Slurry Manure on Grass: Making it Work

I. Short-term responses

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INTRODUCTION

Slurry manure nourishes grass like fertilizer! Indeed, with good technique manure can be used to replace fertilizer.

The key factors are:
- knowing the nutrient content of the manure
- applying the manure uniformly and effectively.

Keys to using manure as fertilizer

- Reliable and predictable response
- Uniform application
- Adequate window for application
- Low risk of contamination
- Low nutrient loss/ odour emission

Why manure on grass?

- High nutrient uptake
- Season-long application
- Year-round vegetation cover (less risk of nutrient loss)
- Soil organic matter build-up
- Low risk of contamination

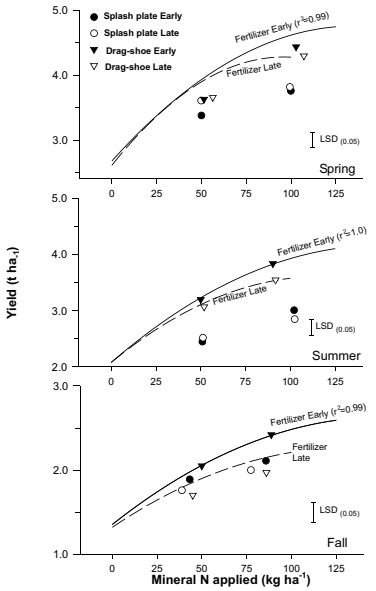

Fig. 1. Yield of tall fescue as affected by NH_4NO_3 fertilizer and dairy slurry spread with splash plate and drag shoe applicators in spring, summer, and autumn (1994-96)

Explanation of Fig 1.

- Top graph represents spring conditions, middle graph is summer and lower graph is fall conditions
- Curves represent the response of grass growth to increasing rates of fertilizer. The dotted curves are responses to delayed fertilizer application
- Round dots represent grass response to splash-plate applied manure
- Triangles are grass response to drag-shoe (sleighfoot) applied manure.
- Hollow symbols are delayed manure applications

CONCLUSIONS FROM FIGURE 1

- Yield responses to sleighfoot applied manure are very nearly equal to fertilizer at equivalent rates of mineral N.
- Responses to sleighfoot applied manure are much more consistent than to splash-plate applied manure.
- Sleighfoot applied manure can be used to replace fertilizer without loss in yield.
- Long-tem effects of using manure at agronomic rates need to be investigated (See other poster by Bittman et al.).

Surface-banded manure

- Consistent results in all seasons and weather
- Uniform application
- Less crop contamination
- Less ammonia and odour emission
- Longer time to apply