Onions with PicoAg 25B-F fights off Frost!

Note: PicoAg 25B has provided provide Frost Protection on least 4 different kinds of crops: Tomatoes, Tobacco, Soybeans and Corn

Florida Sheriff's Farm Manger for Onions testimonial by the staff in Florida. The Farm consists of several acres that are utilized for food crops. The Vegetables grown are distributed to many food banks through out the County area. Additional vegetables grown are also given to facilitate the inmates at the County Jail. The Farm has been in existence for approximately 20 years.

The goal of our farm has always been to grow vegetables through Green and Organic products and safer practices of agriculture. Do to liabilities in excess of the average farmer we have been forced to find alternatives for growing and protecting our crops.

First 3 onion plant pictures without PicoAg 25re from newly plants from 1 week to 60 day frost which killed the plant.

Onions-1 week Without PicoAg 25B after-Planting about dead from frost!

Here is a photo of one of the unsprayed trees.

Farmer's Double Cropping Experience Frost/Freeze protection with Soysoap™ Near Lansing Michigan.

Biobased USA, 1623 NC HWY 801 N, Farmington, NC 27028

800 995-9203. www.biobased.us. donwilshe@biobased.us

Oct 14th, 2008: On October 14th pod counts were taken on the strips. Results: Pod count averages: Treated Strips 10.4 Pods/Plant Control 4.8 Pods/Plant. However, pods on the control strips were not filled.

November 20th, 2008: FARMER harvested the plot on November 20th, after his other fields. Beans harvested from the treated strips averaged 11 bushels per acre. Eleven bushels per acre @ $9.00/ Bu. equates to $99 per acre. There were no harvestable beans from the control strips, just empty pods.

Subsequent talks with Dr. Hesser involved several exciting issues that this farm research points out: North Carolina wheat treated with Soysoap™ matured 7-10 days earlier than control fields in 2008. Dr. Hesser and I have theorized that if Soysoap™ could allow a SRW wheat crop to mature earlier. It would give Northern Ohio a much better chance at a good start for double crop soybeans, not to mention that double crop bean yields could be raised by using Soysoap™ as FARMER did in 2008.

Remember, FARMER planted beans very late. He is located 1 ½ hours north of the Ohio line (however he does gain day length moving north). He sprayed them with Soysoap™ later than recommended, but also extended his pod fill window through a frost. Figure 2 shows a picture of a Soysoap™ treated plant next to a control plant after one of the frosts.

tank mixed with sugar at 1 pm. Soybeans were approximately knee high. This spray was applied to previously treated strips only. This spray mix contained: 2 oz Soysoap™, 5# Pioneer granulated sugar, and 10 GPA of water as a carrier.

Oct 2nd, 2008: On October 2nd with a killing freeze forecast, FARMER applied 8 oz. of Soysoap™ tank mixed with 5# of table sugar in 13 GPA of water. Field experienced a 25^0 frost. Control strips died, but the treated strips lived. Then he experienced 2 more killing frost between October 3rd and October 14th. These frosts killed both control and treated strips.

