

SGN and Particle Density

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Outline

- Objective
- Study Summary
- Results
- Implications – sparged and minors

Why is this important?

- Effectiveness of sparged chemicals may be reduced as spread rates are lowered
- Is particle distribution of minor elements sufficient?

Objective

- To determine the number of fertilizer particles per square foot for a given product and spread rate

Study

- 100 granules of each fertilizer were weighed
- Granules / sq. foot extrapolated from various spread rates

Fertilizers

Regular

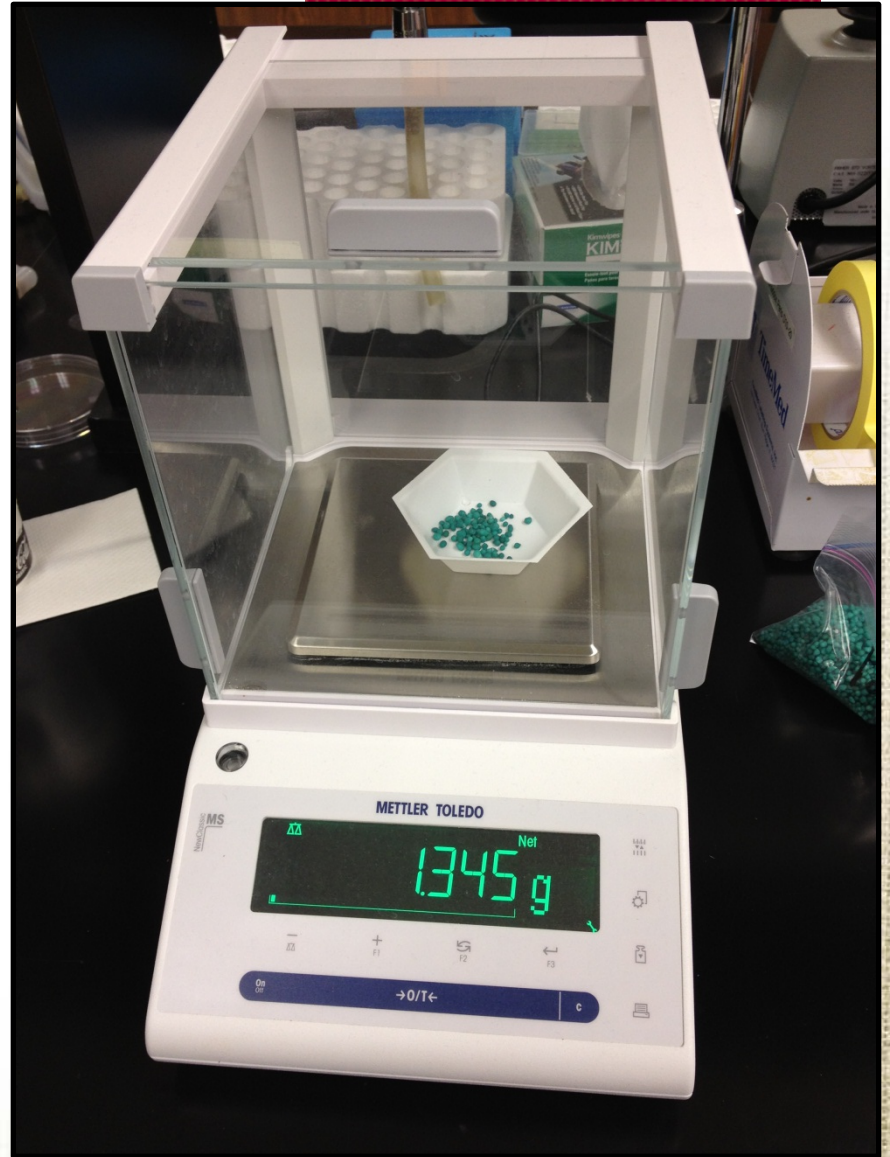
- Polyon 43
- Urea
- Am. Sulfate
- XCU
- UF
- MU
- DAP
- MAP
- Triple Super P
- SOP
- MOP
- Vigiron
- Nutra Plus
- Frit
- Man Chelate
- Man Sulfate
- Man Sucrate
- Man OxySulfate
- Iron Sulfate
- Iron Sucrate
- Iron Chelate
- Iron Oxide
- Polyon Iron
- 5 N 1
- Dolomite
- Kmag
- Polyon Kmag
- Sludge

