How does one best approach fall fertilization after an extremely dry and hot summer? No doubt this issue is on the minds of many superintendents around the Southwest and Midwest. All experts GCI talked to agreed fertilizer with higher levels of potassium and phosphorous is the way to go, but when you’re talking 30 to 60 acres of coverage, that can get downright expensive.

Most every superintendent knows the importance of keeping good logbooks and records of how much was applied to the turf on what dates and how, but what do you do after a weather season like this one, marked by the most extensive drought and excessive heat since the Dustbowl of the 1930s?

Tim Nielsen, the superintendent at Creekmoor Golf Club in Raymore, Missouri, not far from Kansas City, says in his 10 years of being a superintendent, he’s never witnessed such a dry spring and summer. Creekmoor is an 18-hole semi private facility built in 2006 that opened in 2007. Nielsen has zoysia fairways and bent grass tees and greens.

“I haven’t seen anything like this before,” he says. Which may explain why he has surrounded his fairways with 18 acres of bunkers to protect the fairways from any rainwater that may be in the area.

“I’ve always been an advocate for using the minimum amount of water, but this year I’ve been going back to the days of the dustbowl, using as little water as possible,” Nielsen says. "I definitely see the heat and drought as factors in the poor quality of the turf this year. It’s a real challenge to keep it in good condition.

“With so many days of heat, we’ve had to water very carefully. We’ve been using what we call ‘sprinkle’ irrigation, which is a very shallow, light irrigation to keep the turf from drying out too quickly. We also use a lot of sprinklers, which is the most efficient way of using water.”

Nielsen says he’s also had to be careful with his turf fertilizer. He uses a combination of high-phosphorus and high-potassium fertilizers, which helps to keep the turf healthy and happy during these difficult times.

“With the high-phosphorus fertilizers, we’re trying to get the turf to grow as much as possible, while the high-potassium fertilizers help to keep the turf healthy and strong. It’s a delicate balance, but we’re doing our best to keep the turf in good condition.”

Despite the challenges, Nielsen is optimistic about the future of his turf.

“I think we’ll be able to come back from this, as long as we have enough water in the future. But for now, we’re doing our best to keep the turf healthy and happy, and I think we’re making decent progress.”

BY RICHARD SKELLY
Brad Gray, the superintendent at Mission Hills Country Club in Kansas City, Mo. has been in a superintendent role for 12 years. He oversees a classic walking course that was designed and built by Tom Bendelow in 1914. Mission Hills was redesigned by Keith Foster in 2006. Bendelow also designed Medinah Country Club, site of this year’s Ryder Cup matches.

"This has been a terribly hot and dry summer," Gray says, "but what’s unusual about it is it’s always kind of hot and humid in Kansas City. But this year it’s been hot and dry, almost like New Mexico or Arizona."

Gray has bentgrass greens, zoysia grass tees and fairways. The roughs at Mission Hills are fescue and bluegrass blended with Poa annua.

"Right now we’re out there aerifying and over seeding the roughs. Then we’ll fertilize on schedule the second week in September," Gray explains.

"We came through the summer the best we’ve ever had as far as maintaining cool season turf grass. We’re in a drought, yet I’m on city water, so anything we use we buy and we’ve had no restrictions on our water use. We had all the water we needed, but that came with pretty high water bills."

The lack of rain put extra stress on approaches to and from cart paths, Gray says, so in those places he did some extra application of phosphides and some foliar “at the in and out places next to our cart paths.”

Pressed for advice to other drought-hassled supers, Gray says: "Raise your mowing heights, if possible. That’s a way to save money and if you do have access to the water, maybe just try to cool the plant through the day, giving it quick spritzes from the irrigation system."

Gray says the men and women on his maintenance team do their mowing in the morning and spent afternoons syringing and otherwise irrigating certain stressed areas at Mission Hills.

What if there is no relief in sight, and an equally dry winter is expected?

"I won’t alter my plan next spring," Gray says.

"Every super should be tweak- ing their management and main- tenance practices all the time, there might be a few things I tweak but it won’t be much different in the spring."
Charles “Bud” White at the USGA’s regional office in Dallas, says superintendents with warmer weather Bermuda and zoysia grasses need to go with a more phosphorus and potassium in late summer and early fall to help these grasses have better winter tolerance.

“When Bermuda grass goes dormant in the fall, it’s much more susceptible to winter kill, so the fertility plan should be geared toward trying to offset the chance of winter kill affecting the grass too much. That should be the focus for people who use warm season grasses, or the golf courses primarily in the South,” White explains.

“With bent grasses we advise a similar scenario, a little more phosphorus and little more potassium for the same reasons of trying to establish root growth and rebuilding a healthier plant,” White adds.

In Dallas, Sept. 4 was the area’s 31st day of 100 degree plus temperatures, White says, noting “normal” for Dallas is 18 days per year of 100 degree plus temps. Last year, Dallas had a record-setting 71 days of 100 plus temperatures, “and this year, we’ve had another hot summer, not quite as bad as last year, but almost equally as dry.”

White says the drought area as he understands it includes all of Texas, Louisiana, Arkansas, Oklahoma, New Mexico, Colorado, Nebraska, Iowa, Kansas, Missouri and Tennessee, “and this year it was very difficult, it even went on into the Carolinas and Georgia.”

“Hopefully, where possible, the superintendents are using irrigation in conjunction with their fertilization programs. Once there is rainfall, eventually the whole turf grass plant is much better hydrated,” White says.

“It’s going to take several inches of rain to get the soil back to where it was, and in some places in the drought states there’s been several inches,” he adds. “That’s why we recommend potassium and phosphorus to rebuild a strong root and rhizome system.”

Dr. Richard White, a professor of Turfgrass Physiology and Management at Texas A&M University in nearby College Station, Texas, says a good time for supers with cool season grasses to fertilize is once there’s a break in the hot and dry weather.

“The challenge is some of your superintendents are dealing with warm season grasses and some are dealing with cool season grasses,” says White.

“My recommendation is as long as hot dry conditions of summer have moderated, that’s when you should look to fertilize. If you can, wait for somewhat cooler fall temperatures.”

Richard Skelly is a freelance golf writer based in Spotswood, NJ, and a frequent GCI contributor.