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Stoller[®]

Von Liebig's Law of The Minimum

STOLLER'S CORE VALUE

The yield of a crop is limited by the nutrient that is in least supply.

Today we know that there are 2 factors that will limit your yields.

1. The ability of the plant to produce photosynthates.
2. Environmental conditions.



Soybean nutrient removal (grain + stover) 100 bushels/acre

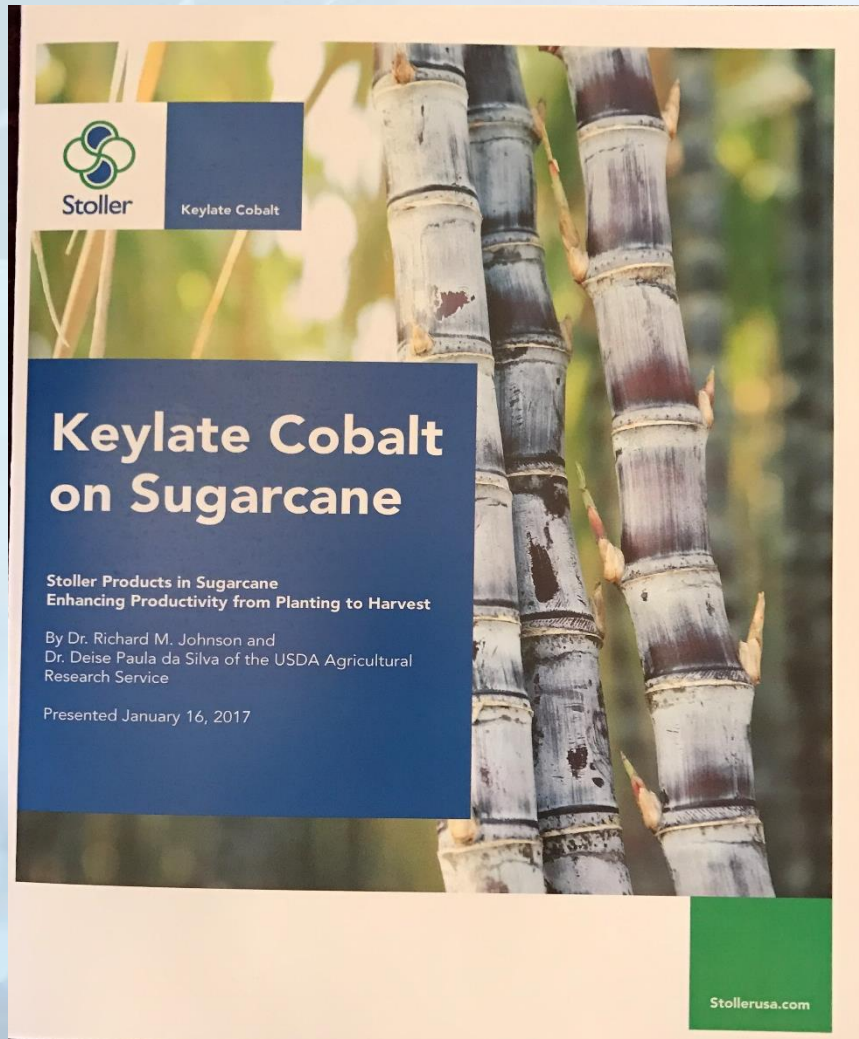
| Nutrient | pounds/acre | |
|------------------------------|-------------|---|
| Nitrogen | 435 | $97 \text{ lbs. P}_2\text{O}_5 = 2(31) + 5(16) = 142$ |
| P (P_2O_5) | 97 | $\text{P} = 62/142 = 43.7 \%$ |
| K (K_2O) | 220 | $97 \text{ lbs P}_2\text{O}_5 = 42.4 \text{ lbs P}$ |
| S | 35 | |
| Mg | 50 | |
| Ca | 95 | |
| Cu | 0.15 | |
| Mn | 1.0 | |
| Zn | 0.62 | |
| B | 0.7 | |
| Fe | 3.0 | |

There is increasing evidence of coordination between nutritional and hormonal signaling.

Plant nutrition and growth are linked together by a multilevel pathway between nutrients and plant hormones.

Stoller has synthetic, EPA registered, plant hormones.

