

"GRASS CLIPPINGS 10 "

To re-plant or not to re-plant is a question which should be occupying the minds of many Club Committees. After all about 90 % of the greens in the RSA qualify for re-planting. In "Grass Clippings 8" we examined the circumstances under which a Bowling Club could consider re-planting their greens.

The advantages were well tabled and it only now remains to study the disadvantages. These are - -

- Can the club afford to have a green out of commission for up to 4 months
- The financial implications -
 - If the work is undertaken by a contractor.
 - If the work is done by Club Members.

Having decided to proceed the club must still decide on a number of issues

1 Grass - Which grass to Plant - will be discussed later

2 Planting Height of new Green

- Ditchboards- As a result of top-dressing every year the green is usually higher than the ditchboards. The GKP either has to lift them or install new ones. When planning the replanting of a green it is important that this be taken into account.

It is important that the "new" green should be completely level which means that the ditchboards should also be level - if they are not level - then they should be removed or replaced at a level which is 8.00mm higher than the proposed planting height

- Upper 20mm - In an old green there is always an accumulation of "muck" (mainly undigested organic material) in the upper 20 mm of an old green. This consists mainly of husks of roots which have not been digested.

As the speed of a green depends, to a certain extent on the "hardness" of the upper layer the presence of these husks will "soften" the green and slow it down

The upper 20 mm is also the site of maximum compaction and removal of that 20 mm will enable the GKP to plant the new grass in an environment free of any compaction

Note - When planning the re-plant the removal of the upper 20mm should be part of the equation

After the upper 20 mm has been removed the Planning Committee must determine whether the grass can be planted directly onto what is left or whether new soil should be brought in (20 mm of soil +28 cu. m. = about 6 X six ton loads)

3 Timing

By using a cloth like crogard to cover the whole green the newly planted grass will grow at any time of the year e.g. new green can safely be planted in the winter. As the festive season is normally the period of lowest usage it might be advisable to include the December / January period in the whole operation - bearing in mind that a newly planted green must be "played in" before the onset of winter.

It is up to the Planning Committee to decide when to start the whole operation

The Operation

1 The Top 20 mm

If a nurseryman dealing in "Instant Lawn" is available the easiest alternative is for him to remove the top 20 mm and take it away at no cost to the club.

If nobody wants it then it must be left until all the grass has been killed off and only then removed.

2 Killing off the Existing Grass

The safest method is to use a substance which will sterilise the soil for a period instead of using a Herbicide like Glyphosate (Round Up) which only kills off the grass and weeds and tends to allow some of the "killed" grass to return at a later date.

The grass should be killed off by applying Herbifume in liquid form and watering it in very well or by arranging with a contractor to use Methyl Bromide gas in which case the whole green must be covered with a tent

The soil remains sterile for at least 3 weeks and this period should be used to level the green and generally to prepare the green for planting.

If the top 20 mm has not been taken by a nurseryman then it must be removed now and sifted for later use to level the green or later as top-dressing.

If new soil is to be brought in it should also have been sterilised when the green was done. The GKP must have 10 cu.m. of soil available for top-dressing after the grass has emerged. Any new soil brought in must be of the same texture as the soil in the upper layers of the green.

At this stage, before levelling, it is advisable to loosen the upper 25 - 30 mm of the soil left after the 20 mm had been removed

3 Levels

The eventual playing level of the green must be 3.00 mm **below** ditchboard level

Planting level is 5.00 mm below playing level (i.e. 8.00 mm below ditchboard level)

About 7-10 days after the application of the Herbifume the Committee can proceed with levelling of the green

4 Levelling the Green - Two Methods

- 1 Rails - Using rails on level pegs with a screed is an old and trusted method which has been used often in the past.
- 2 Wires - Using level pegs (every two metres and two metres apart) wires are stretched very tightly across these pegs and the green levelled by pulling a light screed resting on the wires.

Note - Personally I have found the wires more reliable - this opinion is shared by many overseas GKP's

The most important aspect of whichever procedure is used is that the green **must be absolutely level before planting i.e. to the nearest millimetre.**

If a contractor has been employed to undertake the whole operation then an independent surveyor must be brought in to certify that the green is completely level before permission can be granted to proceed with planting.

