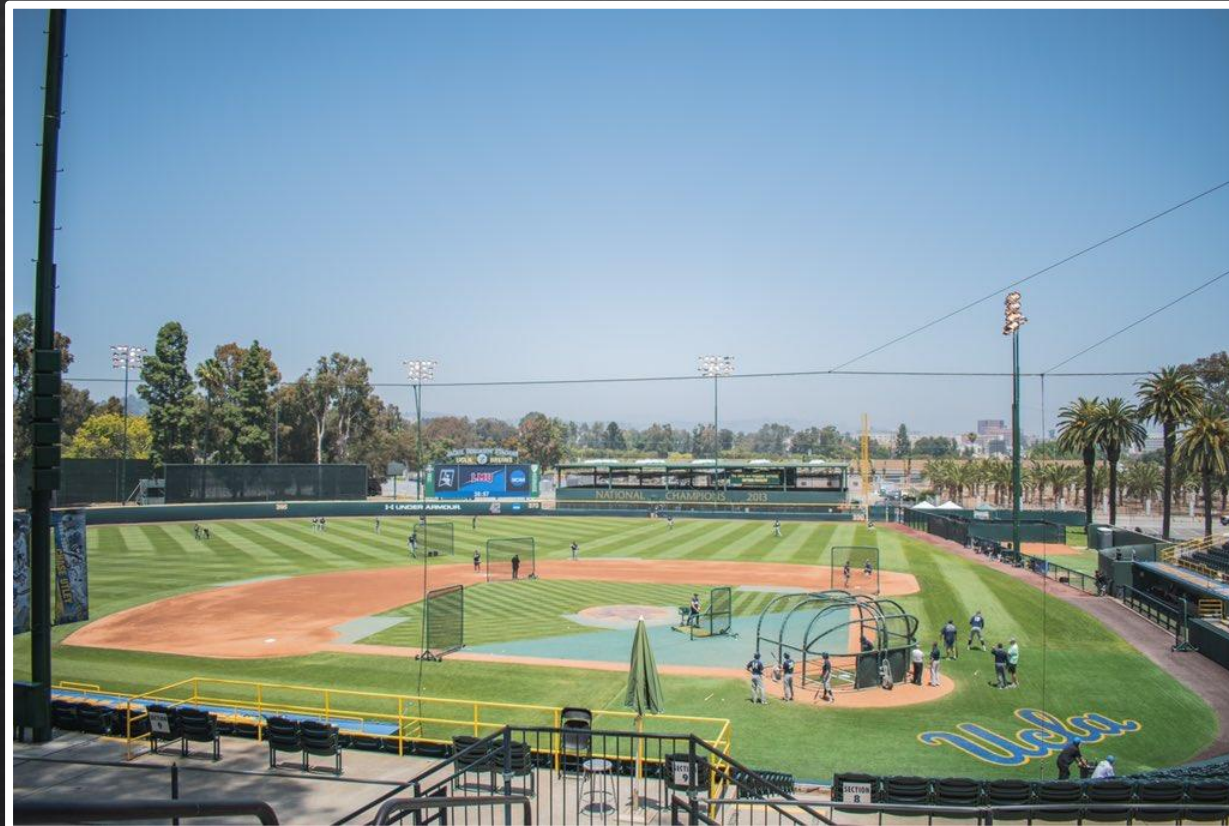


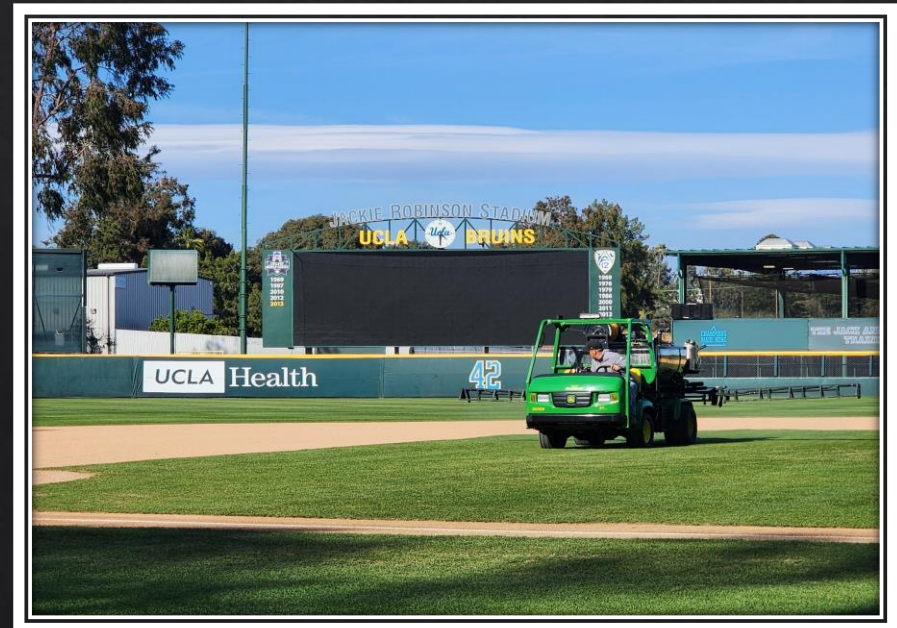
TURFGRASS WEED CONTROL - SPORTS FIELDS & PARKS

