Fraze mow, topdress and seed.

GROWING GRASS IN THE #NOTRANSITION ZONE: NEW IDEAS

BY **BRIAN WINKA, CSFM**

For years, those of us who are fortunate or unfortunate to work in the transition zone, we have dealt with the issues that come with this transitional area. We are fortunate because we can grow both warm and cool season turf grasses, but unfortunately neither one grows exceptionally well. Sports turf managers in the transition zone deal with extreme weather conditions on both ends of the spectrum. In 2013-15 we were hit especially hard with an extremely cold winter followed by a very mild summer. For those of us trying to keep bermuda fields alive in these conditions, it was one of the worst scenarios possible. If you are managing high-use fields this can be a gamble each season. So what can we do to help protect our investment?

The Chesterfield Valley Athletic Complex has nine soccer fields. We went from a little over 2000 hours of use in 2010-11 to close to 9000 hours of use in 2014.

For many of us in the transition zone this means we are overseeding in the fall, which happens to be the busiest time of year for use on our fields. We are attempting to get newly seeded grasses established in the middle of football, lacrosse and soccer seasons. If you work at a Parks and Recreation facility like I do, then there are no road games and there is play on the fields every day from either practices or games. Seed usually germinates


Five-day old HGT variety of Kentucky bluegrass

and comes up great in the low use areas of the fields; but in areas of high use that need the cover, most are often difficult to get established. By the time the high traffic areas do get established, it's time to start thinking about transitioning them out.

This is the part that makes a lot of managers anxious each spring. Each spring we are hoping that the winter was not too harsh and that our bermuda will come back. Some years we are fortunate enough to have great results managing this way and other years we deal with the challenges of establishing bermuda back to 100%. Many managers will need to seed or sprig bermuda to get the field re-established. I have read where bermuda grass needs 100 days of competition-free growth to provide maximum performance during the summer months. In some years, this can be a challenge and once the field is re-established it is just about time to over-seed again and start the process all over. So we can ask, "Does this still make sense for us in the transition zone?"

A BETTER WAY

I believe there is a better way for some of us to manage our high-use facilities. If any of you have taken the time to observe newer cool season grasses over the past 8 years, you have seen some impressive varieties appear in NTEP (National Turfgrass Evaluation Program) and real turf situations. While warm-season breeders have been producing bermuda to travel North, cool season breeders have been producing ryegrass and bluegrass varieties to travel South and there we are, in the middle. I believe they can co-exist, and this may be a viable option for some turf managers in the transition zone.

So why would you try this? 1) Extend the growing season for the FIELD. There is always a real fear of winterkill in the transition zone. 2) Provide dense and consistent green turf year round that is aesthetically pleasing. 3) Develop a stronger root system and healthier field. 4) Reduced weed invasion during winter dormancy. 5) Protect your asset while saving time and money.

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At our facility we need to be able to extend the season as long as we can. If you have ever looked at the growth charts for warm and cool season turfgrasses, you can see that the peak growing seasons for each come at different times in the year. If you overlay the two charts on top of each other you would see a steady growth pattern almost year round. We have managed our fields with this concept in mind and have kept both warm and cool season grasses actively growing together. We are more concerned about turfgrass cover on our fields than we are about any particular species of turfgrass. Green is green. Managing both this way has allowed us to provide a dense and consistent green field almost year round without the dips in quality that come with transitioning cool season out of bermuda.

The fear of winterkill is in almost all of us who live and work in the transition zone. Working at a complex that plays almost year round, we cannot afford to close a field due to winterkill. By having both warm and cool season turfgrass co-existing on our fields, we have virtually eliminated field closures due to winterkill. Having a

Two weeks after fraze mowing and seeding.

need to completely re-establish a bermuda field is something of the past. We can focus on building roots and developing a healthy field year round. How strong of a root system are we developing if we are constantly overseeding a field only to remove that grass months later? How strong of a root system can we be developing on our bermuda fields if we are struggling to re-establish each season?

