

Learning & Development

GRASS SEED SELECTION AND SEEDING PREPARATIONS FOR NEW CYPRUS COURSE

By Arne van Amerongen

In the first of two articles, Golf Project Manager, Arne van Amerongen, gives a fascinating and rare insight into the preparations that take place for the golf-build of a new course located in the hot, dry climates of the Mediterranean. The Korineum Golf & Country Club is the first 18-hole golf course in Turkish North Cyprus and the first seeded course in the world where the grass seed Paspalum was used from tee to green.

Which to choose: Cool or warm season grass?

This was a difficult question especially as this golf course – in Turkish North Cyprus – is in what is called the ‘transit zone’ area.

Here the summer months from June to September are very hot and therefore ideal for warm season grass, but the other eight months are good for cool season grass.

So it is risky during the hot summer months to try to sustain and maintain cool season grass. But if you do manage to succeed in this, it means no more over-seeding with ryegrasses – with savings in this area alone amounting to 40,000 euros for just the grass seed.

However, there were also several other factors that influenced this difficult choice at the Korineum Golf & Country Club:

The quality of the topsoil

- pH 7.9
- SAR: Sodium adsorption ratio from 1.6 to 5.3
- Topsoil texture: Sandy clay loam

The quality of the water

- We had the desalination plan from the sea
- 357 ppm, almost drinking water
- pH 7.2

The temperatures

- Summer temperatures ranging from 29degC at night to up to 45degC in the noon sun
- (as a general guide).
- Winter temperatures ranging from 5degC at night to 15degC during the day
- (as a general guide)

After taking all these factors into consideration, the decision was finally made to use cool season grass, with the species and cultivars for the golf course as follows:

Greens

Agrostis stolonifera	Cultivar	Penn G2	100%
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Tees, fairways & semi-roughs

Lolium Perenne	Cultivar	Citation Fore	25%
Lolium Perenne	Cultivar	Vantage	25%

Festuca rubra rubra	Cultivar	Aberdeen	25%
Festuca arudence	Cultivar	Heel	25%

Seeding began in September 2005 and, with the grass germinating and growing, everything appeared to be going well.

Indeed, in the picture below of the 4th hole, the course is four months old and was playable. Seeding had begun on November 29, and the contours and definition of the cool season grass are clearly visible.



The 4th hole established with cool season grass.

Now, I've been in the golf course industry a long time and I thought that I was no longer surprised by anything – but in April 2006 I got a big surprise!

It was then that the investor came to me and, despite having already told him that the golf course was almost in play, he told me that we were going to have to reseed the whole golf course!

This after we had already used 13,000 kilos of grass seed and with the course was almost ready for play.

But the advisors were in charge – and so the entire golf course was to be sprayed.

It doesn't bear thinking about all those wasted hours of maintenance and hard work the greenkeeping team had put in to getting the golf course ready for the opening date.

But the decision had been made, and we duly sprayed the whole golf course with the total weedkiller Round-up, even spraying it twice in some areas because the grass was not completely dieing.

The pictures below show the 7th hole established with the cool season grass; and then three weeks after being sprayed.



The cool season grass on the 7th hole before and after being sprayed.

Meanwhile, Seaspray Seashore Paspalum was selected as the replacement warm season grass, and reseeding preparations were put in hand.

When complete, the Korineum Golf & Country Club would be the first seeded golf course in the world where this grass seed, Paspalum, was

used from tee to green. For me personally it was a great experience to be given the opportunity to work with the two different types of grasses in this way.

Seeding preparations for 'Seaspray' Seashore Paspalum

Seeding preparations for Seashore Paspalum were no easy task, especially as nobody was experienced in seeding with this particular grass seed type, added to the fact it was the first time anywhere that an entire course was being seeded entirely with Seashore Paspalum.

With the investor insisting on getting the golf course ready for play, there was no time to do any research. Basically, it was a case of experimenting by trial and error.

But it has to be accepted that this is normal because, for the investor, 'no play' means 'no income' and for every single day the golf course remains unopen for play he is losing money. Understandably the pressure was enormous, but the agronomy consultants decided to begin seeding on June 1 with the aim of finishing on June 6, 2006.

First, as stated earlier, the whole course was sprayed with Roundup 480g/l (37%W/W) 5.0 litre/he. Then, after three weeks, work started on the rest of the preparation process.

For the greens and tees, we started by Verti-cutting in two different directions to a depth of 1.5mm. Then we collected the dead grass clippings. The amount we collected was enormous, amounting to about 1m3 per green.



Verti-cutting one of the greens.

Enormous amounts of dead grass were collected from the greens.

Preparations for the fairways and semi-roughs consisted of spraying with Roundup and then cutting them down to 9mm and 15mm respectively

LOCATION	Golf Course	Planting rate			
	Total m2	Grams/m2	Total grams	Total kgs	Total bags
Fairways & semi-roughs	166,174	6	997,044	997.04	99.70
Greens	12,618	14	176,652	176.65	17.67
Green surrounds	37,044	6	222,264	222.26	22.23
Tees	10,974	6	65,844	65.84	6.58
Tee surrounds	39,282	6	235,92	235.69	23.57
Roughs	124,425	3	373,275	373.28	37.33
Total:	390,517	5.30	2,070,771	2,070.77	207.08

Table. Seeding quantities of Seaspray Seashore Paspalum and extent of seeded areas.



Cutting down fairways and roughs after spraying.

We also needed sand to cover the grass seed for the tees, fairways and semi-roughs. We got this from the beach and because we had to clean it we had a self-constructed shredder. The total amount of sand we needed for this work was approximately 1,200m3. The shredder could clean about 20 lorries a day, which amounted to a capacity of 300m3/day.



Cleaning beach sand.

The sand was driven to different locations on the golf course to get the job finished much quicker.

UK course managers and greenkeepers will, I'm sure, be interested in the quantities of seed used, and the extent of the areas covered, for all the

different parts of the course. Therefore I have given them in the table above.

Additionally, as part of preparations all the bunkers had to be covered with plastic to prevent grass seed or dirt contaminating the sand. The total area that needed covering was 7,532m2. The biggest bunker that required a cover was this 1,289m2 fairway example shown in the picture below.



Covering bunkers with plastic

In next month's issue:

At last, with all preparations completed, the staff are organised and more people employed, as a team of 40 makes ready for the incredible task of seeding the entire course in only one week. Establishment and initial maintenance of the turf follows, with special attention paid to cutting and watering in the lead-up to the course opening.

About the author

Arne van Amerongen is a golf project manager. He spent three years building the first 18-hole course in Turkish North Cyprus at the Korineum Golf & Country Club. He can now be contacted at arne-golf@spin.ch



Count on it.