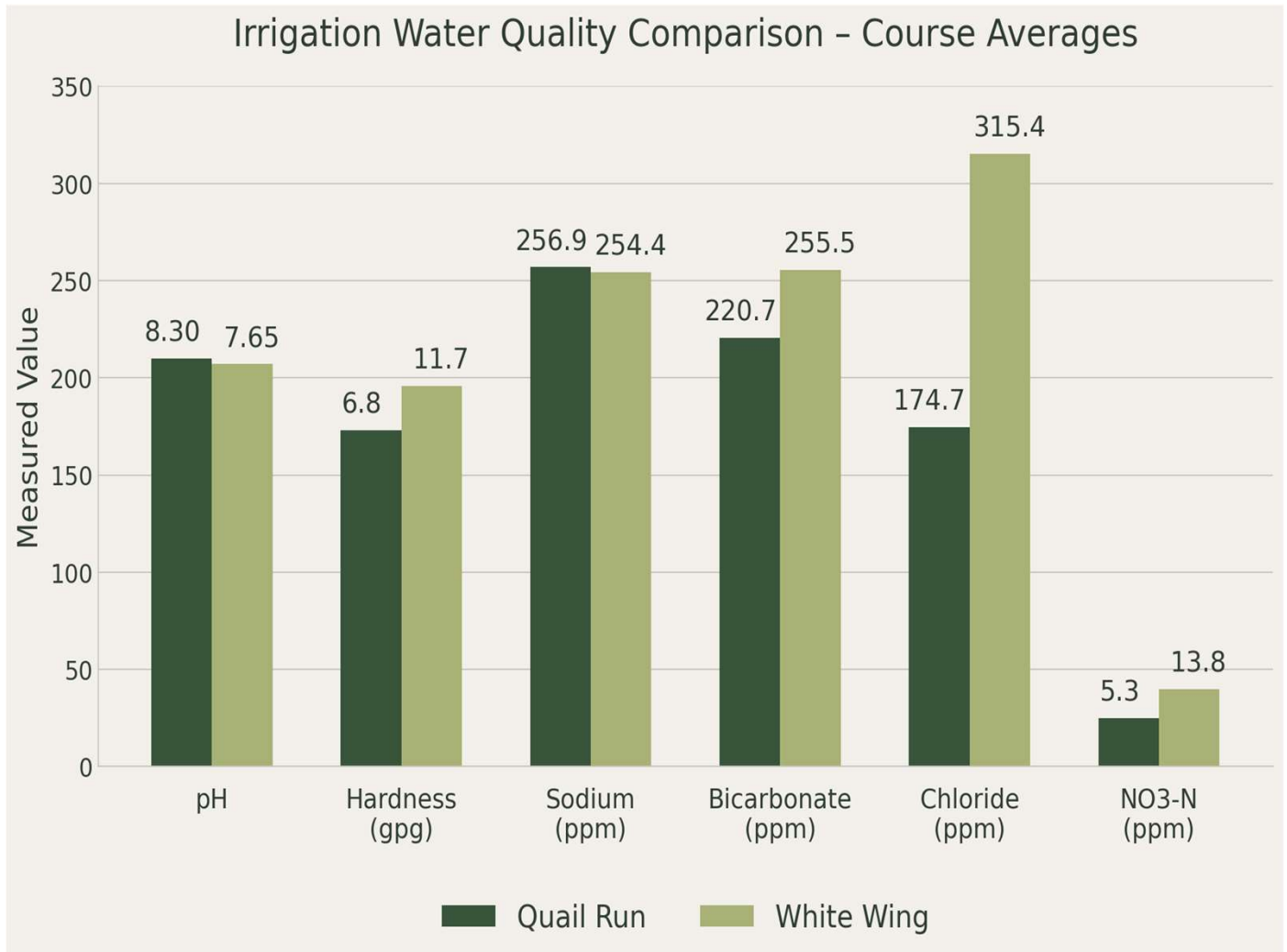




IRRIGATION WATER

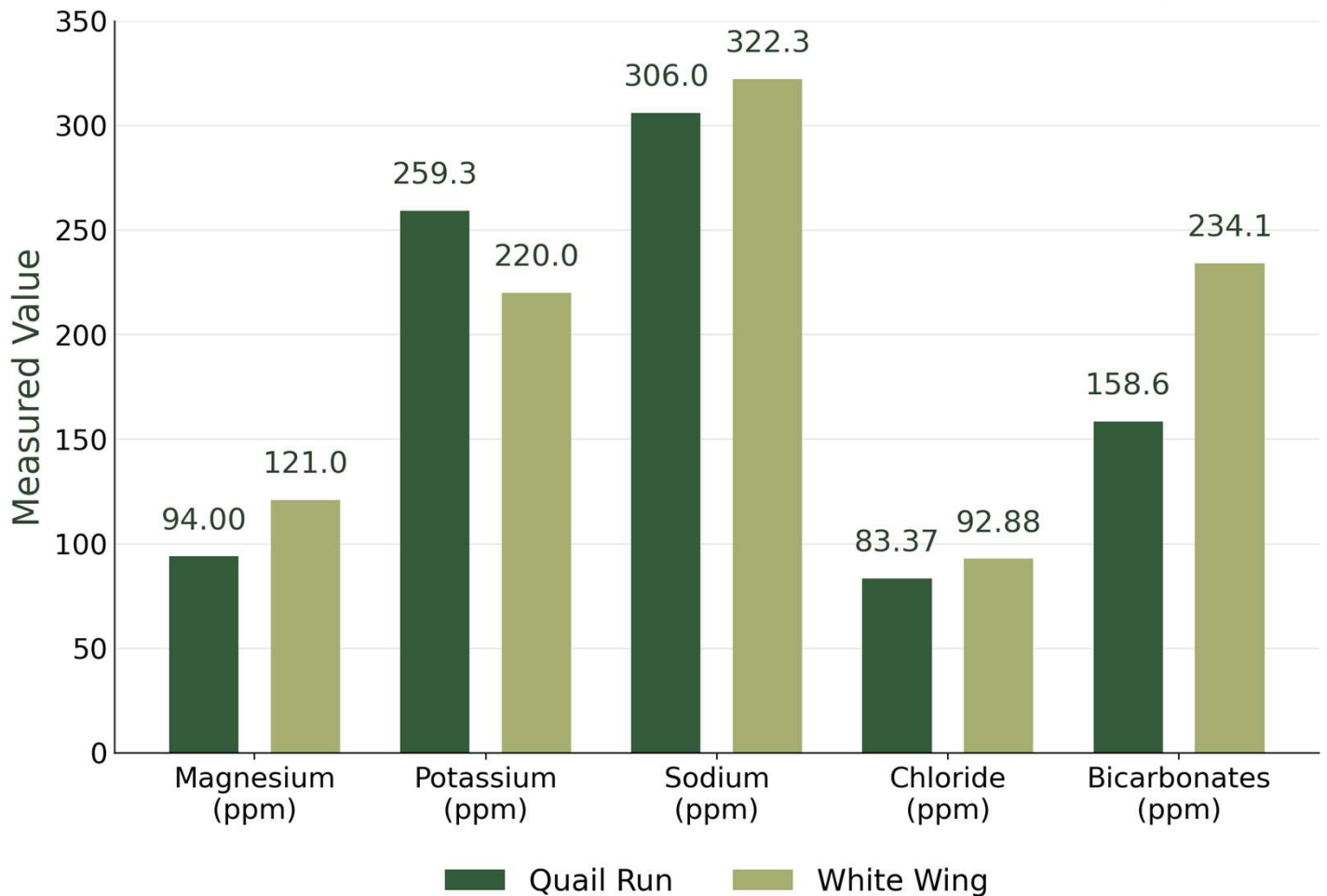


- There are some seasonal inconsistencies between the water sources, and this collection shows a difference that is significant in the nitrates between white wing and quail run golf courses. Each of these samples were taken from green side quick coupler valves. I collected them about as far away on the property as you could get from each other.



