



Green Green Green

Energy-saving and eco-friendly initiatives make Samsø Golf Club a pioneer in its field – In Denmark as well as abroad. Meet the Chief Green Keeper, Thomas Pihlkjær, who is eager to try out new solutions, while enjoying the nature around him.

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Thomas Pihlkjær, Chief Green Keeper, is the fireball behind the energy-saving and eco-friendly solutions taking place at Samsø Golf Club. Solar-powered golf carts and lawnmowers, sheep, microclover and chicken manure are some of the initiatives that make Samsø Golf Club a pioneer within its own field – in Denmark as well as abroad. Although the green transition is challenging at times, there is no stopping Thomas Pihlkjær. He is dedicated to the project. “I have a good feeling every day, because what we do is good for the environment too. My passion for development is the reason why I always think one step ahead, and I think it is exciting to be ahead and do something that is worth telling people about”, he says. Samsø Golf Club has come a long way thanks to its collaboration with the Energy Academy. Choosing the right business partners and suppliers, with an equal aim to find eco-friendly solutions, is crucial. “Not everyone in the business of golf in Denmark is immediately enthusiastic about green solutions. This is probably due to a lack of knowledge and a well-based fear of the golf courses growing over, thus making it difficult to play golf. However, the Germans, Dutch and Swedes are very interested in learning from our green transition, and we also have to be better telling people about it”, Thomas says.

Goodbye to toxic pesticides

Thomas Pihlkjær meets us in the workshop, where we talk for a while about what it takes to manage the sustainable transition at the Golf Club. When he took over the position as Chief Green Keeper in 2001 he knew he wanted to avoid toxic pesticides. Thomas used to be an outdoor gardener at Samsø and twice has he experienced getting sick because of toxic pesticides – a sickness he describes as “a hangover times a thousand”. Therefore, his first initiative at the Golf Club was to import eco-friendly products such as organic fertiliser

made from cold-pressed seaweed. Another initiative is microclover, which makes the grass stronger and greener, while at the same time maintaining the nitrogen in the ground, thus making sure it is not washed out into the ground water. A third initiative is the Gute sheep – a sheep race deriving from the Viking age – pasturing the rough. From the beginning, Thomas has tried to avoid using the toxic chemicals that are harmful to the health of the staff, golfers and visitors. “In time, the usage of pesticides on Danish golf courses will be banned and the environmental requirements will be intensified. I feel good saying that I have absolutely no problem with that”, he emphasizes.

Hello to more nature

Thomas enjoys talking to the people stopping by to see the green golf course; for instance, a number of ornithologists that came by to observe a rare bird, red-necked grebe, which has settled down with two nestlings in one of the lakes by the golf course. Other species such as the smooth newt, the preserved green frog and partridges thrive among hares and roe dears. It is not only the wildlife that benefits from the lake water, which is also used to water the greens. It is much better that using ground water because it is warmer and thus not stressing the grass after being warmed by the sun all day. “Today we have a rough in bloom to look at every day. The landscape changes all the time and that is a pleasure to observe”, Thomas says with a big smile. The biodiversity at the golf course has grown due to the organic fertiliser. Insects attacking the golf courses are a challenge, since several hundred caterpillars are found per square metre, and if they are not kept down, the grass will disappear. “Birds like rooks and starlings help us keep down the crane fly caterpillars and we are experimenting with laying out black plastic in the night, so that the caterpillars believe it is night, only to remove it quickly and mow down the caterpillars. We are willing to experiment”, Thomas says.

SAMSOE GOLF CLUB

Samsøe Golf Club is one of the most beautifully located golf courses in Denmark. It is situated between Langemark and Besser, with a view of Kattegat and on the 73 hectares of land you find a 18-hole golf course and a 9-hole “pay and play”, visited annually by 5000 green fee guests and 500 regular members. 45 hectares of land are tended to every day, other areas only every second or third day, while parts of the remaining areas are used as tracks and trails or grow in wild. During the season, the Club employs 3-6 people in addition to the Chief Green Keeper. Go to www.samsøegolfklub.dk to know more.



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A work of passion

The cost of running Samsø Golf Club is 1.5 mio danish kroner annually, and the money that is saved by not buying pesticides is used to pay hourly workers removing dandelions. In other words, the green transition is not driven by profit but by the desire to test new, sustainable initiatives and the wish for a cleaner nature. “It is incredibly exciting this green transition, and just because we are offering a hobby for a small part of the world’s population, we cannot justify destroying nature and animal life at the same time. At our lot alone, we observe 40 different breeding species”, Thomas says. He explains how many people don’t believe that they are not using toxic pesticides, perhaps because the dandelions are actually kept down. The golf club gives each golfer a pickaxe to carry with them when they use the course and if every golfer removed one dandelion for each hole, the courses would be free of dandelions. Though this is not the case by now, the staff has discovered that leaving piles of flower exposed on the grass for some time makes the golfers remove more dandelions

For Thomas Pihlkjær, taking action comes naturally. “You don’t have to do everything at once but rather try different things one at a time. Having sheep pasturing the courses is not expensive – all you need is a fence so we are able to move the sheep around and in this club our permanent members buy the meat from the sheep, when they are slaughtered at the end

of the season”, he says. It’s a win-win situation – for the club, the members and nature. Most times, making a transition is a matter of introducing new procedures and changing routines. Because most machines like the lawnmowers are electrically powered, it is necessary to plan the tour around the courses differently than they used to, making use of the down-hill areas and avoiding running out of power far away from the charger. The electrically powered vehicles are soundless – something both the staff and the golfers have to get used to. Although everyone benefits from the soundless machines to enhance the tranquillity and a calm nature experience, it can be quite a surprise when a vehicle suddenly is close by.

