256	680.67	1300	353	323	658.67
Available Phosphorus (Colwell P) - mg/kg	50	4.9	5.6	20.17	63	7.5	13	27.83	32	13	9.2	18.07	53	5.9	4.6	21.17
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	528	762	1320	870.00	464	914	1007	795.00	489	1293	1350	1044.00	932	1029	1604	1188.33
Exchangeable Magnesium - mg/kg	73	167	896	378.67	81	234	230	181.67	117	124	374	205.00	85	274	339	232.67
Exchangeable Potassium - mg/kg	140	127	211	159.33	118	178	181	159.00	114	226	251	197.00	194	196	243	211.00
Exchangeable Sodium - mg/kg	4.2	9.1	11	8.10	6.4	15	525	182.13	63	195	474	244.00	59	7.9	14	26.97
Available Nitrate - mg/kg	0.58	4.1	2.5	2.39	13	58	9.3	26.77	13	16	16	15.00	17	13	13	14.33
Total Nitrogen - %	1.8	0.27	0.18	0.75	1.13	0.25	0.9	0.76	1.36	0.4	0.24	0.67	1.28	0.34	0.31	0.64
Cadnium - mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
Organic Carbon - %	2.6	0.8	0.2	1.20	1.6	0.9	0.5	1.00	1.7	0.4	0.4	0.83	1.8	0.9	0.4	1.03
Total Phosphorus - mg/kg	457	126	128	237.00	302	123	127	184.00	293	149	87.2	176.40	314	110	134	186.00
Chromium - mg/kg	130	28.2	33.3	63.83	99.1	42.3	80.8	74.07	47	37.5	35.8	40.10	47.1	23.2	29.4	33.23
Chromium VI- mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	33	3.6	4.2	13.60	36	4	4	14.67	18	8.1	4.1	10.07	29	3.3	2.7	11.67
Exchangeable Aluminium - mg/kg	38	27	1	30.00	30	4.1	20	18.03	36	2.2	37	25.07	40	4.6	36	26.87
SAR - SAR Units	1.15	2.49	2.26	1.97	2.49	8.09	2.43	4.34	2.03	4.15	7.21	4.46	1.01	2.02	9.05	4.03
Chloride - mg/kg	13	11	10	11.33	18	61	17	32.00	16	15	80	37.00	13	20	46	26.33
CEC - cmol/kg	4.4	6.6	16	9.00	5.2	8.3	10	7.83	4.5	8.9	13	8.80	6.7	8.6	14	9.77
ESP - % of CECE	4.2	9.1	11	8.10	6.4	15	23	14.80	6.1	9.5	16	10.53	3.9	7.9	14	8.60

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ANALYSIS	IRRIGATION SECTOR 5				IRRIGATION SECTOR 6				IRRIGATION SECTOR 7				IRRIGATION SECTOR 8			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	5.3	5	5.1	5.13	5.9	6.6	6.6	6.37	6.1	7	7.8	6.97	6.8	6.8	6.8	6.80
Electrical Conductivity µS/cm	150	270	240	220.00	160	290	230	226.67	150	410	770	443.33	540	140	170	283.33
TKN-N - mg/kg	563	345	178	362.00	1120	278	195	531.00	953	288	249	496.67	1080	441	241	587.33
Available Phosphorus (Colwell P) - mg/kg	17	9.5	3	9.83	16	4.3	2	7.43	49	3.3	12	21.43	36	4.6	8.5	16.37
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	288	625	1491	801.33	761	844	1644	1083.00	927	1172	1236	1111.67	472	832	1014	772.67
Exchangeable Magnesium - mg/kg	60	120	630	270.00	59	182	494	245.00	67	538	728	444.33	64	221	427	237.33
Exchangeable Potassium - mg/kg	77	191	197	155.00	129	112	190	143.67	219	203	205	209.00	169	207	171	182.33
Exchangeable Sodium - mg/kg	36	113	511	220.00	30	119	605	251.33	32	96	231	119.67	17	222	257	165.33
Available Nitrate - mg/kg	23	15	8.4	15.47	5	12	2.4	6.47	12	7.6	9	9.53	14	60	0.77	24.92
Total Nitrogen - %	0.54	0.33	0.17	0.35	1.11	0.26	0.19	0.52	0.94	0.28	0.24	0.49	1.06	0.44	0.24	0.58
Cadmium - mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
Organic Carbon - %	0.8	1.5	0.2	0.83	1.3	0.5	0.3	0.70	1.5	0.5	0.5	0.83	1.1	0.5	0.3	0.63
Total Phosphorus - mg/kg	169	125	108	134.00	348	106	96.7	183.57	314	106	86.9	168.97	294	279	178	250.33
Chromium - mg/kg	27.5	31.1	24.5	27.70	69.2	27.1	28.4	41.57	43.2	20.6	29	30.93	54.9	32.9	24.4	37.40
