

# Turf in the Desert Sand

The "Plantation" Equestrian Centre in Dubailand Dubai UAE was host to the **International Polo Tournament** in Nov 2006.

In preparing the virgin site on highly sandy soils the owners followed advice of turf consultant Rob McFarlane of Turfarm UAE and used Hydrosmart's water conditioning approach to overcome salt levels of around 15,500 ppm from bore water with a pH which ranges from 3.5 - 4 ( considered highly acidic for plant growth ).

**Watering takes place daily with 80,000 square meters being watered with 150,000 gallons of Hydrosmart treated bore water.**

## Unbelievable Results

Rob when interviewed on 23 August 06 said of the turf growth over the previous 24 weeks: "Using only Hydrosmart to treat the water, we have seen unbelievable results in a short time with an enormous increase in growth with lower disease and pest attacks than at any other site around. The turf looks lush and healthy and is ready ahead of schedule for the November tournament. I will install Hydrosmart onto several other sites about to commence similar undertakings. This water is being used now on plants lining the driveway and nursery and is promoting healthy plant growth of many types of plants as well".

## Phases;

To date the growth of the paspalum grass has been through three distinct development phases;

**Phase 1.** The use of a new fertilizer saw the paspalum begin to enhance in colour (blue haze) and a general increase in plant quality. (November 2005).

**Phase 2.** The field was top dressed with organic fertilizer/manure resulting in a more rapid spread of the paspalum grass. Regular rolling commenced. (February/March 2006).



**April 2006 - before Hydrosmart installation**

**Phase 3.** When the Hydrosmart's started operating the paspalum began to spread more quickly and grow much more vigorously. Specifically the grass has 'meshed' very well on the surface. (April/May 2006).



**October 2006 - after the Hydrosmart installation**

### **Observations;**

A. The expected summer increase in water demand has not been required. This is believed to be a result, in the main, of the improved soil base and available nutrients in the Hydrosmart treated water.

B. The expected summer fungus, worm and pest problems did not appear. This is likely to be a result of the Hydrosmart treatment increasing the quality of plant sugars. (No pesticide has been used).

C. The effect of the hot wind and sand on the grass would normally cause tip burn. Very little has occurred due to the improved translocation of nutrients to the grass tips. This is a result of the Hydrosmart treated water.

D. No scale has built up inside or blocked the surface irrigation pipework. In support of this being a consequence of Hydrosmart there are salt deposits outside the spray nozzles due to summer sun drying the salt into crystals.

E. Soil pH is now 4.5 - 5. Almost back to its original, pre watered condition.



**Sun baked salt on sprinkler heads**

### **Polo Pitch No. 1 - Original Stats;**

**Subject:** Planted in July 2005, 35,000 sq/m of paspalum grass for Equine project

**Where:** Dubai, United Arab Emirates

**Water:** Mineralized bore water, TDS 15,000ppm, 6,000ppm salt, from 3 bores

**Irrigation methods:** Sub surface and surface irrigation

**Water demand:** 100,000 gallons a day

**Temperature:** Winter 18C, Summer 52C

**Soil:** Local sand from Northern Emirates

**Soil pH:** Originally soil at 5.0

### **Hydrosmart Installation;**

2 x Hydrosmart 60mm Enhanced installed to surface irrigation systems in April 2006. Units are using 8mm antennas in double pass set up.



**The pitch in March 2007**

*Our agent in Dubai sent us this additional background on the story.*

"I think it is worth mentioning that the grass is stolon structured paspalum which is being fed with surface and sub surface irrigation systems. The soil is nutrient rich and Hydrosmart is definitely a key solution in making these nutrients available.

The site is also exposed to hot sandy white winds which can kill grass very quickly. The turf remarkably seems more resilient to this.

It would also be good to say how hot the site actually gets.

Between end of July and beginning of September the temperature is over 28 degrees day and night with daytime temperatures reaching 40-45 degrees regularly. Hot winds frequently blow across the unprotected Polo Pitches and increase evaporation considerably as well as forcing up irrigation water temperatures."



**Plants fed with Hydrosmart treated bore water via drip irrigation**

Thanks Dubai for keeping us in touch with these ground breaking application results.