It's easy being green

Winning the 2009 AGCSA Claude Crockford Environmental Award is just reward for Yamba Golf and Country Club course superintendent Andrew Smith who over the past 18 years has proven you don't need a big budget in order to be proactive when it comes to effective golf course environmental management.

Located at the mouth of the Clarence River in northern NSW, Yamba Golf and Country Club (YG&CC) is sited in a tea tree wetland between the ocean and sensitive river estuary. Home to course superintendent Andrew Smith for 20 years, the past 18 as superintendent, such a location has meant that management practices are focused on ensuring the optimum health of the local estuarine system as well as protecting and enhancing the course's native wetland.

YG&CC consists of 1.7 hectares of 328 greens and collars, 1ha of tees and 13ha of fairways, which are predominately Queensland Blue couch. Smith oversees six staff which includes assistant Mark Ryan, a turf technician, three apprentices and an indigenous trainee.

Due to a mediocre budget, long-term policies have been adopted to realise many of the club's goals and a number of environmental management strategies have or are being implemented to ensure the course has a minimal impact on the environment. The club's main environmental goals are:

- Not allow anything to run off into the river's estuarine system;
- Have nothing pollute the high ground water;
- Not allow any activity on the golf course to have an impact on the general community;
- To protect and enhance the native wetland of the course;
- Develop and implement the club's EMS (i.e.: e-par); and
- Reduce pesticide and fungicide usage.

GOING BIO

One of the major strategies that Smith has overseen is the implementation of a biological programme.

As Smith quips, in the past the club's 6th green made the cover of the now disbanded ATRI magazine for some of the worst spring dead spot seen in Australia. However, reverting to a biological programme and reducing fungicide applications to twice a year, the course's greens, and the 6th in particular, now have minimal evidence of the disease.

Progressing from a preventative to a biological programme has seen a reduction in fungicide application of around 85 per cent, as well as an estimated reduction in cost of around $12,000 per hectare. Graham Scobie, while studying his Masters in Turf Management, also observed that as a result of the biological programme bacteria in the greens help to suppress dollar spot, fusarium, curvularia and rhizoctonia.

Other benefits of the YG&CC biological programme include:

- No spraying for parasitic nematodes for the past nine years;
- Water applications and volumes have been reduced;
- Wetting agent requirements have been reduced by two thirds;
- Through biological activity less grooming and de-thatching is required; and
- Fertiliser applications are reduced by 15 per cent.

"Not only does the biological programme significantly reduce the chances of polluting or having a negative effect on the environment, but also it reduces the cost of maintaining the greens and adds to the sustainability of our business," says Smith.

By researching and trialling adjuvants at different rates, Smith has also been able to halve the rate of herbicides to achieve a result equal to using the product at full rate. Growth regulators help to reduce the club's carbon emissions by not having to run mowers as often while less grass clippings means there is less chance of polluting waterways.

With a high water table, and numerous ponds and drains, only quality slow- or controlled-release fertilisers are used on tees, fairways and occasionally greens. Along with the regular foliar feeding of greens with small amounts of fertiliser, this stops and helps prevent run off and leaching.

GREEN SCENE

Since arriving at Yamba two decades ago, Smith has actively encouraged the development of wildlife corridors and regeneration areas through planting and establishing no-mow areas. Dead and dangerous trees are removed and replaced and a 'natives only' policy as been established for all new gardens. The gardens have helped to enhance the club's native bird and fauna population which includes kangaroos, nesting lorikeets, blue cranes, tawny frogmouths, ospreys and blue wrens. Other migratory birds include the majestic yellow crested cockatoo.

2009 AGCSA Claude Crockford Environmental Award winner Andrew Smith

Several new native gardens have been established on the course with the help of the club's veteran golfers who pay for the plants and organise working bees. Besides staff spraying and manually removing noxious weeds such as bitou bush, lantana and Groundsel bush, members also form working bees to manually remove noxious weeds and generally tidy the course. On the subject of spraying, Smith uses a 'weedball' on the greens to eliminate spray drift, while a lightweight hand-held CDA sprayer, used to spray around trees and course fittings, has allowed chemical rates to be reduced by 80 per cent.

With the help of the local Clarence Valley Council, the club has applied for and secured two Federal Government 'Clean Sea' grants which have enabled an upgrade of the pump set and expand the irrigation system to all greens, tees and 87 per cent of fairways. All installation was carried out internally and senior staff fully trained to operate the control system (Toro Site Pro) in order to minimise the chance of over watering and prevent effluent water from getting into the ground water.

"The upgrade of the watering system has been a great asset for both the golf course and the council," says Smith. "The club now has an unlimited water supply and the council is happy for us to use as much as we want. To ensure the effluent water quality is of a high

Despite operating within some tight budgets, Yamba Golf and Country Club has implemented a number of environmental management strategies to ensure the course has a minimal impact on the environment.

standard aerators have been installed and microbes added to the pumping pond. An example of this is the use of barley straw in the pond which (assistant superintendent) Mark researched and installed.

"We are also in the process of upgrading the control system to a radio wave, solar powered satellite system. By going solar the club is further reducing its carbon footprint and with no need to trench in power cables there is no chance of digging up acid sulphate soils, disturbing native vegetation or in the future causing harm to someone or something through electrocution."

Over the past 11 years the club has worked with the National Parks Department to stage an annual cane toad round up each February. Between 1000 to 3000 toads are collected every year which not only helps to reduce the course's population but also educates the public on what a cane toad looks like, how to handle them and how to dispose of them. Around 350 people attended this year's event.

Following the Warringah Golf Club pesticide spill in Sydney in 2001, Smith undertook a plan of action to prevent any chemical and washdown residue from reaching the main drain that runs behind the club's maintenance facility and into the estuary. Due to budget restraints much of the work involved fine-tuning procedures and renovating the existing maintenance facility. At a reasonable cost YG&CC has been able to meet the required regulations and was used as a venue for the NSW chemical spill training workshop conducted by the AGCSA in 2005.

With the assistant of federal government grants the club has been able to undertake major works to the course's irrigation system and pumps which has seen radical improvements in water management practices

LOOKING AHEAD

Some of Yamba's future projects include using recycled water to wash the club's golf carts and converting fairways to 100 per cent Queensland Blue couch because of its suitability to the region's climate. With its reduced fertiliser requirements and less need for weed and disease control, Smith says converting to such a variety is a more sustainable option for the club. Also, Smith is eyeing up a new CDA unit to replace the existing sprayer to further improve application efficiencies.

"It has been a very interesting challenge to change and improve the infrastructure and maintenance practices on the course to minimise the impact our operations have on the surrounding environment," says Smith. "This would not be possible without the hard work, collaborative teamwork and support of present and past staff, management and directors.

"I would like to thank the AGCSA for presenting the Claude Crockford Award and Syngenta for sponsoring it. Without sponsors like Syngenta the awards would not be possible and by using products such as Primo Maxx sensibly they help to minimise our impact on the environment. I would also encourage other superintendents to look at their cultural practises and apply for the awards as it has been a very rewarding experience."