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Launch Deck

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TILL-IT®

Customer
Slide

WIRED™ GYPSUM

Efficient plant growth is a balancing act
Gypsum-based fertilizer prevents soil tie-ups from throwing it off



GUARANTEED ANALYSIS

Calcium (Ca).....	22.00%
Sulfur (S)	17.00%
Calcium Sulfate Dihydrate (CaSO ₄ • 2H ₂ O)	91.00%

DERIVED FROM: Anhydrite Calcium Sulfate and Hydrated Calcium Sulfate.

SIEVE ANALYSIS	
(before granulating)	
100 mesh.....	100.00%
140 mesh.....	90.00%
200 mesh.....	53.00%

Moisture, maximum <0.20%

ALSO CONTAINS NON-PLANT FOOD INGREDIENT:
0.75% Humic Acids derived from Sub-Bituminous Coal.

F2544

What is it?

- Gypsum is the original soil structure and salt mitigation tool – with PURIC technology, see these same benefits, faster with enhanced nutrient uptake.
- Displace salts, break-up compacted soils, and enhance soil structure in the application zone
- Immediate activation with water-soluble, extracted humic carbon for improved nutrient uptake

Benefits

- 1 Conditions soil faster than other gypsum sources
- 2 Increases porosity of soil, improving the soil structure faster than compost, so soil retains all of the oxygen, water, and nutrients needed
- 3 Breaks up soil and displaces salts
- 4 Enhances fertilizer programs with precision placement
- 5 Acts as foundation for prescription fall fertility amendment programs

Product Description



- TILL-IT WIRED GYPSUM is a homogenous granule of anhydrite and dihydrate gypsum, loaded with extracted humic carbon for FAST release, making a 17% S and 22% Ca with 0.75% HA. OMRI/OIM in 2021 Fall.

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Value Proposition



- Broadcast P, K, and N on both irrigated and non-irrigated row crop acres is the largest market opportunity. The secondary market of dry applications made at planting with wheat, and occasionally soybeans, as a dry starter application.
- Wilbur-Ellis offers precision placement based on YOUR soil, only applying nutrients where they are needed with our equipment. This service is our commitment to providing the best agronomic program for your field, and your farm.
- Benefits of gypsum as a soil amendment with a highly soluble humic acid in one product
- Improve soil health and crop yields

Product Overview



- Gypsum is the original soil structure and salt mitigation tool – with PURIC technology, see these same benefits, faster with enhanced nutrient uptake.
- Immediate release: better nutrient uptake & charge the rhizosphere
- Displace salts, break-up compacted soils, and enhance soil structure in the application zone
- Contains PURIC Technology – The equiv. of 30 lbs. of humic carbon/WSG

Why Apply Amendments?



- Replenish Nutrients (K, S, Ca)
- Build soil carbon & organic matter
- Modify soil pH to maximize nutrient availability
- Create the right rhizosphere for your yield goal with base nutrients
 - Sulfur, Gypsum, Compost, and Carbon help displace salts that impact water percolation/infiltration and absorption.
- Why is this important?
 - Nutrients must be in solution to be utilized by the plant
 - K is critical for production in tree nuts
 - Carbon holds the soil together, increasing productivity

New Product Line: TILL-IT® WIRED™

Fertilizer WIRED with nutrient efficiency



- Replace compost and gypsum fines with prescription agronomy
 - Gain efficiency with a banded application
 - Use WECO equipment, and recommendations
 - Precision application, apply what is needed instead of blanket recs of 1-2 tons per acre
 - Can replace cake sulfur, sulfur bentonite, compost, and gypsum fines with a premium carbon-based nutrient blend.

Some Thoughts from UC Davis



- **Banding of Amendments:** This process will release free Ca from the soil lime, thus improving infiltration. In established orchards, applications should not exceed 1500 lbs/acre (3 - 4 ft spray band), to avoid crop damage. **Even smaller amounts of acid or fine sulfur, shanked into the soil under emitters can be effective. A cost-effective method for banding gypsum along drop lines and microsprinklers.**
- A target is to maintain $SAR < 5 \times EC$, or else infiltration issues could be present
- Sodium in water, and soil, drives our gypsum rates. On drip, placing the nutrients where they will be dissolved and infiltrate into the soil is.

