

# TRIAL DATA SHEET

## NUE-TRITION - Manganese

**Objective:** To evaluate the effect of manganese as a fertiliser coating on crop responses

**Crop:** Spring Barley

**Location:** Athy, Co Kildare, Ireland

**Date:** 2015

**Researcher:** National University of Ireland

**Trial code:** NUIG/AN-IE-GF-2015

### Background:

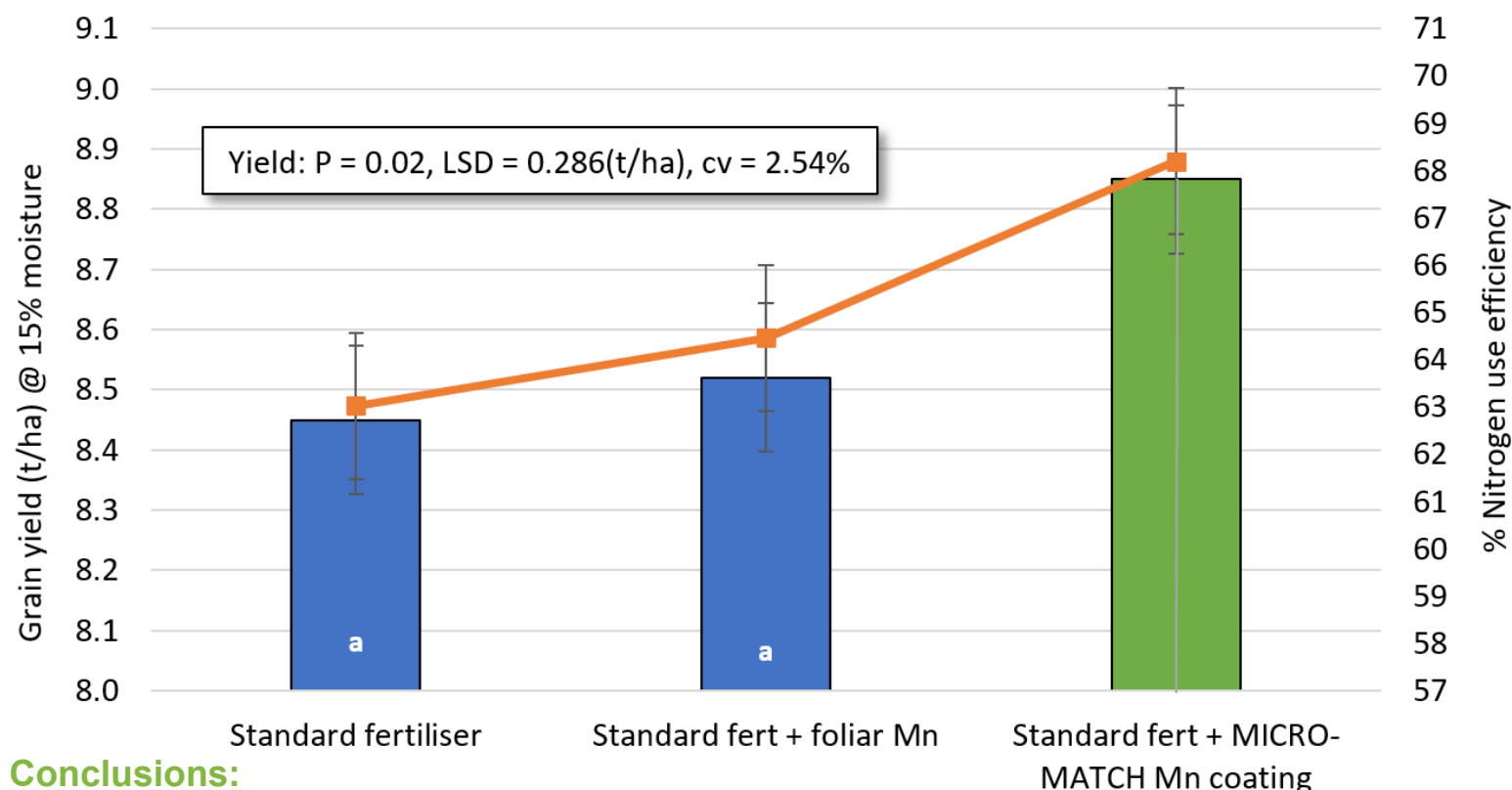
**Hypothesis:** Can MICRO-MATCH manganese fertiliser coatings give similar or improved performance as 'standard farmer practice' on spring barley in soils showing Mn deficiency, when measuring grain yield, quality and nitrogen use efficiency?

**Site:** Sandy silt loam, pH 7.8, soil Mn 25mg/l (guide 100mg/l), SOM 4.9%  
Soil Mn level is low and availability is further compromised by the high soil pH

### Treatments:

1. Standard fertiliser programme (seedbed NPK f/b NS top-dressing), zero Mn
2. Standard fertiliser programme plus foliar manganese @ GS12/13 and GS31
3. Standard fertiliser programme plus MICRO-MATCH manganese coating on seedbed fertiliser

### Results: Manganese trial on spring barley to evaluate yield response and nitrogen use efficiency



### Conclusions:

- MICRO-MATCH manganese gave a significant yield increase of 4.7%
- MICRO-MATCH manganese increased nitrogen uptake by 5.4%
- MICRO-MATCH manganese increased NUE by 8.2%
- MICRO-MATCH manganese gave a return on investment of 6:1

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