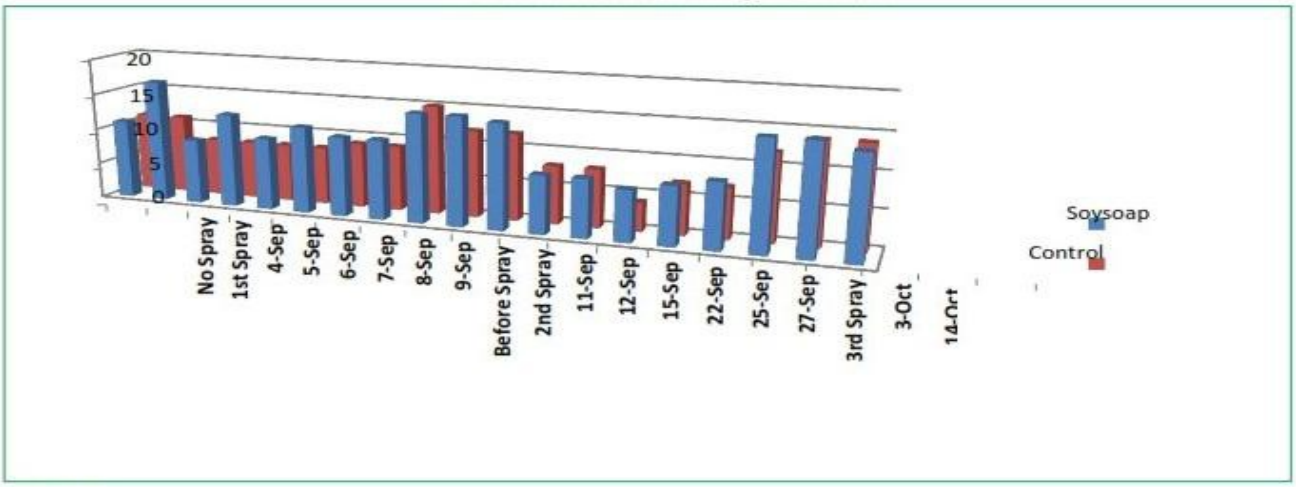

Figure 1

In Figure 1, I have charted the sugar levels monitored in the leaf tissues of the bean plants. (If you want the raw data, I have it). If you notice that after the applications of Soysoap™, the sugar levels in the plant were elevated versus the control strips. This in turn should enhance photosynthesis, plant health, disease resistance, increase yield potential, provide minimal frost tolerance, increase time for pod fill, decrease the length of time needed for the crop to mature, and finally raise potential yield.

Figure 2

<u>Frost Tolerance Observe red on the Farmers Strips</u>

Sprayed soybeans on Oct. 2nd, 8 oz. of Soysoap™ tank mixed with 5# of table sugar in 13 GPA of water. Freeze was 9 hours Oct 3, 6 hour frost on Oct 14.

NOTE: Plant on left is the control; plant on right is the Soysoap™ plant. Look at root structure, pod fill and plant height. A day later it was black should of waited.

NOTE: The obvious difference in color between the two representative plants.

Brix readings for Michigan Double Crop Frost Experiment

09-03-08 noon 84 degrees plants 6 week and 12 in Brix before spraying on both plots at 11:55.
Note: Brix after spraying at 2:35p.m. Brix with Soysoap soy soap 17 Brix without soysoap 12 sunny
(30% More Brix with Soysoap in just 2.5 hours)

09-04-08 9:30 a.m. 70 degrees Brix with Soysoap 9 Brix without Soysoap 8
(Very Early Test Brix Consumed Overnight)

09-05-08 5:00 p.m. 70 degrees rain overnight Brix with Soysoap 13 Brix without Soysoap 8
(After a long day plants operated more efficiently with Soysoap 40% More Brix)

9-06-07 10:30 a.m. 65 degrees Brix with Soysoap 10 Brix without Soysoap 8
(Temperature continues to drop but with Soysoap still 20% More Brix)

9-07-08 6:30 p.m. 68 degrees Brix with Soysoap 12 Brix without Soysoap 8
(After a long day plants operated more efficiently with Soysoap 40% More Brix)

09-08 1:00 p.m. 63 degrees after 1 in of rain Brix with Soysoap 11 Brix without Soysoap 9
(Half day plants operated more efficiently with Soysoap 19% More Brix)

9-10-08 1:00 p.m. 68 degrees sunny and 10mph wind Brix with Soysoap 15 Brix without Soysoap15
second foliar spray began at 1:00p.m. checked again @3:30p.m. Brix with Soysoap 15 Brix without Soysoap12
Applied just 2 oz of soysoap with Soysoap the mixture of tracite, sugar, sea salt, vinegar and ammonia
(2nd Soysoap Spray boosted treated soybeans check 3.30PM plants operated more efficiently with Soysoap 19% More Brix Before the spray Brix Levels about even on both plots) Soysoap Treated plants grew with higher brix levels for about 7 days on everyday tested.

