M-Struct

4/4/2017

Starter fertility options have been met with mixed reviews in the Inland NW

However, planter applied bands are one of very few touchpoints we get with our wheat crop. Are you taking full advantage of this touchpoint to maximize ROI, stimulate growth, and get the crop off to a quick and robust start? What nutrients make sound agronomic sense to apply with seed?

Location Check Values

P Tissue Test (%)	Zn Tissue Test (ppm)	Variety	Avg Loc Yield	Location	bu/a gain M-STRUCT vs Nitropak
0.18 - 0.25	16 - 20	WB 6121	61	Pomeroy, Wa	5.3
0.38 - 0.41	32 - 36	WB 9518	103	Warden, Wa	4.9
0.38 - 0.46	27 - 33	SY Ovation	107	Steptoe, Wa	4.3
0.19 - 0.29	18 - 20	SY Ovation	91	Hooper, Wa	4.1
0.30 - 0.35	20 - 25	SY Ovation	133	Walla Walla, Wa	4.0
0.21 - 0.31	20 - 24	WB 6121	108	Colfax, Wa	3.9
0.27 - 0.35	18 - 22	SY Ovation	102	Colfax, Wa	3.8
0.28 - 0.30	26 - 29	WB 6121	79	Waitsburg, Wa	3.7
0.42 - 0.46	32 - 38	SY Ovation	115	Genesee, Id	2.3
				OVERALL	4.3

Optimal P tissues values = 0.3 to 0.5 %, Optimal Zn soil values = 0.5 to 2.0 ppm, Optimal Zn tissue values = 25 to

M-Struct Zn added to Nitropak

Treatments = 6 gal/a Nitropak vs 6 gal/a Nitropak + 1 gal/a M-Struct
Treatments placed side by side, replicated 4x at 10 locations in 2016.
All treatments were applied directly in furrow with seed

M-Struct contains plant derived Carbon Molecules, Humic Acids, Fulvic Acids, and Highly Refined Carbon Chains, delivering a wide range of chains as small as two or three molecules, up to many thousand molecules in length.

- ❑ This unique formulation protects N and P from tying-up in low pH or high pH soils, improving nutrient use efficiency from fertilizer and soil sources.
- ❑ M-Struct boosts performance of other liquid P sources (11-37-0) and can be used to replace a portion of total volume
- ❑ Provides higher phosphate early = More tillers, improved root growth.
  MORE tillers early = MORE heads later

Phosphorus

- ❑ P is required for root and shoot growth
- ❑ With most P products, availability is only 5% to 15%
- ❑ In low soil pH, the P is tied up by aluminum and iron
- ❑ In high pH soil, P is tied up by calcium
- ❑ M-Struct's unique formulation protects the P from tie up in low or high pH soils

Zinc

- ❑ 60% of fields sampled in the Inland Northwest in 2016 by TMC showed Zn deficiencies. Wheat grown in deficient environments produces Zn deficient seed.
- ❑ Zinc demands during seed germination and early emergence are at its HIGHEST points.
- ❑ Zinc is a main component of the auxin hormone that induces cell elongation and division