

Turfgrass management in Southeast Asia

Micah Woods gives an insight into a different type of turf management



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At Bangkok, the average high temperature never drops below 31°C, and the average low temperature is always more than 20°C. As I write this, it is the end of this year's rainy season, when in an average year about 1200mm of rain will fall at Bangkok from May to October.

At Singapore the average annual rainfall, spread more evenly throughout the year, is closer to 2400mm! Compare that with London and its 600 mm average

annual rainfall, or Glasgow with its 900 mm, and one quickly realizes that Southeast Asia may be a salubrious location for a holiday, but it is quite a different (and challenging) place to manage turfgrass.

When I first visited Southeast Asia in 1999, I saw that there were many golf courses here, but essentially nothing in the way of greenkeeper education, or turfgrass research, or independent advisory services for greenkeepers or golf clubs. In 2006 I started the Asian Turfgrass Center with the goal of providing some of

those services, and I also promised Scott MacCallum that I would write an article about greenkeeping in Southeast Asia. Greenkeeping in Southeast Asia is so different than in Britain, and I thought a description of some of these differences may be of interest to the readership of Greenkeeper International.

What Grasses Are Used on Golf Courses

The primary grasses used here are hybrid bermudagrass, (Cyn-

odon spp.), manilagrass (*Zoysia matrella*), seashore paspalum (*Paspalum vaginatum*), and broadleaf carpetgrass (*Axonopus compressus*). For someone accustomed to the grasses of more temperate regions, these tropical grasses appear quite coarse, but these are the grasses that are adapted to regular mowing in this type of climate. One doesn't find much in the way of open meadow in Southeast Asia. The climate vegetation here would be a tropical rainforest, so to maintain turfgrass on golf courses takes

a different mentality than in other parts of the world. The goal here is actually to keep a vigorously growing sward. Because of the climate, if the growth of the grass is allowed to slow, other plants will invade, and quickly.

The amount of water and fertiliser used on courses in Asia is considerably more than would typically be used in Europe. This is because of the different grass types used, the twelve month growing season, and the need to keep the grass growing to prevent it being overtaken by less

MAIN PHOTO: Blue Canyon in Thailand

desirable species. For nitrogen, in Southeast Asia, the average golf course would use 400 to 600 kg N/ha on greens, and perhaps 200 to 400 kg N/ha on fairways and roughs. And when it comes to water, there is a high evapotranspiration (ET) rate because of the sun intensity close to the equator, and during dry weather the daily ET is about 7 mm per day. Some types of grass can survive with deficit irrigation at less than full replacement of ET, but when that happens growth will slow, so only a very skilled



ABOVE: Rain or shine? Umbrellas are used here to protect the caddies from the heat of the Thailand sun

greenkeeper can manage the turf under those conditions, carefully controlling the growth rate of the desired grass species while carefully monitoring the potential invasion of weeds that could overtake the turf if it is allowed to stop growing.

Average Crew Sizes

When it comes to the number of employees working on the maintenance crew in Southeast Asia, I don't think there is much relation to the numbers at golf courses in other parts of the world. There would tend to be at least 30 or 40 people working at the average 18 hole facility, with it not uncommon to have more than 50 people working at one course. In August I visited a course at Vietnam that had 70 employees on the course maintenance crew. And you may be aware that many golf courses in Asia require the players to take a caddie.

Micah Woods, examines some trial plots, is Managing Director of the Asian Turfgrass Center (www.asianturfgrass.com)



Each course may then have 100 or more caddies, and these caddies are sometimes used to supplement the work of the maintenance crew, perhaps pulling weeds or collecting leaves or other debris from the course during times when they are not otherwise engaged.

Cost for Golf Course Maintenance

The money required to maintain a golf course is quite variable, but it would tend to be more than in temperate climates due to the year-round growing season and consequently more mowing and fertilizer and Labor and irrigation required. Labor costs vary considerably, with minimum daily wage at Thailand being about £4 per day, and with a Head Greenkeeper at Thailand drawing a salary of about £900 per month. The Labor costs on a golf course in Southeast Asia would

tend to be relatively low, but the fertiliser costs and fuel costs may be high, because golf course owners like to see the entire grounds green and trimmed and cleaned.

