

March 9, 2012

**Windmill Ridge Golf Course
Monett, Missouri**

DATE OF VISIT: March 6th and 7th, 2012

PERSONS PRESENT:

Mike Knight, Golf Course Manager
Dave Gillaspay, Golf Course Superintendent
Michael D. Vogt, CGCS, CGIA

Overview of Greens Conditions

Upon arrival at Windmill Ridge Golf Course I made contact with Golf Course Superintendent Gillaspay.



Photo 1 Generally turf populations on greens have improved slightly since last November.

Annual bluegrass (*Poa annua*) has become a dominate species in some areas on greens. There are rarely any greens that exist in this region that are ten years and older that do not have a certain percentage of annual bluegrass; the goal is to keep the populations of this variety to a minimum and slowly discourage its growth in favor of creeping bentgrass.

Poa annua is an annual turf plant that normally dies in the mid to late summer, succumbing to heat stress, disease pressure and physiologic stress at the end of its life cycle. In spring, without proper treatments *Poa annua* seed production proliferates, causing greens to exhibit slow putting speeds and poor ball roll, also the seed production process uses vast amounts of plant energy weakening *Poa annua* going into summer months. A combination of two growth regulating chemicals has been recommended by universities; these tank mixes are widely used on golf greens to inhibit seedhead formation. Spray applications of Primo[®] (trinexepac-ethyl) and Proxy[®] (ethephon) have proven to be very safe at recommended rates. In addition, these chemicals include slowing the growth and improve rooting on all turf. Superintendent Gillaspay and I agree that a program of multiple spray applications of these compounds will increase playability and strengthen *Poa annua* and bentgrass to help with survival during the summer months.

Overview of Greens Conditions (continued)



Photo 2 Prostrate-clump type growth habit of annual bluegrass (*Poa annua*)

Photo 2 above illustrates the growth habit of *Poa annua*. The red circles indicate seedhead development, a spray application of Proxy[®] / Primo[®] should occur as soon as the product is in hand and the turf sprayer is repaired. The rate of application is:

Name of product	Rate	Frequency of application
Proxy [®] (ethephon).	5 ounces / 1,000 ft ²	Every 12 – 16 days
Primo [®] (trinexepac-ethyl)	.125 ounces / 1,000 ft ²	Until threat of seeding is diminished

It is of great importance that anyone, when making chemical applications, reads, understands and follows the label and all of the label instructions and recommendations. All application equipment should be calibrated to apply the proper amounts of chemical and water carrier per allotted square footage. Each time an application is made a record should be made of conditions, chemicals applied, and amounts per square footage.

Overview of Greens Conditions (continued)



Photo 3 Number 2 has improved but remains very thin in areas

It should be no surprise that winter turf growth and the ability to fill in voids from 2011 turf losses will be slow until soil temperatures reach and remain stable above 55° F.

Schedule of Green Renovation Events

After a dialog with Superintendent Gillaspy, the schedule (page 4) of greens maintenance events should yield the best possible results. However, weather, labor and equipment are always a factor that may influence final outcome.

After the initial week two renovations (Chart 1, page 5) is completed a spot-sod program will begin. Bentgrass sod from the Windmill Ridge bent grass nursery will be harvested and carefully placed in the areas prone to water run-off first, followed by areas that will yield more hole cup locations, mainly in the center of each effected green.

A program of venting greens will begin on or near week eight of the program. Venting should be accomplished every four to six weeks until temperatures become prohibitive (sustained nighttime temperatures above 80°F). The venting operation is accomplished by using an aerification machine with ¼ inch tines to open a hole from the atmosphere to the root-zone. These small vertical holes will allow water and air to infiltrate the root-zone. This is especially important when attempting to flush salts, incorporate gypsum, keep the root-zone cooler and allow plant respiratory gases to exchange in the root-zone. The condition of the putting surface after venting is relatively unaffected after rolling and/or mowing.

A satisfactory fungicide program was in effect during 2011, I recommend staying with the program schedule and chemical use.

Schedule of Green Renovation Events (continued)

A slightly modified nutrition program may be designed for 2012, the basis of which will be planned to evenly feed the turf throughout the season eliminating the excess nutrient consumption during certain times of the season.