TEES

Tee Soil Averages Comparison - Course Averages



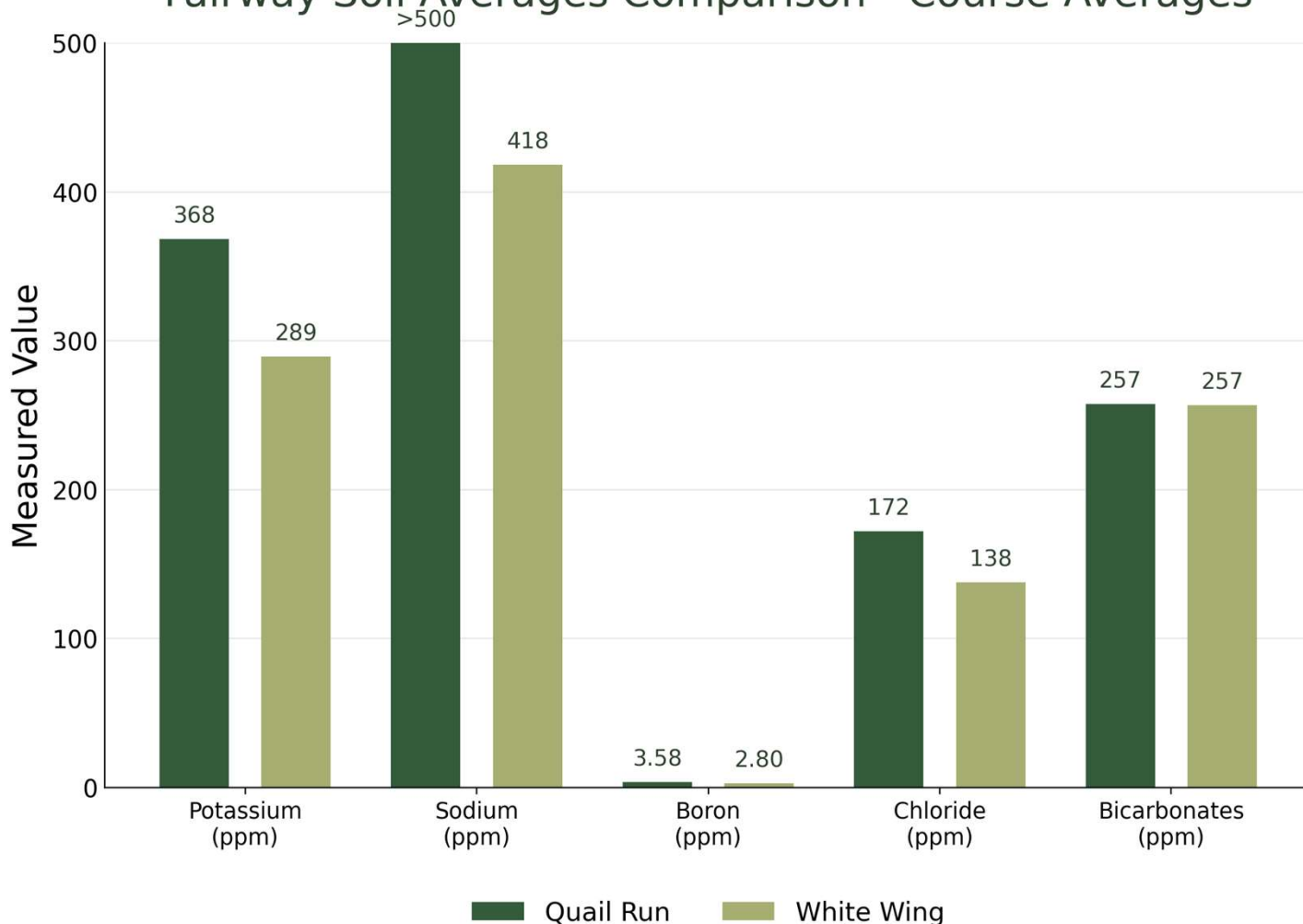
- Tees, unlike native soils, have a significant amount of sand in the profile through filling divots, top dressing or aerification processes. Certainly, they do not drain the way greens do, but you have a better chance of getting rid of some of that sodium and bicarbonate buildup. I would recommend gypsum applications to try to offset the negative salts in the soil.

TURF NUTRIENT TARGETS	
NUTRIENTS	
Ca	≥ 500 ppm
Mg	≥ 100 ppm
K	≥ 75 ppm
Mn	≥ 50 ppm
NITROGEN	
NO ₃ -N	≤ 5 ppm Greens
NO ₃ -N	≤ 10 ppm Cool-season tees & fairways
NO ₃ -N	≤ 15 ppm Warm-season grass, tees & fairways
ppm = parts per million	



