As overseeding costs continue to rise, greenkeepers are looking at painting greens as an alternative to stretch their budgets.

A little dab of paint here and a little dab there and you can have your greens keeping their color all winter long to wow those tourists from the north and keep your members happy.

As the cost of overseeding continues to rise, greenkeepers are looking for more alternatives to stretch their budgets. Enter the practice of painting. In southern climes, more and more superintendents have implemented painting of greens as part of their standard operating procedures.

Over the last few years, cost is becoming more and more of a factor when it comes to overseeding. If you treat your whole course, it's not unreasonable to spend more than $30,000 just on cost of seed and fertilizer; add in labor and you are looking at a big number on one's budget every year. The other major reason more and more superintendents are turning to this practice is due to agronomic transition.

"Overseeding is a big ticket item in budgets," says Joe Lara, product manager, Horticulture & Specialties, Becker Underwood. "It's the primary reason for switching to painting. The secondary reason is for a better agronomic transition. What the USGA people and other researchers have determined is that these fall overseeding programs don't do warm season turf any favors in the spring. They will affect the growth characteristics and recovery of warm season turf in the spring, so now you've set yourself up for competition. A ryegrass, which tends to be more aggressive, will literally fight for their turf. What you have is weakened warm season turf in the spring that just doesn't transition very well. You do that from season to season and it weakens your warm season turf grass."

So, a lot of superintendents today are making changes in their decision on whether to overseed. The cost of painting is slightly less than overseeding, but biggest advantage is a better agronomic transition.

Superintendents can make the argument to not overseed if they can get their maintenance practices down well enough that the end result of painting is acceptable, Lara says. "The turf manager should be making a conscious decision to save labor," he says. "By painting, they don't have to shut the course down for a week or two to grow their cool season grass and their spring transition is far better."

Like the practice of overseeding, it doesn't have to be one or the other when it comes to agronomic practices. Superintendents can now use a combination of turf maintenance practices to achieve the desired result based on their course
Color enhancement study

Kai Umeda from the University of Arizona Cooperative Extension and Brian Whitlark from the USGA Green Section recently completed a color enhancement study at ASU East for Ultradwarf Bermudagrass.

The study is comprised of four different painting products being conducted on a non-overseeded Mini-Verde Ultradwarf bermudagrass green at the ASU East campus practice facility. The four treatments are: Green Lawnger (Becker Underwood), Wintergreen Plus (Precision Labs), and two different products from Pioneer Athletics - Match Play - Ultradwarf Plus and Match Play - Ultradwarf Super. Each of the four treatments was applied between Dec. 2 and 3, 2009. The treated area was 195 square feet for each treated area, where each treatment was replicated three times, for a total treated area of 585 square feet.

Whitlark explains that a white towel was used to determine the amount of 'rub off' from each paint product at one hour after application, two hours after application and at daybreak the following morning. Here is what they observed:

- All paint products 'rubbed off' to some extent one hour after application. The Wintergreen Plus product rubbed off more than the other products.
- Two hours after application (on a sunny, dry day), nearly no paint rubbed off with any product.
- The following morning, the surface was only slightly moist from either dew, guttation water or residual water from the irrigation cycle. All paints rubbed off, but only very slightly with the Match Play and Green Lawnger products. The Wintergreen Plus product rubbed off substantially more than the others.
- A ball rolled across the painted surfaces did not show any signs of 'rub off' at any point after spray application.
- The estimated retail cost of paint products was: Green Lawnger ($48/gallon), Wintergreen ($48/gallon), Ultradwarf Plus ($28-35/gallon), Ultradwarf Super ($28-35/gallon).

A few things learned from this study that should be taken into consideration when painting greens:
- The timing of applications;
- Turf condition and vigor;
- The percentage of the green that goes dormant;
- Fertility and pre-conditioning;
- The amount of moisture, irrigation and rainfall;
- The longevity of the paints and dyes;
- The wearability;
- Staining; and
- Cost benefits or disadvantages.

"In consideration for golfers, it is recommended to delay play a minimum of one to two hours after application or maybe more on a very moist and overcast day," Whitlark says. "It is not recommended to irrigate the evening following application. It is possible golfers kneeling down on the painted surface may see some paint on clothing in the early morning hours the day after application. However, this unfortunate circumstance may be avoided simply by rolling or mowing the greens prior to play."
aged. Green Lawnger also lasts longer under prolonged UV exposure.

Rob Collins, superintendent at Paradise Valley Country Club in Arizona, trialed non-overseeded greens on their two chipping greens and one of their practice greens last season. He says, this was done for a couple of reasons: to gain first-hand experience and to introduce the concept to our members.

This was Collins first experience with not overseeding greens.