Planting

Just before planting the GKP must apply 50 kgs of 3-1- 5 (or 5-1-5) to the green.

If the grass was obtained from a nursery it will probably have been delivered in the form of "super sods" (Each sod plants 10 sq .m.)

The sods must be broken up with a machete or equivalent instrument and the roots and stems teased apart into small pieces which are then planted. The soil is lifted to a depth of 10 mm

and each sprig placed under the soil with nothing showing above the ground.

If a neighbour supplied the grass as "scarifyings" then these must be spread evenly over the green. If the green had been levelled with rails then the procedure is to scarify the recipient green in one direction leaving grooves on the green

The "scarifyings" from the donor green are then spread (or sown) over the green - the green is irrigated and then rolled.

If wires are used they must remain in situ while planting and the screed continuously pulled over the wires. If scarifyings were used then a little soil must be spread over the scarifyings and the screed used to cover the "scarifyings" The grass will emerge within a few days and after 2-3 weeks runners (or stolons) will start spreading across the green.

The GKP must, during this period, watch out for any spots where the grass has not come through and plant new grass immediately.

The initial growth will be vertical until the grass plant is self-sufficient.

Once stolons or runners start spreading from the original bud the GKP may consider mowing at 10 mm. This will stimulate tillering which will almost double the number of vertical leaves. Soon the runners will meet up and cover the green with a thin mat.

The green should be mowed regularly with the mowing height being reduced gradually from the original 8-10 mm to 5.00 mm

At this stage the whole green should be top-dressed lightly for the first time to fill in the odd hollows

Once the grass has emerged through the top-dressing and mown a few times at 5.00mm the GKP should open the green for the first time so that the green can be "walked in " - the members might not be happy but it is an essential part of the preparation of the green. Having played for a few times in both directions the green is lightly top-dressed again and mown again.

Play is resumed again and the whole process repeated until the GKP is satisfied that the green is now ready for regular play.

SELECTION OF GRASS

Apart from the decision to re-plant their green selecting the correct grass is the most important decision to be taken by the Planning Committee. Yet, it is surprising how often clubs decide on a certain variety of grass without any form of consultation

Of the 7500 types of grass found on this planet less than 20 are suitable for planting on a bowling green.

It is also rather terrifying to find how many nurserymen are not aware of the difference between the requirements of bowling greens as opposed to golf courses and have recommended grasses for bowling greens which can only be used on golf greens.

Requirements for a Bowling green

- Supine growth habit - lateral spread to form a "thin" mat.(the thicker the mat the slower the green)
- Many small leaves will produce more "food" through photosynthesis than larger but fewer leaves
- Tolerance to low Mowing Height
- Thin Stolons with short inter-nodal length more desirable than long thick stolons.
- Rapid Growth to cope with "wear and Tear" - especially where there is heavy traffic.
- Disease resistant
- Indigenous if possible.
- Deep root system

Remember that, as yet, we have not found a perfect grass which meets all the requirements

Local Requirements

In addition to the above requirements there are a number of conditions at the club which have to be considered.

- The Texture of the Soil (How much Clay)
- The expected traffic and wear?
- The Water Supply - Availability and Quality (Salinity). Are there frequent interruptions in the water supply and has the club got to rely on borehole water
- Climatic Conditions
- Is an indigenous variety available?
- If not - Is there a non-indigenous grass with a good track record in that area -

or - does the club have the funds to create the environment a non-indigenous grass would require

- Is the GKP capable of handling a non-indigenous or exotic variety

- Availability of new grass

The Club might be lucky and have a benevolent GKP in a neighbouring club which has the variety of grass the club intends planting. He might offer to scarify or hollow tine his green to supply the grass for the new green Alternatively the club might decide to obtain the new grass from an established nursery. Here the cost of the new grass might be a factor and the club might decide to order a small quantity of the new grass a year in advance and establish a nursery which would later provide sufficient grass to plant a whole green

Research

In the RSA the genera *Cynodon* is the prominent grass with *Cynodon Dactylon* (often referred to as Bermuda grass) being the commonest. We in the RSA are also very fortunate to have the *Cynodon Transvalensis* (Florida, Bayview, Skaapplaas, Harrismith and Elliot) varieties available. The *C. Transvalensis* are characterised by their finer, smaller leaves, and short inter-nodal length. It has a supine growth habit with 80 % lateral growth and only 20 % vertical leaves (This specie is not found anywhere else in the world).

