Soil Fertility Management

National Tillage Soil Fertility Status

Results of Soil Samples from Tillage Farms in 2014

- % Soil Samples in Each Fertility Category
- % Tillage Soils with Good Overall Fertility:
  - Soil pH > 6.5; Soil P and K Index ≥ 3

5 Steps to soil Fertility Management

1) Soil Test
2) Soil pH & Lime
3) P & K Index 3
4) Slurry
5) NPKS Balance

Take Home Messages
- Crop yields limited on 90% of tillage soils by pH, P or K
- Sample fields for soil fertility every 3-5 years
- Aim for target soil pH 6.5 by applying lime
- Build soil P & K to Index 3 over time
- Utilise organic manures where available as cost effective sources of P and K
Phosphorus Fertiliser Studies

Importance of Adequate P Availability for Crop Establishment and Soil P Fertility for yield

Efficiency of Different P Fertiliser Application Methods on Low P Soils

- **S. Barley Seeding Rates with & without P Fertiliser**
  - No P Fertiliser
  - 20 kg/ha P fertiliser

- **W. Wheat grown at 3 Different Soil Test P Levels**
  - Site: Oak Park – Clay Loam

**Relative Yield Response to P Fertiliser Application Method**
- Mean results across 8 sites between 2010 & 2014

- **Grain Yield (t/ha)**
  - No P (control) 6.4 t/ha
  - Surface Broadcast 7.3 t/ha
  - Incorporated 7.3 t/ha
  - Combined drilled 7.6 t/ha