



# GREENS SOUTH COURSE

Dear Members

Due to the different comments about the current situation with the greens on the South Course, specially holes 13, 14 and 16, We would like to inform you about the reasons ,what measurements have been adopted and how long we expect it will take to see our greens in the conditions that they have been through the year

## **Species affected**

This disease affects specially to POA, AGROSTIS AND RYE GRASS

## **Symptoms**

Normally appears together with other fungus Pythium, Helminthosporium o Rhizoctonia.

Turf became first orange and later brown

Symptoms can appear any time of the year but specially in July and August, each individual plant turns into orange / brown and loses density , from above greens seems brown with irregular patches. At the bottom part of the leaf the plant shows a necrotic symptoms, and the black aggregates of the mycelium of the fungus can be seen with an ordinary magnifying glass

## **Conditions that promote the appearance of the disease**

Cloudy skies hot and humid summers, this disease can also affect turf at early winter or spring specially if they are very humid

Necrosis at bottom part of the plant increases if grass suffers very low mowing conditions and to heavy treading or lack of nitrogen fertilization.

## **Control by using**

**METIL TIOFANATO, TRIADIMEFON CLORATONIL FENARIMOL Y TRIFLOXYSTROBIN**

## **FACTORS WHICH HAVE PROMOTED THIS SITUATION**

### **RECYCLED WATER**

As you know in Guadalmina used two sources of supply for irrigation, water stored in Las Medranas Lake, which is primarily used for irrigation of the North Course and Pitch & Putt, and recycled water from la E.D.A.R. of Cancelada ( Estepona ) used to irrigate the South Course.

In summer the recycled water was supplied with high doses of sodium chloride (NaCl) dissolved in water, produced by the intrusion of seawater into the main pipe of the integral sewage water system for the Costa del Sol.

The use of this water increased a "salinisation" of the soil that block the plant at the roots level.

When plants get blocked it does not absorb nutrients and became less healthy in the case of the South Course greens this situation fact has affected the weakest specie, THE POA.

### **POA ANNUA A WEAK PLANT WITH A YEARLY LIFE TIME**

Poa annua is a grass variety , which as its name suggests, has a life cycle for a year. The winter annual life cycle is both the strength and the weakness of this grass, it is a strength because it is a mechanism for survival, POA grass avoids the stress of summer by simply producing seeds and dying. In the summer this grass tends to disappear, especially if weather conditions are not suitable for maintenance, this plant needs plenty of water available at the roots level, a disadvantage of this species includes its shallow root system and provide the required amount of water during the hot months is practically impossible with the rate of "evaporation" caused by warmer temperatures.

This specie is not a creeping bentgrass like other plants such as the "Pencross", L93, A4, pennlink ... etc, is NOT a kind of Agrostis stoloniferous, POA does not reproduced by rhizomes and stolons , unlike it comes to individual plants from seeds.

This characteristic means that when an area with POA is affected by a disease, neighboring plants can not come to repair the affected plants, you can see dry patches and areas without grass.

## **ANTRACNOSIS A SUMMER FUNGUS DISEASE**

In summer with humidity and high temperatures, to prevent a potential fungus disease we have been using since last June recommended products in turf grass management practices by the USGA.

Continued treatment with this product has caused the fungus has developed resistance to the product and, after consultations with experts in turf management, we have changed the product, both preventive and which helps to combat existing disease.

## **SOLUTIONS AND SHORT TERM MESUREMENTS**

### **CHANGING THE RECYCLED WATER**

First measurement was to change from recycled water to Las Medranas Lake, since August 4th we have been irrigating exclusively with Las Medranas Lake.

### **CHANGE OF FUNGICIDE PRODUCTS**

Change of fungicide products, as recommended we have changed to different to avoid resistance, the disease is currently under control

## **RE TURFING THE MOST SEVERE AFFECTED AREAS**

As soon as the temperatures have dropped down and with less players on the course, and after the last tournament arranged on the South course, we have started a re turfing program to replace the grass in the most affected areas, on holes 1, 3, 4, 7, 8, and 16

## **HOLE CORING AND SEEDING**

During the week commencing on September 20th on our normal maintenance program we will hole core the greens and seed them with L93 which is an *Agrostis stolonifera*, know as a creeping bentgrass, more resistance. In this occasion we will incorporate double doses than normal.

## **LONG TERM SOLUTIONS AND FUTURE PROGRAM**

### **GETTING OURSELVES READY FOR NEXT SUMMER**

From the month of May, after completion of scheduled maintenance for golf courses, will begin a cultural practice and intended to achieve better results for the summer.

### **VERTI - CUTTING THE GREENS**

After the hole coring and seeding of our spring maintenance program, at the beginning of June we will start with a weekly program of verticutting the greens, by this program we will scarify the greens reducing the amount of grass, leaving more space for the creeping bentgrass to grow and develop.

### **CHANGING THE WATER SUPPLY**

As from May we will irrigate exclusively with Las Medranas Lake water and we will not use the recycled water, if recycled water is needed due to the possible lack of water, all depends on the rainfall over the winter.

### **ALTERNATING FUNGICIDES**

We will alternate fungicides every two weeks in order to avoid the potential resistance of the fungus, we will use both preventive treatments and if necessary to fight the disease if it appears.

### **CHANGE OF FERTILIZERS**

As from June we will change from slow release fertilizer into foliar fertilizer ( liquid )

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## **WITH ALL THESE MEASUREMENTS WE EXPECT TO HAVE MUCH BETTER GREENS THROUGH NEXT SUMMER**