



Research White Paper

Rhizome Formation in Tall Fescue

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Introduction

A trial was conducted to compare rhizome formation in a number of commercially available tall fescue varieties that claim to produce rhizomes. It is known that tall fescue plants sometimes make rhizomes or produce tillers that are often mistaken for rhizomes.

The following varieties were included in the study:

1. Labarinth RTF
2. F1B RTF
3. Blade runner
4. Grande
5. Grande II
6. Titan
7. Titan Ltd.
8. Rendition
9. Barrington

Method

Individual plants of different varieties were space-planted 2 feet apart and replicated three times (25 plants per replication). Plants were mown at 2.5 inches and were monitored for two years. The plants were planted in fall 2005. The following data was collected:

- Number of rhizomes per plant
- Percentage of plants with rhizomes
- Percentage of plants with more than one rhizome
- Average rhizome length

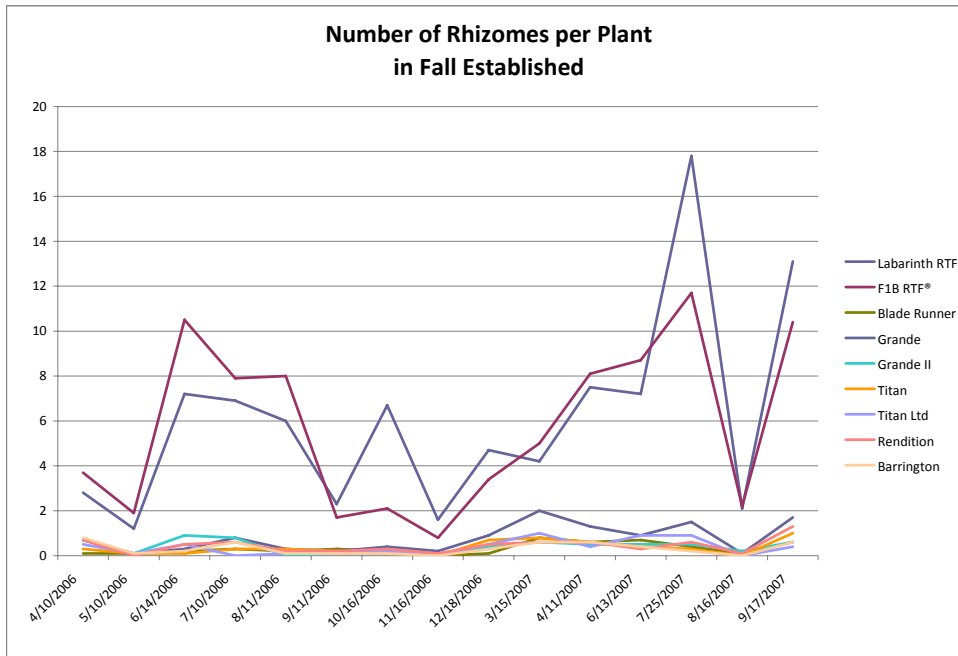
Results

It was very clear that only two varieties in this trial produced a significant amount of rhizomes; Labarinth RTF and F1B RTF.

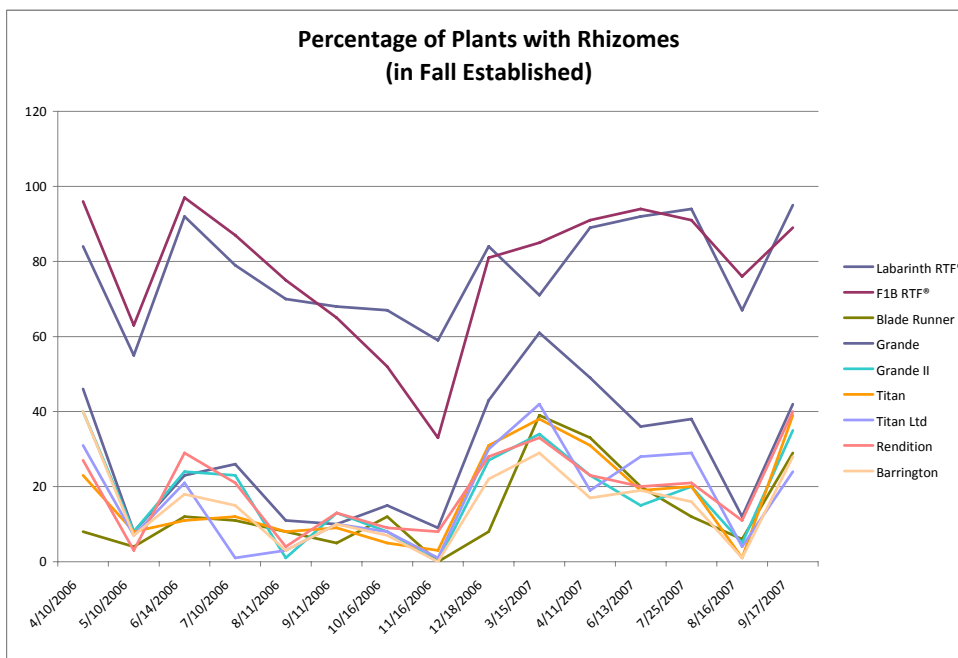


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Graph 1. Only two varieties exhibited a significant number of rhizomes throughout the year.



