



## Springing Forward: Seasonal Cycles of Golf Courses

by John Strawn

As we move into spring, our thoughts turn once again to outdoor fun, and for those of us who have the habit, to the chance to get back on the golf course. When we arrive for our first round, especially if we live in a cold climate and haven't managed to get away to the Sun Belt for a respite from winter's chill, we don't think much about what the golf course has been through for the winter.

We just imagine that first tee shot sailing down the fairway. But the tee we're launching our round from, and the fairways we're about to walk, look as good as they do because the golf course superintendents and their staffs have spent the fall and winter getting ready for us. We have them to thank for getting our favorite courses through the dark night of winter.



Vail Resort's Beaver Creek Course in Vail, Colorado

Golf courses can be roughly divided into cool weather, or northern, courses and warm weather, or Sun Belt, courses, based on the types of grass used for the fairways, tees and greens. In the cool weather courses, the turf consists, as you might expect, of cool weather grasses such as ryegrass, bentgrass and fescues. Warm weather courses typically feature Bermuda grass, which goes by the generic name cynodon.

Bermuda grass species are among the most widespread in the world, and grow in just about every warm climate. There are both the common species, cynodon dactylon, which on a golf course would be regarded as a weed, and the turfgrass varieties, which have been selected for their fine blade size, color, drought resistance and so on. Most warm weather golf courses use varieties derived from crosses between common Bermuda and other species, such as the African species, cynodon transvaalensis, which were selected at the United States Department of Agriculture's field station in Tifton, Georgia, and thus have

"tif" in their names. If you hear of tifgreen, tifway or tifoldwarf, you know it was discovered in Georgia. All of these species are reproduced vegetatively - that is, they do not grow from seeds, but rather from stolons or sprigs, which are essentially the blades of grass harvested at turf nurseries. The cool season grasses are grown from seed.

In courses from Florida to southern California, the Bermuda grass goes dormant once the average evening temperature drops below 50°F, shutting down photosynthesis and turning a sort of purple-brown color. Because these courses receive much of their play in the winter, and golfers prefer green fairways, tees and greens, superintendents will prepare their courses for a seasonal planting of perennial ryegrass. That's why pictures of these courses you see in the winter - for example, on broadcasts of PGA Tour events such as the Bob Hope Desert Classic or the Phoenix Open - depict the fairways and greens as bright green and lush, while the rough is brown and thin.

The contrast can be lovely to see, and golfers like playing there because the rough is so sparse it is hardly penal at all. It's no surprise that the pros usually shoot very low scores at these events. To oversee properly takes several weeks, both to prepare the Bermuda for the ryegrass and then to let the ryegrass germinate properly. The spring transition is simpler, because the ryegrass tends to die out in the summer heat and humidity.

There is a lot more variety in the grass types used on cool weather courses. Still, whether in a cool or warm climate, a golf course undergoes a seasonal transition. In colder climates, especially in places with annual snow packs, courses will shut down for from three to five months. Superintendents must prepare their courses for winter, just as homeowners do. Superintendents responsible for the health of the turfgrass on their courses take special care to ease them into winter, and then gently awaken them in spring.

Mike Miner is the superintendent at one of the highest golf courses in the USA, the Vail Resorts' Beaver Creek Course in Colorado. Miner's course sits at an elevation of 8,000 feet. In 2005, which by a happy coincidence was Beaver Creek's 25th birthday, the Vail region was finally coming out of a seven-year drought. Arid weather conditions compounded the challenges Miner faced in keeping this high-end destination resort course in premier condition.

"In the fall we start preparing for winter by aerating and top-dressing our greens, using a deep tine and filling the holes with coarse sand," Miner said. "If water gets in the greens and it freezes, it kills the grass. So we aerate and put a lot of coarse sand down and then wait for snow." Miner does not cover his greens, but rather depends on the insulating effect of the snowpack to keep the greens from freezing.



Three Crowns Golf Course in Casper, Wyoming

Bob Brownlow, the superintendent of a much newer course, the Three Crowns Golf Course in Casper, Wyoming, faces tough, cold winters, too, but on the plains east of the Rockies, at 5,100 feet, Brownlow's adversary is a cold, howling wind. Because he can't depend on the snow sticking to the ground when the wind is blowing at 40 miles an hour, which it does on many days, Brownlow prepares for winter a bit differently than Mike Miner.

"We apply a fungicide on our greens to protect against snowmold, then cover all twenty of them," he said - that is, the greens for each of the 18 holes and the two practice greens. "We cover them with a light woven fabric that lets in light and creates a kind of greenhouse effect, keeping the greens thawed out." Brownlow's course is usually open until October 31, while Beaver Creek typically shuts down in mid-October. And while Three Crowns looks to open again about April 1, Beaver Creek doesn't start play again before early May, at least a full month later.



Turning Stone Casino Resort's Kaluhyat Course in Verona, New York

The Turning Stone Casino Resort in New York has evolved into one of the Northeast's premier golf tourism destinations, with three world-class courses and an executive course to keep guests happy between visits to the casino and attendance at shows featuring all the top names in entertainment. Frank Albino is the superintendent of the Kaluhyat Course, designed by Robert Trent Jones II. "We shut down about November 1, when the grass stops growing and hardens off," said Albino. "We put down an application to keep snowmold off, and then monitor the greens all winter for any evidence of mold or desiccation."

Miner, too, worries about desiccation, especially if the snow cover shrinks or disappears. He also monitors regularly, looking for any evidence of ice, a silent killer. "We dig pits at select greens starting about mid-February," Miner said. "With all of our practices, we depend on experience and our records, but it's also a kind of 'feel' thing. We also talk to our colleagues in the area to see what's working for them."

All of the Turning Stone courses are aerated and topdressed in the fall, before they go dormant, with enough time for them to heal before the winter regime is put in place. "We usually have plenty of snow cover," said Albino, "but we still monitor daily for ice and snowmold." April 1 is Albino's target date for the first mowing after the spring thaw. Late February or early March is Brownlow's target date to pull the tarps at Three Crowns. At Beaver Creek, Miner has faced as much as a foot of snow in May. "We've even had snow in July," he said.

Brownlow faces another challenge few other courses must contend with, and that's winds strong enough to blow the sand from the course's many bunkers during the winter. "We've tried putting snow fences up," Brownlow said, "but the wind switches direction." Because of the fabric's greenhouse effect, Brownlow's greens may grow before the cover is removed, so he has to take care to slowly lower the mowing height. His goal is to have the course ready for play on April 1, or as soon as he can complete his spring-cleaning.

April 1 is also Albino's target date for his first mowing, or "getting off the top growth," as he says. He cleans the greens first, including raking to remove any small areas of snowmold, which may have gone undetected. He removes any signs of desiccation in the grass and begins the mowing, which will result in the kind of smooth, fast greens players now expect.

As we move toward spring and the golf clubs come out of the closet, remember that the golf course, too, needs time and attention to recover from winter. And you can thank the highly professional and dedicated superintendents for easing their charges through another winter. ♣

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