

Tips

Successful Fertigation

Know what components will create the most effective system for your course

BY FRANK H. ANDORKA JR.,
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Installing fertigation systems allow superintendents greater control over their fertility programs. For it to work properly, however, it's important to explore which components will fit your specific needs. Here are a few ideas from irrigation and fertigation specialists about what to consider.

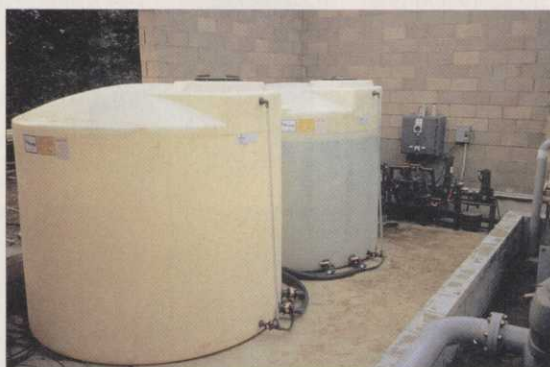
Have a plan

Fertigation is a complicated subject, and it's hard to explain to golfers why they should spend the money for a system, says John Dorer, an agronomist for Ecotronics, a Souderton, Pa.-based fertigation company.

"You have to explain that the changes they'll see in course conditioning will be subtle — but important — once the system is in place," Dorer says. "You have to agree on the goals before you embark on the project."

Next, you have to decide what parts of the course you want to fertigate, Dorer says. With proper planning, you can segregate the system so it only fertigates tees and greens, or you could go wall-to-wall if that will fit your agronomic program best.

If you decide to fertigate the entire course, you must ensure your irrigation system provides uniform coverage, says Brian Vinchesi, president of Pepperell, Mass.-based Irrigation Consulting. Ideally, the irrigation would be run off of a computerized control system, with



(Above) The fertigation system should be hooked up to the flow meter to ensure proper proportions. (Below) An ideal system should also include two 1,500-gallon storage tanks.

pump house to accommodate a fertigation system. The bigger the pump house, the better, he says.

Nash recommends that newly built pump houses should be at least 24 feet wide and 24 feet long. If you're adding an addition on to an existing pump house, he recommends that it be at least 12 feet wide by 20 feet long. That allows for the installation of two 1,500-

gallon fertilizer tanks and enough room for a superintendent to service the system.

the injection pump attached to the same program. "It may require you to upgrade parts of your existing system," Vinchesi says. "If you're not providing uniform coverage, you're wasting your time."

Vinchesi also advises superintendents to check their original pump station building permits before expanding the buildings for fertigation upgrades. Each state has different rules regarding fertilizer use, so it behooves superintendents to check their compliance with laws, he says.

Now that you've done all the preparatory work, it's time to build your system.

It's all about the pump house

Ed Nash, president of Atlanta-based PlantStar Fertigation, says size matters when it comes to building an adequate

gallon fertilizer tanks and enough room for a superintendent to service the system.

"I've seen situations where the club hasn't allowed enough room for someone to fix a leak or service the motor," Nash says. "It's not something everyone considers, and that can cause you problems down the road."

Vinchesi says a fertigation system should connect to the flow meter to ensure the ratio of chemicals to water stays proportionate. If the water flow drops below a certain pressure, such an arrangement will shut off the injection system, preventing overfertilization.

Nash also recommends superintendents consider adding mixing tanks to their plans. He says many superintendents like to mix soluble fertilizers to create a formula to meet specific needs.

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"Most superintendents are alchemists at heart, and mixing tanks allows them to create their own concoctions," Nash says. "It indulges them in this pastime, and allows them to customize a 'home brew' fertilizer for their course."

Don't forget about safety

Jim Barrett, president of Roseland, N.J.-based Barrett Associates, an irrigation consulting firm, says once superintendents commit to fertigation systems, they must think about safety. Anytime you automate systems involving chemicals, you must plan for contingencies.

"This should be a central preoccupation for anyone installing a fertigation system," Barrett says. "It's the only responsible way to behave."

Barrett says all fertigation systems should have a vacuum breaker, which

allows air into the system and aids drainage if a leak occurs. Barrett says superintendents should also install professionally manufactured backflow valves to prevent tank contamination.

"You need spend the money to purchase one of these," Barrett says. "I've seen some homemade ones that have been pretty scary. You can't take any chances in these environmentally sensitive times."

Nash says the pump house should have its containment floor sloped toward a sump, which will collect all spilled materials, which can be returned to a storage tank by a transfer pump.

"Even the best plans have problems from time to time," Nash says. "You have to be ready to deal with them so they don't cause a catastrophe."

Barrett says the containment area should hold 125 percent of the combined capacity for fertilizer storage tanks.

Nash says superintendents should also purchase filter on transfer pumps to eliminate impurities in the recycled product, he adds. Barrett adds that an ideal fertigation system also includes containment walls around the pump house in case chemicals leak.

Before you finalize your fertigation system, Nash recommends superintendents check out their suppliers. Make sure they can supply you with chemicals or service on your schedule instead of when it's convenient for them. If you follow these steps, you should have a fertigation system that will meet your needs well into the future.

"With fertigation, you can deliver nutrients to your turf when you want to, in the quantities you want to, without spending extra money on labor," Nash says. "It frees up superintendents to do other jobs on the course." ■



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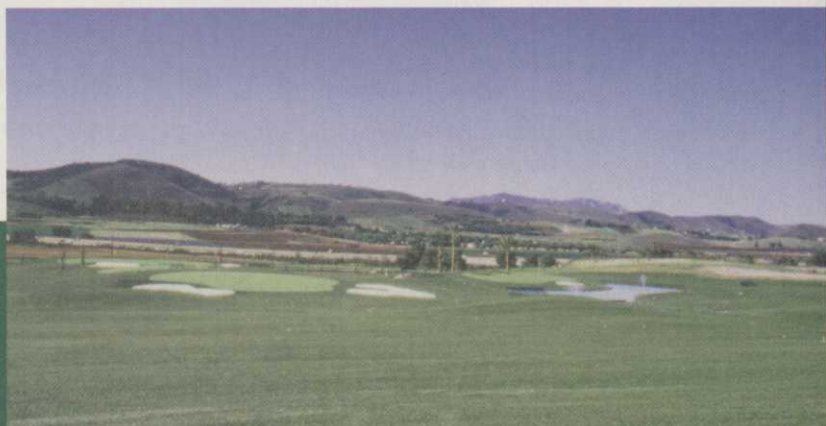
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