9-11-08 2:00p.m. 68 degrees Brix with Soysoap 14.5 Brix without Soysoap12
(2/3 day plants test treated soybeans operated more efficiently with Soysoap 18% More Brix)

9-12-08 12:30p.m. cloudy and rain 72 degrees humid Brix with Soysoap 8 Brix without Soysoap 8
(Cloudy and raining both plots treated and untreated same brix)

9-15-08 1:30p.m. cloudy 61 degrees after 4.5 inches rain Brix with Soysoap 8 Brix without Soysoap 8
(Cloudy and raining both plots treated and untreated same brix)

9-22-08 1:15p.m. sunny 70 degrees no rain for 1 week now Brix with Soysoap 7 Brix without Soysoap 4
(Sunny day Soysoap treated 43% Higher Brix) 11 days after soysoap applicaton)

9-25-08 1:15p.m. sunny and 76 degrees Brix with Soysoap 8 Brix without Soysoap 7
(Sunny day Soysoap treated 13% Higher Brix) 14 days after soysoap applicaton)

9-27-08 1:30p.m. 72 degrees Brix with Soysoap 9 Brix without Soysoap 7
(Sunny day Soysoap treated 23% Higher Brix) 15 days after soysoap applicaton)

10-02-081:15p.m. cloudy and 64 degrees Brix with Soysoap 15 Brix without Soysoap12
(Cloudy day Soysoap treated 20% Higher Brix) 20 days after soysoap applicaton)

10-03-08 4:00p.m. sunny 52 degrees Brix with Soysoap 15Brix without Soysoap14
(Sunny/Cold 4PM Test 52 degrees day Soysoap treated 9% Higher Brix) 21 days after soysoap applicaton)
(Danger freeze forecast, Than Applied Soysoap (8 oz) and sugar (5lbs) 13 gal H2O. After Brix Test)

10-03-08 Retested 6:20 pm. 2 Hours later 50 degrees Brix with Soysoap 16 Brix without Soysoap12
(Sunny/Cold 52 degrees Soysoap treated 25%, Soybeans responded Higher Brix 2 hours after soysoap) applicaton)
10-14-08 1:30 pm. 60 degrees had 3 freezes **5 to 9 hours 26-27 degrees** since last Brix checks Brix with Soysoap 14 Brix without Soysoap14 this was our last Brix checks we did do pod counts on the three plots with Soysoap the following results: (**After the 3 killing frost it was just a matter of counting pods.)**

Pod Count Analysis of Treated and UnTreated Soysoap

Pod Count test 1 with Soysoap 9+15+11+-5+12=52/5=10.4 test without Soysoap 8+4+3+2+3=20/5=4
Pod Count 1 Test Analysis = Soysoap Treated Aveaged 10.4 Pods, Untreated 4 Pods = 72% More Pods

Pod Count test 2 with Soysoap 12+18+14+15+6=65/5=13 test without Soysoap 6+5+3+7+1=22/5=4.4
Pod Count 2 Test Analysis = Soysoap Treated Aveaged 13 Pods, Untreated 4 Pods = 70% More Pods

Pod Count test 3 with Soysoap 9+12+4+9+5=39/5=7.8 test without Soysoap11+5+8+2+5=31/5=6.2
Pod Count 3 Test Analysis = Soysoap Treated Aveaged 13 Pods, Untreated 4 Pods = 21% More Pods

Average Pad Count test for 3 Plots with Soysoap 7.8+13+10.4 =31.2./3= 10.4
Average Pad Count test for 3 Plots without Soysoap 4+4.4+6.2 =14.6/3=4.8
All 3 Pod Count Test Analysis = Soysoap Treated Aveaged 10.4 Pods, Untreated 4 Pods = 54% More Pods

PicoAg 25B Growing late corn in a freeze or Frost.

Representative: Freddie we are standing out here in the cornfield and you got some pretty good ears of corn on this. Tell us when this was planted and what you did to it.

Soysoap 2 Provides Frost Protection And Can Make Crop Harvest Faster or Longer!

One of the benefits of Soysoap is what might call "Push Growing". Soysoap 2 can not only provide frost protection on crops, but can make them grow more or less days. The benefits of a faster growing crop is you escape bad weather like freeze, hail, wind, drought and rain. The benefits of growing a crop longer is you can survive frost, plant later and fill unfilled pods with soybeans. Unfilled pods can be 0 beans per acre vs probably 30 to 40 or more bushels.

Here's a photo of a late double crop soybean field where we foliar fed four times on alternate rows every 20 days. The blooming green rows continued for 30 days longer than the once sprayed beans, and are filling pods. You can plainly see the difference in color of the beans ready to harvest vs those still making more bigger beans.