Paul Cushing – Agronomist – Sports Field Specialist

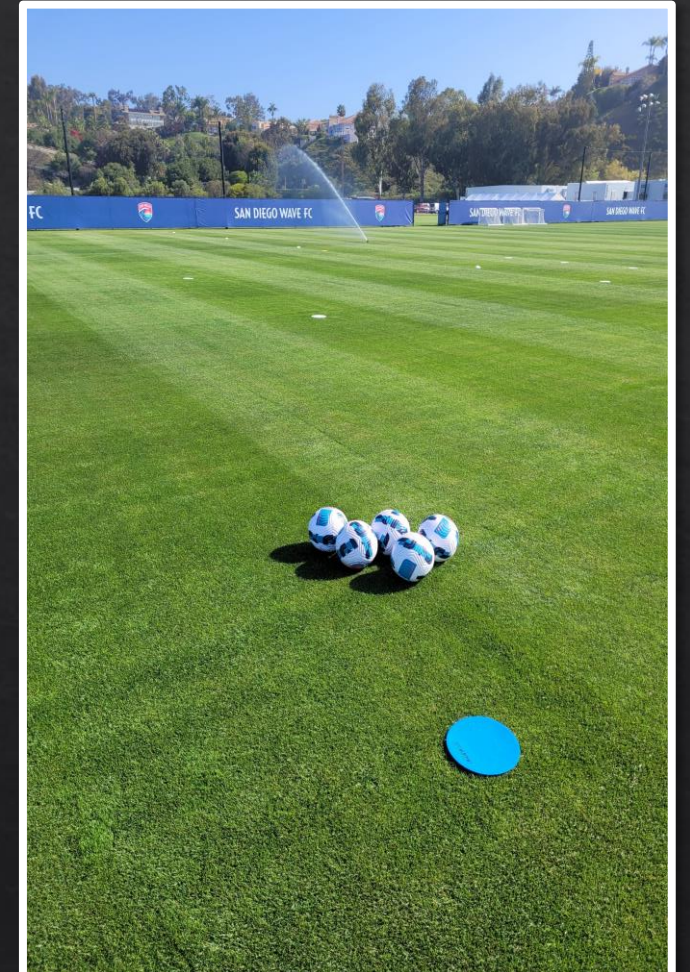
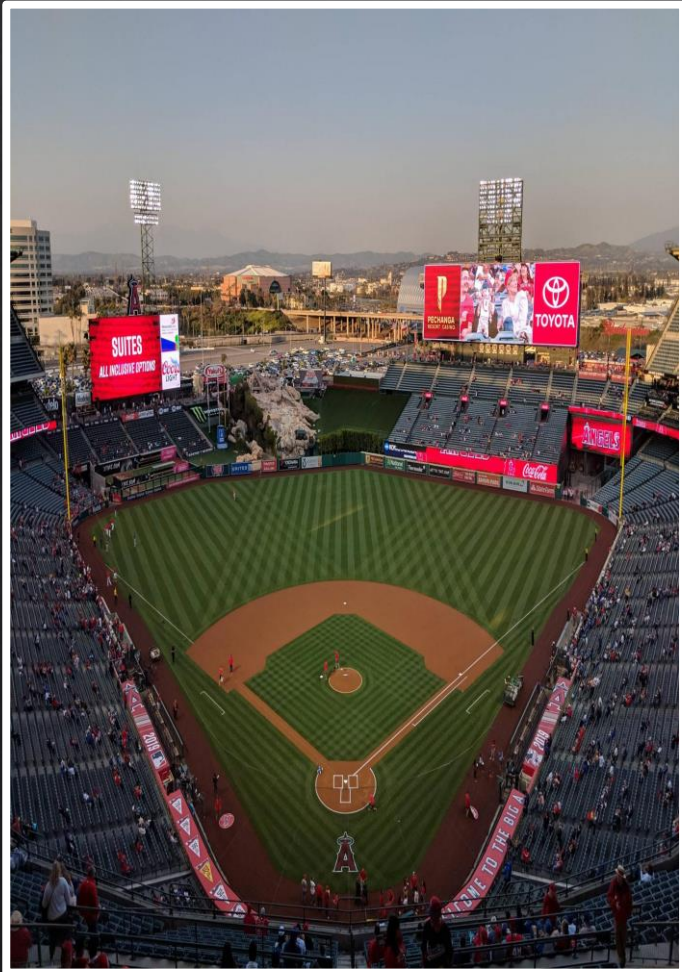


