

Part Three: TifEagle and Champion

The previous articles focused on the growth habit of TifEagle and Champion and what it takes to turn these two cultivars into putting surface material. This meant growing them on an organic substrate/ infrastructure that is conducive to good plant health. In addition to good plant health, we covered locking the stolon mat in place with the right sand for stabilization to support good mowing practices as well as auxiliary practices to enhance ball roll. Once the stolon mat was locked into place, we discussed the importance of using the right nutritional inputs for plant health and maintaining good macropore space to support life in the soil (edaphic environment). The combination of all these things working together would provide the perfect setup for good greens.

Now, let's get into some more particulars that should be considered in managing these two cultivars as putting surfaces.

Watering practices must be at the top of the list. As I have mentioned in several articles, these two ultradwarfs need their water. There are some situations that may allow for less water than others. But in general, frequency of watering is the key to success, not the amount of water. Chasing water is not their forte. However, I do believe they will chase nutrients to a high

degree if everything is in order around the rhizosphere. The other aspect about light/frequent watering is it keeps the finer sand near the surface compressed so the stolon mat remains locked into place. If it becomes dry, it will become loose and unstable. This can cause imperfections when you mow or manage the surface through rolling, verticutting, etc. Wet/fine sand compacts better than loose coarse sand. A great example of this is when you go to the beach. When the tide goes out, the fine sand is firm under your feet. As it dries, it becomes unstable and shifty. The same thing can happen on greens. This is where there is a fine line between too wet and too dry. So, water does more than just hydrate the plant. It sets a foundation! I have found that watering just after “dusk” is a good time - not just before dawn. It gives the leaf blades a chance to dry down before being mowed and prepped for play in the morning. There is nothing worse than trying to mow and prep wet grass. I realize there is a school of thought that early morning watering may prevent disease by removing the dew formation. However, mowing takes care of this in most cases. And if you’re not mowing, then adjusting the watering time may be an appropriate measure based on circumstances – especially in the winter. But normally, early evening watering (e.g., 9:00 p.m.) is the best. I am not going to get into winter

kill, but it is a foregone conclusion that proper hydration of the soil/plant during the winter may help prevent winter kill/desiccation. I like to use this analogy: If the water is frozen at 32 degrees, then the area frozen around the plant can go no lower than 32 degrees. Sounds simple. It is! Air temperature can go to extremely low temperatures, but frozen water between the pore space and around the plant can only go to 32 degrees. Therefore, frozen water or liquid between may act as an insulator or buffer to cold desiccating temperatures that may cause winter damage. And remember, we are talking about using good water. Bad water is a completely different situation. Bad water can interfere with everything good one is trying to do. So, there you go! Water does more than just hydrate the plant.

The next is disease management. So many turf managers become obsessed with preventative fungicide treatments, but, in my opinion, preventative programs can get completely blown out of proportion. Bermuda is a very tolerant grass and can survive most anything if the right agronomic practices are put into play. I lend to the philosophy that “The best fungicide plan is a good nutritional plan.” If you have disease pressure, ask yourself one question. Why am I getting the disease? So often, it is something that is right in front of you. It might even be that

the soil chemistry is out of balance, or the wrong sand is being used to support good macro pore space, or a non-compatible nutritional approach. Whatever the case may be, turfgrass pathogens are like buzzards. They prey on anything that is dying or weak. This is nature's way of cleaning up the system.

Keeping your soil and turf healthy will help you avoid the "Turf Buzzards" (diseases) of our industry. I find that implementing a sound IPM (Integrated Pest Management) program is the best approach. It helps maintain balance without compromising the life of the soil. If you don't know what IPM is, look it up. It is what supports BMPs (Best Management Practices). One complements the other.

As for diseases on these two ultradwarfs, it has been my experience that there are three key times to spray a preventative fungicide.

Cloudy weather. These cultivars hate days with no sunlight and rainy conditions. They are very susceptible to curvularia / leaf spot when it is cloudy as well as other diseases. So, first rule of thumb: When cloudy weather is coming your way, spray a curative and/or preventative fungicide in anticipation of your Bermuda getting this aggravating disease. Sometimes, it can even be mistaken for Pythium. Why is that? The cells of the pathogen get broken apart and the spores get tracked all over

the leaf blades during moist and wet conditions by equipment, golfers, etc. So don't kid around with this disease. It can take you by surprise if not treated and/ or recognized.

Spring Dead Spot. This is most apparent in cooler climates. If it is allowed to go untreated in the fall, the possible damage can be a real eye sore in the spring of the following year if damage does occur. Taking a proactive approach to prevent this disease is a must if your turf is being grown in cooler climates.

Root protection. Green-up in the spring is a time of the year when Bermuda can be at its weakest due to its fragile root system or reestablishment of its root system. A curative fungicide approach using a broad-spectrum fungicide can protect and aid in the development of new roots. For example, one may select a broad-spectrum fungicide in conjunction with a selective fungicide that may prevent pythium, etc. Avoid fungicides that may be phytotoxic to the plant since it is coming out of dormancy.

Surface cultivation. Last, but not least, is surface cultivation to remove old/tired plants and make room for new ones. This is probably the most overlooked practice in our industry for long term success of TifEagle and Champion. Why do sod farms very seldom have problems when growing their crops? The simple

answer is this. They are always dealing with new plants. New plants are resilient. These new plants are not as prone to biotic and abiotic stresses as are older plants. Plus, new plants are far more tolerant to mechanical wear and tear of auxiliary practices compared to older plants when managing a putting surface. Since TifEagle and Champion are top growers, they produce a lot of excess growth that results in older plants. These older plants need to be randomly removed to make room for new plants that are more resilient. If these old plants are not removed, managing a putting surface may become problematic as age sets in and pose lots of agronomic challenges, e.g., managing grain, disease pressure, hydrophilicity, nutrient efficiency, mower performance, etc. Since older plants do not perform as well as younger plants, the frequency of surface cultivation to create new plant growth may depend on one's location. For example, if you are near the coast, your greens might require more cultivation than greens that are inland due to more growth and aging in a warmer climate.

Below is a picture of a surface that has been cultivated by removing a lot of the old plants and making room for new ones to establish and regrow. The recovery time from this kind of cultivation would be about one month.



The whole idea behind this type of cultivation is to remove the old plants so new ones can take center stage. There is no one shoe that fits all, so implement a cultivation program that best fits your situation. This can be done through heavy vertical mowing, mower scalping, etc. This kind of cultivation should be done in early summer to allow for plenty of recovery time. Prior

to cultivation, spray a curative fungicide and apply good preplant fertilizer to facilitate new growth. This will help insure against decline. Once these old plants have been removed, new plant responsiveness to maintenance practices will be far more predictable than with older plants. This will lead to a better putting surface and a healthier turf in the future. Remember, new is most always better than old. So, keep your turfgrass young and life will be good where the flat blade is used in golf.

I hope this series on ultradwarf management has offered some insight and techniques on how one might choose to manage TifEagle and Champion in the future.