

Do You Know What “Cultural Practice” is?



Despite the non-stop heat this summer, there has been a lot going on with golf maintenance. Summer is the time of the year when the climate is ideal for our plants to experience the most growth.

We are taking advantage of the growing season by doing cultural practices. It's the same in golf courses all over the world, it seems once the golf course gets in good shape the maintenance department wants to punch holes or apply sand to the turf. I'd like to take this opportunity to explain the importance of these cultural works including the consequence of timing.

At Harbour Plaza we have warm season turfgrass that has active growth only when temperatures are 25 to 35 Celsius. That leaves only June, July and August that have suitable temperatures for the grass to recover. Taking in consideration of rainfall, June is our highest rainfall month of the year. This leaves us with just July and August to do our cultural practices.

So what are cultural practices? And why is this so important?

Turfgrass culture is a mixture of science combined with the art of application of works to improve the health of the grass so it stays strong during periods that growth is not optimal. We have two months to prepare the grass for the next 10 months of use.

The major cultural works consist of: mowing, fertilizing, irrigation, and cultivation.

Mowing, fertilizing and irrigation are pretty easy to understand but what about cultivation?

Soil compaction, soil layering and excessive thatch buildup are common problems on turf. These conditions do not allow adequate water movement into the soil, drainage of water through the soil profile, adequate oxygen in the soil or easy root growth. The results are shallow rooting, inefficient water use and poor turf health.

Cultivation (also called aerification) is the process of physically modifying the soil by removing plugs from the soil profile. There are several types of specialized equipment designed for this procedure. The most common include those with hollow tines that remove a core of soil. Others have solid tine spikes that punch holes into the soil.

Soil Compaction and Soil Layering

Soil compaction is the result of soil particles being pushed together. It severely reduces the air spaces in the soil. Maintaining air space in the soil is important for water drainage and oxygen exchange for turf roots. Heavy traffic from golf carts and mowers compact the soil. Soil layering occurs when different soils are stacked one on top of another. This condition results in poor water movement between layers and inhibits root growth into the lower soil layer.

Cultivation techniques can improve water infiltration and increase the air space. This procedure will provide for better rooting, which will allow the turf to be more resilient and better tolerate traffic, drought stress, and weed, disease and insect pressure.

Thatch

Thatch is the accumulation of dead and decomposing turf stems, leaves and roots intermixed with live plant roots. Clippings do not contribute to thatch buildup. Clippings decompose quickly and should be returned to the turf. Thatch is the brown layer between the soil surface and the green top growth. A thatch layer of approximately one centimeter is beneficial because it acts as a buffer at the soil surface and protects the plants from weather extremes. Thatch that

builds up over 2 centimeters, however, will inhibit water and air movement and eventually weakens the turf. The thatch layer is home to a variety of microorganisms that are responsible for its decomposition. A buildup of thatch occurs when it is being produced faster than it is being decomposed. Compacted soils and overwatering also encourage thatch formation. Effective thatch control requires an integrated program combining proper grass selection, irrigation, fertilization, and timely cultivation and dethatching. (Cultural practices)

The cultivation process will cause some injury to turf. Fertilizing approximately a week before cultivation will increase the growth rate of the grass and promote quick recovery. Cultivating during our optimum growth months is most desirable because the turf will recover quickly.

It is an exciting time to be involved with Harbor Plaza Golf Club. I can assure you that the staff of Golf Maintenance is committed to finding new and innovative ways to improve course quality and continue our journey toward higher standards for our course.

Annual Weather Chart

Monthly averages - Houjie, Dongguan China			
	Avg low	Avg hi	Avg precip
January	11	18	3.3
February	12	18	4.45
March	15	21	6.4
April	20	26	14.91
May	23	30	20.39
June	25	32	22.73
July	26	33	18
August	26	33	18
September	24	32	13.57
October	21	29	4.88
November	16	25	2.07
December	12	21	2.47