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FRIDAY, 2 SEPTEMBER 2011

IPM Disease Monitoring on your Smartphone

For years I have been trying to monitor the turfgrass diseases at my golf course. Despite good intentions of writing all of my observations down, I rarely put my observations on paper. I had a great sheet made up that I could take around the course and record any disease observations I would make.

In reality this never happened. I think I used the paper record once(the day I made it). The problem was that most of the time I noticed the disease I was either on a machine or didn't have my record book handy. I come from a small golf course where I do not have the luxury of spending hours a day making observations.

The problem with this system was that it was too time consuming to make the observation. Furthermore the data that I would have collected would have been too difficult to interpret. All of this information would have to be manually entered into a spreadsheet so that it could be easily graphed. Therefore I made the observation in my head, and often forgot what had happened on the course months or years prior. My only record for disease was my pesticide application records.

There have been many attempts at making a system that makes it easy to record disease monitoring data but most have fell short of my expectations. They either cost too much or were too difficult to use.

Enter Google Documents. Google documents is an online office suite similar to Microsoft's Office.

Check out the [wiki](#) for more info. One of the functions that makes Google Docs so powerful (other than the fact that it's free) is the [form feature](#) that allows users to enter data from a form directly into a spreadsheet. These forms can be embedded into a website or shared via email.

I have used this feature to allow me to enter data for all aspects of my golf course maintenance operation specifically turf disease monitoring. I have created a [Google Site](#) (also free) for my maintenance operation where I have embedded my Disease Monitoring Input Form. I can load this website and form on my smartphone (I have an iPhone) and enter data into my spreadsheet from anywhere I have cell service!

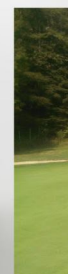
I highly recommend that you sign up for google docs and sites and check out what they have to offer.

Now on to my Disease Monitoring system. After you have signed up for Google sites load [this sheet](#).

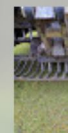
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Now go to File and select the Make a Copy option. Rename the spreadsheet with your golf course name and click OK.

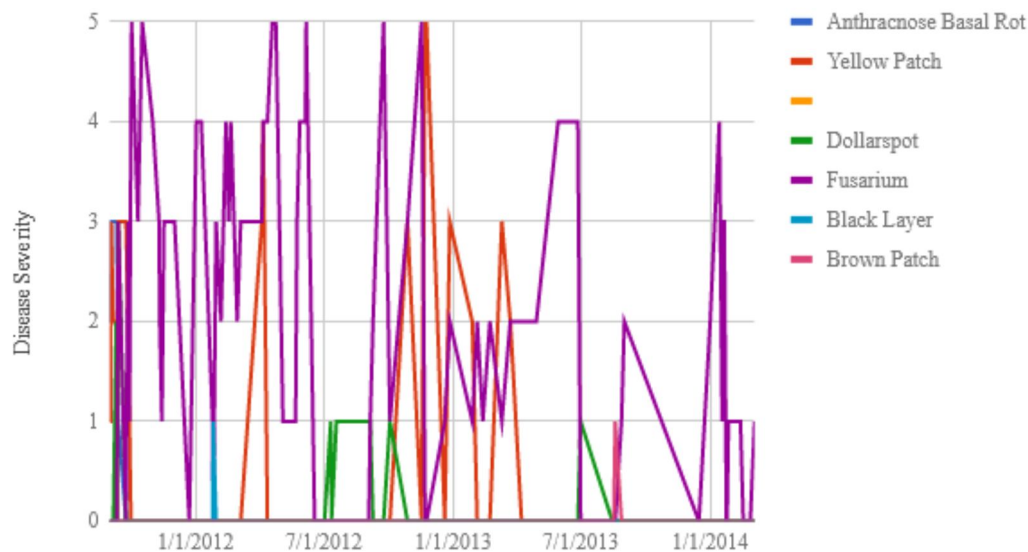
Now you have my system! All you have to do now is embed the form into a Google site. In the Google docs menu select the "Form" menu and then select the "embed form in a webpage" option. Copy the link provided and past it into your Google site. You need to select the "edit html" option before you copy the form into your site. After you update your html click on the spreadsheet form and select "properties". Delete the Width field and add about 50 pixels onto the height (this makes it look better on smart phones in my opinion). Select "save" then "save" again at the top of the page.

Now you can load up this page on your smartphone and add data directly into the database wherever you are. On my iphone I have saved this page to my home screen to make it easy to load. I have tried to keep the form simple in an attempt to make it easy to use (so that you'll actually use it). The only information it asks for are where, on what, which disease, and how bad it is.

Now that you are adding data to the database you need to know how to use this info. Load up the spreadsheet. The only pages you need to be worried about are the Generaldata and Chart pages.

The generaldata page allows you to sort the database according to what part of which holes has disease. You can also select a date range to show data from. After these selections are made you can visualize the data on the Chart page. It is important to know that only the maximum infection rates per day are shown on the chart. This is because we usually base our decision to spray on the worst area. The following chart is my actual chart for the Pender Harbour Golf Club. It automatically updates when data is entered into the database.

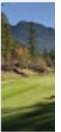
Pender Harbour Golf Club Disease Monitoring



If you don't want to have all of the disease options in the form you can delete them from the Form: edit form menu. You can easily add or delete any of the information recorded in the form. I work at a 9 hole course so I have removed the options of holes-10-18 from the form. I also have 2 practice areas that I have distinguished on my form.



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So there you go, a free, easy way of recording your disease data on the fly!

Let me know of any problems you may encounter with this. I hope this helps you as much as it helps me!

Addition Sept 03 2011,

This spreadsheet does have a few limitations and I will list them here when I discover them so check back often.

1. If you notice more than one turf disease on a green you need to add each one separately into the form. If you omit a disease the spreadsheet will assume that that disease is no longer present. This is only a problem if you add info from a specific green. If no data is added for a green then the spreadsheet won't assume that there is zero disease. Make sense??

Posted by [Jason Haines](#)



Labels: [Form](#), [IPM](#), [Smart phone](#)

Location: [Sunshine Coast Hwy, Madeira Park, BC V0N 2H0, Canada](#)

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environment (5)

equipment (4)

experiment (1)

fairways (3)

fertilizer (29)

Form (4)

funny (1)

Fusarium Patch (35)

Google docs (17)

Greenspeed (4)

Growth Potential (28)

growth rates (16)

grubs (1)

hack (6)

Height of Cut (5)

hud (2)

IPM (34)

iron (3)

irrigation (9)

job board (4)

labor (2)

learning experiences (2)

M. nivale (11)

math (1)

Microdochium nivale (19)

minimalist (9)

MLSN (17)

moss (9)

Mulch (1)

newt (1)

nitrogen (18)

opinion (2)

Organic (16)

other stuff (1)

Pesticide Ban (3)

Pesticides (36)

pH (2)

phosphite (13)

pigments (2)

Poa annua (27)

primo (1)

putting green moss (7)

putting greens (5)

R. cerealis (2)

robot mowers (4)

rolling (19)
salamander (1)
sand (1)
sand trap (3)
Seed head (6)
Shade (10)
silica (1)
silvery thread moss (7)
Smart phone (2)
social media (1)
soil moisture (5)
STIMP (3)
Sunseeker (1)
super interview (1)
Sustainability (43)
technology (2)
Turf disease (44)
UAV (1)
urea (5)
VMC (1)
Water Use (5)
weeds (3)
wetting agents (3)
white yarrow (3)
winterkill (1)
wood ash (1)
yellow patch (5)

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