

NATURAL DETHATCH – PRO: FIELD TRIAL YEAR ONE - 2022

DATE OF TRIAL: April – Aug 2022

PURPOSE OF TRIAL: To quantify effectiveness of Natural Dethatch Pro as biological thatch reduction agent

LOCATION & HISTORY: Multi-Sport Field 2 (treated) - multi-Sport Field 3 (control). Both fields were deemed to contain approximately the same thatch density, which is why these specific sports fields were chosen as test sites for trial. The site was also chosen due to its inclination towards thatch accumulation!

SOIL pH LEVELS: Field 2 (6.3) Field 3 (6.4)

SOIL CONDITIONS: Loamy (40 % sand, 40 % silt, 17.5 % clay, 2.5 % organic matter)

GRASS TYPE: 75 % Bluegrass / 25 % Rye Blend

WATERING PARAMETERS: No Sprinkler system

SAMPLING TECHNIQUE: Core samples (random)

BASELINE THATCH LAYER FIELD 2: Approximately 1.77 inches / 45 mm throughout entire field

BASELINE THATCH LAYER FIELD 3: Approximately 1.77 inches / 45 mm throughout entire field

FERTILIZATION HISTORY: Averaging 4.0 lbs of synthetic N per 1000 sq ft over last 5 years. Utilized Lebanon 25-0-4 with LSN. In 2022 the actual amount nitrogen applied was 3.6 lbs per 1000 sq ft.

FORMULATORY PARTICULARS: Natural Dethatch - Pro

APPLICATION RATE: 2 quarts per acre (utilized 2.0 gal of water per 1000 sq ft at time of application)

APPLICATION FREQUENCY: 4 applications @ 2 quarts per acre on April 1, May 1, June 1, July 1, 2022

FIELD DATA YEAR 1 (2022): READINGS ON THATCH DEPTH

	April 1	May 15	June 15	July 15	Aug 15	% Change
Field 2 <i>Treated</i>	45 mm 1.77 inches	43 mm 1.69 inches	38 mm 1.50 inches	32 mm 1.26 inches	24 mm 0.94 inches	- 46.67 %
Field 3 <i>Control</i>	45 mm 1.77 inches	45 mm 1.77 inches	46 mm 1.81 inches	46 mm 1.81 inches	49 mm 1.93 inches	+ 8.89 %

RESULTS & DISCUSSION

Data indicates that (4) applications of Natural Dethatch – Pro @ 2 quarts per acre reduced thatch level on Field 2 an average of 46.67 %. The thatch level on control plot (Field 3) increased 8.89 % over the same time frame.

Assertion is that supplemental applications of the right consortia of beneficial soil organisms increases the production of select hydrolytic enzymes which leads to enhanced thatch degradation. The inclusion of targeted microbial synergists enhances the performance of the microbial package by providing nutritional support during the Lag Phase, a period of high metabolic activity just prior to logarithmic growth phase. Furthermore, we assert that supplemental applications of high nitrogen synthetic fertilizers increase thatch accumulations which was borne out by an 8.89 % increase in thatch height on control plot.

NATURAL DETHATCH – PRO: FIELD TRIAL YEAR TWO - 2023

PURPOSE OF TRIAL: To quantify effectiveness of Natural Dethatch - Pro as biological thatch reduction.

This was a continuation of the trial which commenced in 2022.

DATE OF TRIAL: April - Aug 2023

LOCATION & HISTORY: Multi-Sport Field 2 (treated) - multi-Sport Field 3 (control).

SOIL pH LEVELS: Field 2 (6.5) Field 3 (6.2)

SOIL CONDITIONS: Loamy (40 % sand, 40 % silt, 17.5 % clay, 2.5 % organic matter)

GRASS TYPE: 75 % Bluegrass / 25 % Rye Blend

WATERING PARAMETERS: No Sprinkler system

SAMPLING TECHNIQUE: Core samples (random)

BASELINE THATCH LAYER FIELD 2: Approximately 0.94 inches / 24 mm throughout entire field

BASELINE THATCH LAYER FIELD 3: Approximately 1.93 inches / 49 mm throughout entire field



FERTILIZATION HISTORY: Averaging 4.00 lbs of synthetic N per 1000 sq ft over last 5 years. Utilized Lebanon 25-0-4 with LSN. The actual amount in 2023 was 3.5 lbs per 1000 sq ft.

FORMULATORY PARTICULARS: Natural Dethatch - Pro

APPLICATION RATE: 2 quarts per acre (utilized 2.0 gal of water per 1000 sq ft at time of application)

APPLICATION FREQUENCY: 4 applications @ 2 quarts per acre on April 2, May 1, June 1, July 1, 2023

FIELD DATA YEAR 2 (2023): READINGS ON THATCH DEPTH

	May 1	June 2	July 1	Aug 1	Sept 1	% Change 2023	% Change 2022-2023
Field 2 Treated	24 mm 0.94 inches	22 mm 0.87 inches	19 mm 0.75 inches	16 mm 0.63 inches	15 mm 0.59 inches	- 37.50 %	- 66.66 %
Field 3 Control	49 mm 1.93 inches	50 mm 1.97 inches	50 mm 1.97 inches	53 mm 2.08 inches	53 mm 2.08 inches	+ 8.16 %	+ 17.77 %

RESULTS & DISCUSSION

Data indicates that Natural Dethatch – Pro reduced thatch levels on Field 2 by an average of 37.50 % in the second year of the trial. The reduction over a 2-year period (2022 – 2023) was 66.66 %. In comparison the thatch level on the untreated check increased 17.77 % over a 2-year period. The data from year two reaffirms our assertion that supplemental applications of the right consortia of beneficial soil organisms increases the production of select hydrolytic enzymes which leads to enhanced thatch degradation.