

From the Ground Up

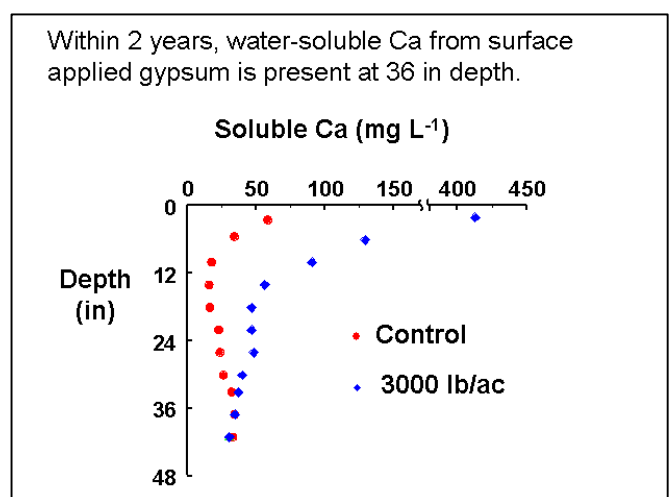
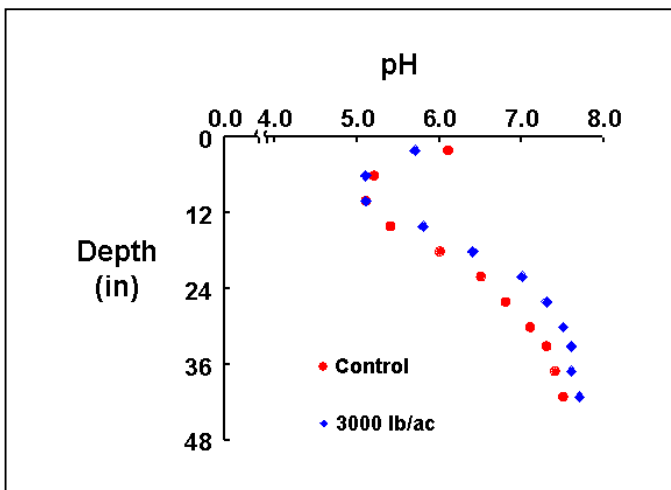


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PRO CAL 40 is not just for high pH soils.

Frequently we have producers tell us that they didn't think they needed gypsum on soils unless they were high pH soils. Gypsum is a neutral product when it reacts in the soil. It is true it will lower the pH of high pH soils if the soil contains appreciable amounts of sodium. These soils usually also contain a significant amount of bicarbonates and carbonates. However, if these are not present in the soil gypsum will have little or no affect on the pH as is shown by the research below.



Gypsum is beneficial on lower pH soils because it is more mobile than lime providing soluble calcium to roots in the lower depths as is shown by the chart above. This can be particularly beneficial in no till fields. It also helps improve soil structure and infiltration rates of lower pH soils. Alfalfa is very responsive to gypsum regardless as to what the soil pH is. This study below from the University of Minnesota shows that gypsum gave a better response over the three years in corn on low pH soils than lime.

<u>Lime Source</u>	<u>Lime Rate</u>	<u>Time of App.</u>	<u>Corn Yield, Bu/A</u>
Check	-----	-----	163
Ag Lime	6 tons	Aug. '98 & Oct. '00	170
Granulized Lime	1 ton	Aug. '98 & Oct. '00	168
Granulized Lime	.2 tons	Annually since '98	167
Gypsum	.2 tons	Annually since '98	173

University of Minn.; Initial pH was 5.4. Subsoil pH is neutral to alkaline. Gypsum had no effect on pH.

Sudden Death Look-Alike Symptom

University of Nebraska-Lincoln plant pathologists have reported that when certain varieties of soybeans are sprayed with the Triazole class of fungicides a phytotoxic response can be exhibited that looks similar to sudden death syndrome (SDS) or brown stem rot (BSR) in



soybeans. The picture to the right was taken from one of their plots showing this symptom. Hot and dry conditions at the time of spraying using a surfactant seem to increase the odds of this occurring. The Tebuconazole group (Elite, Folicur) of Triazoles seems to cause this most frequently. We must be careful to not misdiagnose this problem. Generally, SDS or BSR in soybeans will appear in patches in fields and will affect many leaves on the plant. This symptom, if present as a result of spraying a triazole fungicide, would most likely be more general across the field and will probably affect only a couple of leaves on each plant.

Applying Lime and Gypsum Together

In a trial near Craig, MO results show that soybeans respond well to lime even at much lower levels than may be recommended. In a soil that tested 5.2-5.4 (pH_{salt}) the lime requirement to bring the pH of the soil up to 6.6 was six tons of 47% ag lime. Although the six ton rate gave a six bushel yield response (55 bu./A) over the check (48.8 bu./A), the one ton rate gave a 4 ½ bushel response (53.4 bu./A) and was the most economical and actually yielded higher than the two, three or four ton per acre rates.

It is not uncommon for soybeans to yield at least 3 to 4 bushels better where PRO CAL 40 is applied and for corn to yield 10 to 12 bushels per acre better. Rather than applying higher rates of lime, a more economical and cost effective program is to apply 1 ton of gypsum with one ton of lime if you are on low pH soils. You will benefit by the synergistic affects of these two products.