While the rest of the world was looking for and developing new specie we sat back and basked in our good fortune and for a long time did not try to look for, or develop, new specie, For a few years now one of the major nurseries has been actively encouraging clubs to send in samples of grass found to be performing well in their area and propagating them at the nurseries.

Of these the most notable "discoveries" were- Silverton Blue - origin Silverton Club - Durban Gulf Green - Found on Scottburgh Golf Course

Available Varieties

C. Transvalensis - well adapted to use on a Bowling green. Quick growers and adapt well to any environment. Fairly resistant to Disease

Strong unbending leaves, pronounced NAP
Bayview and Skaaplaas probably the most
versatile

Harrismith rather underrated and merits
consideration

C.Dactylon

Royal Cape / Outeniqua - Finest variety of this
genus. Can be fined up still further but still
forms a mat which is thicker than that
produced by the Transvalensis - Very disease
resistant.

Safe, easy-to-handle grass - Not easy to
produce a fast surface

Silverton Blue - Small fleshy leaves lying very
close to the ground - possible to mow at 2.00
mm without affecting the leaf area. Very slow
grower with a long dormant period in the colder
climates

Hybrids

Tifdwarf - C.Dactylon X Florida - Dwarf
Variety with soft less rigid leaves - produces a
fast green but very prone to fungal
infestations (a new hybrid - Tifeagle has been
imported and produces a very good golfing
surface - has not been tried in a bowling green
yet.

Note - Gulf Green has a very marked vertical
growth habit. Very fast grower but most of it
is vertical with restricted lateral spread.

Needs to be mown frequently and is not
recommended for bowling greens

Paspalum Vaginatatum - Origin Western Cape -
called "vleigras" because it grew in the "brak"
saline areas. Now referred to as "Country Club
Grass" because of its success at Durban
Country Club on the golf course.

It was first planted on the bowling greens at
Koeberg power station near Cape Town but,
unfortunately they irrigated with fresh water
instead of sea water with the result that other
Cynodons invaded the green and eventually took
over.

It's ability to tolerate very saline conditions (it
even flourishes in sea water) makes it the grass
of choice where the club has no alternative but
to use saline borehole water

It has a supine growth habit. Initially it has
very thick stolons which have to be verticut
frequently after planting. Once the thick
stolons have disappeared it will form a thin mat
which has spread across the whole green.

Because the leaves are soft and bend easily it
will produce a faster surface than the
C.Transvalensis. It has a "Hockey-stick turn.
Unlike the Cynodons it has no NAP.

The grass has a dormant period of about two
months in the winter. Growth resumes in
August.

Players who have played on it are very
enthusiastic about the surface and are actually
thinking of creating a Paspalum - friendly
environment by feeding the green with ordinary
coarse salt.

There is a new variety available which is much
finer and still more adaptable

Remember Paspalum cannot compete with the
other Cynodons if there is no salinity. The
other grasses will take over.

CONCLUSION

I have made re-planting a green sound very
involved but once you decide to re-plant there
are a number of extraneous things which must
also be done to restore your green to its
original glory.

One does not re-plant a green every day but at
the same time most of our greens in the RSA
are "tired" and in need of rejuvenation
Probably all of them have a certain amount of
muck and compaction in the upper 20 mm and
the green will be better off without it.
One can also be fairly certain that any old
green will be a Heinz green.

The obvious benefits which will arise from
putting down a new grass have been mentioned
Unless the GKP has been particularly diligent
about it one can also assume that the levels on
the old green are not as consistent as they
should be.

Therefore all in all the advantages of re-
planting a green far outweigh the possible
annoyance the members might have to endure
while having a green out of commission for four
months.

These two offerings of Grass Clippings have
given clubs some insight into what is involved
when re-planting a green and how to set about
it. If the club intends using a private
contractor to undertake the work then I would
suggest they spend some time on the contract
before signing. I have seen too many clubs
"caught" by unscrupulous contractors.
GO FOR IT - GOOD LUCK.