The Environment or Golf?

There is certainly a different perspective on the environment from Europe to Asia. I was at a pub in Edinburgh a few years ago and I somehow came into conversation with someone about my employment in the golf industry. And the conversation soon turned to something along the lines of "but don't they use a lot of chemicals on golf courses, and don't they use a lot of water, and aren't the golf courses located in rather remote places, and don't people drive large vehicles out to the golf courses, and aren't the parking lots of the golf courses filled with so many large vehicles?" That type of concern is, I think, somewhat prevalent in Europe and also in North America, but in Southeast Asia the mentality is different. In Thailand or Vietnam or the Philippines, where only a small percentage of the population owns an automobile and the convenience that would provide certainly trumps any concern about the environment. At an average golf course in these countries, there would be perhaps 40 employees working on golf course maintenance, and three of them would own an automobile, with the rest going to work on foot or by bicycle or motorcycle.

The climate of Southeast Asia is great for a holiday, but not for a

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A different kind of spectator can be found by the courses of Singapore



COURSE FEATURE

Banyan GC, Thailand

routine job when one must get to work by bicycle or motorcycle, and it is understandable that one would want to have a better quality of life and a car or truck. And when we pass vast expanses of rice fields and see workers spraying insecticides and herbicides with no protective gear, we may cringe a bit, but that is commonplace in Southeast Asia and food production is a lot more important than is golf course maintenance.

When the agricultural industry spreads fertilisers and pesticides in a certain way, those working in golf course maintenance will have a hard time understanding why they should do the work any differently. If it is good enough for our food, why is it not good for the grass, the thinking may go.

People in Asia are concerned about the environment, but in my experience, the people are first concerned about improving their quality of life, and would prefer to see people from developed countries make sacrifices in their lives rather than restricting water use or golf development or energy use in Asia.

Employment Opportunities for Expatriates

I am sometimes contacted by people who are interested in working in Asia, asking me if I know of any job openings or how one might go about gaining employment here. Frankly, there are not a lot of employment opportunities for foreigners in the greenkeeping field in

Southeast Asia. To take Thailand as an example, with its approximately 250 golf courses, I think there are five expatriate head greenkeepers. At Hong Kong there are expatriates in the management roles at most clubs, but then with only six clubs, that doesn't represent many jobs, does it?

To step away from Southeast Asia for a moment, we can look at Japan, where there are over 2000 golf courses, and I can say with some confidence that aside from the few American military base courses in Japan, there are a grand total of zero expatriates working as a Head Greenkeeper in Japan.

To sum it up, there are not a lot of employment opportunities available, and those that are available are usually offered to people who have already been working in Asia.

The way to get work (and the way that I found my first employment in Asia) is through new construction projects, generally, and if you are interested in working in Asia, and have some contacts with golf course architects or construction companies who are doing work in Asia, that may be an opportunity to find a job here. And once you have worked in Asia, and been successful, it is relatively easy to find another job within the region.

A Difficult Place to Grow Grass

Because the climax vegetation in Southeast Asia tends toward jungle, it is a matter of constant effort and constant vigilance on the



A team of workers can contain around 50 people



ABOVE: Not regarded as suitable footwear in Europe!
BELOW: Caddies say, "Hi"



part of the greenkeeper to keep a course in good condition. And it is particularly unfortunate that in a part of the world where the climate is so extreme and una-menable to turfgrass growth, there is also a real lack of educational opportunities available for greenkeepers.

But that is changing, and local greenkeeper associations are developing to share information and provide educational opportunities to their members.

With that, I think, the greenkeepers in Asia have much in common with their counterparts in other parts of the world, and although the climate and grass and economy are all quite different from Asia to Europe to America, the greenkeepers here have the same passion for the work and the same interest in constant improvement in their skills and in the courses they manage.