Mini

- Polyon 43
- Am. Sulfate
- Urea
- SOP
- XCU

Micro

- Polyon SOP
- MU
- UF
- MAP
- SOP
- Milorganite
- St. KMag

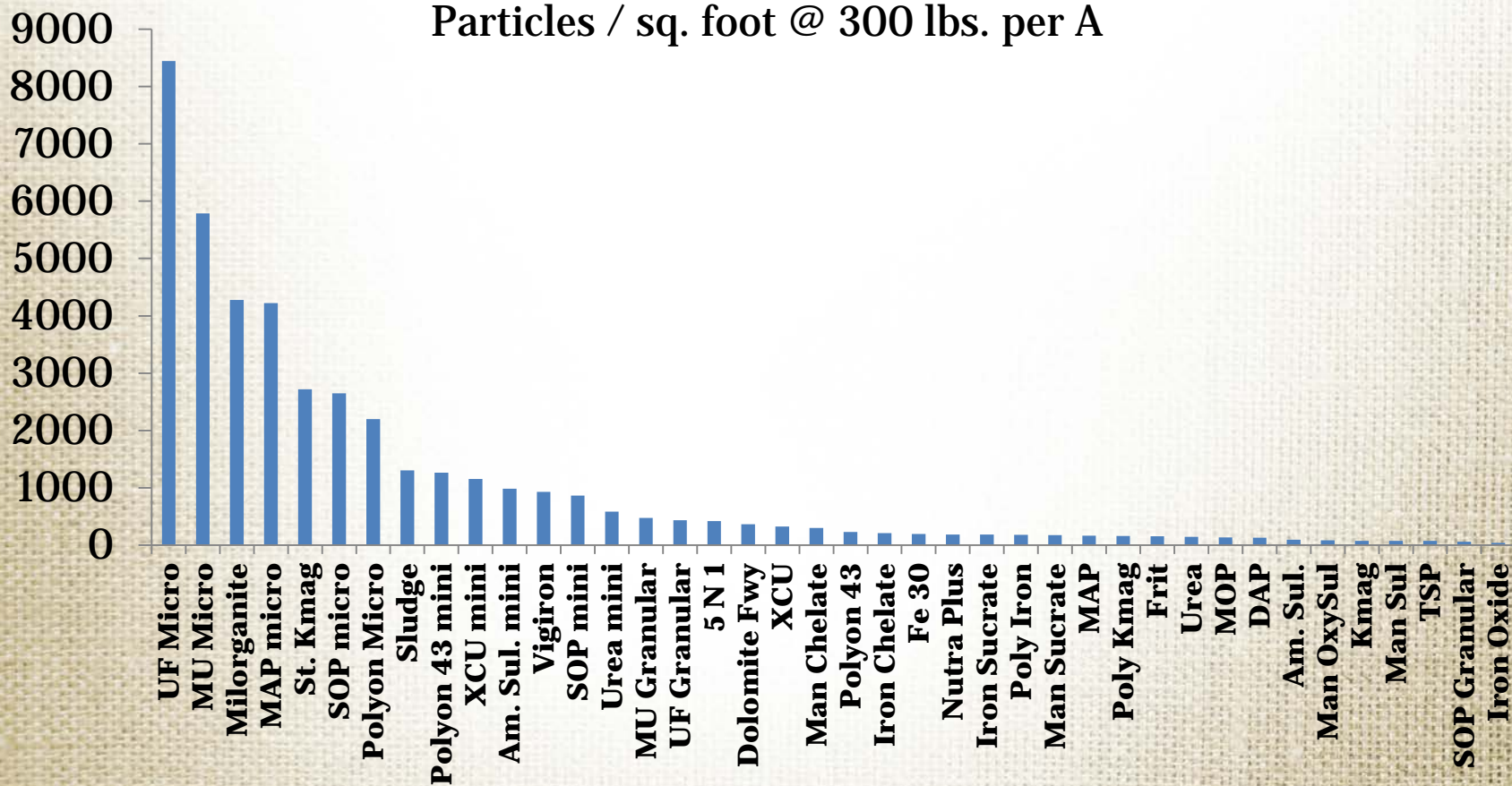


Regular, Mini, and Micro



