Changing Grasses Can Be The Best Answer For Water Woes

Mauna Lani Resort Golf Courses **Puako, Hawaii 96743**
Tim Snelling, CGCS, superintendent

Issue

The two courses at Mauna Lani were planted with various types of bermudagrass on all of the playing surfaces. However, everything changed after an invader named seashore paspalum gained a foothold because the irrigation water was high in salts. This salt-tolerant grass was able to outcompete the neighboring bermudagrass because it could tolerate the poor water quality. The spread of seashore paspalum in the fairways was not a major issue because it provided outstanding playing conditions. However, Superintendent Tim Snelling, CGCS, tried multiple techniques to eliminate seashore paspalum from the putting surfaces and surrounding areas because of playability concerns and its aggressive growth rate.

Action

After many years of little or no success in eradicating seashore paspalum, the resort decided to simply let the grass grow. Based on the aggressive growth rate, Mr. Snelling made the correct decision to dramatically reduce nitrogen fertilization to less than half of what he would normally apply to bermudagrass. The lower nitrogen levels slowed the growth rate of the seashore paspalum, but it also gave the seashore paspalum an additional competitive advantage over the bermudagrass, helping the paspalum gain more ground. Also, the staff noted that lower mowing heights encouraged aggressive growth in the paspalum and improved its playability.

The resort also decided to begin converting all of the greens to a pure stand of seashore paspalum through sprigging. The greens had already experienced significant invasion from seashore paspalum and resurfacing them would improve consistency and playability. To achieve this transition without affecting the playing experience, two additional holes were created on a former practice facility. This enabled the resort to convert two greens at a time while keeping 36 holes in play. Slowly and methodically all of the greens were converted to the better-adapted seashore paspalum.

Results

The conversion to seashore paspalum has been very successful at Mauna Lani. Paspalum thrives with very poor irrigation water and significantly less fertilizer than bermudagrass. Another major benefit is that seashore paspalum outcompetes the greatest weed pressure in Hawaii—goosegrass. In many cases, simply applying salt eliminates these weeds while leaving the paspalum unharmed. This would be considered a salt with intent to kill.

The courses at Mauna Lani have poor water quality and deal with constant wind and salt spray, causing bermudagrass to struggle. Seashore paspalum, on the other hand, thrives under these conditions and now comprises most of the primary playing surfaces.