

What, Why, measuring Clip-Volume

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What is Clip Volume

Clip volume is used by greenkeepers to understand the grass plant growth rate (speed of grass growth) on golf putting green surface

The basic knowledge gained from measuring clip volume

- ★ Understanding of - playing quality
- ★ Understanding of - nitrogen requirements
- ★ Understanding of - mowing regime requirement

CLIP VOLUME

TAKING MEASUREMENT IN THE COURSE



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What is Clip Volume

As greenkeepers we are measuring stimp speed, ground moisture, surface firmness where we can base our maintenance decisions from

- ★ Stimp meter measures surface resistance (stimp speed),
- ★ VCM meter measures ground water content (wetness),
- ★ Clegg hammer measures surface density (firmness),
- ★ But plant growth is not measured,

That is where clip volume has changed everything.

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Why is Clip-Volume important

- ★ Golfers often comment and base recommendations on the golf course, whether the putting greens are fast or slow, play well or not.
 - ★ A high percentage of the maintenance budget is spent on putting green maintenance
- ★ Combined mowing, rolling, aeration, sanding, brushing, changing holes, and fertilising maintenance techniques, the total hours spent maintaining a putting green can be over 1300 hours, which is 15% of a year
- ★ **When this much time, effort and finance is used by a golf course to maintain a surface, it should be seen as a priority to understand the surface in as much detail as possible, to maximise the efficiency of the resources used to maintain it.**

**JUST FINISHED MOWING
THE 14TH GREEN**



**TIME TO MEASURE
CLIP VOLUME**

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My Personal experience with Clip Volume

Measuring clip volume helped us reduce are maintenance on our putting greens, while increasing their quality at the same time.

This has help us a lot, in giving more time to other mowing and maintenance tasks around the golf course, so increasing the overall quality of Leeuwenbergh.

My Personal experience with Clip Volume

I feel my greens perform really well with clip volume value between
8ml/m² - 15ml/m².

less than 8ml/m²

I risk to slow grass growth recovery from the players and machine damage.

Above 15ml/m²

I believe it to be unnecessary (to fast) grass growth,
which requires additional maintenance, to keep the putting greens performing at a
acceptable standard

(The grass species on my greens are Festuca, agrostis & poa.
favour to manage the greens to a preference festuca)

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CLIP VOLUME (ML/M2) EXCEL FORMULA

$$=(((C6*3)*1000)/(D3)/(E6/24))$$

**C6 = QUANTITY OF GRASS
CLIPPING COLLECTED (LITERS)
(FROM MIDDLE GRASS BUCKET)**

D3 = GREEN SIZE (METERS 2)

**E6 = THE TIME SINCE THE AREA
WAS LAST MOWN (HOUR)**

**(THIS FORMULA IS FOR A TRIPLEX MOWER.
IF USING A HAND MOWER, DO NOT MULTIPLY BY 3)**