PC TURF - AGRONOMIC SERVICES

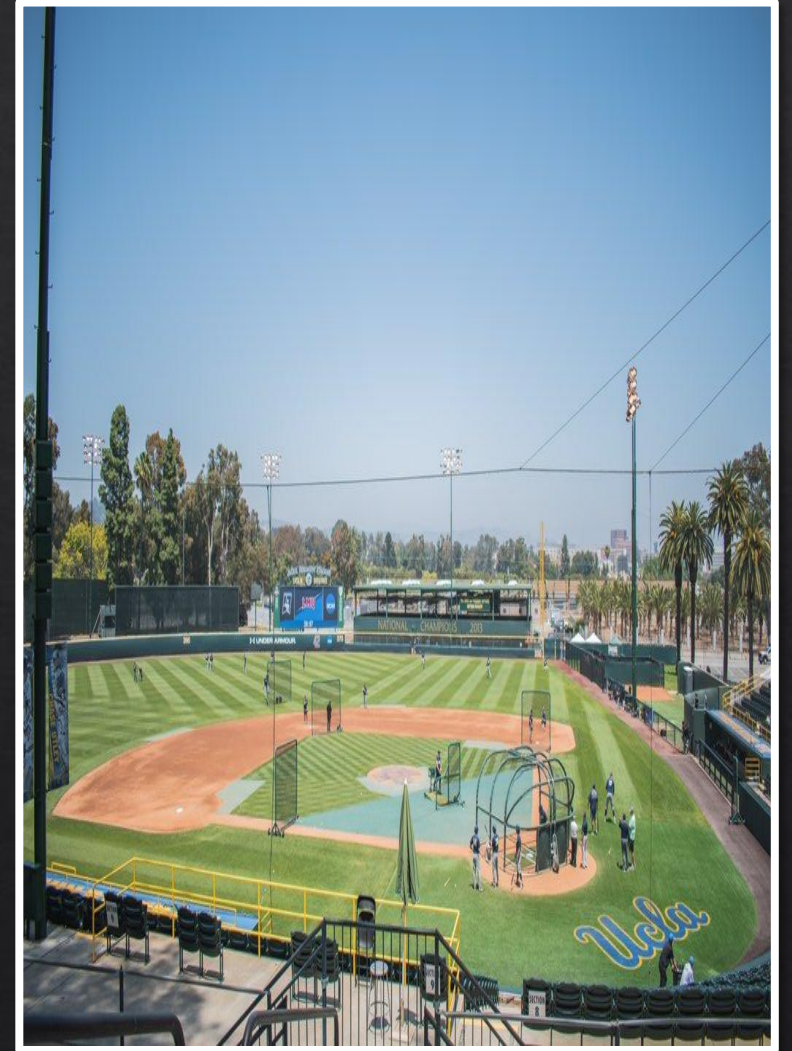
- ❖ Professional Soil & Water Testing
- ❖ Analysis and Independent Fertility Recommendations
- ❖ Sports Field Agronomic Day & Monthly Visits
- ❖ Spraying Services
- ❖ www.pcturfpro.com