Chromium VI- mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	11	6.2	2	6.40	8.9	2.7	2.2	4.60	30	2.7	5.2	12.63	23	3.2	2.4	9.53
Exchangeable Aluminium - mg/kg	45	54	3.1	34.03	1.5	1	3.9	2.13	1	1	1	1.00	1	9.3	6.5	5.60
SAR - SAR Units	2.19	6.34	6.82	5.12	2.18	7.97	4.91	5.02	0.73	3.42	12.59	5.58	0.84	0.59	1.06	0.83
Chloride - mg/kg	20	16	23	19.67	22	69	63	51.33	11	12	28	17.00	18	11	10	13.00
CEC - cmol/kg	3	5.9	15	7.97	4.8	6.5	15	8.77	5.9	11	14	10.30	3.4	7.7	10	7.03
ESP - % of ECEC	5.2	8.3	14	9.17	2.7	7.9	17	9.20	2.3	3.7	7.3	4.43	4.2	13	11	9.40

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ANALYSIS	IRRIGATION SECTOR 9				IRRIGATION SECTOR 10				IRRIGATION SECTOR 11				IRRIGATION SECTOR 12			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	5.8	5.6	5.1	5.50	5.7	5.4	7	6.03	6.1	6.1	5.6	5.93	5.4	5.4	5.9	5.57
Electrical Conductivity $\mu\text{S}/\text{cm}$	170	270	1100	513.33	150	210	570	310.00	110	130	380	206.67	140	310	180	210.00
TKN-N - mg/kg	573	260	305	379.33	390	169	171	243.33	485	331	240	352.00	514	266	237	339.00
Available Phosphorus (Colwell P) - mg/kg	32	8.9	6.2	15.70	11	3.9	3.6	6.17	15	22	19	18.67	44	25	20	29.67
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	974	1259	1229	1154.00	1747	1711	581	1346.33	581	968	1554	1034.33	534	1709	1230	1157.67
Exchangeable Magnesium - mg/kg	270	1079	382	577.00	792	849	150	597.00	150	445	672	422.33	44	555	821	473.33
Exchangeable Potassium - mg/kg	148	203	276	209.00	311	291	153	251.67	153	188	330	223.67	125	456	246	275.67
Exchangeable Sodium - mg/kg	295	931	261	495.67	755	761	53	523.00	53	184	320	185.67	24	197	495	238.67
Available Nitrate - mg/kg	10	25	8.7	14.57	9.1	11	4.8	8.30	4.8	0.1	9.5	4.80	3.6	5.5	7.2	5.43
Total Nitrogen - %	0.25	0.28	0.38	0.30	0.16	0.16	0.48	0.27	0.48	0.31	0.23	0.34	0.51	0.26	0.23	0.33
Cadnium - mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
Organic Carbon - %	0.3	0.6	1.5	0.80	0.2	0.3	0.8	0.43	0.8	0.5	2.2	1.17	2.5	0.3	0.3	1.03
Total Phosphorus - mg/kg	187	79.4	123	129.80	154	101	128	127.67	197	81.4	83.4	120.60	205	104	168	159.00
Chromium - mg/kg	36.5	26.2	30.5	31.07	40.8	27.3	41.8	36.63	23.9	28.2	33.1	28.40	22.6	21.9	27.3	23.93
Chromium VI- mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	4.6	8.7	5.6	6.30	2.9	2.7	8.8	4.80	8.8	3.1	3.8	5.23	15	4.2	2.2	7.13
Exchangeable Aluminium - mg/kg	53	1	16	23.33	1	1	2.1	1.37	39	2.6	1.7	14.43	18	35	2.1	18.37
SAR - SAR Units	6.66	12.8	5.44	8.30	6.6	7.04	2.91	5.52	2.91	5.29	6.7	4.97	1.31	0.66	1.99	1.32
Chloride - mg/kg	30	130	32	64.00	22	60	15	32.33	15	88	32	45.00	13	11	16	13.33
CEC - cmol/kg	9.6	20	11	13.53	19	20	5.4	14.80	5.4	9.8	16	10.40	3.7	16	16	11.90
ESP - % of ECEC	8	13	21	14.00	10	17	17	14.67	4.2	8.2	9	7.13	2.8	5.5	14	7.43

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ANALYSIS	SLUDGE INJECTION AREA 1				SLUDGE INJECTION AREA 1B				SLUDGE INJECTION AREA 2				SLUDGE INJECTION AREA 3			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	7.6	8.1	8.4	8.03	8.2	8.2	8.1	8.17	8	8.3	8.1	8.13	8.3	8.4	8.2	8.30
Electrical Conductivity $\mu$ S/cm	310	230	90	210.00	270	280	150	233.33	220	230	150	200.00	180	140	85	135.00
TKN-N - mg/kg	907	699	205	603.67	755	2260	353	1122.67	711	1440	351	834.00	1060	496	372	642.67
Available Phosphorus (Colwell P) - mg/kg	125	5.9	6.9	45.93	136	5.9	3	48.30	66	5.6	2.6	24.73	31	7.5	3.6	14.03
