Field trial Thatch removal with WormPower

Location:	**Golf Course Kralingen (Near Rotterdam, The Netherlands) issued on green no 5a**
Coordination:	**Marvin van Haaften, AHA de Man- Head Greenkeeper** **Peter Mook, Vos Capelle - Crop Adviser** **Hans de Kort, Aqua Aid - Supplier WormPower**
Trial period:	**April – September 2016**

BASE INFORMATION:

Golf course is situated below sea level; Base of the soil is loamy / Clay (old sea bottom) topped up with dressing for many years. Because of the local circumstances drainage has always been an issue; result is too wet circumstances throughout the year. Greens suffer POA infection; thatch build-up over time. Aim: reduce thatch by 40% within one growing season using WormPower in the high dose as suggested by manufacturer. Trial was conducted on ½ green to see effect; Soil was tested before trial start;

Green 5 A Golf Course Kralingen, April 10 2016 10.00 AM (before trial)

SITUATION PRIOR TO 1ST APPLICATION: APRIL 14TH 2016

Temperature	14 ° C, mild sunny weather
Soil temperature	11 ° C
Moisture reading in profile	49.5 % 7.5 CM
Thatch layer	8 cm
Poa Annua content	>80%
Application rate & surface	1.5 L WormPower in 100 L water on 250 m2

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SITUATION PRIOR TO 2ND APPLICATION:

Control

After 1 application WormPower

2ND APPLICATION: MAY 9TH 2016

- Anaerobe condition due to build-up / construction
- Poa has become dominant
- WP treated area lies in shady part of green
- Needle tining planned in week 20

Temperature	22 ° C, mild sunny weather
Soil temperature	15,5 ° C
Moisture reading in profile	38 % 7,5 cm
Thatch layer	7 cm
Poa Annua content	>80%
Application rate & surface	1,5 L WormPower in 100 L water on 250 m2

Comments: Results show after weeks of low temperatures, high rain and hail; soil temps of 6 – 7 C; last week before reapplication increased temperatures; first results show.

Control 8 cm Thatch

WormPower 7 cm Thatch

SITUATION PRIOR TO 3RD APPLICATION:

Control on the right; WP on the left

3RD APPLICATION: JUNE 13TH 2016

- Rain during data collection. It rained 6 MM.
- Higher temperatures; good growing conditions
- High moisture % remains
- No visual difference in turf quality treated vs. control
- First signs of thatch reduction visual

Temperature	16.5 ° C, Rain
Soil temperature	18 ° C
Moisture reading in profile	40-42 % 7.5 cm
Thatch layer	5-8 cm
Poa Annua content	>80%
Application rate & surface	1.5 liter WormPower/100 liter water, 250 m2

WormPower 5 cm Thatch
Reduction of 3 cm

Control 8 cm Thatch
No reduction

SITUATION PRIOR TO 4TH APPLICATION:

Control on the left; WormPower on the Right

4TH APPLICATION JULY 11TH

- Loads of rain in months June & July
- 3rd application was not sprayed
- Result to date is after 2 applications April & June.
- Thatch reduction remained the same over the month of June.

Temperature	17 °C, dry overcast
Soil temperature	18.6 ° C
Moisture reading in profile	35-37 % 7.5 cm
Thatch layer	5-8 cm
Poa Annua content	>80%
Application rate & surface	June App was applied in July now

SITUATION AFTER 4TH APPLICATION:

After the 4th application we sprayed the product 2 more times, but with no significant change in thatch reduction. This most probably had to do with the profile / high moisutre % (and anaerobic conditions) on the green.

CONCLUSION:

The aim of the trail was to test the product in non-ideal situations to see if the results also show in less than ideal conditions. This green suffers with moisture readings that are too high through the whole growing season; bad or no draining profile. However, we saw the desired thatch reduction of 35 – 40% in these conditions even after two applications. Because of the anaerobic conditions / high moisture content we feel that in better environments this would have even worked better. The extreme weather conditions we were faced with did not help the trial; but as this is a fact of mother nature; we all have to live with this out on the golf course.

The product has proven this is a new tool in the market to reduce thatch without surface disruption and loss of play.

21 september 2016

Peter Mook
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Expert natural turf; Dutch Fieldmanager of the Year 2011