SOIL SULFUR APPLICATION RATES⁺⁺

Change in Desired pH	Pounds Elemental Sulfur Needed to Lower Soil pH		
	Sand	Loam	Clay
8.5 to 6.5	2,000	2,500	3,000
8.0 to 6.5	1,200	1,500	2,000
7.5 to 6.5	500	800	1,000
7.0 to 6.5	100	150	300

⁺⁺To the plow-depth layer in a carbonate-free soil (contains no calcium carbonate limestone)

GYP SUM CALCULATION FOR SODIUM DISPLACEMENT

$$\text{Tons gypsum/ac} = \frac{(\text{Na \%} - 5)}{\text{Na \%}} \times \text{Na ppm} \times \frac{1.7}{230}$$

Example: 15% Na and 500 ppm

$$\frac{(15-5)}{15} \times 500 \times \frac{1.7}{230} = 2.46 \text{ ton}$$

Gypsum Calculator for High Sodium Soils



WILBUR-ELLIS
AGRIBUSINESS

Target is to reduce sodium to approximately 5% of the soils Cation Exchange Capacity

Data points needed from soil report

		Enter Below
1	% Sodium of Cation Exchange Capacity (CEC) or Base Saturation (BS)	15
2	Sodium ppm or mg/kg (same value)	500
Calc 1	0.666667	
Calc 2	333.3333	
Calc 3	2.5	
Gyp Req	2.5 tons/acre	

Banding is more efficient – it is hard to change pH of the field, but can be done in a banded zone

Banding is more efficient – it is hard to displace sodium in the entire field, but in a band?

Use our internal tools for your customer

Sodic Soils – WECO Gypsum Calculator



Goal is to get Na to less than 5% of soil CEC

- % Na of 9, ppm of Na is 600

Data points needed from soil report					Enter Below
1	% Sodium of Cation Exchange Capacity (CEC) or Base Saturation (BS)				9
2	Sodium ppm or mg/kg (same value)				600

- As a broadcast, this would call for 2 tons of gypsum per acre
- What is the efficiency gained from banding?

High Na impacts:

- Drainage and water availability
- Soil structure
- pH
- Nutrient availability

High Mag Soils – WECO Calculator



Goal is to reduce Mg to 30% of CEC

- Mg is 36%, ppm of Mg is 1200

Data points needed from soil report					Enter Below
1	% Magnesium of Cation Exchange Capacity (CEC) or Base Saturation (BS)				36
2	Magnesium ppm or mg/kg (same value)				1200

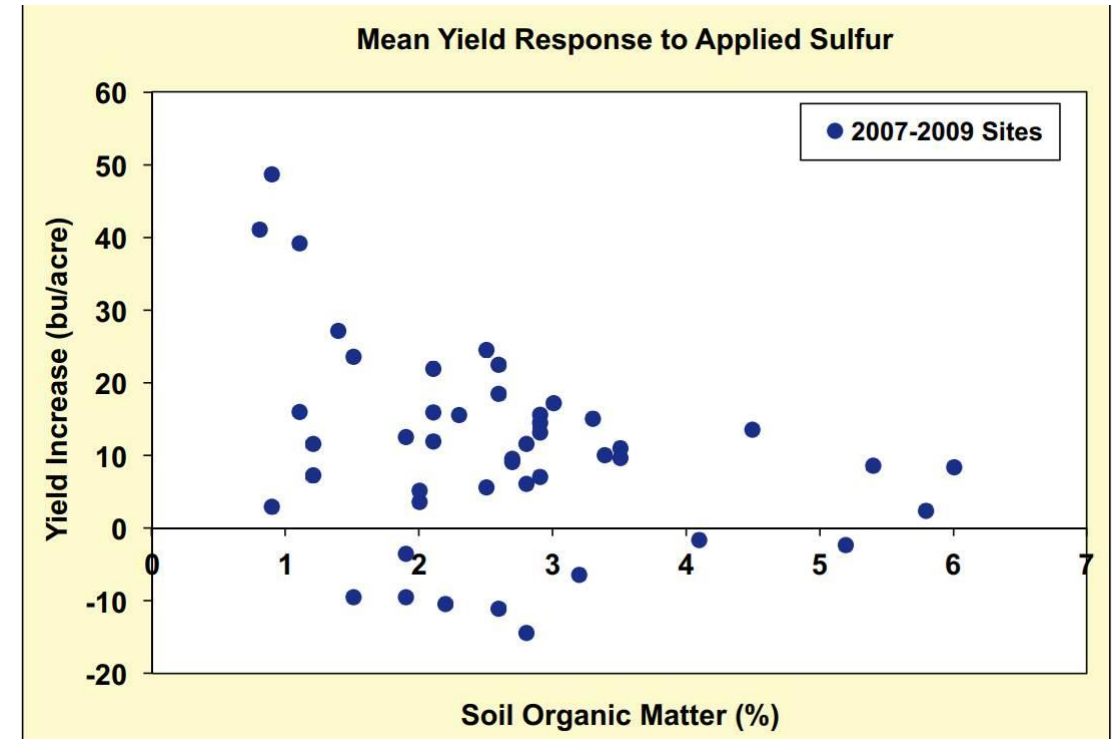
- Requirement is for 1.5 tons/acre as a broadcast
- What about for banded applications?

