Starting to cut the 15th Fairway

LIFE AS A QUAIL HOLLOW INTERN

By Tom Granite

Having completed my degree in 2006 from Writtle College, I decided I needed to gain as much practical experience as possible.

I had heard about the Ohio Program through college and trade magazines and wanted to find out more. I got in contact with Mike O'Keeffe (www.top.osu.edu) and went to meet with him in person at Harrogate Week. The programme brings young, 19-28 year old single turf applicants from around the world to the States for 12-18 months. You have to be drug free, have no criminal record and be willing to work hard while over there, if you want to be placed at a top club.

After speaking with Mike I decided to submit the forms as soon as I could. They were received by the end of January and I was starting at Quail Hollow by mid-March, so the whole process happened very quickly.

Once I arrived in Charlotte I was given a tour of the course and it was off to work. Luckily for me there were two Ohio State interns from Australia working at Quail; Simon Beilby had been there for a year and Patrick Casey had been there for two weeks. This was good for me as I had people who understood what I was going through and could show me the ropes and help me settle in.

Since 2003, Quail Hollow Club in Charlotte, North Carolina, has been home to the Wachovia Championship. The tournament has always attracted the best golfers in the world, with 30 of the top 35 taking part in the 2007 championship.

The course was originally designed by golf course architect George Cobb in 1961. In the intervening years, the course underwent a series of improvements, including modifications of several holes by Arnold Palmer in 1986 and a redesign by Tom Fazio in 1997 and 2003. The course is renowned for having the toughest three finishing holes on the PGA TOUR schedule for the past few years.

The championship traditionally starts around the first week of May and the preparation starts months in advance. As I arrived in mid-March preparations were well underway and I now have an understanding for the term "out of the frying pan and into the fire". From the moment I arrived we were working from dawn until dusk, at least six days a week in a high pressure environment, so I had to adapt to this very quickly especially as interns were given extra responsibilities and duties.

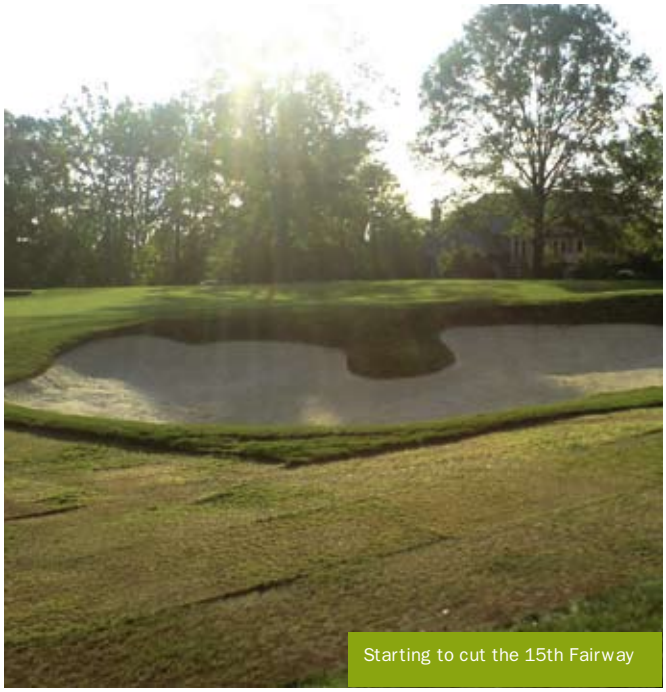
- Tournament Heights of cut
- Greens - .110 inches (2.8 mm)

- Tees, Approaches and Collars - .240 inches (6.1 mm)
- Fairways - .350 inches (8.9mm)
- Intermediate rough - .750 inches (19mm)
- Primary rough – 3 inches (76.2mm)

The greens are double cut in the mornings and once again in the evening. Everything else is cut once in the morning and once in the evening with the exception of the primary rough which is left. Approaches are rolled twice a day but the greens are not.

The largest area to be cut is the fairways which are approximately 30 acres. This is done in 45 minutes using up to 15 fairway mowers cutting in a "flying V" hole by hole in one pass.

To make it possible for all the cutting to be carried out in a short space of time (under three hours) a huge amount of machinery and staff is needed. During the tournament there were over 30 full time staff and up to 100 volunteers from all over the USA and even Australia.



Starting to cut the 15th Fairway

Drainage project on the 4th fairway

The machinery is supplied by Charlotte-based Jacobsen, who kept a steady supply of machinery coming in the weeks leading up to and during the tournament.

Machinery supplied by Jacobsen for the tournament:

- 8 greens mowers
- 9 fairway mowers plus 2 clean up mowers
- 12 tee/approach mowers
- 2 collar mowers
- 20 golf cars
- 14 mower trailers

This is only a small sample of equipment supplied; other machines include sand pros, rough mowers, flail mowers, utility vehicles and shuttles.

This is in addition to the equipment already owned by the golf course.

The Transition

Charlotte is within the transition zone of the United States. This means that Quail Hollow has a mix of cool and warm season grasses including Creeping Bentgrass, Tall Fescue, Fine Fescue, Perennial Ryegrass, Bermuda grass and Zoysiagrass.

The day after the tournament has finished, work began on transitioning the course from cool to warm season grasses. This process includes scalping down the rough practically to the soil, in order to expose the Bermuda rhizomes.

