actosol ®

FIELD TRIALS
Report #9

"Calcium *actosol*® improved cation exchange capacity, organic matter and root development on sports turf at Fort Myers Sports Complex, Florida"

Jim Stamp, JSM Services, April, 2008.

In the spring of 2008, a test was conducted to evaluate the use of ***calcium actosol*®** applied with a boom sprayer at 3 gallons of actosol/60 gallons of water per acre on several sports fields located in Fort Myers, Fl. The objective was to demonstrate that calcium actosol could improve Bermuda grass turf performance on highly compacted soils by providing improved root development, thus increase drought tolerance and increase fertilizer efficiency. Second treatment was applied after twenty-four days.

Two Sports Field were treated with 15-5-15 at 1 lb. N/month The first sports field was completely treated, and the second field with a selected area was treated on the warming track. The third field was in a parking area that has very highly compacted soil. Another location Estero Park was chosen with three areas which included an Amphitheater, Soccer Field (treated whole field) and a less maintained soccer field All of these areas are treated with 1 lb. N every 2 months (amp theater) and the soccer fields every month with 15-5-15.

INITIAL OBSERVATIONS:
General observations on this Estero Park area showed turf that had poor root development and moderately acceptable turf quality on the soccer fields. The Amp theatre had slightly better root development and turf quality.

RESULT:

SPORTS COMPLEX

This study showed that actosol® improves root development by increasing more roots and deeper roots on both cool and warm grasses. In relationship to more roots we also noted a direct correlation of improved root development resulting in better turf quality. Based on the soil analysis we also noted that there was a reduction of compactness based on the deep we could achieve via the use of our soil profiler. We noted an increase on the average of 3-4 inches of soil retained compared to no actosol® treatments. The study also confirmed that the actosol® treatment more than doubled the number of active roots per sample compared to the non treated turf.

In reference to nutrient efficiency the study showed the use of actosol® (biostimulant) increased not only the organic matter content (which helps reduce water need to the turf) but also increased the CEC resulting in better retention of most nutrients into the soil. In summary, two applications of 3 gallons of actosol/60 gallons of water increased root development, provided better drought tolerant turf, increased nutrient efficiency, and provided acceptable turf quality.

ESTERO PARK

The study which was conducted at this complex demonstrated that a similar program using actosol can improve turf quality along with improved root development, increased stress tolerance, and greater efficiency of nutrients. Our data also supports that due to the increase of better use of nutrients there is potential opportunities to reduce synthetic fertilizer applications in conjunction with actosol®.

SOIL ANALYSIS FOR FORT MYERS ESTERO PARK FIELDS

	4/10/2008	**6/11/2008**	
	Wo/actosol	**w/actosol**	**wo/actosol**
ORGANIC MATTER	1.3	1.8	1.3
Phosphorous	33 ppm	72 ppm	57 ppm
Potassium	40ppm	89ppm	50ppm
Magnesium	75ppm	100ppm	62ppm
Calcium	650ppm	790ppm	640 ppm
CEC	4.2	8.1	3.9
FE	137 ppm	230 ppm	175ppm
MN	96 ppm	126 ppm	99 ppm
ZN	2ppm	13ppm	3ppm
pH	7.6	7.6	7.4
SS	66	224	114

SOIL ANALYSIS FOR FORT MYERS FIELDS

	4/10/2008	**6/11/2008**	
	Wo/actosol	**w/actosol**	**wo/actosol**
ORGANIC MATTER	2.2	3.9	2.3
Phosphorous	60 ppm	87 ppm	64 ppm
Potassium	74ppm	83ppm	58ppm
Magnesium	140ppm	230ppm	155ppm
Calcium	1200ppm	1600ppm	1190 ppm
CEC	6.6	15.3	7.6
FE	70 ppm	112 ppm	99ppm
MN	75 ppm	214 ppm	129 ppm
ZN	6ppm	39ppm	19ppm
pH	7.6	7.6	7.4
SS	66	224	114

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