Renovation and Rejuvenation: A Sports Field Experience

The main field at Thunderbird Stadium on the University of B.C. campus is an older, native soil field with a crowned surface. Prior to 1996, the field was the recipient of erratic management and subjected to extensive wear and compaction as a result of a diversity of events from rock concerts to rugby matches. The field has been topdressed and/or amended with a variety of soil materials over the years and shows considerable variation in the root zone profile. In-ground irrigation was installed in approximately 1995-96. Since 1992, the centre of the field, which is subject to the most wear, has been resodded three times. On the last occasion, the area was excavated slightly and refilled with a composted material prior to laying the new sod. As this subsurface material continued to decompose, the central crowned area settled and formed a concave depression between the hash marks which was highly water retentive.

In late fall 1996, the field was used for an intensive football tournament over a three-day period during which it rained almost continuously. Following this damage, the field was clearly in need of major renovation. The area between the football hash marks for two thirds of the length of the field was heavily worn, compacted and inadequately drained. Heavy wear had also compacted the soil and removed most of the turf from the east sideline. Renovation of the field using big roll sod was considered, but was precluded by fiscal constraints and equipment availability.

In view of the success that had been reported in restoration of sports fields in New Mexico using the zeolite product Ecolite, we made a proposal to the UBC athletic facilities for a demonstration program to attempt field renovation using an aggressive aeration and Ecolite topdressing strategy. The program was constrained by the scheduled use of the field for a variety of events starting in mid-March through to the end of summer, including football, rugby, soccer, ultimate Frisbee and four music concerts, as well as being leased for use as a backdrop for two film productions. The longest period without a major event during this time was approximately five weeks.

In March the field was verti-drained and topdressed with Ecolite. As soon as conditions permitted, the central area of the field was overseeded with a perennial ryegrass blend. The cool wet weather which followed seeding provided poor growing conditions and the field responded slowly. With improved weather, the poorest central areas of the site were overseeded again. In June the centre of the field was core aerated and topdressed with Ecolite. An additional topdressing of sand was used to begin restoration of the original crowned level. Throughout this period (March to June), the field continued to be used for scheduled events which included music concerts, football, two major rugby tournaments and two film crews. Despite this use, and pattern and weather conditions which did not facilitate the renovation process, the field now appears to have excellent cover and the majority of the area is of consistent quality, both visually and functionally. There remains a recalcitrant region in the central area of the field where turf cover is still below acceptable quality and where the soil profile is not yet stabilized. The underlying composted material has produced a localized “bog” which will require further aggressive attention. However, this area is much less extensive than the original damaged portion of the field. Two additional deep tine aereations are scheduled to be carried out after concerts in mid-July and in late August. The central areas will receive a 100% Ecolite (90:10) mixture. Some additional overseeding in the central problem area using perennial ryegrass may be undertaken in late August if warranted.

While it is too early to make any definitive statement about the value of this approach to renovation, it is clear that the stadium field has been significantly improved over its previous state. We will continue to monitor the field to evaluate short term success in addressing the remaining problem area in the central part, and the longer term impact of the Ecolite topdressing on wear tolerance, water and fertility management on this facility. From our observations to date, Ecolite incorporation into the soil profile has contributed to a significant improvement in field quality.

—F. Brian Hall, Ph.d., P.Ag., Professor Pacific Turfgrass Research Program
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GUEST EDITORIAL

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4 • SEPTEMBER 1997