High Mag impacts:

- Potassium availability
- Calcium availability
- Compaction

Assessing Sulfur Needs

- Soil Type and OM%, Manure applications
 - 1% OM will release 3-6 lbs. of sulfur a year
 - CS ratio of 400:1 will immobilize S in the soil, while 200:1 releases it
- Water quality – Can contain SO_4
- Soil Test is unreliable – Tissue testing is best
 - In-season assessments



2007-2009 John Sawyer, ISU

Why WIRED Gypsum Instead of Others?

- **WIRED GYPSUM contains 17% S, 22% Ca, and 0.50% Humic Carbon in a homogenous prill**
- Each ton has 30 pounds of Extracted Humic Carbon and 1970 lbs. of gypsum
 - Can be organic (2021 fall for all 3 agencies)
- Increases porosity of soil, increases soil structure faster than compost
- Immediate activation with water with water-soluble, extracted carbon
- Break up the soil, displace salts, and condition soil faster than any other gypsum

Enhance fall-applied fertilizer programs with precision placement based on your soil and planned by Wilbur-Ellis Agronomists.

Benefits and Applications	
Super charge your gypsum	Benefits of Humic Acid Carbon
Build the rhizosphere with both sulfur and humic acid carbon.	High CEC – 300-600 meq
Increase soil CEC and improve nutrient performance	Modify soil structure
Mitigate high salts in soils	Increase water holding capacity
Reduce compaction and build soil structure in the application zone	Enhance rhizosphere and microbial growth
	Displace salts and salt stress in soils
	Augment and enhance soil amendments ability

Positioning



Western market: CA, AZ, WA, OR

Focus Crops & Use Rate



- Almonds

When should it be used?

Preplant, early season, or as an amendment

- What are the sulfur needs of the crop?
- Is this for S, or an amendment? What are we correcting in the soil?

How to use?

Use soil testing data, field information, and experience

- As an amendment, 250-500 lbs. per acre+. Banding is preferred, near irrigation points to maximize the benefit. Can be used in-season for Ca/S
- Yearly applications, or precision applications to problem areas

Packaging



- 2,000 LB - 268556
- BULK LB - 268557

Packaging



- 2,000 LB - 268556
- BULK LB - 268557

Data & Support Materials



Using the links below allows you to filter data by crop, trial title, and more for TILL-IT WIRED GYPSUM.

**Note: Data is sorted chronologically, with the most recent data at the top of the page.

**Territory Managers are the only sales personnel that can access Product Support Summaries below.

[Product Support Summaries:](#)
[Territory Managers >](#)

[Product Webpage >](#)

Marketing Supportive Pro...	Crop	State	Name	Title	Pest	Year Initiated
TILL-IT WIRED GYPSUM TILL-IT WIRED SULFUR	Alfalfa	NM	SHL227004NM01 - Product Support Su...	Evaluation of PURIC WSO MAX on Alfalfa Yield	Not Applicable	2022
TILL-IT WIRED GYPSUM TILL-IT WIRED SULFUR	Alfalfa	NM	SHL226049NM01 - Product Support S...	Evaluation of TILL-IT WIRED SULFUR and TILL-IT W...	Not Applicable	2022

