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A change in grass saves Italian Club

La Montecchia hailed as role model after dramatic cuts in use of water and fertiliser.



Introducing the new bermudagrass at Montecchia

PUBLISHED:

2nd January 2013

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Italy

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A 25 year-old golf club in the north of Italy is being hailed as a role model after dramatic cutting of both its water and fertiliser usage following a switch from cool season grasses to bermudagrass.

The success of the experiment at La Montecchia Golf Club in Padova will be viewed with interest by other courses in an area where 70% of Italy's golf clubs are situated and has important implications for facilities in other countries where the climatic conditions are similar.

La Montecchia is located at 45.24 degrees N latitude and is currently the most northerly course in Europe to have bermudagrass on its fairways and tees.

The club was established back in 1988 by a group of local businessmen who brought in English course architect Tom Macauley to build three nines comprising the 3,387-yard Yellow Course, the 3,424-yard Red Course and the 3,485-yard White Course. The gentle undulations of the golf course reflect the surrounding landscape of the Euganean Hills while its wetlands and grassland areas provide a perfect habitat for rich fauna and created an attractive backdrop when the club hosted the Challenge Tour in 2001 and 2002 and the Alps Tour in 2010 and 2012.



The club had to use a considerable quantity of water and a large amount of pesticides to protect stressed turf.

Not enough water for the grass

For much of its history the dominant grasses at La Montecchia were cool season species; perennial ryegrass (*Lolium perenne*), smooth-stalked meadow grass (*Poa pratensis*), annual meadow-grass (*Poa annua*) and creeping bentgrass (*Agrostis stolonifera*). The course drained efficiently which represented a strength in wintertime but a weakness in the summer months when the temperature often rises to 35 degrees C and there are regular periods of drought.

That original maintenance programme was unsustainable which was why in 2003 La Montecchia started working with experts at Pisa University and the Italian Golf Federation Green Section in order to identify turfgrass species more suitable for their transitional climate.



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Summer heat burns off cool-season grasses

The right grass for the climate

In 2004 the club created an experimental nursery planted with warm-season grasses and at the same time a bermudagrass cultivar, Tifway 419 was sodded on a part of the driving range teeing ground. Results indicated the new grass species thrived in summer conditions and needed nothing like as much water or nutrients and no pesticides whatsoever. It also proved resistant to the significant drop in temperature and provided good quality turf during the four month dormancy period.

The results of the trial were presented at the 5th World Scientific Congress of Golf at Phoenix, Arizona, in March 2008 as well as at the 1st European Turfgrass Society in Pisa a couple of months later and in 2010 the decision was taken to convert the fairways on the White course from cool-season grasses to bermudagrass (*Cynodon dactylon* x *C. transvaalensis*) using Patriot, a cultivar specifically selected in the USA for the transition zone. The technique used was innovative and involved using small plants instead of stolons and this resulted in the course being able to re-open in six weeks rather than the usual 12.

Maintenance data for the White Course in 2011 shows significant differences when compared to that from previous years, with dramatic reductions in terms of water consumption (60% less), fertiliser inputs (70% less) and herbicide use (80% less). No fungicide or insecticide treatments were

made in 2011. For 2012, the golf club is expecting to bring herbicide use down to zero as well.

Dramatic results!

In 2011 the same technique was repeated for the fairways and tees on the Red Course and the results of both projects have been spectacular. The decision to switch from cool-season grasses to bermudagrass has achieved the aim of providing better quality playing surfaces while reducing maintenance inputs. Maintenance data for the White Course in 2011 shows significant differences when compared to that from previous years, with dramatic reductions in terms of water consumption (60% less), fertiliser inputs (70% less) and herbicide use (80% less). No fungicide or insecticide treatments were made in 2011. For 2012, the golf club is expecting to bring herbicide use down to zero as well.



July 2010, two weeks after planting bermudagrass

The aesthetic improvements have been equally marked and many visitors have commented on how the appearance of the course has improved. The end result is that La Montecchia is moving onto the next stage of its sustainability programme which has involved converting the fairways on the Yellow Course fairways and the tees on the White Course tees to bermudagrass. This year the club has also agreed on a number of additional measures aimed at enhancing its sustainable performance and these will include commencing a tree management plan together with the Landscape Horticulture Department of the University of Bologna, beginning the first ornithological research on the effects of bermudagrass on golf courses, adopting an environmental purchasing policy and starting a new study concerning the adaptability of an ultradwarf bermudagrass (cultivar Miniverde).



August 2010, six weeks after planting bermudagrass

Summary

La Montecchia Golf Club has become a model for other clubs with similar climatic conditions and its success might well lead to many of those clubs following the lead of La Montecchia and electing to switch to bermudagrass in order to make considerable savings in the amount of water and chemical products they use.

Alessandro de Luca of the Italian Golf Federation Green Section said: "This has been an important experiment in grass selection, optimising grass choice in order to minimise resource input. It clearly shows what can be achieved through a systematic approach to assessing what is best in a particular situation."



Grasses, Italy

La Montecchia Golf Club, Italy

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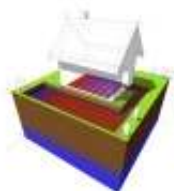
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