A good start

The collaboration with the Energy Academy started when Michael Kristensen from Energitjenesten in 2010 did a so-called energy check-up, in order to optimise the energy consumption in the buildings, and the geo-thermal heat pump kicked off several green and sustainable initiatives (see next page)

GREEN INITIATIVES AT SAMSØ GOLF CLUB

ORGANIC FERTILISER

On 90 % of the golf club’s area, fertiliser is never spread, but on 1,7 hectares of greens, fertiliser is spread out every month, 116 kilo of fertiliser annually. The fertiliser consists of turkey- or chicken manure. The organic fertiliser has many benefits like maintaining moisture and nourishing microorganism in the soil, which helps decompose organic matter and leads to dense and thick lawns. Cold-pressed seaweed produced in Ireland is used as a vitamin supplement for the grass and it keeps diseases away, while giving the grass a vivid green colour. The darker the grass is, the more heat it is able to absorb and if the temperature rises just one degree, the grass will grow faster and the Golf Club can prolong the season.

MICROCLOVER

Microclover absorbs nitrogen from the air and fixates it in the soil, making sure it is not washed out into the ground water, while at the same time heightening the durability of the grass and preventing weed due to the denser bed of grass. This makes the grass greener and prettier. The Golf Club does not use microclover on the greens but on other areas, where it is planted alongside grass. The annual cost saving from using microclover instead of fertiliser is 4.200 danish kroner per hectare and furthermore, the microclover reduces the CO2 emission by 185 kilo per hectare annually. For every 100 hectares, the reduction of emission correspond to burning 7000 litres of diesel, producing 900 kilos of meat or driving 162.000 kilometres in a Suzuki Swift 1,3. Tranebjerg playing field on Samsø and a number of other playing fields around Denmark are experimenting with microclover, since the municipalities cannot spread toxic pesticides anymore (source: Prodana).

RENEWABLE ENERGY AND REUSE OF WATER

Samsø Golf Club uses a geo-thermal heating system to heat up the golf club house and solar cell panels produce energy to charge the machinery. The golf club has also cut the first sod for a small wind turbine located on the course, which produces electricity for the pumps to provide the large areas

with water. Everything takes place in a closed network and the pumps are mobile with the solar cell panels. Sea water as well as lake water is used. The advantage of using lake water over of sea water is the fact that lake water is warmer than ground water, preventing the grass from having a “cold shock”. Water from the lakes is being pumped into a water reservoir near the club house. In this way, all water is reused and as a positive side-effect, any excess fertiliser is recirculated. The lakes are very clean, which the green frog thriving in the lakes bear witness of. Furthermore, at the golf course is a beautiful fountain that is in use whenever there is excess water.

ELECTRICALLY POWERED MACHINERY

All golf carts and several of the lawnmowers are electrically powered and in addition to reducing the CO2 emission, they are soundless and thus maintaining tranquillity – something both the staff and the golfers appreciate. The greens are mown every day of the week. The latest lawn mower, a Jacobsen Eclipse 322 – which the Minister for the environment, Kirsten Brosbøll gave a test drive in March 2014 – runs solely on solar cell panels. The club still has diesel-powered machinery; however, they have gone through an environmental- and eco-friendly optimisation.

GUTE SHEEP

34 gute sheep are pasturing the large nature resort, one hectare at the time. The club collaborates with a local farmer who supplies the club with sheep in the spring and takes them back in the fall and further on to be slaughtered. They are not ecological because they are also fed by hand, but the system is sustainable. The members of the club can purchase the meat from the sheep – so in fact it is not only about playing golf but also about eating golf!

NEW TECHNOLOGIES SAVE ENERGY

Samsø municipality, the Energy Academy, Grundfos and the local plumbing business, Brdr. Stjerne, are working together in order to replace all old pumps on Samsø. The local authorities have already drawn out a map of all pumps in local government buildings and changed them all with more energy-efficient pumps. On the website of the Danish Energy Service, it is estimated that by changing a traditional central heating pump, the type found in most private homes, with an energy-efficient model, it is possible to reduce the annual cost with an average of 790 danish kroner and the annual CO2 emission by 170 kilos. The bigger and older the pumps are, the greater cost saving and the shorter payback time. The golf club is using the latest technology from Grundfos in order to pump water to the greens. The solar cell panels and the wind turbine produce electricity for the pumps, thus, when the sun is shining and the wind is blowing, the pumps take water from a collection lake and further out to water the greens.