



Client: El Caballero Country Club
Fall 2024 Report

	<u>10/18/23</u>	<u>9/13/24</u>
Humidity/Air Temperature	50%/90°	55%/80°
Green Temperature	(avg)64.9°	(avg)70°
Fairway Temperature	(avg)65.65°	(avg)74°

WATER	Acceptable Range For Water Sample	Hole #3 <u>10/18/23</u>	Hole #10 <u>9/13/24</u>
pH	6.0-6.5	7.25	7.79
EC	<2.25 mmhos/cm	0.35	0.36
Sodium		37.15	38.36
Calcium	20 - 60 ppm	26.48	28.59
Magnesium	10 - 25 ppm	6.06	7.75
Potassium	5 - 20 ppm	4.14	3.94
Sulfur	30 - 90 ppm	37.10	37.59
Bicarbonate	<120 ppm	133.31	141.54
Boron	<0.67 ppm	0.44	0.52
Chloride	<177 ppm	33.70	27.40



SOIL AND WATER CONSULTING

TEE	Acceptable Range For Tissue Sample	1 <u>9/13/24</u>
Nitrogen	2.49%-4.56%	n/r
Phosphorus	0.26%-0.38%	n/r
Potassium	0.95% - 1.97%	n/r
Calcium	0.50%-0.90%	n/r
Magnesium	0.13%-0.16%	n/r
Sodium	622-1709 ppm	n/r

FAIRWAY	Acceptable Range For Tissue Sample	1 <u>9/13/24</u>
Nitrogen	2.49%-4.56%	n/r
Phosphorus	0.26%-0.38%	n/r
Potassium	0.95% - 1.97%	n/r
Calcium	0.50%-0.90%	n/r
Magnesium	0.13%-0.16%	n/r
Sodium	622-1709 ppm	n/r

GREENS	Acceptable Range For Tissue Sample	1,10(avg) <u>9/13/24</u>
Nitrogen	3.0%-6.5%	3.44
Phosphorus	0.2%-0.55%	0.63
Potassium	0.86%-2.55%	1.29
Calcium	0.21%-0.50%	0.85
Magnesium	0.09%-0.22%	0.24
Sodium	506- 2264 ppm	1,132.95

TEES	Acceptable Range For Alkaline Soils Sample	1 9/20/15	1,10 (avg) 9/13/24
Organic Matter (Humus)	2 - 3%	n/r	1.60
Sulfur	12 - 16 ppm	n/r	36.50
Olsen - Phosphorus	13 - 20 ppm	n/r	13.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	n/r	1,847.00
Magnesium	>7% base saturation or at least 200 lbs/acre	n/r	11.25%/165
Potassium - TEC of 0 - 35	100 ppm	n/r	125.50
Manganese	>50 ppm	n/r	35.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	1 9/20/15	1,10 (avg) 9/13/24
Organic Matter (Humus)	2 - 3%	8.77	5.27
Sulfur	12 - 16 ppm	89.00	93.00
Olsen - Phosphorus	13 - 20 ppm	58.00	31.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,672.00	5,667.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.69%/666	12.69%/570
Potassium - TEC of 0 - 35	100 ppm	412.00	324.50
Manganese	>50 ppm	n/r	28.00

GREENS	Acceptable Range For Alkaline Soils Sample	1 9/20/15	1,10 (avg) 9/13/24
Organic Matter (Humus)	2 - 3%	0.89	0.37
Sulfur	12 - 16 ppm	22.00	11.50
Olsen - Phosphorus	13 - 20 ppm	18.00	5.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,308.00	1,592.00
Magnesium	>7% base saturation or at least 200 lbs/acre	16.08%/188	9.24%/111
Potassium - TEC of 0 - 35	150 ppm	95.00	92.00
Manganese	>50 ppm	n/r	20.00

TEES	Acceptable Range For Saturated Paste Sample	1 9/20/15	1 9/13/24
Nitrate-Bermudagrass	10 -15 ppm	n/r	16.40
Phosphorus	2 - 10 ppm	n/r	4.77
Potassium	40 - 100 ppm	n/r	132.00
Calcium	60 - 200 ppm	n/r	149.25
Magnesium	20 - 70 ppm	n/r	32.65
Sodium	0 - 30 ppm	n/r	112.77
Soluble Salts	<1,920 ppm	n/r	1,376.00
Bicarbonate	<60 ppm	n/r	247.14
Chloride	<1,000 ppm	n/r	333.00
SAR	<4%	n/r	2.18

FAIRWAYS	Acceptable Range For Saturated Paste Sample	1 9/20/15	1 9/13/24
Nitrate-Bermudagrass	10 -15 ppm	25.60	11.00
Phosphorus	2 - 10 ppm	3.92	2.98
Potassium	40 - 100 ppm	67.27	58.92
Calcium	60 - 200 ppm	120.70	131.53
Magnesium	20 - 70 ppm	24.74	23.47
Sodium	0 - 30 ppm	204.66	66.57
Soluble Salts	<1,920 ppm	1,027.00	771.00
Bicarbonate	<60 ppm	178.15	195.01
Chloride	<1,000 ppm	168.00	66.00
SAR	<4%	4.43	1.40

GREENS	Acceptable Range For Saturated Paste Sample	1 9/20/15	1,10(avg) 9/13/24
Nitrate - Pure Distinction Bentgrass	1-3 ppm	0.60	30.50
Phosphorus	2 - 7 ppm	3.71	5.63
Potassium	25-40 ppm	40.42	34.94
Calcium	50- 75 ppm	58.20	17.70
Magnesium	15-30 ppm	21.27	3.52
Sodium	0 - 30 ppm	181.40	40.65
Soluble Salts	<1,000 ppm	727.00	297.00
Bicarbonate	<60 ppm	209.87	91.78
Chloride	<200 ppm	154.00	29.50
SAR	<4%	5.17	2.31



Nutrient Deficiencies

		P	Mg	K	Mn
GREEN	1	8	112	95	25
GREEN	10	3	110	89	15

Phosphorus can be added in the form of 11-55-00 at a rate of 3 pounds of product 1,000 sq ft in November

Magnesium can be added in the form of Pro-mag36 at a rate of 2 pounds of product 1,000 sq ft in November

Manganese can be added in the form of Manganese Oxide at a rate of 3 pounds of product per 1,000 sq ft in November, December and monthly until we recheck in the Spring

Comments and Next Level Cultural Practices

- It sounded like the USGA event was a full success.
- Bermudagrass decline was diagnosed on the fairways and rough. There are no reasons for it found in the fairway's soils data. Potassium has always been readily available in the native soils. Low levels of K can aid in the disease. If it was to be seen again, raising the height of cut would be the first defense.
- The nitrogen levels were good on the tissues and soils. The saturated pastes showed a high level- I would ignore that. The greens showed no signs of elevated nitrogen levels.