“We conducted our evaluation of agronomic inputs during this time as well,” he says. “We’ve been measuring clipping yield in both volume and weight of our overseeded and non-overseeded greens. We had been warned to be careful of letting the speed get too fast upon frost and slow growth, so in preparation we began raising mowing height during mid-December to anticipate this condition.

“However, we experienced the opposite as indicated by the green speed in the spreadsheet below,” he adds. “We continued to water, fertilize and mow the non-overseeded greens very similarly to the overseeded green during this experience.”

By January, Collins and his crew felt they could control the speed by managing height-of-cut, using brushes while continuing to water and apply foliar fertilizers.

“As you would imagine, this doesn’t support the lower cost argument because many of our inputs were similar to the overseeded greens,” he explains. “However, we avoided the labor, fertilizer and water costs associated with overseeding, which is significant. An additional input was painting, which was done the first week of December. We liked the Turf Dye Southwestern as it matches our overseeding color very closely.”

Members at Collins’ club then participated in an evaluation of the overseeded versus non-overseeded greens during the season. Collins says reviews were very good for the non-overseeded greens upon opening from their overseeding closure.

This continued into December because the non-overseeded greens were smoother and faster, Collins says.

“Both were rated about the same into January,” he says. “By February, the non-overseeded greens began growing much more as days lengthened. The members concluded that the trial was a good experience and we will not overseed greens this fall. There is a period in late winter when we may hear some complaints about the visibility of old plugs and we’re working on cup changing training to minimize this.”

Overall, Collins describes the trial as a success because he got real experience and member feedback. The members, too, got to “kick the tires.” But, most importantly, he achieved member buy-in before trying this practice on all of their greens.

“I think not overseeding this season will be a continuation of this learning process for all of us,” he says. “We’ll continue to make adjustments.”

David McPherson is a freelance writer based in Toronto.
In 2004 Wilmington CC grounds committee decided it had waited long enough and committed to move ahead with a total renovation project to bring the South Course up to current championship standards.

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Waiting gets old. Just ask 17-year Wilmington CC superintendent Dan Pierson.

Severe turf injury occurred repeatedly at the Wilmington, Del., facility in the high-stress months of July and August during the late 1980s and early 1990s due to a pathogen that University of Maryland researcher Dr. Peter Dernoeden called the Woodmont Funk. The name arose because it was seen only at Rockville, Md.'s Woodmont CC and Wilmington CC.

The Wilmington facility chose fall 1994 – a year after Pierson replaced renowned superintendent Paul R. Latshaw at the 36-hole facility – to start gassing and regrassing the Robert Trent Jones-designed South Course with Crenshaw bentgrass. The club originally excluded fairways from the project even though USGA agronomist Stan Zontek suggested including them since the course would be closed. The grounds committee deemed it inappropriate to take the added risk but recognized replanting the fairways would be a distinct possibility in the future.

With the Woodmont Funk crisis averted, the club again considered replanting the fairways. A consensus developed to wait for Roundup Ready bentgrass, which seemed the next big thing. But regulatory concerns delayed approval year after year. In fact, Roundup Ready turf has yet to hit the market.

By 2004 the club decided it had waited long enough and committed to move ahead with a total renovation to bring the South Course up to current championship standards. (The second course is the 18-hole, Dick Wilson-designed North Course). The private facility hired architect Keith Foster in 2005 to develop a master plan.

In selecting grasses, Pierson called on his own replanting experiences, observations of what worked at other nearby layouts and consultations with Rutgers University turfgrass researcher Dr. James Murphy. He decided to use several Seed Research Oregon (SRO) varieties on the various parts of the South Course.
In the end, the total renovation for the Wilmington CC project cost ended up just shy of $5 million.

In the end, regrassing of the greens was done for two reasons: eliminate Poa contamination that had evolved since 1994 and improve grass variety to something potentially more cold-tolerant with an earlier spring green-up. — Dan Pierson, Wilmington CC

The first was the driving range, practice area, clubhouse grounds, a couple tees and the area exiting the 18th green. The bulk of the course work occurred in the second phase. The project took 18 months between 2006 and 2007. The South Course reopened June 18, 2008.

Pierson utilized Hendrix and Dail products, using methyl bromide to fumigate the greens. He knew the traditional fumigation material, which is being phased out for golf course use per government order, would work well.

Pierson chose Basamid to sterilize fairways. He says it may be the second-best product (after methyl bromide) to sterilize soil, but is tricky to use. The fine powder must be drop spread. Water activates the material (which must be irrigated a minimum of 1 inch immediately after application to activate the product) by turning it into a gas with the water acting as a barrier to keep it in the soil. Basamid works best on turf areas – bare soil is a different animal – needing only aggressive aerification to ensure gas penetration.