FAIRWAYS

Fairway Soil Averages Comparison - Course Averages

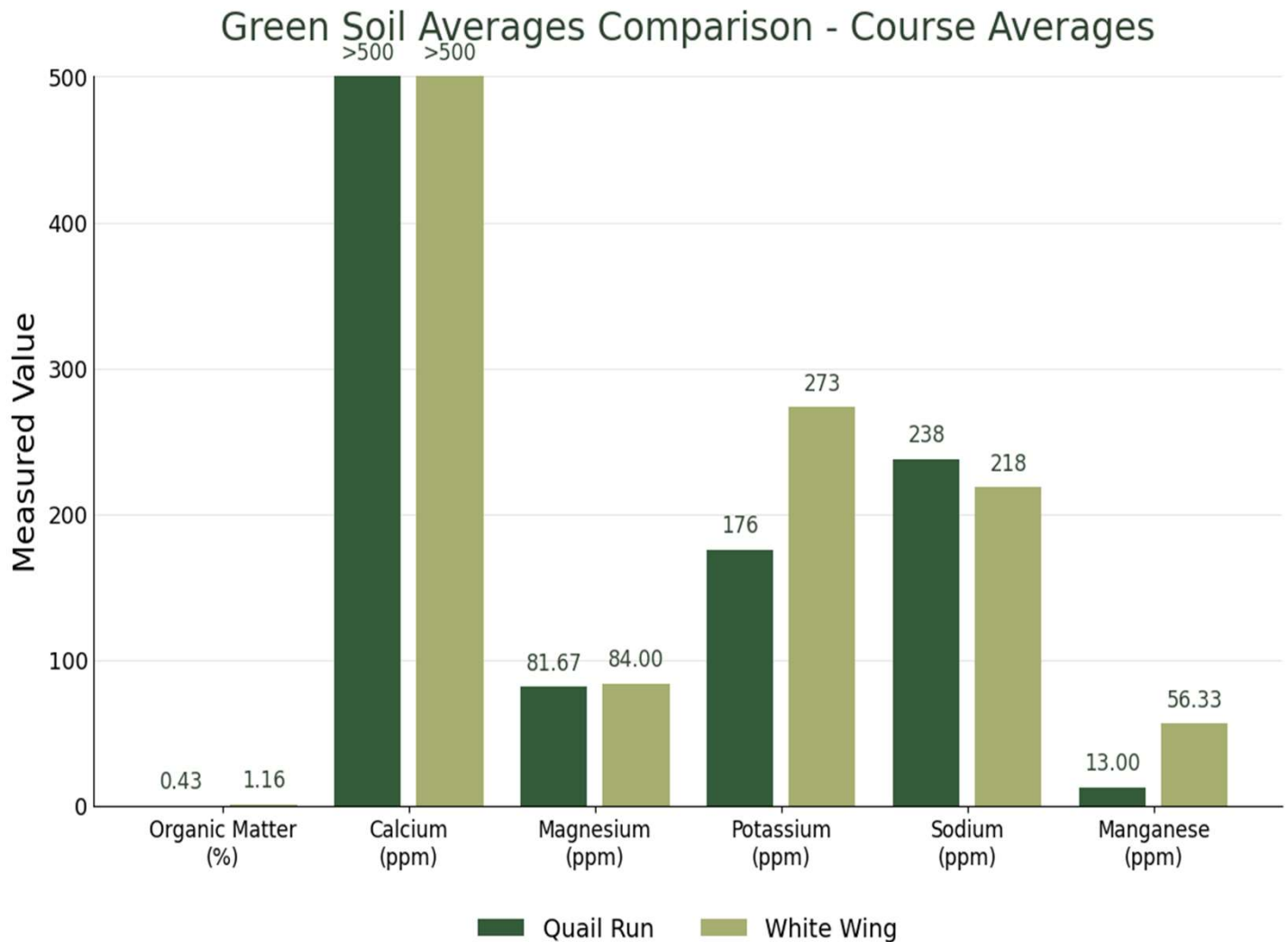


- The fairways soils are dominated by sodium, chloride and bicarbonates with a little excess boron. The native soils are very high in minerals. However, there is very little routine availability of the good salt such as calcium and potassium. Water management and the ability to drain that water is the most critical in soils like these. The key would be to use only what's needed to hydrate the plant and then make sure that it keeps moving through the profile. Aerification during the Summer months should be a priority.

TURF NUTRIENT TARGETS	
NUTRIENTS	
Ca	≥ 500 ppm
Mg	≥ 100 ppm
K	≥ 75 ppm
Mn	≥ 50 ppm
NITROGEN	
NO ₃ -N	≤ 5 ppm Greens
NO ₃ -N	≤ 10 ppm Cool-season tees & fairways
NO ₃ -N	≤ 15 ppm Warm-season grass, tees & fairways
ppm = parts per million	



GREENS



- I am noting the amount of potassium in the greens, because profile is known to make potassium numbers larger than they really are on the soils test. I believe the actual amount of potassium available to the plant is less than the number shown in the testing. On the greens, I would do monthly applications of O-O-22. The relationship between potassium and sodium is strained and more readily available potassium will help. Magnesium is low and could be corrected before the Fall sample collection.

TURF NUTRIENT TARGETS	
NUTRIENTS	
Ca	≥ 500 ppm
Mg	≥ 100 ppm
K	≥ 75 ppm
Mn	≥ 50 ppm
NITROGEN	
NO ₃ -N	≤ 5 ppm Greens
NO ₃ -N	≤ 10 ppm Cool-season tees & fairways
NO ₃ -N	≤ 15 ppm Warm-season grass, tees & fairways
ppm = parts per million	

SUMMARY

- ❑ Fairways exhibiting excellent root development, indicating strong soil structure and effective moisture management under current conditions (75°F air / 60°F soil).
- ❑ Superintendent plans to overseed all greens each winter; mixed bermudagrass cultivars (TifEagle- Quail Run, Tifdwarf- White Wing) will require careful spring transition management.
- ❑ Sod installation along cart paths establishing well; new desert landscape plantings improving aesthetics and reducing maintained turf areas.
- ❑ Recommended core sampling for physical soil analysis (Fall 2026 or Spring 2027) to guide aeration and topdressing programs.
- ❑ Supported USGA agronomist half-day visit as follow-up to post-Roundup recovery; It is an opportunity to validate progress and communicate improvements to membership.



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