SOMETHING I TRIED THAT DIDN'T WORK. . . AND WHY!!!

By: Don Savard, CSFM, CGM

Several years ago I had a number of puddles or "birdbaths" on a sports field. Every time it rained, water would collect in these low areas and would remain for up to 5 days. In order to make the field playable, I would pump the water out the puddle with a hand powered "puddle pump." Then I would run a leaf blower over the wet spot to dry it. Sometimes I would add calcined clay on top to help absorb the moisture. The problem was not getting better and I really needed a better solution.

One summer day, I had a dump truck load of screened topsoil delivered to my school. With a borrowed tractor, I set out to fix these puddles once and for all. Using the front end loader, I shuttled bucket load after bucket load of topsoil to the biggest and deepest puddle spots on my field. I dumped the topsoil right on the surface and worked the topsoil in, leveling and compacting the soil with the bucket and tractor wheels. I hand raked and smoothed each area. The next day I installed sod over each spot and began irrigating. We were careful not to traffic the sod with mowers or feet when it was wet.

As the summer progressed, the sod became established. The field was looking pretty good. About a week before the football preseason was to begin, we had several heavy thunder showers. I was trying to mark and paint the field. As I was traversing the field with tape measure and string lines, I kept noticing that the new sod areas were really soft and mushy. A couple of days later, these

areas were still wet but the surrounding areas were firm. After subsequent rainstorms, these problem areas became worse. Football practice turned these areas into quagmire. After all that work and money spent, the repair was a failure.

HERE IS WHAT HAPPENED AND WHY:

- 1. The sports field had been poorly graded and some settling had occurred following reconstruction 2 years previously.
- 2. The existing sports field soil texture was a silt loam. The screened topsoil that we brought in was a sandy loam soil.
- 3. |The screened topsoil was not blended with the existing soil, rather piled on top.
- 4. Light frequent irrigation was applied only on the new sod for establishment.
- 5. Soil saturation was not observed until the period of heavy thunder showers.

Here is what was happening. I had created something similar to a bowl of wet oatmeal but with grass growing on top! This "bowl" retained water longer than the surrounding soil. And because this "bowl" had sides, it could not drain laterally. I had placed a layer of sandy loam was on top of a layer of silt loam. Unfortunately, the silt loam underneath would absorb the water at a much slower rate.

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The problem was solved when we renovated the field. First we stripped the sod off the field. Next we loosened the rootzone depth with a box scraper equipped with ripper teeth. We purchased a silt loam soil that was specially blended to match our soil and spread it on our field. Next, we laser graded the field at a 1 to 1.5% slope for positive surface drainage and to eliminate the "birdbaths." Finally we installed sod that was grown in silt loam. We grew it in and managed the traffic on it. The result was the elimination of virtually all of the birdbaths. Because the soil is relatively homogeneous, it drains at a consistent and acceptable rate.

The lesson learned was that layers of dissimilar textured soils do not drain consistently. In some case they do not drain at all. Now when I purchase soil, I make sure that I obtain a physical soil test so that what I buy will be similar to what I have.

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