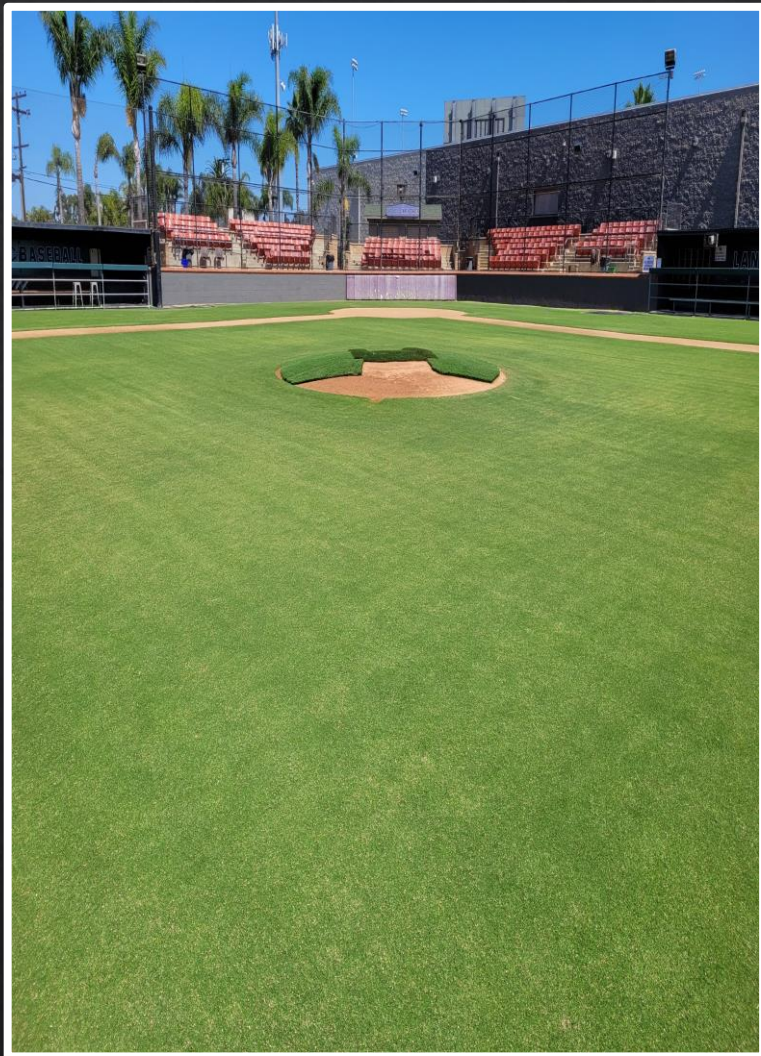
PROFESSIONAL FIELDS



UNIVERSITY ATHLETIC FIELDS



HIGH SCHOOL SPORTS FIELDS



CITY & MUNICIPALITY SPORTS FIELDS



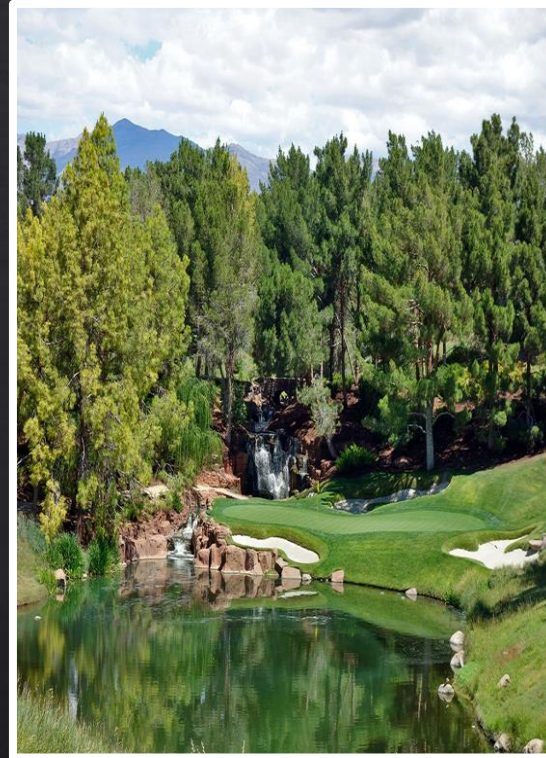
PAUL CUSHING - AGRONOMIST



**TORREY PINES GOLF
COURSE**



**RIVIERA COUNTRY
CLUB**



**SHADOW CREEK GOLF
CLUB**



**EDGEWOOD TAHOE GOLF
CLUB**



TORREY PINES GOLF COURSE – SAN DIEGO CA



TORREY PINES GC

#1 MAINTAINED GOLF COURSE ON THE PGA TOUR - 2014



LET'S TALK WEED!



.....I MEAN WEEDS



WEED CONTROL - SPORTS FIELDS



BROADLEAF WEED CONTROL - SPORTS FIELDS



GRASSY WEED CONTROL - SPORTS FIELDS



NUTSEDGE WEED CONTROL - SPORTS FIELDS



WEEDS TELL OF STORY OF WHAT'S GOING ON IN THE SOIL

- ◆ Too Wet!
- ◆ Too Dry!
- ◆ Compaction
- ◆ Lack of Fertility
- ◆ Inability for Turfgrass Plant to Utilize Available Nutrients in Soil



TOO WET!



POA ANNUA



PLANTAIN



NUTSEGE

TOO DRY!



SPURGE, THISTLE, MUSTARD, NETTLE & BLACK MEDIC



COMPACTION



SILVER CRABGRASS, PLANTAIN, CHICKWEED



LACK OF FERTILITY



CLOVER – LOW NITROGEN



WEED CONTROL ON SPORTS FIELDS

- ◇ Speedzone Herbicide (2,4-D, Mecoprop-p, Dicamba, Carfentrazone) has a strong control of a wide spectrum of broadleaf weeds
- ◇ Combination of MSMA Herbicide (Monosodium Acid Methanearsonate) + Drive Herbicide (Quinclorac) are a great mix to control a wide spectrum of grassy weeds
- ◇ Herbicide Products Sedgehammer (Halosulfuron), Manage (Methyl 5) and Monument (2-pyridinesulfonamide N) are good products to control nutsedge (Multiple applications are necessary)
- ◇ Make herbicide applications early in the morning or early evening when fields are not in use
- ◇ Don't mow the day before or the day after any application(s)
- ◇ Let materials sit on leaf blades at least 24 hours before watering
- ◇ Water all weed control applications before allowing players to utilize fields
- ◇ Add fertilizer and/or non-ionic wetting agents and/or MSO Oil to improve chemical uptake of weeds