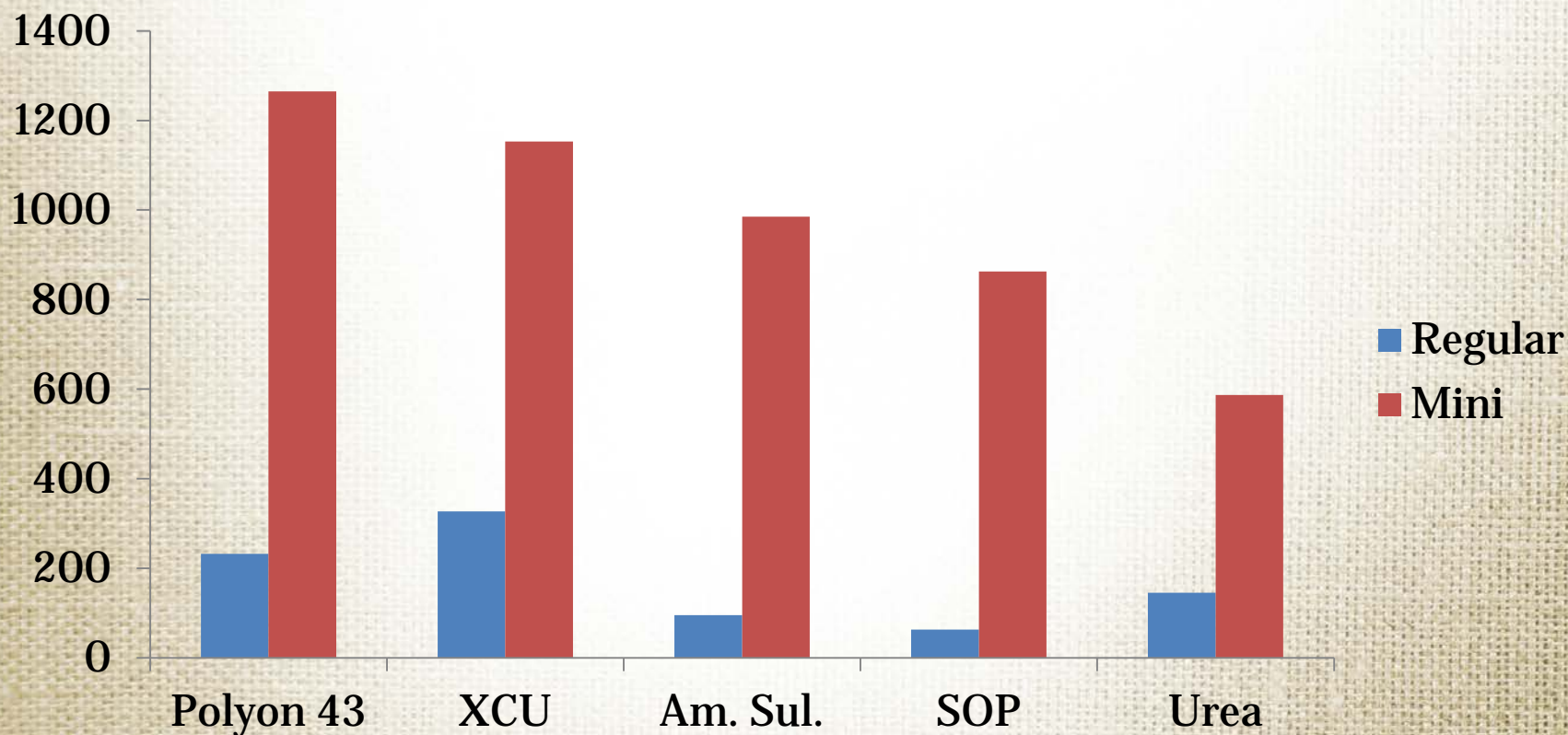
Results

Particles / sq. foot @ 300 lbs. per A

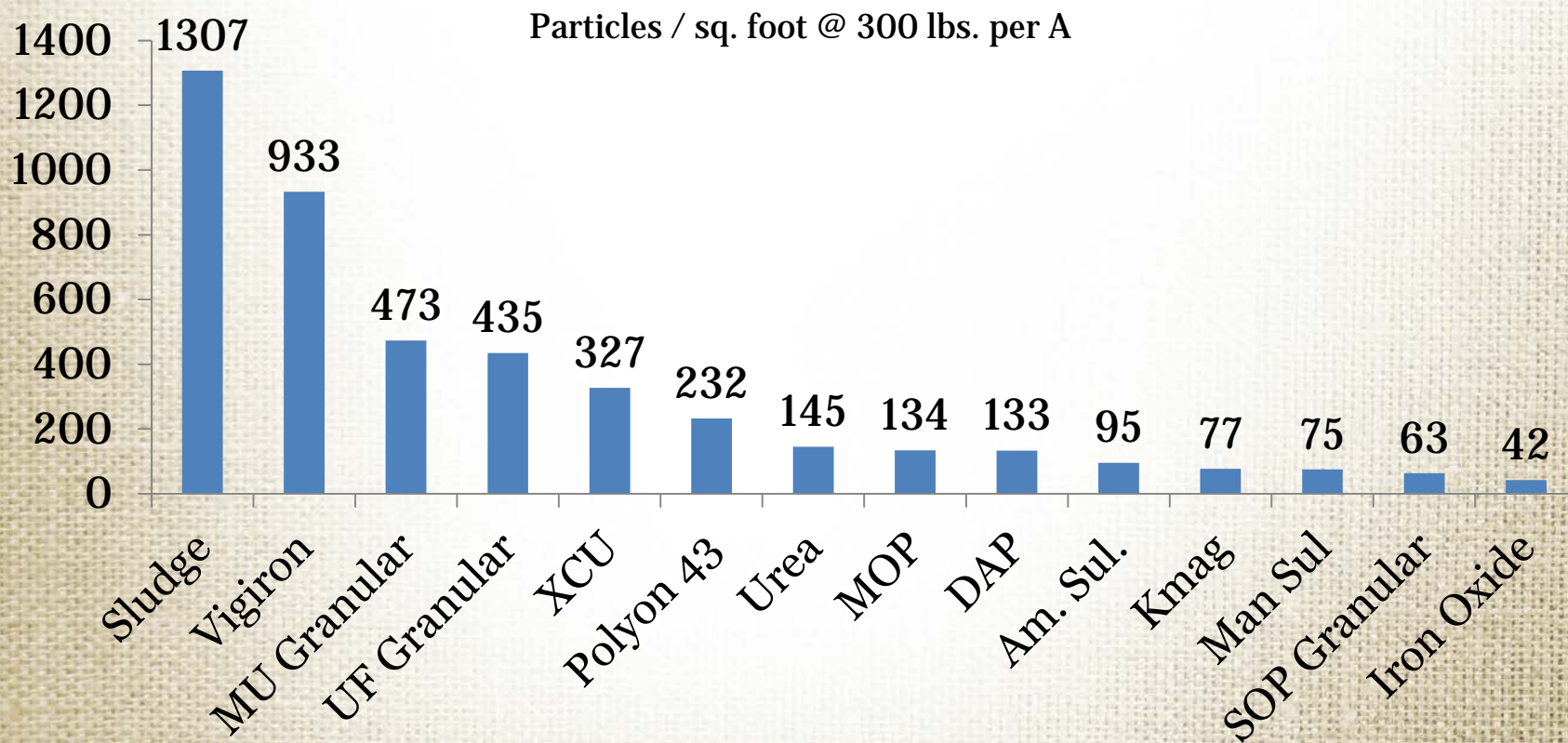


Regular vs. Mini

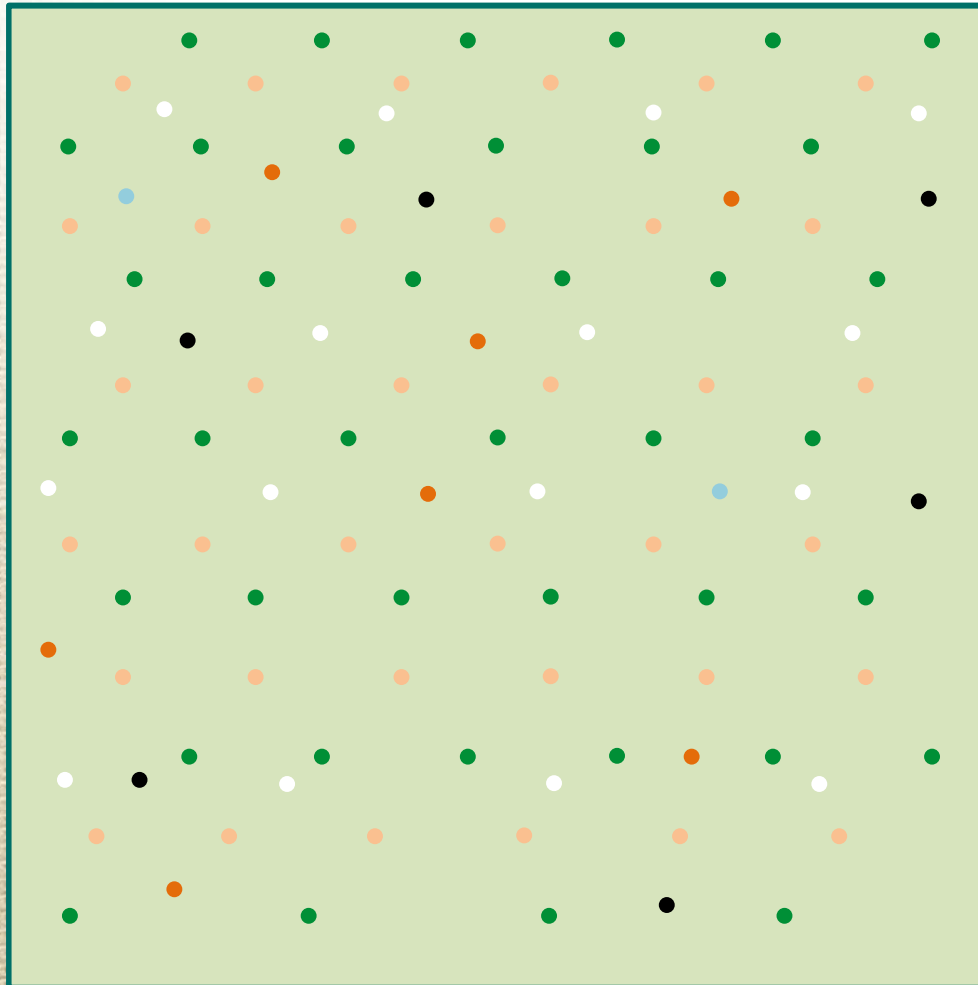
Particles / sq. foot @ 300 lbs. per A



Particle Distribution of Common Fertilizers



Minor Element Distribution



15-0-15

1Fe 1Mn 1Mg

Derived From:

- Am. Sulfate
- Polyon 43
- SOP
- SPM
- Techmangum
- Iron Sulfate

300 lbs / Acre

Total Particles = 107 / sq. ft.

Summary

- Particle distribution can vary by as much as 20x within an SGN range
- Minor element distribution is low relative to N, P, and K.