Cytokinin, Gibberellin, Auxin



Summary Cobalt Results

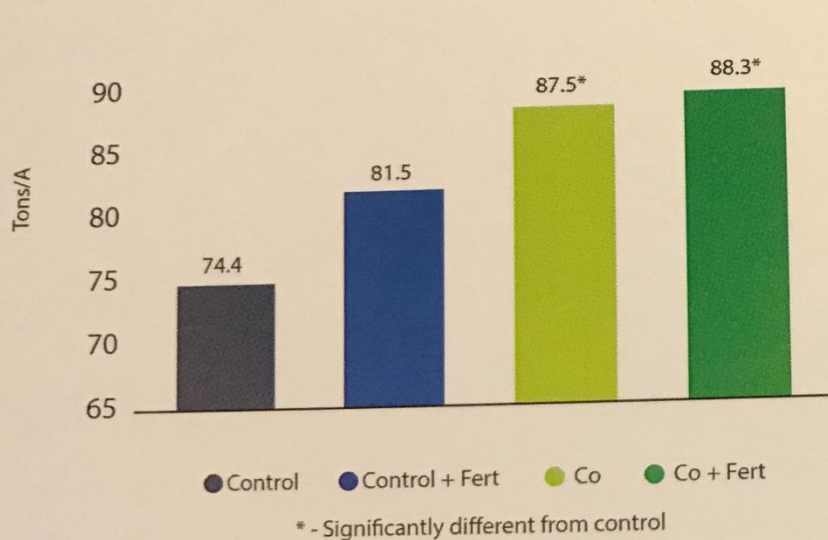
Keylate Cobalt increased stomatal conductance, allowing the plant to more effectively dissipate excess heat.

Keylate Co increased the number of leaves and tillers.

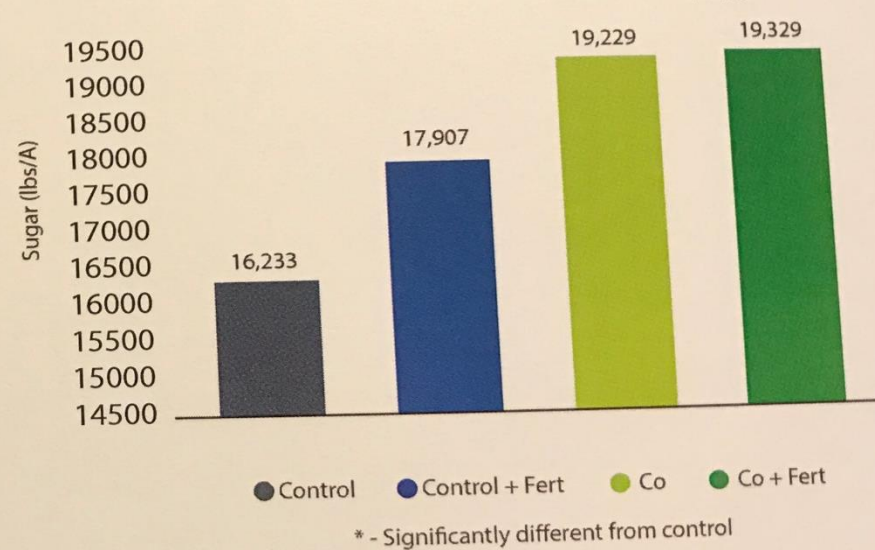
Keylate Co increased the number stalks, stalk weight, and the total sugar production

In all cases, the optimum rate appears to be 1 pt./acre.

Sugarcane Planting Study PC & 1R – Cane (Tons/A)
P=0.2



Sugarcane Planting Study PC & 1R – Sugar (lbs/A)
P=0.1



2 year study by Dr. Richard Johnson and Dr. Deise Paula da Silva, USDA/ARS Sugarcane Research Unit, Houma, LA.

A \$12 investment gave a \$631/acre return.

