



Client: Quail Creek Golf Club
Fall 2024 Report

	<u>9/26/23</u>	<u>10/15/24</u>
Humidity/Air Temperature	22%/100°	30%/91°
Greens Temperature	(avg)63.1°	(avg)61°
Fairway Temperature	(avg)66.8°	(avg)62°

	<u>Acceptable Range For Water Sample</u>	<u>Coyote Hole #3 9/26/23</u>	<u>Quail Hole #1 10/15/24</u>
pH	6.0-6.5	8.72	8.19
EC	<2.25 mmhos/cm	0.58	0.61
Nitrate		<0.10	<0.10
Sodium		115.80	110.01
Calcium	20 - 60 ppm	16.22	19.54
Magnesium	10 - 25 ppm	<0.20	0.38
Potassium	5 - 20 ppm	2.84	2.73
Sulfur	30 - 90 ppm	180.32	182.28
Bicarbonate	<120 ppm	49.81	123.24
Boron	<0.67 ppm	0.27	0.27
Chloride	<177 ppm	6.13	8.00



SOIL AND WATER CONSULTING

<i>QUAIL TEE</i>	<u>Acceptable Range For Tissue Sample</u>	<u>4 10/15/24</u>
Nitrogen	2.49%-4.56%	2.68
Phosphorus	0.26%-0.38%	0.28
Potassium	0.95% - 1.97%	0.83
Calcium	0.50%-0.90%	0.70
Magnesium	0.13%-0.16%	0.11
Sodium	622-1709 ppm	2,676.70

<i>QUAIL FAIRWAY</i>	<u>Acceptable Range For Tissue Sample</u>	<u>4 10/15/24</u>
Nitrogen	2.49%-4.56%	2.35
Phosphorus	0.26%-0.38%	0.23
Potassium	0.95% - 1.97%	0.61
Calcium	0.50%-0.90%	0.69
Magnesium	0.13%-0.16%	0.10
Sodium	622-1709 ppm	1,876.80

<i>QUAIL GREEN</i>	<u>Acceptable Range For Tissue Sample</u>	<u>4 10/15/24</u>
Nitrogen	3.0%-6.5%	3.06
Phosphorus	0.2%-0.55%	0.34
Potassium	0.86%-2.55%	0.91
Calcium	0.21%-0.50%	0.53
Magnesium	0.09%-0.22%	0.09
Sodium	506- 2264 ppm	2,662.60

ALL TEES	Acceptable Range For Alkaline Soils Sample	3(avg) 9/26/23	4(avg) 10/15/24
Organic Matter (Humus)	2 - 3%	0.77	0.97
Sulfur	12 - 16 ppm	55.50	60.67
Olsen - Phosphorus	13 - 20 ppm	<1	8.33
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,129.00	2,388.00
Magnesium	>7% base saturation or at least 200 lbs/acre	7.77%/187	6.11%/116
Potassium - TEC of 0 - 35	100 ppm	139.50	130.00
Manganese	>50 ppm	51.50	36.00

ALL FAIRWAYS	Acceptable Range For Alkaline Soils Sample	3(avg) 9/26/23	4(avg) 10/15/24
Organic Matter (Humus)	2 - 3%	3.79	3.66
Sulfur	12 - 16 ppm	324.67	162.33
Olsen - Phosphorus	13 - 20 ppm	10.33	10.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,074.00	5,272.67
Magnesium	>7% base saturation or at least 200 lbs/acre	6.38%/268.67	4.96%/204.66
Potassium - TEC of 0 - 35	100 ppm	332.00	231.00
Manganese	>50 ppm	73.00	48.00

ALL GREENS	Acceptable Range For Alkaline Soils Sample	3(avg) 9/26/23	4(avg) 10/15/24
Organic Matter (Humus)	2 - 3%	0.59	0.75
Sulfur	12 - 16 ppm	17.67	43.00
Olsen - Phosphorus	13 - 20 ppm	<1.33	<2
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,880.67	2,022.00
Magnesium	>7% base saturation or at least 200 lbs/acre	7.89%/116	5.03%/82.66
Potassium - TEC of 0 - 35	150 ppm	123.33	188.00
Manganese	>50 ppm	17.33	21.67

QUAIL TEE	Acceptable Range For Saturated Paste Sample	3 9/26/23	4 10/15/24
Nitrate - TiftTuf bermudagrass	10-15 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	0.38	0.52
Potassium	40 - 100 ppm	9.62	9.39
Calcium	60 - 200 ppm	27.78	47.54
Magnesium	20 - 70 ppm	4.11	6.90
Sodium	0 - 30 ppm	120.77	118.57
Soluble Salts	<1,920 ppm	427.00	467.00
Bicarbonate	<60 ppm	169.63	183.09
Chloride	<1,000 ppm	14.00	16.00
SAR	<4%	5.65	4.25

QUAIL FAIRWAY	Acceptable Range For Saturated Paste Sample	3 9/26/23	4 10/15/24
Nitrate - TiftTuf bermudagrass	10-15 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	0.43	0.82
Potassium	40 - 100 ppm	20.88	17.90
Calcium	60 - 200 ppm	47.62	72.76
Magnesium	20 - 70 ppm	7.29	6.68
Sodium	0 - 30 ppm	239.26	214.31
Soluble Salts	<1,920 ppm	769.00	732.00
Bicarbonate	<60 ppm	234.17	216.07
Chloride	<1,000 ppm	41.00	39.00
SAR	<4%	8.53	6.45

QUAIL GREEN	Acceptable Range For Saturated Paste Sample	3 9/26/23	4 10/15/24
Nitrate -Mini verde bermudagrass	1-3 ppm	3.10	0.70
Phosphorus	2-7 ppm	0.64	1.21
Potassium	25-40 ppm	6.18	12.40
Calcium	50- 75 ppm	12.98	24.68
Magnesium	15-30 ppm	1.68	6.60
Sodium	0 - 30 ppm	45.10	73.48
Soluble Salts	<1,000 ppm	200.00	295.00
Bicarbonate	<60 ppm	78.26	97.33
Chloride	<200 ppm	5.00	17.00
SAR	<4%	3.13	3.39



Nutrient Deficiencies

		P	Mg
COYOTE	TEE	9	104
QUAIL	TEE	3	112
ROADRUNNER	TEE	13	132
COYOTE	GREEN	< 2	60
QUAIL	GREEN	2	106
ROADRUNNER	GREEN	2	82

Phosphorus can be added in the form of 11-55-00 at a rate of 3 pounds of product per 1,000 sq ft multiple times in the next 12 months.

Magnesium can be added in the form of Pro-Mag 36 at a rate of 3 pounds of product per 1,000 sq ft one time before Winter.

Comments and Next Level Cultural Practices

- A nice increase in Phosphorus levels on tees.
- We discussed the product line you prefer- DCM. I can see the advantages to using it in your situation. There are many Organic based fertilizers that will help on greens and longer cut turf. There were many that met your need for phosphorus as well as add some needed organic material to the very sandy greens and fairway soils.
- We also discussed topdressing fairways. The process has shown to make the turf healthier, more rigid/upright and more able to withstand wear and tear. It would be a very nice upgrade to the new holes and help give you some budget baselines for the potential new nine. There is a significant cost to staying on a fairway topdressing program. However, I believe you can find an inexpensive local source that will work fine.