2007 Seminars Well Received

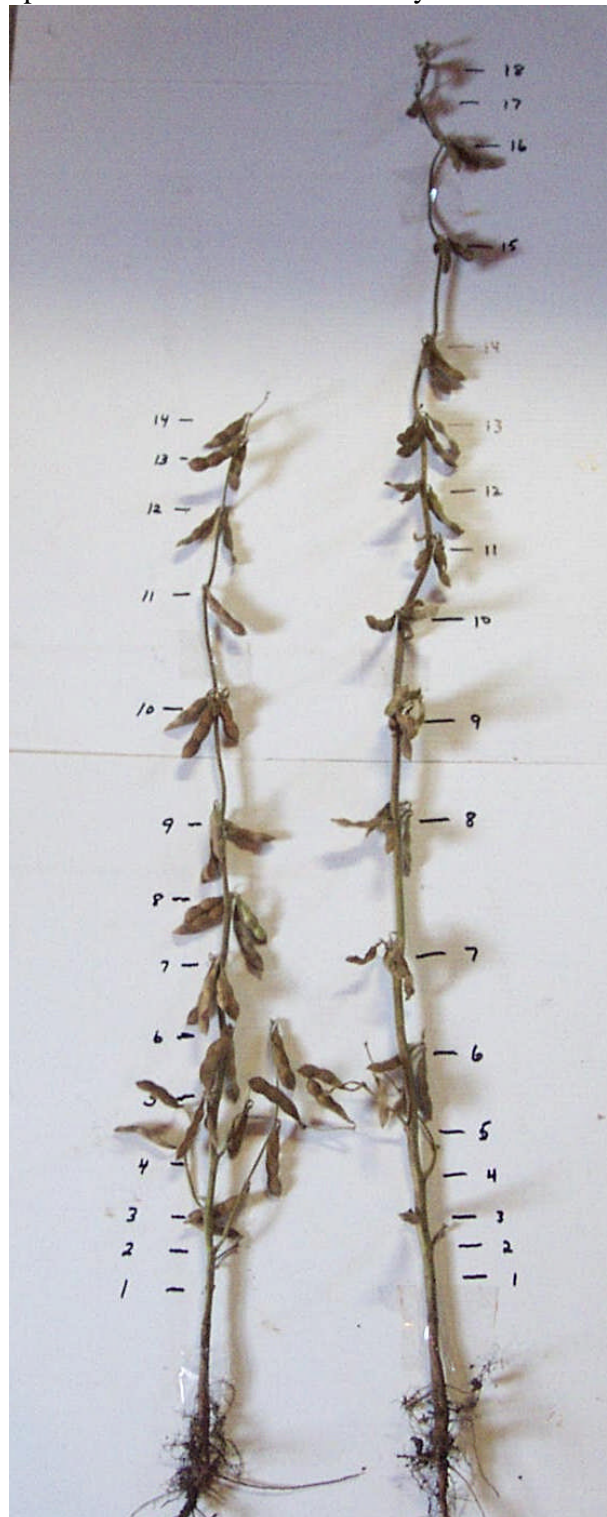
Our seminars that we scheduled in August of 2007 were well received by all who attended based on our surveys. We want to thank Bill Darrington for sharing his insights into high yield crop management and good soil stewardship

Increased Land Rental vs. Improving the Farm

With higher commodity prices the first notion of many landlords is to bump up the rental prices. It wasn't uncommon to see rental rates jump \$30-\$50 per acre this past year. Many landlords don't realize that most tenants who are offering the outrageous prices for land rent can only do so if they mine the landlord's soil fertility. Rather than trying to meet these high rental rates, why not offer to improve the landlord's soil fertility levels or apply soil amendments such as gypsum and lime to the fields. Both you and the landlord will be money ahead. The land will produce more and the landlord's property will be more valuable when they sell it. Once soil is mined or the pH drops down it is very difficult to spend the money to build it back up and production drops off dramatically. With ever increasing fertilizer and fuel costs it is much more costly today to build up fertility than it has been previously.

Evaluating Soybean Yields

With the good moisture that was received in August in many areas, expectations for soybean yields are high as well they should be. The picture below is a picture taken of Kip Culler's soybeans this August. He raised 139 bushels per acre in 2006 and he thinks he may have even higher yields in 2007. I viewed some of his soybean plants at Husker Harvest Days in Grand Island and it is just amazing how many pods he sets per node. Contrast these with some I took from a plot in SE Nebraska (picture to right).



This picture also shows the affect that planting date has on the length of internodes. The same variety planted about a month later (late May versus late April) on the right has much longer internodes. **Soybeans will grow an internode every 3.7 days so the warmer and wetter conditions will result in longer internodes.** With the late moisture received this year, it appears that the later planting may yield greater since it has a larger number of nodes and pods, but that may not necessarily be true. Taller soybeans don't usually mean higher yields, just longer internodes. Also notice that the earlier planted soybean plant has a larger number of pods in the lower canopy, which also can cause one to underestimate yields if just viewing a field from the edge.

Seeding alfalfa next spring? Get your PRO CAL ordered today!

Many of our past customers have called to tell us that their best corn, soybean and alfalfa fields this year are where they have applied the PRO CAL 40. Our early orders are way ahead of past years. Make sure you call us or your local retail dealer to get your name on the books for a fall application also. Also keep in mind that if you are planning on seeding alfalfa next spring, it would be best to get your gypsum and lime applied this fall. This would give it plenty of time to react before next spring's seeding.

Send us any agronomic questions you may have.

We are always willing to help our customers become more knowledgeable in crop and soil management. If you have a question that you would like answered, please feel free to email Vickie@ruralwaves.us and we will reply to your question by email.

Send us your email address.

If you now have an email address or would like to receive our newsletter by email please send it to us at Vickie@ruralwaves.us. Also if your email address has changed please send us the updated email address. Thanks.