

DeSal® & Stress Rx®

Proven Results on Turf Under Play Using a Two-Pronged Strategy

Targeting the Soil with DeSal®

DeSal® is a salinity and sodicity soil treatment that addresses the underlying problems in the soil. It's the top performing product in this category.

1. Detox the Soil

Using our proprietary NuRelease® technology, DeSal®:

- Dramatically reduces sodium and total salt concentrations in rootzones.
- Helps move sodium and total salts out of the rootzone.
- Releases calcium, critical to effective water and nutrient transport.
- Helps correct nutrient deficiencies of calcium, potassium, iron, magnesium, manganese, phosphorus and zinc.

Calcium released by DeSal® in the rootzone has two functions. It displaces sodium on soil particles allowing the sodium to be more easily and economically flushed out. It also helps to supply the plant roots with calcium, which is known to improve salinity tolerance and protect plant cells.

2. Manage Calcium Better

Calcium is without question, the most important and most difficult nutrient element to manage for turf professionals dealing with salinity and sodicity issues. Among many other benefits that DeSal® delivers is dramatically improved calcium availability and efficiency.

3. Correct Nutrient Deficiencies in Rootzone and Soil

We use to great advantage our NuRelease technology to target salinity-sodic stresses. Our proprietary blend of natural compounds mimics the natural sequestering power of exudates produced by healthy roots and soil microbes. These help reduce sodium toxicity in the plant by making calcium, and also P, K, Mg, Mn, Fe, and Zn more plant available through the roots.

4. Improve Water Uptake

The net result of reducing sodium, improving calcium availability and correcting critical nutrient deficiencies is better water uptake.

Salinity and sodicity are related but very different problems. An effective solution to high salinity and sodicity requires a two-pronged strategy, one targeted at the soil, the other targeted at the plant.

Targeting the Plant with Stress Rx®

Detox and Strengthen the Plant

Stress Rx® is an innovative foliar-applied fertilizer and osmoprotectant that significantly increases salinity stress tolerance in turfgrasses. Osmoprotectants are organic solutes that help plants maintain osmotic balance in their cells during salt stress and protect cells from water loss due to ion imbalances.

1. Sodium Toxicity = Calcium Deficiency

Just as sodium displaces calcium on soil particles and destroys soil structure it also displaces calcium in plant cell membranes making them leaky and compromised. When this happens, plants can't effectively transport water and nutrients and photosynthesis degrades. Getting calcium into the plant is critical for turfgrass survival under these conditions. Stress Rx® gets calcium and also potassium into plant cells.

2. Protect Osmotic Balance

Stress Rx® contains unique osmoprotectants in a proprietary formulation that help plants subjected to salinity stress maintain osmotic balance and cell membrane integrity without disrupting enzyme (essential for survival) activity. One of our key osmoprotectants is glycinebetaine.

3. Salinity Solutions from Sea Plants

Betaines, including glycinebetaine, are among the many unique constituents in the seaplants we harvest and process. (Betaines are one of the reasons seaweeds not only survive but flourish in salt water.) We increase our glycinebetaine concentrations by using other natural sources.

- Glycinebetaine has been shown to maintain the activity of enzymes in a wide variety of plants under a wide variety of unfavorable conditions including high temperature, extremes of pH, and high salt concentrations.
- Our research at Rutgers University shows that salt-stressed turf accumulates glycinebetaine when our proprietary foliar materials are applied and that they help maintain osmotic balance.
- The rate of net photosynthesis in salt-stressed plants has also been shown to increase.

The Salinity Solution™

DeSal® — Top Performer

DeSal® was the top performing salt management product out of the 7 programs tested in Monterey, CA. DeSal was also the top performer out of 9 programs tested in Indio, CA.

The recommended rate for DeSal is 24 oz per acre every 21 days.

Science-Based Sustainable Solutions to Salinity and Sodicity

Talk's Cheap. Research Isn't Stress Rx® and DeSal® and have been tested by Rutgers University and Virginia Tech as well as independent field researchers. The following statements are printed with permission of The Corral de Tierra Country Club, The Shadow Hills Golf Club and The Hi-Lo Golf Course Superintendents Association Research Committee.

“DeSal is the best product we have ever screened for reduction of exchangeable and extractable sodium in turf. Plus it is quite safe for use on turf.”

— Mark M. Mahady, President of Mark M. Mahady and Assoc., Carmel Valley, CA

1 “DeSal® (NB36820) was the top performing salt management product out of 7 programs in a replicated field trial conducted by Mark M. Mahady & Associates, Inc. on the Poa annua chipping green at Corral de Tierra Country Club near Monterey, California.”

2 “In a replicated field trial funded by the Hi-Lo GCSA Research Committee and conducted by Mark M. Mahady & Associates, Inc. on fairways at the Shadow Hills Golf Club (Indio, CA), DeSal® (NB36820) exhibited the greatest change in the concentration of critical salt management components* out of 9 programs tested...”

* Including EC, soluble salts, exchangeable sodium, extractable sodium, and extractable chloride.

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