



Client: DragonRidge Country Club
Summer 2024 Report

	<u>6/12/24</u>
Humidity/Air Temperature	7%/108°
Fairway Temperature	(avg)81°
Green Temperature	(avg)76°

WATER	Acceptable Range For Water Sample	Irrigation Water Direct Line #7 6/12/08	Irrigation Water Fairway #15 6/12/24
pH	6.0-6.5	6.88	7.26
EC	<2.25 mmhos/cm	2.04	1.91
Sodium		277.20	258.48
Calcium	20 - 60 ppm	113.70	92.70
Magnesium	10 - 25 ppm	39.81	28.58
Potassium	5 - 20 ppm	28.61	19.52
Phosphorus	0.1 - 0.4 ppm	<0.20	3.87
Nitrate	5 - 50 ppm	5.32	8.26
Sulfur	30 - 90 ppm	409.20	300.37
Bicarbonate	<120 ppm	205.68	164.86
Boron	<0.67 ppm	0.55	0.31
Chloride	<177 ppm	381.10	357.95

GREENS	Acceptable Range For Tissue Sample	PG,3,12(avg) 6/12/24
Nitrogen	3.0%-6.5%	3.75
Phosphorus	0.2%-0.55%	0.47
Potassium	0.86%-2.55%	2.06
Calcium	0.21%-0.50%	1.07
Magnesium	0.09%-0.22%	0.37

TEES	Acceptable Range For Alkaline Soils Sample	12 6/12/08	3,12(avg) 6/12/24
Organic Matter (Humus)	2 - 3%	1.55	2.86
Sulfur	12 - 16 ppm	100.00	114.00
Olsen - Phosphorus	13 - 20 ppm	n/r	28.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,488.00	1,981.00
Magnesium	>7% base saturation or at least 200 lbs/acre	11.10%/400	13.53%/247
Potassium - TEC of 0 - 35	100 ppm	166.00	105.00
Manganese	>50 ppm	15.00	21.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	12 6/12/08	3,12(avg) 6/12/24
Organic Matter (Humus)	2 - 3%	1.12	1.97
Sulfur	12 - 16 ppm	248.00	109.50
Olsen - Phosphorus	13 - 20 ppm	n/r	27.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	6,228.00	2,347.00
Magnesium	>7% base saturation or at least 200 lbs/acre	7.64%/370	13.27%/286
Potassium - TEC of 0 - 35	100 ppm	228.00	116.00
Manganese	>50 ppm	12.00	20.50

GREENS	Acceptable Range For Alkaline Soils Sample	12 6/12/08	PG,3,12(avg) 6/12/24
Organic Matter (Humus)	2 - 3%	0.70	0.48
Sulfur	12 - 16 ppm	67.00	22.33
Olsen - Phosphorus	13 - 20 ppm	n/r	7.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	19,920.00	1,876.67
Magnesium	>7% base saturation or at least 200 lbs/acre	7.33%/996	12.45%/181.33
Potassium - TEC of 0 - 35	150 ppm	119.00	82.67
Manganese	>50 ppm	17.00	21.67

TEE	Acceptable Range For Saturated Paste Sample	3 6/12/24
Nitrate-Bermudagrass	5 - 10 ppm	7.60
Phosphorus	2 - 10 ppm	2.89
Potassium	40 - 100 ppm	66.58
Calcium	60 - 200 ppm	124.63
Magnesium	20 - 70 ppm	38.43
Sodium	0 - 30 ppm	395.97
Soluble Salts	<1,920 ppm	1,644.00
Bicarbonate	<60 ppm	106.86
Chloride	<1,000 ppm	443.00
SAR	<4%	7.95

FAIRWAY	Acceptable Range For Saturated Paste Sample	3 6/12/24
Nitrate- Ryegrass	5 - 10 ppm	26.40
Phosphorus	2 - 10 ppm	5.54
Potassium	40 - 100 ppm	75.36
Calcium	60 - 200 ppm	114.35
Magnesium	20 - 70 ppm	37.07
Sodium	0 - 30 ppm	405.17
Soluble Salts	<1,920 ppm	1,533.00
Bicarbonate	<60 ppm	153.76
Chloride	<1,000 ppm	341.00
SAR	<4%	8.42

GREENS	Acceptable Range For Saturated Paste Sample	PG,3(avg) 6/12/24
Nitrate - Bentgrass/Poa	1-3 ppm	<0.5
Phosphorus	2 - 7 ppm	3.07
Potassium	25-40 ppm	29.76
Calcium	50- 75 ppm	44.40
Magnesium	15-30 ppm	13.84
Sodium	0 - 30 ppm	74.43
Soluble Salts	<1,000 ppm	478.00
Bicarbonate	<60 ppm	108.17
Chloride	<200 ppm	20.50
SAR	<4%	2.57

Nutrient Deficiencies

		P	K	Mn
TEE	3	20	101	13
TEE	12	36	109	29
FAIRWAY	3	25	113	20
FAIRWAY	12	30	119	21
GREEN	PG	5	93	28
GREEN	3	4	76	14
GREEN	12	12	79	23

Potassium can be added in the form of 0-0-50 at a rate of 2 pounds of product per 1,000 sq ft every other month

Manganese can be added in the form of Manganese Oxide or Sulfate at a rate of 3 pounds of product per 1,000 sq ft in September- December

Comments and Next Level Cultural Practices

- I displayed soil and water test results from the same hole (#12) from 2008. I did it to show what has changed and what hasn't. Of course, the greens are new and should be different, but tees and fairways are essentially unchanged. There was a slightly different test method I used back then so I didn't show results where methods used were different.
- I am not recommending any phosphorus applications to greens currently. We may revisit that after the next round of samples.
- Dominator Bentgrass seems to do best as the heat increases. The longer this grass is in the market, the more information we have in the field. This is a trait that is not in all newer bentgrasses.

