



SMART Watering for player safety

SMART WATERING CASE STUDY: SOUTH CANTERBURY RUGBY FOOTBALL UNION

Growing plentiful, lush grass is normally the aim of irrigation but the South Canterbury Rugby Football Union has taken a different approach to watering its sports fields.

To maintain safe playing environments, the union has reduced its irrigation watering by half. Watering deeply, less often, creates more robust sports fields as this irrigation approach generates more grass root growth, which is important for player safety.

Chief executive of the union, Craig Calder, says the result is a win-win for the union and the Timaru District Council, which encourages residents, businesses and community groups to use water wisely to reduce pressure on the town supply.



Craig Calder inspects a sports field

“The council has been incredibly supportive. They listened to our needs and we’ve come up with a very open collaboration which benefits both parties.”

The story began last year when the union researched how to improve the quality of its sports fields through grass management. Contrary to what local farmers recommended around irrigating little and often, studies from similar temperate areas in the United States suggested an alternate approach of watering every two to three weeks, deeply, would produce a better result for sports fields.

“Essentially the end goal of most irrigation and watering of lawns is to maximise grass leaf growth. But rugby fields are quite different. We want to grow strong root growth and mass as this gives cohesion to the field enabling it to withstand a very tough game. It’s quite a different approach to normal grass growing objectives,” says Craig.

The union applied to the council for an exemption to carry on watering through periods of water restriction on the understanding less water would be used. “We’re now probably putting on about half as much water as we used to which serves the council’s objective of trying to conserve water.”

Timaru’s climatic conditions reinforce the suitability of this approach.

“Grass stops growing down here when the soil gets to seven degrees which happens about May and the dry spell down here runs until April. So we can’t rely on autumn rains to strengthen the grass ready for winter. We have to have good growth at the end of summer/early autumn before the cool temperatures stop growth all together. If we don’t our grounds are very hard and the risk in the early season of broken bones and twisted ankles on our fields is very high.”

In the past, dry grounds and patchy grass cover at the start of the season has meant postponed games to reduce the risk of player injury.



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“We developed this strategy to maintain moderately active grass growth through summer. This means when we come to winter we have grass roots that are vigorous that take advantage of natural rainfall. The end result is grass that’s got some cushioning effect.”

The union uses a K-Line irrigation system which is moved manually every two to three weeks for a deep watering application. Volunteers help staff to move the irrigation system and focus on watering early in the day or during the evening. Coring of the fields (drilling small holes) for aeration also ensures water is absorbed by Timaru’s prevailing soil type, a hard silty clay. “It lets the air in and helps drain water through. If the ground is hard at the top, you’ve not going to get water through all the layers. We’ve really noticed the difference it makes. Our fields are really green and lush at the moment. We’ve having to mow two times a week.”

The union will continue review its water management plan and consult with the council to ensure it meet’s the council’s requirements, says Craig.

“Our major focus is on maintaining what we’ve done, but particularly around Health and Safety, it’s paramount that we look after our players by ensuring our fields are safe.”

Rugby is now a year-around sport with tournaments being hosted in the district in November and February and the potential for the grounds to harden up with this summer’s predicted high temperatures being “quite major”.

“If we get into the severe position of having total water restrictions and our grounds are too hard, we may have to cancel the tournaments and delay the start of next year’s season. But in the meantime we’ll continue to work with the council and apply for an exemption if needed.”



A sports field at South Canterbury Rugby Football Union



Craig Calder



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