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	2585	1799	1507	1963.67	3491	2166	1446	2367.67	2698	2154	1312	2054.67	2739	1424	1672	1945.00
Exchangeable Magnesium - mg/kg	148	993	551	564.00	234	577	832	547.67	130	370	1043	514.33	260	484	494	412.67
Exchangeable Potassium - mg/kg	294	312	267	291.00	351	208	112	223.67	153	127	184	154.67	195	192	217	201.33
Exchangeable Sodium - mg/kg	1.9	4.3	2.4	2.87	1.5	0.94	1.8	1.41	20	35	204	86.33	15	29	48	30.67
Available Nitrate - mg/kg	6.5	7.6	3.9	6.00	4.2	1.9	2.2	2.77	20	4	1.3	8.43	6	5	1.8	4.27
Total Nitrogen - %	0.9	0.69	0.2	0.60	0.75	2.26	0.35	1.12	0.69	1.43	0.35	0.82	1.05	0.49	0.37	0.64
Cadnium - mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
Organic Carbon - %	1.2	1.2	0.3	0.90	1.2	1.9	0.3	1.13	0.9	1.6	0.5	1.00	1.3	1	0.4	0.90
Total Phosphorus - mg/kg	284	394	144	274.00	248	410	104	254.00	311	575	127	337.67	237	112	103	150.67
Chromium - mg/kg	62.2	141	29.7	77.63	127	84.2	34.2	81.80	183	189	35.9	135.97	47.8	23.8	25.6	32.40
Chromium VI- mg/kg	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00	1	1	1	1.00
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	122	5	3.6	43.53	109	4.1	2.2	38.43	48	6.8	3.1	19.30	21	5	3	9.67
Exchangeable Aluminium - mg/kg	1	1	1	0.00	1	1	1	1.00	1	1	1	1.00	1	2	1.8	1.60
SAR - SAR Units	142	0.93	2.16	48.36	1.34	0.7	1.71	1.25	0.21	0.58	1.4	0.73	0.25	0.52	0.87	0.55
Chloride - mg/kg	27	19	14	20.00	25	18	13	18.67	13	13	10	12.00	11	10	10	10.33
CEC - cmol/kg	15	19	13	15.67	21	16	15	17.33	15	14	16	15.00	16	12	13	13.67
ESP - % of ECEC	1.9	4.3	2.4	2.87	1.5	0.94	1.8	1.41	0.58	1.1	5.4	2.36	0.31	1.1	1.6	1.00

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ANALYSIS	SLUDGE INJECTION AREA 4				SLUDGE INJECTION AREA 5			
	0-10 cm	10-30 cm	30-60 cm	AVE	0-10 cm	10-30 cm	30-60 cm	AVE
pH - pH units	8.1	8.5	8.1	8.23	7.9	8	7.8	7.90
Electrical Conductivity $\mu\text{S}/\text{cm}$	210	170	160	180.00	140	52	92	94.67
TKN-N - mg/kg	1020	457	382	619.67	848	244	253	448.33
Available Phosphorus (Colwell P) - mg/kg	58	6.6	3	22.53	45	4.6	4.3	17.97
Emerson Aggregate Class - Class	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Permeability - mm/hr	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Exchangeable Calcium - mg/kg	1209	1129	1306	1214.67	1128	1137	981	1082.00
Exchangeable Magnesium - mg/kg	59	288	353	233.33	68	195	541	268.00
Exchangeable Potassium - mg/kg	297	200	104	200.33	150	126	116	130.67
Exchangeable Sodium - mg/kg	0.22	2.8	1.2	1.41	0.17	1.8	2	1.32
Available Nitrate - mg/kg	7.9	7.2	1.9	5.67	7.7	3.7	2.4	4.60
Total Nitrogen - %	1.1	0.45	0.38	0.64	0.84	0.24	0.25	0.44
Cadnium - mg/kg	0.5	0.5	0.5	0.50	0.5	0.5	0.5	0.50
Organic Carbon - %	1.7	0.5	0.4	0.87	1.1	0.4	0.1	0.53
Total Phosphorus - mg/kg	287	130	158	191.67	254	69.2	97	140.07
Chromium - mg/kg	26.4	44.7	29.6	33.57	31.7	19.9	24.9	25.50
Chromium VI- mg/kg	1	1	1	1.00	1	1	1	1.00
Total Sulfur (LECO) - %	NT	NT	NT	#DIV/0!	NT	NT	NT	#DIV/0!
Available Phosphorus (Bray P) - mg/kg	57	4.5	2.8	21.43	29	3.2	3	11.73
Exchangeable Aluminium - mg/kg	1.7	2	1.6	1.77	1.7	1.5	1.2	1.47
SAR - SAR Units	0.2	3.9	1.33	1.81	0.2	0.34	1.2	0.58
Chloride - mg/kg	15	12	17	14.67	15	11	10	12.00
CEC - cmol/kg	7.3	8.8	9.8	8.63	6.6	7.8	9.9	8.10
ESP - % of ECEC	0.22	2.8	1.2	1.41	15	32	45	30.67