March / April, 2012 - Greens Maintenance Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
3/4/2012		Vogt Visit for March	Vogt Visit for March		Spray Proxy 5 oz .125 oz Primo / 1000 ft ²
WEEK 1					
3/11/2012	AERIFY GREENS ½ inch solid tines ≈ 3-4 inches deep, apply Sand-Aid 1-0-1	TOPDRESS with 85/15 sand and peat and apply Cascade wetting agent	FERTILIZE GREENS SeaBlend 12-4-5, 1#/ 1000 ft ² and Gypsum ≈ 1 bag per green	SEED GREENS then LIGHT TOPDRESS WITH 85/15	DRAG AND ROLL WATER HEAVY / ONE HOUR+
WEEK 2					
3/18/2012	KEEP GREENS MOIST	KEEP GREENS MOIST	KEEP GREENS MOIST	KEEP GREENS MOIST	Spray Proxy 5 oz .125 oz Primo / 1000 ft ²
WEEK 3	Begin sod work	Sod work	Sod work	Sod work	Sod work
3/25/2012	Sod work	Sod work	Sod work	Sod work	FUNGICIDE APPLICATION Tourney or Torque + Daconil
WEEK 4					
4/1/2012			FERTILIZE GREENS NatureSafe 8-3-5 FINE or similar, 1# / 1000 ft ²		Spray Proxy 5 oz .125 oz Primo / 1000 ft ²
WEEK 5					
4/8/2012	1 st Pre-Emerge Application Dithiopyr 1.12 OZ per 1000 ft ²	Vogt Visit for April	Vogt Visit for April		
WEEK 6					
4/15/2012				Spray Proxy 5 oz .125 oz Primo / 1000 ft ²	Fungicide Application Tourney or Torque + Emerald
WEEK 7				High School Conference Tournament	
4/22/2012	VENT GREENS needle tines, once per month, starting today	VENT GREENS needle tines, once per month, starting today	Gypsum / Water-in ≈ 1 bag per green		Spray Proxy 5 oz .125 oz Primo / 1000 ft ²
WEEK 8					Tournament on the 28th →
4/29/2012	Start liquid greens fertilization program				2 nd Pre-Emerge Application Dithiopyr 1.12 OZ per 1000 ft ²
WEEK 9					ARC of the Ozarks Tournament

Schedule of Green Renovation Events (continued)

All of the operations outlined on the above schedule have been discussed and agreed upon in method, supplies needed and execution with Superintendent Gillaspay. It is our mutual opinion that this schedule will enable the best opportunity for recovery of the greens turf surfaces at Windmill Ridge Golf Course. This work should begin as soon as March 12th.

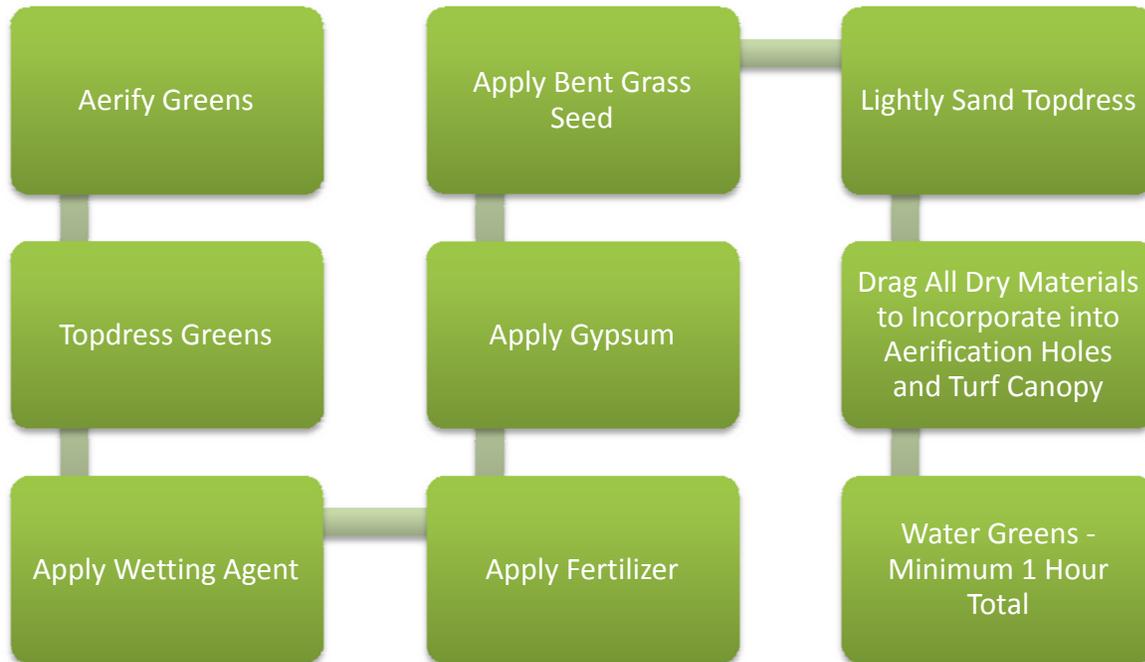


Chart 1 Week 2 greens renovation project path of events

Conclusion

The next two months of renovation, chemical applications and maintenance will act as a foundation for greens turf conditions at Windmill Ridge throughout the season. As critical as these practices are to the turf an effort must be made to keep the golfers informed to the benefits of these programs, disturbances often frustrates golfers, the ultimate goal is great golf conditions for the Windmill Ridge customers. Additionally, we must keep in mind that as turf growth begins; furthermore, additional maintenance practices may become necessary to optimize turf health as the season progresses.

My next scheduled visit is April 11th and 12th. During this visit we will examine how the renovation schedule is progressing and make any modifications if needed. We will also design a greens maintenance plan for the next 9 weeks.

Any questions or comments, please feel free to contact me at your convenience.

Respectfully submitted,

Michael D. Vogt, CGCS, CGIA