

Additional Nitrogen Calculator

Wet spring weather sometimes causes nitrogen loss. The following calculator can help determine nitrogen loss by assessing multiple factors.

I. FERTILIZER MANAGEMENT FACTOR		
NITROGEN SOURCE	DATE APPLIED	SCORE
Anhydrous Ammonia	Before Nov 1	5
Anhydrous Ammonia	Nov 1 - Dec 31	4
Anhydrous Ammonia	Jan 1 - Feb 28	3
Anhydrous Ammonia	March 1 - March 31	2
Anhydrous Ammonia	April 1 - April 30	1
Anhydrous Ammonia	May 1 or later	0
Urea	< 4 days before excess water	4
Urea	4 - 14 days before excess water	3
Urea	> 14 days before excess water	5
Ammonium Nitrate or UAN Solution	Before April 1	5
Ammonium Nitrate or UAN Solution	April 1 - April 30	4
Ammonium Nitrate or UAN Solution	May 1 or later	3

II. SOIL FACTOR		
SOIL SURFACE TEXTURE		SCORE
Loamy	n/a	2
Clayey	n/a	3
Sandy	n/a	5

III. WETNESS FACTOR		
WATER SITUATION		SCORE
Flooded 6 or more days	n/a	5
Flooded 3 to 5 days	n/a	4
Flooded 1 to 2 days	n/a	3
Never flooded but saturated 3 or more days	n/a	2
Never flooded but saturated 1 to 2 days	n/a	1
Never saturated but sandy and excess rainfall	n/a	1
Never saturated and not sandy	n/a	0

Multiply SECTION I Score x SECTION II Score x SECTION III Score:

TOTAL SCORE _____

Nitrogen Calculator

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Used with Permission

Step 1

Step 2

TOTAL SCORE	ACTION NEEDED
0 to 10	No Additional Nitrogen Needed
11 to 24	Don't Spray Nitrogen, but Watch for Deficiency
25 to 49	Apply 40 - 60 lb/acre now
50 or >	Apply 60 - 120 lb/acre now

Scouting Nutrient Deficiencies: Sulfur and Zinc

Higher corn yields mean more minor nutrients are removed from the soil; thus, minor nutrient deficiencies may occur. Sulfur plays a major role in the formation of proteins needed for crop growth. Zinc (Zn) is a micronutrient required by corn in very small amounts. Zinc is an important component of multiple enzymes that drive metabolic reactions in all crops.

Sulfur Deficiency



Zinc Deficiency



Sulfur deficiency may occur in situations with:

- Sandy soils or soils with low organic matter.
- Cool soil temperatures, when mineralization is slowed.

Zinc deficiency may occur in situations with:

- Soil pH above 7.4; Zn availability may be reduced in soils with high soil pH.
- Cool/wet soils, when mineralization is slowed.
- Sandy soils or soils with low organic matter.
- Topsoil removed, or eroded soils.
- High phosphorus (P) levels; a P-induced Zn deficiency is a concern and may occur if very high rates of P-fertilizer (more than 100 lb P₂O₅/acre) are used and soil test shows low to very low Zn level.