The rough was predominantly Ryegrass and after the tournament was up to 12 inches high in places. This grass has to be scalped down and removed, using a combination of rough and flail mowers for the transition to be successful. It is important to remove the organic material to allow the sunlight to get through to the Bermuda and allowing the transition to happen as quickly as possible. The scalping of the rough was a very long and slow process, taking approximately one month to complete, with the mowers working non-stop through out this period.

Bentgrass Maintenance

Throughout the summer, the maintenance of bentgrass greens in a warm season environment is an ongoing challenge. The greens were G2 bentgrass inter-seeded with A1 bentgrass. Heights of cut on the greens were maintained at .120 of an inch (3.05mm) during periods of heat over 38 degrees Fahrenheit. To prevent wilting of the turf we would syringe the greens when needed by putting out a light mist of water using a half inch hose. The purpose of syringing is to replace moisture lost by the plant through transpiration, but with out moistening the soil. In addition to the syringing, static and portable fans were used to cool the soil surface. The greens were only irrigated once a week, but this was done using a heavy application known as flushing. This would flush the greens of salts in order to keep the EC levels down. After the greens were flushed, the Sub-air system would be activated to move excess water out of the rootzone and into the drainage pipes. This keeps the playing surface firm and encourages deeper rooting.

Due to the difficult environment which we faced, an intense program of chemical and fertiliser was undertaken. This includes the use of many different fungicides to control a long list of diseases such as brown patch, dollar spot and pythium. Foliar fertilisers based on soil and tissue test results were also used on a regular basis along with the use of different plant growth regulators.

The greens are hollow tined three times a year, once in early spring,

once in early summer and once in early autumn. In addition to the hollow tining, dry ject machines were also used. The greens were also vent tined and hydrojected through out the summer to help improve gaseous exchange.

Summer Projects

Throughout the summer along with the regular course maintenance, a number of projects were taking place.

This included a substantial drainage project of fairways and approaches and the re-build of the 8th bunker.

The drainage project lasted for eight weeks, with the interns starting at 5.30 in the morning to lift the sod, number it and then move it away before the contractors started to install the drainage. Once the contractors had finished for that day, we then had to put all the sod back in the right place, water and then roll it. With only one hole being closed per day, it often meant that we were working until dark to get the hole ready for opening the next day.

The re-build of the 8th bunker involved working with one of Tom Fazio's designers to re-shape the face and shorten the total length making parts of the green more visible from the fairway allowing for more pin positions. Also the alterations were designed to improve the playability and make maintenance easier.

The total re-shape, including the replacement of the drainage system, liner, sand trapper and sand took just five days to complete.

Overseed

The overseed involves re-seeding the entire course with various different cool season grasses, with the exception of the greens which remain creeping bentgrass all-year round.

The process begins with raising the heights of cut to encourage vertical growth and discourage lateral growth. This is done to help provide a thinner sward to allow the seed to fall through the canopy and make contact with the soil.

During the last week of September the overseeding begins with all the areas being scalped down, and the fairways, tees and approaches being verticut. This process is done to create as many gaps in the canopy as possible and to reduce competition from the Bermuda.

The Species and rates are as follows:

- Tees – Fine Fescue@ 800lbs per acre (896kg per hectare)
- Approaches and collars – Fine Fescue@ 600lbs per acre (672kg per hectare)
- Fairways – Ryegrass@ 350lbs per acre (393kg per hectare)
- Rough – Fine Fescue@ 400lbs per acre (448kg per hectare)
- Shaded areas – Tall Fescue – as needed

Irrigation of the Overseed

The irrigation operating system at Quail Hollow is Toro VP Sitepro and the pump station is Flowtronex PSI with an operating pressure of 130 PSI. The total gallons per minute are 2250 (8516.25 litres).
During the overseed period it is important to keep the seed wet at all times, and as rainfall in Charlotte was very rare in 2007 the irrigation system was working overtime to keep the whole course wet.
Trying to water the entire course at least three times throughout the day, while avoiding play was challenging to say the least. To avoid putting too much pressure on the pump and to keep the correct operating pressure at each head, only 16 heads per 9 holes could be run at a time making the task even harder.

Winter Work

During the winter time, the work really slows down because of the weather. Typically we would have frosts in the morning but that would lift by mid morning. There is very little rainfall so the average winter day is cold and sunny with blue skies, much better than a cold wet winter in England!

During this winter, a lot of tree work was taking place due to the effect that the drought had on the pine trees. This included de-limbing any dead branches and removing dead or dying trees to help improve the health of the remaining trees and to reduce the risk of limbs falling on staff and golfers. This was done using a mechanical lift allowing us to get to the top of the trees, often over 60 ft high.

I would like to thank David Withers and his team at Ransomes Jacobsen in Ipswich for their scholarship and for all the kind support and help in getting me over to the States. Also I would like to thank Mike O'Keeffe at the Ohio State University, Jeff Kent and all the staff at Quail Hollow Club for making this such a beneficial and memorable experience for me.

About the Author

Tom Granite is Assistant Greenkeeper at Slinfold Park Golf & Country Club. He has a Foundation Degree in Sports Turf & Golf Course Management, and a BSc (Hons) Degree in Sports Turf Science & Management.

Tom Granite (left) and fellow Ohio State intern, Patrick Casey, de-limbing trees

Construction of the 8th bunker