

GROWING PAINS

eased by erosion control game plan

By Tom Wedegaertner

When Christ the King Cathedral School and Catholic Church, Lubbock, TX expanded its student body to include high school grades 9-12, it also needed to address expansions of everything from buildings and bus routes to staff members and sports fields. Construction had begun, but after adding a high school football team, the school realized it was short on practice space.

School staff, church members and the Trojan Booster Club agreed to build a practice field from scratch on a site near the school that had previously been open pasture. Having an onsite practice field would decrease the liability involved in bussing players to and from an off-site facility. And with two-a-day practices ahead, the new sports field would be a convenient addition.

The site was an open field featuring native grasses and uneven surfaces. Construction crews used a road grader to rip the soil in

three directions, pulling up eight inches of top soil, along with rocks, roots and tree stumps. The field was then scanned by crews who manually removed unwanted debris, applied herbicides to kill remaining vegetation, and installed an irrigation system.

Church member and former CTK student John Wanjura volunteered his services and expertise as a researcher for the USDA-ARS Cotton Production and Processing Research Unit by leading the field design efforts and erosion control initiatives. "I was glad to help steer a part of the school's response to growth," said Wanjura.

With limited time before the practice season began, crews faced the final step in building a sturdy practice field that looked good and performed under extreme conditions. "We needed to plant a ground cover that was tough enough to withstand the wear and tear of a high school football team," said Wanjura, "and with anticipated seasonal rains ahead, we needed to establish dense, strong vegetation



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quickly.” After consulting with a fellow colleague at the USDA and determining that hydraulically applied mulch was needed to prevent soil erosion and aid in grass establishment, Wanjura selected North American Green’s HydraCM Steep Slope Matrix.

“Though the field surface was flat, we were concerned about impending rain events and wanted to be sure the hydromulch took to the soil,” said Wanjura. “We wanted a mid-grade hydromulch to ensure success.” Developed by Mulch and Seed Innovations LLC, Centre, AL along with Cotton Incorporated and the USDA, HydraCM is a high-performance hydraulic erosion control product made with mechanically processed straw fibers, reclaimed cotton plant material, and proprietary performance-enhancing tackifiers.

Installation

On Memorial Day 2008, Lubbock landscaper Ashton Walden first mixed the HydraCM with Bermuda grass seed, commonly known for its resilience in extreme rain and heat, and then applied the blend directly for a convenient one-step application.

A noticeable glitch during the application process led to initial concerns about how well the mulch would perform—the mulch was mistakenly applied at a rate of 2,500 lbs/acre instead of the recommended 3,000 lbs/acre. But crews decided to wait it out and to be prepared to distribute a second application, if necessary.

“We had never used HydraCM before and weren’t sure how it would cover due to being under sprayed,” said Wanjura. The area experienced heavy rainfall two days later, and steadily continued for another week resulting in more than five inches of rain. “Following the rainfall, there was no seed floating on top of the soil, and no evidence existed that residue had seeped toward the storm drains around the perimeter of the field,” confirmed Wanjura. “Despite the rainfall, we were surprised to find that the HydraCM had stood its ground.”

HydraCM is made from a combination of straw, reclaimed cotton plant material and a blend of performance enhancing tackifiers and additives that form a protective web that holds soil in place. “HydraCM contains beneficial nitrogen, phosphorus and potassium nutrients that, when made

available to the soil, are important for plant growth,” added Wae Ellis, vice president of sales and marketing for Mulch and Seed Innovations. “HydraCM is also highly absorbent and has an excellent water holding capacity, which assists with germination and encourages the establishment of vegetation. Meanwhile, its crosshatching matrix provides air space and porosity for seedlings to push through with little resistance.”

Much to Wanjura’s surprise, the vegetation began growing within days, and at two weeks the field was lush enough to require mowing. “I thought it would be a month or two before the stand was established enough to be mowed. In the past we have worked with seed alone and it took five to six months before mature vegetation grew,” said Wanjura. “I really believe that HydraCM’s hydraulic application should be given credit for the fast soil-seed contact and quick germination,” said Wanjura.

In addition to quick vegetation establishment, the use of HydraCM and seed was at least five to ten times less expensive than placing sod, according to Wanjura.

In keeping with the close-knit spirit of the Christ the

King community, Wanjura and his brother Eric volunteer their time to maintaining the practice field through regular mowing and supervision. This past fall, the Trojan football team completed another football season, this time with a true home field advantage. ■

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