




EARLY START STOPS STRESS

Starting wetting agent programmes earlier this spring will aid faster recovery of turf quality, and ensure plants remain healthier through the summer to enhance playability on better surfaces.

Even after record wet winter conditions, the prolonged dry spring weather experienced in recent years can seriously affect root growth and plant recovery.

ACTION	TURF BENEFITS	ENHANCED PLAYABILITY
 <p>MOVE WATER DOWN FROM THE SURFACE</p>	<ul style="list-style-type: none"> • Firmer surfaces • Consistent smoothness • Improved clean cut • Reduced thatch build-up 	
 <p>HOLD MOISTURE IN THE ROOT ZONE</p>	<ul style="list-style-type: none"> • Encourage rooting • Enhance water uptake • Relieve stress conditions • Reduce Dry Patch risk 	

Advanced wetting agent technology, combining genuine penetrating and polymer components in Qualibra, provides the opportunity to create firmer, faster playing surfaces earlier in the spring, along with preparing improved growing conditions for turf through the season.

Where the unique formulation of Qualibra performs differently to other wetting agents is the combination of moving surface water down, to maintain firm and fast surfaces, along with holding soil water lower in the root zone to optimise conditions for root and plant health.

The key is to start the programme early to prevent stress. It is crucial to maintain a consistent supply of water for healthy turf plants.

Spring stress busting actions:

 <p>Remove thatch and improve aeration</p>	 <p>Provide adequate nutrition</p>
 <p>Programme irrigation</p>	 <p>Optimise water availability in the root zone</p>

Lack of available water in the root zone leads to water and heat stress, along with nutrient stress where water soluble N cannot be taken up by roots.

Once you start to visibly see the onset of stress induced symptoms, the plant is already suffering and damage to playing surface quality will result. It takes time and energy for the plant to recover.

Abiotic stress factors alleviated by improved water availability in the root zone include:

- **Water stress**
- **Heat stress**
- **Nutrient stress**

Furthermore, healthier leaves that are not under water stress will cut cleaner and be less susceptible to disease.

Holding water evenly in the root zone limits the development of hydrophobic zones and ensures turf root hairs remain in contact with soil moisture. That results in:

 <p>Better utilisation of water</p>	 <p>More young root hairs that are optimal for plant performance</p>
 <p>Greater uptake of nutrients</p>	 <p>Reduced plant stress and stronger turf</p>
 <p>Enhancement of root mass</p>	

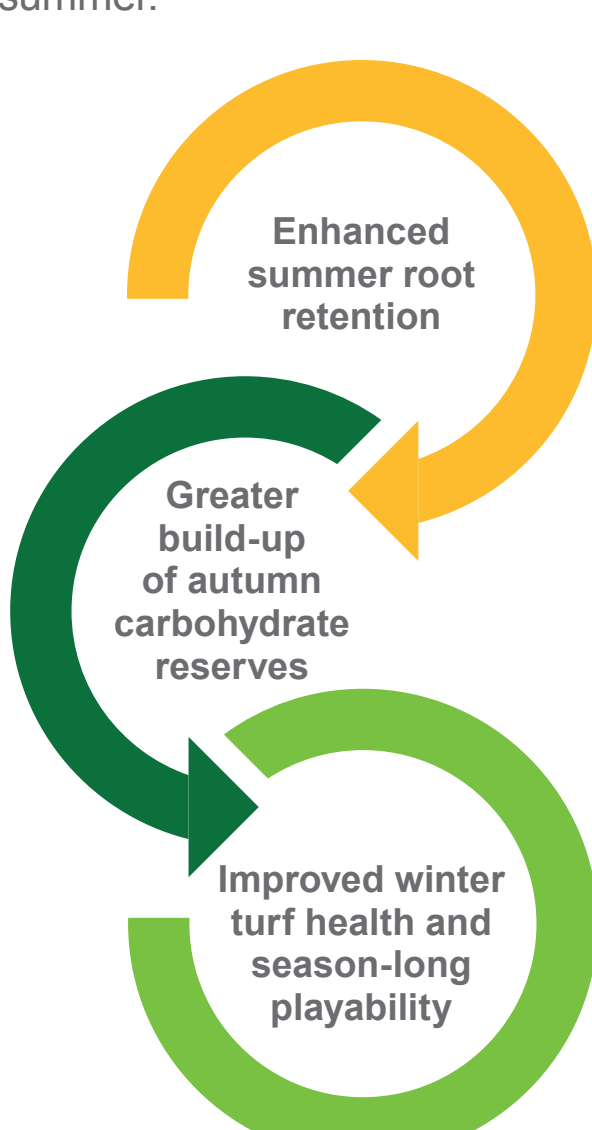
Trials have shown that Qualibra programmes can give an 11% improved uptake of applied nutrients – which is beneficial to the plant and reduces any environmental loss through groundwater.

The improved uptake of nutrients is attributed to a greater root mass and soil moisture being held in the root zone for longer.

Summer heat

Hot, dry soil conditions can lead to significant reduction in the root mass, as plants draw on the carbohydrate reserves to maintain growth.

The cumulative effect of the Qualibra programme started in early spring can be especially beneficial in providing the optimal soil conditions for root retention through the summer.



Better root retention, by holding water evenly in the root zone over the summer, could allow for a greater build-up of carbohydrate reserves in the autumn, which has been shown to significantly improve over-winter turf quality and playability.

Trials results and the experiences of greenkeepers using Qualibra has demonstrated the best performance has been to make an initial application as soon as turf is growing consistently, and repeated at four to six week intervals.

Treatment is best applied in a water volume of 400 litres per hectare, and then watered in as soon as possible with two to three mm of irrigation. If no irrigation is available, the application water volume could be beneficially increased up to 1000 l/ha.

NEW recommendations for Qualibra on fairways have highlighted the potential for an initial early application at 20 l/ha, with subsequent applications at 15 l/ha, to apply the same overall treatment, over an extended season.