

HOLTWOOD TURBOTVILLE RED LION 717-244-6909 888-845-1814 570-649-5579

2023 Fertilizer Market Outlook

NUTRIENT TREND FROM 2022

REASON TO BE BEARISH REASON TO BE BULLISH



- Russia has opened trade channels through Ukraine
- Warmer Europe temps lowered national gas prices
- Lower exports is weighing down on the corn market
- Lower spring '22 application have increased inventories
- Midwest drought areas are likely to cut back on spring '23 application
- China has high inventories and can wait to import additional tons
- North American sales were down 59% in 2022
- Canadian Potash mines are expected to increase capacity throughout 2023

- U.S was a net exporter of UAN in q4 2022
- 30% of European plants are still shutdown
- Higher projected 2023 corn acres
- Hurricane lan has setback fall production
- Higher ammonia prices have delayed production plants restarting



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- N.A. retail inventories are low heading into spring
- Europe still has sanctions against Belarus and Russia
- Ongoing threats of railroad strikes are likely to last into 2023





2023 Seed

VARIETY	MATURITY	DESCRIPTION
H4522	95	Full Flex ear that is great on all soil types
H5624	106	Broadacre placement and strong disease tolerance
H6134	111	Top performer with strong disease tolerance
H6244	112	High yielding hybrid and top performer in Pennsylvania
H6423	114	High yielding, dual purpose, and premier drought tolerance

VARIETY	MATURITY	DESCRIPTION
Z3101e	3.1	Racehorse early season variety
H34xf3	3.4	Broadacre placement and strong standability
Z3602e	3.6	Top yielder - Wide, bushy plant type for 30 inch rows.
37-v4e3	3.7	Full season and double crop versatility
39-t5e3s	3.9	Excellent drought tolerance and plant health

2023 Fertilizer Prepay

PRO-MARKET

Prepay a lump sum to receive a \$20 per ton discount on all fertilizer blends. Priced at time pickup/delivery. This prepay plan is advantageous in a bearish market.

PRO-LOCK

Receive a \$20 per ton discount and lock in a fixed price for the spring season. This prepay option is beneficial for accurate financial planning.

MARKET MATRIX

Per acre profit projections based on current input costs (excluding ground rent), grain prices, and yield expectations. This can help to decide whether to use Pro-Market and/or Pro-Lock prepay pricing.

CORN

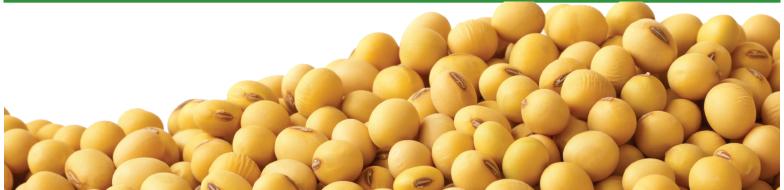
Corn	\$5.50	;	\$5.75	;	\$6.00	,	6.25	;	\$6.50
160	\$ 77.00	\$	117.00	\$	157.00	\$	197.00	\$	237.00
170	\$ 132.00	\$	174.50	\$	217.00	\$	259.50	\$	302.00
180	\$ 187.00	\$	232.00	\$	277.00	\$	322.00	\$	367.00
190	\$ 242.00	\$	289.50	\$	337.00	\$	384.50	\$	432.00
200	\$ 297.00	\$	347.00	\$	397.00	\$	447.00	\$	497.00
210	\$ 352.00	\$	404.50	\$	457.00	\$	509.50	\$	562.00
220	\$ 407.00	\$	462.00	\$	517.00	\$	572.00	\$	627.00

WHEAT

Wheat	\$ 8.00	\$ 8.25	\$ 8.50	\$ 8.75	\$ 9.00
70	\$ 51.00	\$ 68.50	\$ 86.00	\$ 103.50	\$ 121.00
75	\$ 91.00	\$ 109.75	\$ 128.50	\$ 147.25	\$ 166.00
80	\$ 131.00	\$ 151.00	\$ 171.00	\$ 191.00	\$ 211.00
85	\$ 171.00	\$ 192.25	\$ 213.50	\$ 234.75	\$ 256.00
90	\$ 211.00	\$ 233.50	\$ 256.00	\$ 278.50	\$ 301.00

DOUBLE CROP SOYBEANS

D.C. Beans	\$ 12.00	\$ 12.25	\$ 12.50	\$ 12.75	\$ 13.00
30	\$ 54.75	\$ 62.25	\$ 69.75	\$ 77.25	\$ 84.75
40	\$ 174.75	\$ 184.75	\$ 194.75	\$ 204.75	\$ 214.75
50	\$ 294.75	\$ 307.25	\$ 319.75	\$ 332.25	\$ 344.75



HOW MUCH PHOSPHORUS?

HOLTWOOD

888-845-1814

Higher yields, increased wheat acres, and baling corn fodder and wheat straw have removed higher rates of phosphorus. In the past, the rule of thumb was 50 units of P for a 200 bu. yield goal. Recent studies have shown P removal has increased to at least 70 units.

TURBOTVILLE

570-649-5579

Phosphorus has limited mobility in the soil, so the best availability is consistent application that corresponds with your yield potential. Furthermore, availability increases when PH ranges from 6.2-6.8 and applications are made closer to the rootzone.

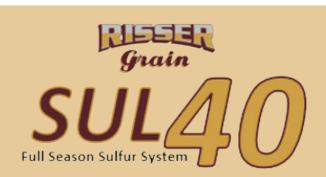
GRAIN	STOVER	TOTAL
70	32	112
48	46	94
45	15	60
	70 48 45	70 32 48 46

Phosphorus Products: Liquid: 11-37-0, 10-34-0, 7-21-7 Dry: MAP 11-52-0, DAP 18-46-0

PROTECTED NITROGEN

An increase in fuel costs and nitrogen price volatility can be challenging to manage when trying to plan applications and sources of Nitrogen. Adding a nitrogen source to your broadcast blend gives you a flexible option in addition to UAN in a chemical burndown. By using a combination of polymer coated urea, stabilized urea, and Ammonium Sulfate, you can protect your investment and add efficiency to your dry fertilizer application.

- Polymer Coated Urea 45-80 day release depending on temperature; can be applied as early as March
- Ammonium Sulfate 21% ammonium nitrogen is stable in the soil and readily available for plant uptake
- Neon Air Nitrogen Stabilizer Patented Technology that treats the urea granule to its core. Protects from above and below ground losses



- Target goal of 40 units of S in multiple applications. High yield corn environments have shown to have a Nitrogen/Sulfur ratio of 6 to 1
- Each fertilizer application should feature at least one sulfur product: Ammonium Sulfate, Polysulphate, Ammonium Thiosulfate, K-Mag, Gypsum, Fortified Sulfur, and/or Amidas
- Using sulfur in each fertilizer application increases yields in 3 ways:
- Increases nitrogen use efficiency
- Reduces opportunity for leaching as sulfur is mobile in the soil
- Benefits plant health, increases photosynthesis, and nutrient availability



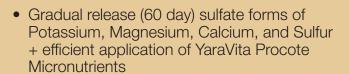












- Designed to be applied for spring broadcast in wheat and full season soybeans
- Boron, Calcium, and Manganese act as natural fungicides and improve heat and drought stress tolerance
- Addition of Manganese corrects early yellowing of soybeans by increasing Nitrogen fixation
- Enhances Soil health by improving water infiltration and Nutrient holding capacity