PROPER HEIGHT OF CUT (HOC) ON SPORTS FIELDS PLAYS A HUGE ROLE IN WEED POPULATION

- ◆ Turf Management 101 tip- never mow off more than 1/3 of a turfgrass leaf blade at one time
- ◆ Lower HOC in spring when turf is greening and coming out of winter dormancy
- ◆ Raise HOC in summer when turf is under heat stress
- ◆ Lower HOC in fall again to keep turfgrass canopy tight
- ◆ When possible, use reel mowers for lower HOC
- ◆ By rule- The lower the HOC & mowing the field on a greater frequency, the fewer weeds you'll have in your turf areas
- ◆ When possible, use turfgrass growth regulators on highly maintained fields



SAN MARCOS UNIFIED SCHOOL DISTRICT

MISSION HILLS HIGH SCHOOL



IMPORTANCE OF SOIL TESTING SPORTS FIELDS



Soil Report

Job Name: **Stanford University**

Date: 8/28/2019

Company: **Paul Cushing GC & Sports Turf Agronomic Services** Submitted By: **Paul Cushing**

Sample Location		Football			
Sample ID		Stadium			
Lab Number		70			
Sample Depth in inches		6			
Total Exchange Capacity (M. E.)		10+ 2.58			
pH of Soil Sample		7.9			
Organic Matter, Percent		1% - 2% 0.33			
ANIONS	SULFUR:	100 p.p.m.	36		
	Mehlich III Phosphorous:	400+ as (P ₂ O ₅) lbs / acre	66		
EXCHANGEABLE CATIONS	CALCIUM: lbs / acre	Desired Value	701		
		Value Found	514		
		Deficit	-187		
	MAGNESIUM: lbs / acre	Desired Value	200		
Value Found		198			
Deficit		-2			
POTASSIUM: lbs / acre	Desired Value	200			
	Value Found	69			
	Deficit	-131			
SODIUM:	-100 lbs / acre	134			
BASE SATURATION %	Calcium (60 to 70%)	72% (6) (1.5)	49.80		
	Magnesium (10 to 20%)	12% (1) (1)	31.97		
	Potassium (2 to 5%)	5%+ (5) 1	3.43		
	Sodium (.5 to 3%)	-1% (1) (-3.3)	11.32		
	Other Bases (Variable)		3.50		
	Exchangable Hydrogen (10 to 15%)		0.00		
TRACE ELEMENTS	Boron (p.p.m.)	1+	0.35		
	Iron (p.p.m.)	200+	312		
	Manganese (p.p.m.)	50+	12		
	Copper (p.p.m.)	1+	0.57		
	Zinc (p.p.m.)	3+	2.35		
	Aluminum (p.p.m.)		189		





Stanford University – Sports Fields

Soil Recommendations from July - October 2019 Testing

Stanford Stadium Recommendations:

- Six (6) individual applications of Gypsum - Calcium Products SO₄ @ 15#/1000 ft. Recommend flushing irrigation for at least 60 minutes after application or apply prior to a rainfall event. Applications at 4-week intervals in schedule.
- Six (6) individual applications of Best 0-0-50 @ 1# K/1000 ft. (2# of actual material/1000 ft.). Apply Potassium at 4-week intervals in schedule after Gypsum applications and leaching.
- Four (4) individual applications of Andersons 7-14-14 @ 1# P&K/1000 ft. (7# of actual material/1000 ft.). Apply 7-14-14 at 4-week intervals in schedule. Recommend watering in product for at least 20 minutes of irrigation after application.
- Four (4) individual applications of Andersons Genesis RX 5-7-5 @ 15#/1000 ft. Apply 5-7-5 at 4-week intervals in schedule. Recommend watering in product for at least 30 minutes of irrigation after application.
- Three (3) individual applications of Signature 24-4-8 + 3.5 Iron @ 1#N/1000 ft. (4# of actual material). Apply 24-4-8 at 8-week intervals in schedule.
- Three (3) individual applications of Sustane 5-2-10 + Iron @ 10#/1000 ft. Apply Sustane 5-2-10 at 6-week intervals in schedule.
- When spraying Stanford Stadium field remember to add Ferrous Sulfate @ 3 oz./1000 ft. + Manganese Sulfate @ 3 oz./1000 ft. and Surfside Wetting Agent @ 3 oz./1000 ft.