When a fine-finished grade is accomplished on a fairway with any contour, aerification is still required to ensure penetration. The application of substantial amounts of water can create wash outs. Working with Basamid in these areas resulted in some Poa annua seeds surviving and contaminating small amounts of turf. It also seemed to concentrate the chemical in basketball-sized spots resulting in no bentgrass germination in those areas, even after delaying seeding for up to three weeks. Repeat seedings were needed to fill in completely. But by the following June, the fairways were in excellent shape.

Following fumigation, Pierson settled on SRO’s Tyee as the new greens grass. According to SRO literature, Tyee creeping bentgrass reportedly performs well under temperature extremes that can be experienced in transition zone locales like Delaware. It maintains a dark, green color through the heat of summer and into the winter that provides an appealing contrast with other grasses in the fairway. It has improved resistance to brown patch and dollar spot – common transition zone problems – as well as copper spot, pythium blight and fusarium.

Like bentgrass siblings such as Penn A-I and Penn A-4, Tyee requires extensive management for thatch control, including topdressing and verti-cutting. But the extra effort yields a superior putting surface, reduced syringing, less herbicides and reduced thatch production compared to other high-density bentgrasses.

Germination occurs in three to five days in temperate conditions and six to 10 days in colder daily temperatures. The first mowing is around 21 days and limited player use is possible in six to eight weeks.

"Tyee is reportedly, and seems to us, superior to other new varieties in terms of less bloating (meaning less scalping) and higher disease resistance," Pierson says. "We cut our greens at 0.100 inch, weather permitting, and could likely go lower. Tyee established a little quicker than anything else we have tried. We are very optimistic it will continue to show excellent heat and drought tolerance."

SRO’s 007 creeping bentgrass was the choice for the long-awaited fairway replanting. Seed Research developed it for improved dollar spot resistance, medium bright green leaf color, no cool-weather purple coloration, and a vigorous, uniform, moderately dense growth habit. It has rapid establishment and competitive growth against Poa annua all year long. It adapts well for low mowing on greens or for reduced fungicide use on fairways and
tees. "It has a hardy color that contrasts well and provides definition to Tyee," Pierson says. "It is aggressive like Tyee but with a broader leaf. Some courses are using it on their greens. We are mowing it at 0.380 inches in the fairways, but I’m sure we could cut it even lower."

On the tees, Wilmington CC blended 007 with Quality Seeds' Shark creeping bentgrass, a Murphy recommendation, to give the tees a color similar to the fairway. Pierson introduced a SRO ryegrass blend for the courtesy cut leading from the tee box and the step cut around the edges of the fairway.

One major challenge during the replanting process was a mini drought while seeding in 2007. The dry weather kindled some brief discussions of the possibility of replanting with less-water-thirsty Bermudagrass or zoysia grass, which might be possible in a transition zone area even as far north as Delaware. But Wilmington members preferred a grass that does not go into dormancy and turn brown in the fall.

The club also maintains a Patriot Bermudagrass practice tee it previously overseeded with ryegrass. Over time the ryegrass diminished the Bermudagrass base and renovation was required this season. The staff big-rolled the replacement Patriot sod and will try overseeding with Riviera Bermudagrass seed to see if the club can keep the base longer.

"Bermudagrass might work here if you could get past its aesthetic shortcomings. It may get some additional consideration when we eventually replant the North Course," Pierson says. With the 007 fairways in their third full season, Pierson would prefer to topdress at a rate of five to eight tons per acre as many as eight to 10 times per year to achieve optimum turf health, firming and smoothing the playing surface and reducing thatch. Weather and an aggressive club calendar have reduced the optimum number to a more realistic five or six times per season.

The putting surfaces are aerified and topdressed as often as possible during the season by applying sand first, and then aerifying on close pacing with Soil Relievers mounted with 5/16" x 12" solid tines, followed by a PlanetAir Turf Aerator spiking in a cross pattern. Light dragging and rolling is all that is required to return the surface to excellent playing condition almost immediately. Total renovation cost ended up being less than $5 million.

Through negotiations with the construction contractor, Pierson accepted being general contractor. Taking on this role saved money but was time consuming. Locating, pricing, ordering, scheduling and coordinating took on new meaning as the project progressed. Suppliers delivered large quantities of materials from around the country. The logists were oftentimes dizzying. Meantime, Pierson was responsible for the second course, other club amenities and participating in the renovation itself.

"Almost immediately, our staff was needed for a great deal of support to the contractor as well as in many facets of the renovation that we had agreed from the beginning would be our responsibility. Bottom line, my advice to others would be to let the 'general contractor' title stay with the construction contractor. It is well worth the money." GCI