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ALERTS:

PLATINUM TE™ SEASHORE PASPALUM

1. **IF SCALPING PROBLEMS UNEXPECTEDLY SHOW UP WITHOUT CHANGING MOWER HEIGHT-OF-CUT, THE MOST LIKELY PROBLEM IS INADEQUATE OR INSUFFICIENT POTASSIUM CONCENTRATIONS IN THE LEAVES. ALWAYS MAINTAIN AT LEAST 3% K IN PASPALUM LEAVES, BASED ON WET CHEMISTRY/SPECTRO-PHOTOMETRIC OR ICP TISSUE ANALYSIS. ROTATED WEEKLY PRESCRIPTION APPLICATIONS OF EITHER GRANULAR OR LIQUID K PRODUCTS MAY BE REQUIRED ON A SPECIFIC SITE, SINCE K IS HIGHLY MOBILE IN THE SOIL AND MOVES QUICKLY WITH IRRIGATION WATER APPLICATIONS AND RAINFALL EVENTS. POTASSIUM WORKS SYNERGISTICALLY WITH CALCIUM TO HELP MOVE NUTRIENTS PAST THE PLASMA MEMBRANE FOR PHOTOSYNTHETIC ACTIVITY.**

2. **SALT TOLERANCE MECHANISMS IN PLATINUM TE ARE GENETICALLY ACTIVATED PRIMARILY IN THE ROOT SYSTEM BY MANGANESE AND ZINC. TO FULLY ACTIVATE THESE SALT TOLERANCE MECHANISMS, GRANULAR MN PRODUCTS MUST BE APPLIED TO THE SOIL AND SUBSEQUENTLY BE ROOT-ABSORBED. MANGANESE IS IMMOBILE INTERNALLY IN THE PLANT; THEREFORE, LIQUID APPLIED AND FOLIARLY ABSORBED MN PRODUCTS WILL NOT BE TRANSLOCATED TO THE ROOTS FROM THE SHOOTS. ZINC IS SOMEWHAT IMMOBILE INTERNALLY IN THE PLANT, AND BOTH SOIL-APPLIED GRANULAR AND LIQUID FOLIAR-APPLIED ZN PRODUCTS ARE ALSO RECOMMENDED FOR BEST RESULTS. BOTH MN (50-300 PPM) AND ZN (20-250 PPM) ARE**

REQUIRED IN THE SHOOTS AT SUFFICIENCY LEVELS FOR MAXIMUM ENZYME ACTIVATION AND NUTRITIONAL BALANCES IN CONCERT WITH OTHER NUTRIENTS.

3. **RELATIVE SOLUBILITY OF CALCIUM PRODUCTS:**
   ➔CALCIUM SULFATE ANHYDRITE (<u>LEAST/SLOWEST SOLUBILITY</u>). ROOT ABSORBED.
   ➔DOLOMITE (CALCIUM+MAGNESIUM CARBONATE). SLOW SOLUBILITY. ROOT ABSORBED.
   ➔CALCIUM CARBONATE (LIME OR CALCITE). ROOT ABSORBED.
   ➔CALCIUM HYDROXIDE (HYDRATED LIME). ROOT ABSORBED.
   ➔CALCIUM SULFATE DIHYDRATE (GYPSUM). ROOT ABSORBED.
   ➔CAS_X (LIME SULFUR). ROOT ABSORBED.
   ➔CALCIUM NITRATE. FOLIARLY ABSORBED IN LIQUID FORM.
   ➔CALCIUM CHLORIDE (<u>MOST SOLUBLE/FASTEST SOLUBILITY</u>). FOLIARLY ABSORBED.

   Soil applied and root-tip absorbed calcium products will take 3-4 weeks to translocate up to the shoots; so time the applications accordingly to ensure continuous availability and pulse release of the calcium for uptake. Foliar-absorbed calcium will take 4-7 days to stabilize nutrition in the leaves.

   Note: particle size ranges from fine to coarse will also vary by product and by solubility/release of calcium with irrigation or rainfall.

4. **MOBILITY OF NUTRIENTS INTERNALLY IN PLATINUM TE:**
   ➔MOBILE: N, P, K, Mg, CL, Na
   ➔SOMEWHAT MOBILE: S, CU, Mo, Zn, B
   ➔IMMOBILE: Ca, Mn, Fe, Sl
   The immobile nutrients, when absorbed foliarly, will not translocate to the roots; therefore, both granular soil-applied and liquid foliar-absorbed products will be required in the fertility program for maximum grass performance. THE KEY MANAGEMENT STRATEGY IS TO MAKE SURE THAT CALCIUM AND MAGNESIUM ARE CONTINUOUSLY AVAILABLE FOR UPTAKE AT ALL TIMES WHEN GROWING TURFGRASS.

5. **MANGANESE IS THE KEY NUTRIENT FOR SUPPRESSING ROOT BORNE PATHOGENS THAT CAUSE PASPALUM DECLINE/TAKE-ALL/ETRI DISEASES. YOU MUST AERATE DOWN INTO THE SOIL PROFILE 2-3 INCHES (50-75 MM), APPLY THE GRANULAR MANGANESE (AT LEAST 5% CONCENTRATION), AND SYRINGE THAT ELEMENT SUFFICIENTLY TO LOCALIZE IT AROUND THE CROWNE AND RHIZOME REGIONS FOR BEST DISEASE SUPPRESSION RESULTS.**

6. **PASPALUM HAS A TENDENCY TO RAPIDLY ABSORB MOISTURE FROM IRRIGATION OR RAINFALL EVENTS. WHEN EXCESS MOISTURE IS AVAILABLE OVERNIGHT (SUCH AS FROM PROLONGED OR HIGH RAINFALL EVENTS), AVOID VERTICUTTING OR GROOMING AGGRESSIVELY THE NEXT MORNING, SINCE THE LEAVES WILL BE PUFFY AND PRONE TO SCALPING OR SHOOT TISSUE BRUISING/DAMAGE, AND POTASSIUM WILL GENERALLY BE RE-REGULATING TURGOR PRESSURE DURING THE MORNING HOURS.**

7. **WET CHEMISTRY OR ICP TISSUE ANALYSIS NUTRIENT SUFFICIENCY CONCENTRATIONS FOR SEASHORE PASPALUM**

2.00-3.00% N	**50-500 PPM FE**
0.30-0.60% P	**20-250 PPM ZN**
2.00-4.00%K	**50-300 PPM MN**
0.20-1.50% CA	**5-50 PPM CU**
0.20-0.60% MG	**5-60 PPM B**
0.20-0.60% S	**0.5-1.0 PPM MO**

MAXIMUM COLOR EXPRESSION: CA, MG, FE, MN, S, P, K

SALINITY STRESS TOLERANCE ACTIVATION: CA=k IN SHOOTS; MN+ZN IN ROOTS; CYTOKININS (HORMONALLY)

DROUGHT STRESS TOLERANCE ACTIVATION: MO (NUTRITIONAL); SILICON/SILICATES (PROTECTANT); SALICYCLIC ACID (HORMONALLY)