JOHN MASCARO'S PHOTO QUIZ

John Mascaro is President of Turf-Tec International

Can you identify this sports turf problem?

Problem: New sod installation; turf green on left
Turfgrass area: Football practice fields
Location: Cincinnati, OH
Grass Variety: Patriot bermudagrass

Answer to John Mascaro's Photo Quiz on Page 33

Background illustration courtesy of istockphoto.com

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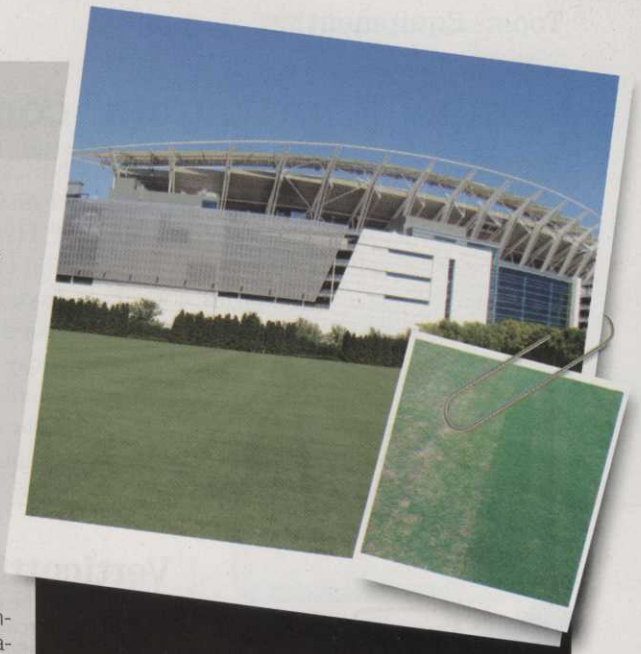
Answers from page 17

This Patriot bermudagrass installation is at the Cincinnati Bengals' practice facility. These two fields were rebuilt using 220,000 square feet of sod. The sod was delivered from a sod farm more than 600 miles away and about half the sod was about 10 months old and the other half was about 18 months old. The 18-month-old sod had also been overseeded and 3 weeks before harvesting the big rolls, the overseeded turf at the sod farm had been sprayed out. Due to the aggressive growth of the overseeded grass, the turf that had been overseeded (on the left) was thinner when compared to the non-overseeded turf on the right.

Interestingly enough, the overseeded turf, even though it did not look as good, was older and also easier to install because of its more mature root system. Even though the previously overseeded portion of the sod was initially about 3 weeks behind in growth, the sports turf manager reported that after a few weeks, growth had caught up and the fields will be in top shape for the football training camp at the end of July (see second photo). These photos are also an excellent side by side example showing the stresses overseeding warm season grasses with cool season grasses puts on the turf in the springtime. If the overseeded sod had not been more mature, it almost certainly would have taken even longer to grow out.

Photo submitted by Darian Daily, head groundskeeper at Paul Brown Stadium in Cincinnati, OH.



If you would like to submit a photograph for John Mascaro's Photo Quiz please send it to John Mascaro, 1471 Capital Circle NW, Ste # 13, Tallahassee, FL 32303 call (850) 580-4026 or email to john@turftec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of *SportsTurf* magazine and the Sports Turf Managers Association.

include: ET (actual plant evapotranspiration); rainfall; site properties (soil texture, rootzone depth, water holding capacity); and MAD (managed allowable depletion).

The IA SWAT committee has proposed an equation for calculating this water balance. For more information, see the IA's website: http://irrigation.org.

TESTING PERIOD

The controllers were set up and allowed to run from April 11 to May 29, 2011 and from August 8 to November 20, 2011. Controller performance is reported over seasonal periods. For the purposes of this report, seasons are defined as follows: Spring: April 11 to May 29 (48 Days);

Summer: August 8 to September 4 (28 Days); Fall: September 5-November 20 (76 Days). ETo was computed from weather parameters measured at the Texas A&M University Golf Course in College Station, which is a part of the TexasET Network. The weather parameters were measured with a standard agricultural weather station that records temperature, solar radiation, wind and relative humidity. ETo was computed using the standardized Penman-Monteith method.

CONTROLLER PROBLEMS

Four controllers experienced problems during the course of the study.

1. Controller A had a capacitor leak during the course of the study. This resulted in the controller software operating but not being able to turn valves on.

2. Controller C had a sensor module failure that was discovered during a routine check of controller status (power), the manufacturer was notified and a replacement was installed.

3. Although programmed and installed correctly, the Controller F failed to operate 4 out of the 6 programmed stations. The controller is currently being analyzed for a possible software or hardware malfunction.

4. Controller H experienced communication problems multiple times throughout the study.

Controller alerts (beeping) occurred on at least two occasions during the evaluation period.

The manufacturer was notified of the problem and a signal amplifier was installed on the controller. However, it was later determined that the problem was a result temporary poor signal service by the signal provider company in the testing area (a bad tower).

5. Controller D had a recall issued in late 2011 due to possible sensor malfunctions. As a result this model was discontinued and will be replaced with a newer for the 2012 year test.

CONCLUSIONS

Over the past 5 years since starting our "end-user" evaluation of smart controllers, we have seen improvement in their performance. However, the communication and software failures that were evident in our field surveys conducted in San Antonio in 2006 (Fipps, 2008) continue to be a problem for some controllers. In the past 4 years of bench testing, we have seen some reduction in excessive irrigation characteristic of a few controllers.

Our emphasis continues to be an "end-user" evaluation, how controllers perform as installed in the field. The "end-user" is defined as the landscape or irrigation contractor (such as a licensed irrigator in Texas) who installs and programs the controller.

Although the general performance of the controllers has gradually increased over the past 4 years, we continue to observe controllers irrigating in excess of ETc. Since ETc is defined as the ETo x Kc, it is the largest possible amount of water a plant will need if no rainfall occurs.