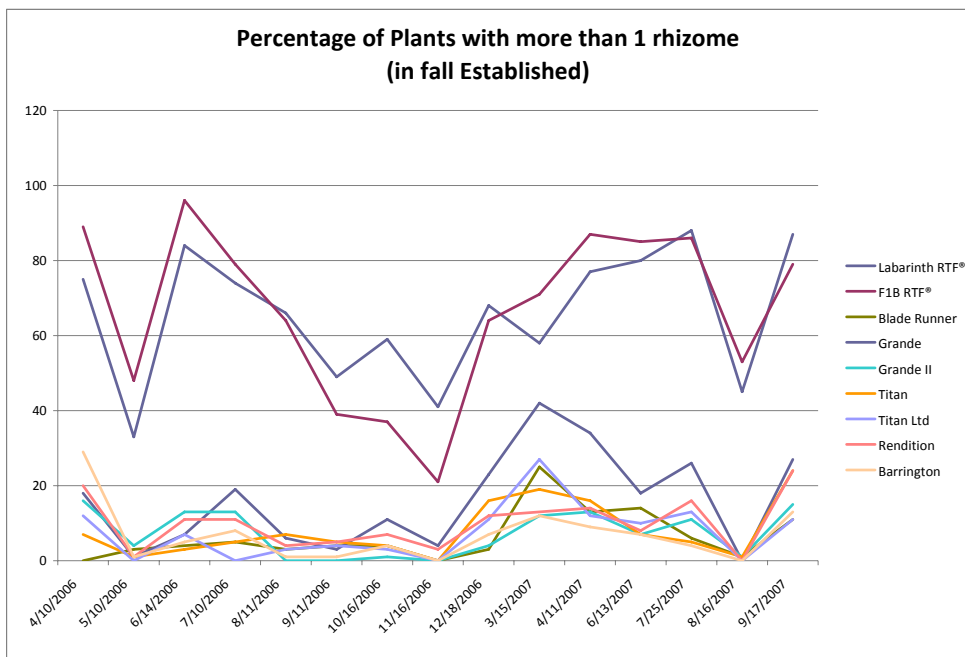
Graph 2. Labarinth RTF and F1B RTF plants consistently exhibited greater rhizome production than the other varieties.





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Graph 3. Labarinth RTF and F1B RTF produce more rhizomes per plant than the other varieties.

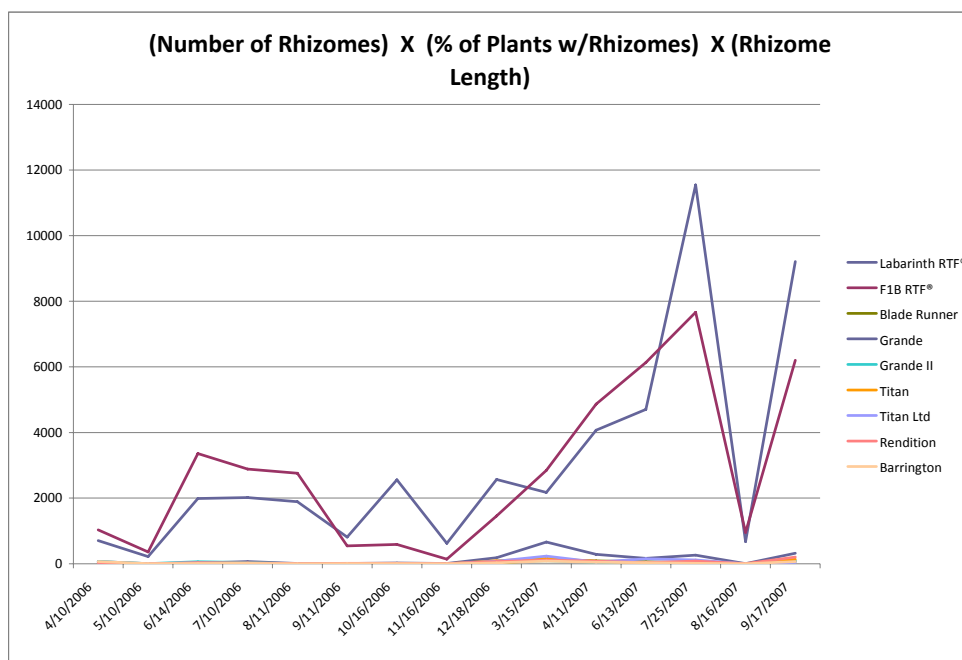


To illustrate the cumulative effect the 'number of rhizomes'; 'percentage of plants with rhizomes'; and 'rhizome length' we have modeled three data points in Graph 4. First multiply the number of rhizomes per plant by the percentage of plants with rhizomes. This result gives the total amount of rhizomes produced in this trial per variety. Then multiply this number by the average rhizome length per plant. This final integer of this modeling indicates the vast effectiveness of Labarinth and F1B RTF varieties in rhizome formation compared to other varieties.



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Graph 4. The total amount of rhizomes produced by the RTF varieties in this trial was significantly greater than the other varieties.



Summary

- RTF varieties from Barenbrug produce 20 times more rhizomes per variety than other so called "rhizomatous tall fescue" varieties.
- These so called rhizomatous varieties produce the same amount of rhizomes as a regular Barenbrug tall fescue variety, Barrington.
- The average length of rhizomes in Barenbrug RTF varieties increases as the plant matures, thus increasing the spread of the plant.