Materials and Quantities Needed for Stanford Stadium (93,000 ft.)-

SO₄-	1,400# / application (28 bags) – 8,400# total or 168 total bags
0-0-50-	200# /application (4 bags) – 1,200# total or 24 bags
7-14-14-	650#/application (13 bags) – 2,600# total or 52 bags
5-7-5-	1,400#/application (28 bags) – 5,600# total or 112 bags
24-4-8-	400# / application (8 bags) – 1,200# total or 24 bags
Sustane-	1,000# /application (20 bags) – 3,000# total or 60 bags

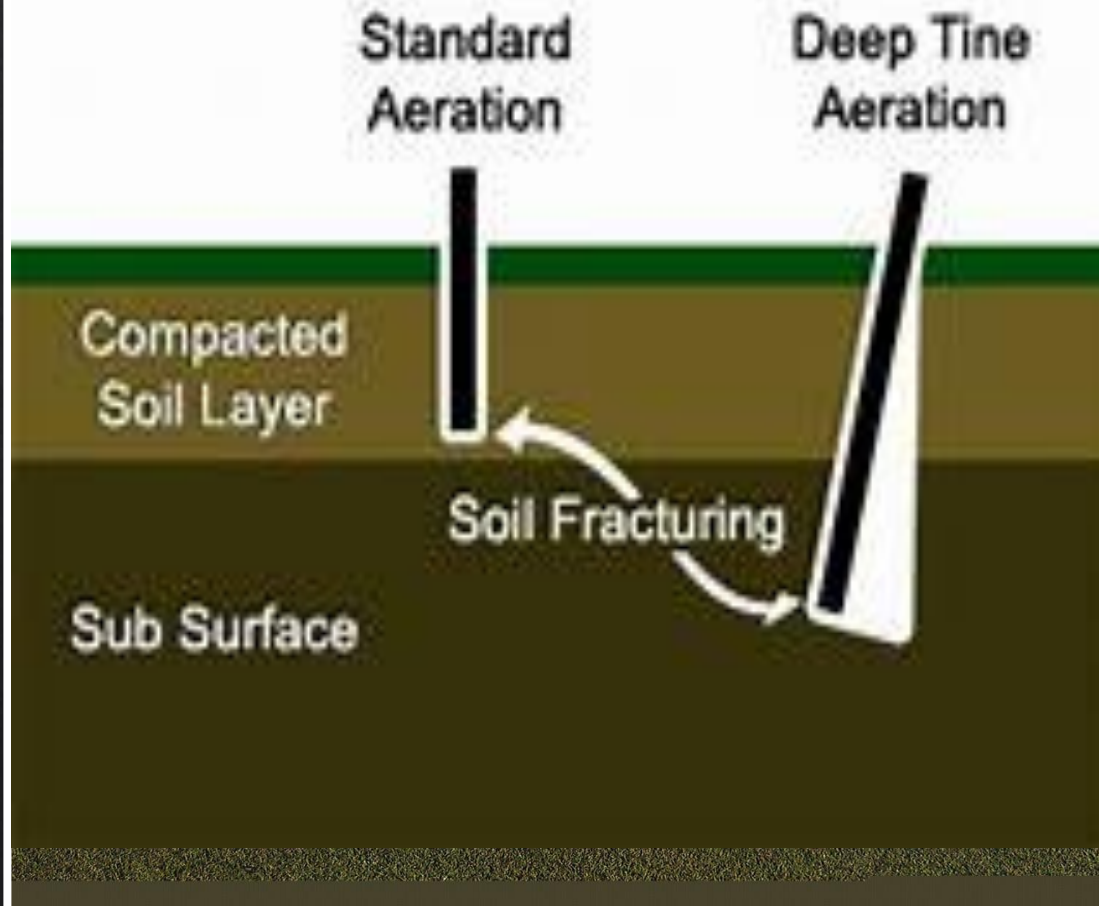


IMPORTANCE OF PHYSICAL AERIFICATION



IMPORTANCE OF DEEP TINE AERIFICATION

Advantage of Deep Tine Aeration



WARM SEASON GRASS VERTICUTTING



SAND TOPDRESSING ON SPORTS FIELDS





SIGNIFICANCE OF PRE-EMERGENT HERBICIDE APPLICATIONS

“Failing to prepare is preparing to fail” John Wooden

- ◇ Apply Pre-Emergent Herbicides in late winter/early spring (February-March)
- ◇ Good products for spring: Dimension (Dithlopyr), Barricade (Prodiamine), Surflan (Oryzalin)