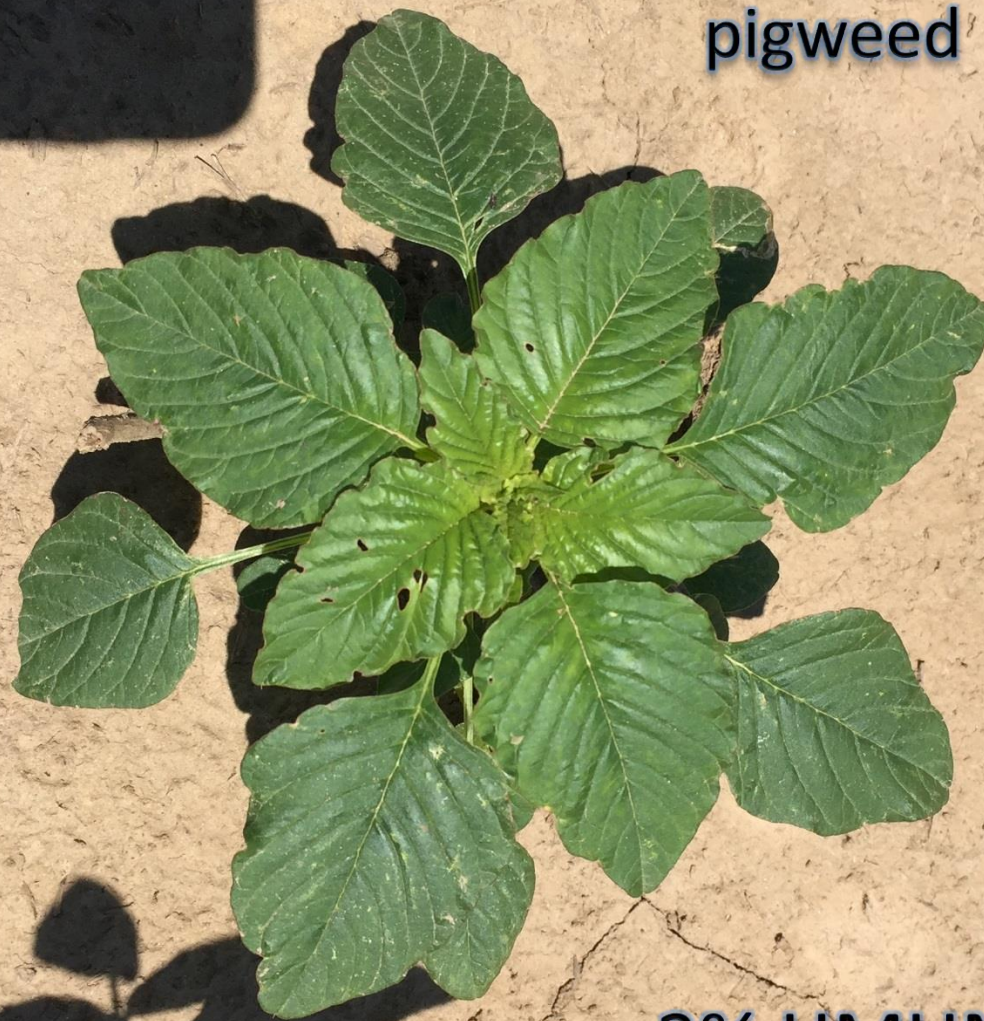




2% HMUM 5-10-27
2% Roundup 41%

Amaranthus palmeri
pigweed

Amaranthus palmeri
pigweed



2% HMUM 5-10-27
2% Seed Power

Amaranthus palmeri
pigweed



2% Roundup
2% HMUM
2% Seed
Power





100 BUSHEL SOYBEANS

Commercial beans
Vs
Competition beans

Tim Fisher: I'm not trying to farm more acres, I'm trying to get more from the acres that I farm.

Perry Galloway: I'm not here to break your yield record, I'm here to break mine.

Environmental factors will include but not limited to:

1. Money
2. Weather
3. Disease
4. Weeds
5. Insects
6. Timing of application (proactive not reactive)

Plant Producing Photosynthates

1. Soil test (nutrient ratios)
2. Tissue test
3. Soil microbes
4. Know the amount of nutrients required for 100 bushel soybeans.

Stoller's X-Cyte (Cytokinin)

If the concentration of auxin and cytokinin are equal, then normal cell division will take place. If the concentration of auxin is greater than cytokinin then roots will form. If the concentration of auxin is less than cytokinin then shoots will form.

Stoller's N-Large Premiere is Stoller's EPA registered Gibberellic Acid.

Stoller's Stimulate Yield Enhancer is Stoller's EPA registered PGR.

Stimulate Yield Enhancer has the optimal concentrations of gibberellin (GA), auxin (IBA) and cytokinin in a 2(CK):1(GA):1(IBA) ratio ideal for triggering plant growth and accompanying yield characteristics with no risk of injury to plants.

Harvest More Ureamate 5-10-27 + 4 Ca-1.5 Mg-.15 B-.008
Co-.3 Cu-.5 Mn-.008 Mo-.5 Zn (EDTA Chelated
micronutrients)

When you foliar feed HMUM + SYE you get a balanced meal
of nutrients + PGR's to build a strong skeletal structure that
will send nourishment to soybean babies.

Another time: Soybeans making babies. We know that we
can get 10 pods in the top of the plant by some extra work.
What about the other 18 or so nodes. Our next meeting will
address this issue.

THANK YOU for being here. RW

MISSISSIPPI COUNTY, Ark. - One man is dead and another out on bond after being arrested following an argument that led to gunfire.

It happened early Thursday evening outside Leachville.

The Mississippi County Sheriff's Office says Allan Curtis Jones, 26, was given a bond of \$150,000 on a charge of First Degree Murder in the death of Mike Wallace.

Deputies say the men had argued about the spraying of pesticides on farm fields in a dispute related to dicamba drift.

Dicamba is similar to the herbicide 2,4-D. Both act like natural plant hormones known as auxins. These hormones help to control plant growth. When plants are treated with dicamba, they grow in abnormal and uncontrollable ways, and often, the plants die. Dicamba is used on many broadleaf weeds and woody plants.

2,4,D Herbicide

2,4-Dichlorophenoxyacetic acid

An organic compound with the chemical formula $C_8H_6Cl_2O_3$. It is a systemic herbicide which selectively kills most broadleaf weeds by causing uncontrolled growth in them, but leaves most grasses such as cereals, lawn turf, and grassland relatively unaffected.

It acts by mimicking the action of the plant growth hormone auxin, which results in uncontrolled growth and eventually death in susceptible plants.