

Project of a green area close to a Bermudagrass “green”: the case of Montecchia Biogolf

Dott. Alberto Minelli⁽¹⁾, Dott. Alessandro De Luca⁽²⁾, Dott.ssa Ilaria Pasini⁽¹⁾

(1) Dipartimento di Scienze e Tecnologie Agroalimentari, Università di Bologna – Alma Mater Studiorum

(2) Italian Golf Federation – Green Section, viale Tiziano 74, Roma

INTRODUCTION

In winter 2017 the 9 greens of the Green Course of the Golf della Montecchia, managed under the Biogolf protocol, composing of Bermudagrass (*Cynodon dactylon* x *transvaalensis* variety P18 - Miniverde™), suffered cold damage.

The young age of the turf, established a few months earlier have certainly accentuated the problem.

In particular, more damages were found in the areas most exposed to north-east, where there was no tree and shrub vegetation, able to act as a windbreak barrier against colder winds.

Unlike cool-season species, *Cynodon* spp. and in particular the ultradwarf varieties selected for greens, if not adequately protected, are particularly affected by low temperatures during the winter season.



Fig. 1: Cold damages in Golf Montecchia – green n. 5

PURPOSE

The article describes the criteria and parameters that must be taken into consideration to design the areas close to the greens of Bermudagrass.

The study therefore seeks to identify the suitable species, ensuring the practicability of the field in terms of play, a correct landscape fitting and low management and maintenance costs of the vegetation.



Fig. 2: Identification of area affected by damage: green hole n. 5.



Fig. 3: GPS survey of the study area.

METHOD AND MATERIALS

- Identification of the areas most affected by damage.
- Vegetational analysis performed within the yellow path.
- GPS survey of the study area.
- Green design.

RESULTS AND DISCUSSION

WHAT ARE THE DESIGN CRITERIA TO BE CONSIDERED TO ENSURE SUCCESS OF BERMUDAGRASS GREENS AND A BIOGOLF?



- Avoid excessive interference between turfgrass and the surrounding vegetation (nutrients, water, etc.)
- Avoid shading of the turf (*Cynodon* spp. Heliophilous species)
- Where necessary, provide a windbreak barrier with plants
- Ensure the playability of the field
- Ensure a proper landscape insertion
- Provide low maintenance species



Fig. 4: Identification of areas affected by damage, by the red circles.



Fig. 6: Example of planting and green of hole n. 5 after planting.



Fig. 5: Example of Green design and species for green of hole n. 5.

CONCLUSIONS:

First results confirm that it is necessary:

Add shrubbery strips at a distance from the turf able not to damage it, in terms of intake of nutrients and water to the green (strip close to the bunker); Select species that do not interfere with the green: the maximum height of the plants is around 3-4 m; The shrub hedge near the bunker acts as a windbreak, able to protect the “green” from cold winter winds; Use most of the species that are already present within the yellow route, therefore they fit perfectly with the landscape. In association, species that fit with existing plants (color homogeneity, leaf characteristics, adaptability to the landscape, etc.) have been selected; Use selected species that are rustic, resistant to water stress, disease and with low maintenance, but with a good aesthetic-ornamental aspect.