- ◇ Fall Pre-Emergent application in mid September-mid October
- ◇ Good products for fall: Specticle Flo (Indaziflam), Dimension (Dithlopyr), Barricade (Prodiamine)
- ◇ If starting new Pre-Emergent program – initial clean up application of Post-Emergent herbicides on existing weeds is recommended



SEASONAL SCHEDULING

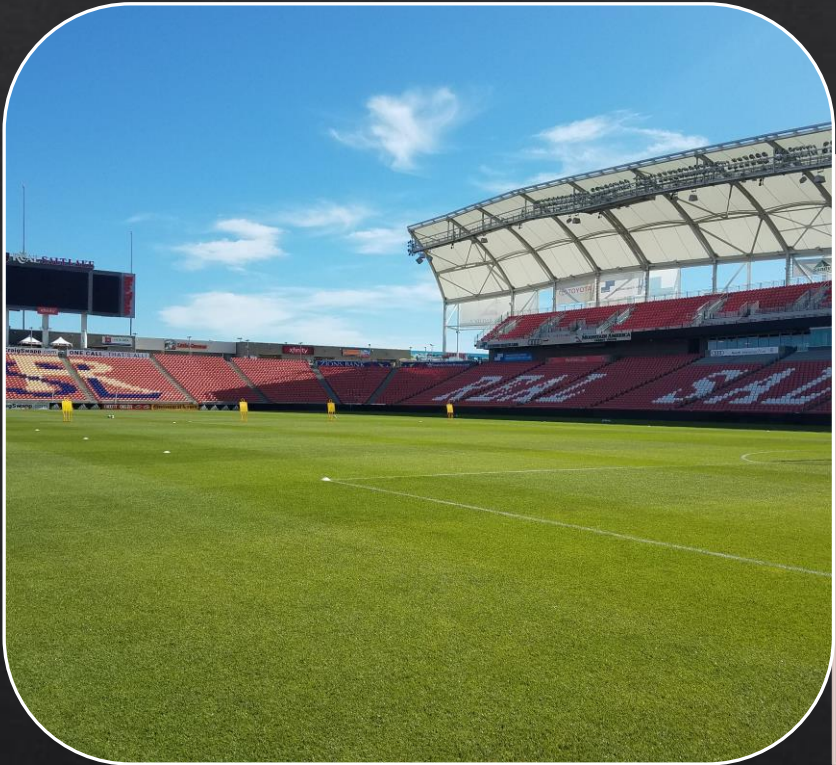
- ◇ Aerify at least 2x per year (One time core aerification and one time with a solid - deep tine)
- ◇ With warm season grasses verticut/tickle every 4-6 weeks during summer months
- ◇ Sand topdress monthly during growing season
- ◇ Irrigation audit in early spring, followed by monthly audits during the growing season
- ◇ Summer break from school or sports seasons do not mean we stop mowing or maintaining our fields!!!



ENJOY CONTROLLING THE “LOW HANGING FRUIT”



CONTACT INFORMATION



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- www.pcturfpro.com