THE PROCESS

In the fall of 2009 we inter-seeded two soccer fields with one of the newer rhizomatous perennial ryegrasses (RPR) with the thought of leaving it in the following season and start growing the field as a mix. We inter-seeded two soccer fields at 6.3#/1000sq ft and began our experiment. From this point on, the mistakes began. We thought that we could manage the field as a cool season field in the spring and fall and then change to warm season management in the summer. We fertilized with the wrong products trying to push growth on the bermuda in the summer months. We were also lacking a solid fungicide program since we did not have a lot of pressure on bermuda in the past. Needless to say we had some setbacks that first summer but we also learned some valuable lessons. If you are going to grow your fields as a mix then you need to manage your fields as a mix.

The mix is working and is successful for us. We decided to try a bluegrass bermuda mix in 2014. In May we fraze mowed our Quickstand and Patriot bermuda fields, then topdressed the surface with ¼ to ½ inch of sand and then seeded. One field was seeded at a rate of 2.2#/1000 and the other was seed in two directions totaling 4.4#/1000 sq ft. In the spring of 2015 we converted two more fields to the blue/bermuda mix. The process was the same as before except this time we introduced Northbridge and Latitude by sprigging after fraze mowing.

All turfgrasses have the same basic requirements for growth: water, sunlight, air, soil and nutrients. It is our job as managers to determine how the plants

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receive each one. We understand that the needs of one grass might not coincide with that of the other species and this may cause competition. We are sports turf managers; we manage for competition on the field so why do we shy away from it when it comes to our turfgrasses? Isn't competition a good thing? Don't we want the strongest to survive? Again it's about managing the field, not a particular grass.

By making mistakes the first season, we were able to adjust our management practices the following season. By having the warm and cool season grasses growing together, we had good cover on the field year round. Now, we no longer worry about the 100 days of competition-free growth and pushing the bermuda to

Eight weeks after fraze mowing and seeding.

Kentucky bluegrass and bermudagrass mix in June 2015.

fill in. We now feed our fields slowly year round and reduce the amount of nitrogen that we are applying. By having the ability to grow the plants slower, they are in turn healthier and stronger. Cell walls are no longer elongated and weak. Bi-weekly summer applications of 21-0-0 ammonium sulfate have been replaced by foliar feeding, slow-release organics and extended release fertilizers. Foliar nutrition can be very effective in providing nutrients to your plant, in particular if your root system is damaged or not functioning correctly. Foliar applications bypass the challenges of nutrient tie-ups in the soil that granular applications can fight. Generally, liquid applications require very small amounts of product to be effective and have little chance of burn potential.

Reducing the nitrogen has also reduced disease pressure on the fields. The transition zone can be a harsh environment to grow grass so we needed to implement a better fungicide program to fight diseases like brown patch, grey leaf spot and pythium. Conditions vary from year to year but in most years we can get away with three or four fungicide applications depending on conditions.

Results have been great with the warm and cool season mixes. Traffic tolerance has been excellent for both mixes on the fields. The Chesterfield Valley Athletic Complex has nine soccer fields. We went from a little over 2000 hours of use in 2010-11 to close to 9000 hours of use in 2014.

Before starting with the idea of managing two different species in your turfgrass program, we strongly recommend going to the NTEP website and look at the bluegrass data for OK, TN, and NC.

These three states provide the best data to find a proven bluegrass to co-exist with bermudagrass based on summer hardiness. Test plots of the bluegrass bermuda mix were established in Virginia, Kentucky and multiple sites in Missouri in the fall of 2015. We are hoping to gather information from these sites and hope to have data on seeding rates, turf quality, timing and methods of seeding. The advancements in plant genetics keep evolving and as sports turf managers, we should evolve too. The burden of managing in the transition zone can be a little less difficult if we open ourselves up to new concepts. ST

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