THURSDAY, 18 DECEMBER 2014

# EIQ Tracking, My First Year.

Putting down an application of phosphite and primo in mid December 2014 before it gets dark!

It has now been almost an entire year since I started tracking my pesticide use in a meaningful way. Last year I discussed different ways we can measure our pesticide use on the golf course and discussed how the cost and EIQ (Environmental Impact Quotient) were the only real metrics that mattered. You can read all about this in my post:

## Sustainable Pesticide Use: Tracking Pesticide Cost and Environmental Impact

By mid year 2014 I was seeing a lot of success with my tracking and goal setting. I claimed that I was

ahead of my goals for pesticide cost and just about right on track with my EIQ goals. Now that the year has come to an end I can look back and see how I did. Did I achieve my goals? The answer is yes and no.

Here are the numbers:

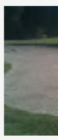
| Sustainability Metric | YTD Total Cost | Goal | Percent of Goal Used |
|---|---|---|---|
| Cost Fusarium | $4,401.56 | $5,000.00 | 88.03% |
| Cost Dollar Spot | $312.17 | $400.00 | 78.04% |
| **Total Cost** | $4,713.73 | $5,400.00 | 87.29% |
| Fusarium EIQ | 975.38 | 775.00 | 125.86% |
| Dollar Spot EIQ | 22.01 | 25.00 | 88.06% |
| Total EIQ | 997.40 | 800.00 | 124.67% |

Yes I was able to exceed my goal for cost. I had budgeted $5,400.00 for pesticides on my course in 2014 but only ended up spending $4,713.73. This amounts to about 13% under budget for pesticides this year.

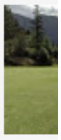
No I wasn't able to meet my goal for EIQ. I had budgeted for an EIQ of 800 but ended up using an EIQ of 997 which is about 25% over budget! To put these EIQ numbers into perspective, a single application of Daconil 2787 (chlorothalonil) at the high label rate has an EIQ of 620! My total EIQ is equal to about 3 low rate applications of Daconil 2787.

For me, this process of tracking my pesticide use was eye opening. In the Spring it was quite easy for me to stay on track. As the grass started to grow I could use less effective products to get adequate control. In the Summer I had little difficulty but in the Fall I was forced to bring in the big guns to get control of a runaway disease outbreak on a few of my greens.

This summer I decided to try not using Civitas and learned a lot. I learned how big of an impact it had on dollar spot. For the first time in 3 years I had to use a traditional pesticide to treat for dollar spot on my greens. I'm still on the fence whether or not it's worth it to use this product next year. The EIQ is rather high even though it's "organic" and I have seen issues with applying it to stressed turf in the summer. For me, my turf is always stressed in the summer! I also HATE the colour, it hides the real condition of the turf from my most valuable






stress indicator, my eyes. I can see using it a few times of the year when disease control is particularly difficult to achieve.

I used phosphite all year on my greens. This product accounted for about $700 of my fungicide budget or about 15%. It also accounted for an EIQ of about 372 or 37%! Because this product needs to be almost continuously applied the EIQ begins to add up. More analysis of the actual benefits and effects of this product on my pesticide use will need to be done to see if this EIQ is worth the benefit it brings to my disease management program. If I removed phosphite from my disease management plan would I need significantly more traditional pesticides? That's a topic for another post.

Iron. I did not apply much iron this year despite recent research showing that it can reduce or eliminate fusarium on poa annua putting greens. Aside from some of the issues caused by excessive iron use namely, cemented layers, I was hesitant to apply it in significant quantities this year. Furthermore, the rates of iron sulfate that showed adequate control (97.65Kg iron sulphate/Ha every 2 weeks) had an EIQ of about 570! An EIQ of 570 every 2 weeks is 1140 per month or 11400 per season to control fusarium! Even though this is considered a "safe" alternative to traditional pesticide use I don't think that the EIQ is worth it. I'm just a simple man, and don't entirely understand how EIQ is calculated but I trust that the scientists at Cornell who made it know what they are doing and that the EIQ reflects the actual impact of a product on the environment. Iron is out as a big part of my disease management program.

The fall has always been a challenging time to fight disease. The turf growth slows and any damage done will recover slowly if at all. The deteriorating conditions are reason to be extra vigilant in the control of turf disease. Things were made particularly worse as I was caught off guard by the early birth of my son right when the fusarium started to explode. When I was able to get back to the course it was pretty bad and an application of chlorothalonil was the only thing that would do in my experience. My total course EIQ up to the 23rd of

September was only 450. In the span of a few short months my EIQ doubled!

Lesson learned!

The real beauty of tracking what you are doing in a meaningful way is that it affords you a chance to learn. So what did I learn?

I have always been a reactive user of pesticides. I would always wait until a certain disease threshold would be reached before applying a pesticide. For the most part this has always worked out for me. It was especially useful when I wasn't tracking my pesticide in a meaningful way. I used to use the number of applications and costs as a gauge of how I was doing.

The right side of the 1st green loves the fusarium!

I still stand behind my principles of not applying a pesticide preventatively and I still like to hold off if I can. After all, why apply something if it's not needed? What I have learned through my detailed disease monitoring and pesticide application records is that there is a time (early September for me) when a preventative application of a product with a low EIQ could save me the need to apply a product with a high EIQ at a later date. I can go even further and say that this preventative application would only need to be done on a few of my problem greens. My shady greens are the ones that always cause issues and on some of my better greens the disease outbreak is only located in isolated areas. With my detailed records and vast experience with my property I can now make this preventative application only to areas that have been shown to need it. Doing this would slightly increase the cost of my pesticide use but I have some room to spare in this category.

I had no clue that changing the way I monitor pesticide use would have such a big impact on my management practices and my views about fighting turf disease. With a combination of reactive, and preventative disease management I can now try and further reduce my EIQ and costs of products used to fight turf disease. Next year I am going to keep my pesticide use goals the same as I feel they are still realistic targets to aim for. If you aren't already, I highly suggest that you start tracking the EIQ of the products you use, it will help you get a better understanding of what you are really doing and make a real difference to your bottom line and environmental impact. After all, these are the only real things that matter.

Posted by Jason Haines

Labels: disease update, EIQ, Fusarium Patch, Turf disease

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