Farmer: Well we planted early about April but what happened is got all over everything and flooded and killed it. So it dried out and everything and by the time it got dried out it was done in July. So last June in the got started, I planted this first day of July and so it came out and made it all and before it frosted the it the chaff had turned brown on it so I said well it's going to be all right. And so but we sprayed it with clear masses of PicoAg 25 Band it was about two foot tall and that's all the PicoAg 25B we put on it, till it got so big we couldn't get back in there and do nothing with it and all this made the pretty decent hold here and dried down.

Representative: What did the corn do after you put the PicoAg 25Bto it?

Farmer: Oh it turned green you know, and picked up and I was afraid that it leached out too much of fertilizer but I don't it had I think the PicoAg 25Bmade it pick it up you know, and grow to it.

Representative: So after it flooded out and you come back and replant it, you didn't put any more fertilizer. All you did was plant it and put the PicoAg 25Bon that.

Farmer: That's all we done yeah. Well we did put nitrogen on it, put 30% on it because.

Representative:Top grafted?

Farmer: Yeah we top grafted 30% of about 40 gallons a day, so that's all we are done.

Representative: Pretty good-looking corn.

Farmer: Yeah it is; we planted July 1 the first round.

Representative: I take it on any year just about I believe.

Farmer: It its really going to be a whole lot better now than the previous years.

Representative: Yeah July the 1st.

Farmer: Yeah, yeah. So normally July the 1st you're going to make net.

Representative: Yeah.

Farmer: It's just too late.

11. Rick Nervig, Hardy, IA What's most clear to me about Representative: is that any spray tank mixed with Representative: lays down smoothly on leaves. No droplets or runoff on either corn or soybeans. That appears to make a real difference in herbicide effectiveness. When I sprayed volunteer corn in our soybeans with herbicide plus PicoAg 25B Aka Soysoap, the corn was taken out faster than I've seen before without PicoAg 25B Aka Soysoap. (Photo)

I'm still unsure of another "test" with Representative: in spring 2010. I had planted some

soybeans really early. By May 6 the cotyledons were out. Forecasters warned us of severe frost for the night of May 8. I took a chance: On May 6, I sprayed the field with 8 oz. of Representative: in water, having heard that Representative: increases leaf sugar somewhat. On the morning of May 9, 2010, all the beans were white with frost. The reported low was 28 degrees. A lot of corn in our neighborhood was severely frosted. By that afternoon, beans in that field looked dead. I watched them for a few days, and saw beans pushing new trifoliate leaves. We lost some population, but not enough to replant. By May 19, the second trifoliate leaves had emerged and I sprayed Representative: again, 8 ounces per acre. So that field had two applications of Representative: by the time it reached the second trifoliate stage. The 110 acres averaged 65 bu. per acre my best soybean field for 2010. But I can't say that was due to PicoAg 25B Aka Soysoap. We didn't have any check strips. In 2012 I'll use 3 oz. per acre of Representative: in starter fertilizer, and then spray 15 in. bands of Representative: over the row on corn and beans.

This picture is also and experiment of late treated beans as the farmer had extra soysoap and decided to apply after pod-set. There again you can see the difference of ready to harvest brown beans on top of the photo and late treated green beans still growing at the bottom of the picture.

The beans in the lower part of the field have already grown longer by 30 days and we were late taking this picture. But its very obvious the beans are growing longer because of the color as the farmer sprayed just after pod set to extend. We believe we can take determinate beans and make them indeterminate!

Farmer: These beans were planted on August 1st.

Representative: Yeah.

Farmer: We had trouble getting beans up here to start with and now we come back and planted these and we sprayed them a week ago Sunday night, which was 17th of August, I mean now October.

Representative: Why did you do that?

Farmer: Well, I want to see if the soap would keep them from freezing as they start the top of the leaves and the plants are still this green, still growing and filling the pods out and also we wish to have sprayed it there too ahead, but we didn't realize so Sunday night as they were talking about frost on Sunday night and Monday morning. And so we jumped in here and sprayed them on Sunday afternoon. And done a simple good job as far as not letting down so we got all the beans just leaves from going make!

Representative: How cold did it get about?

Farmer: Down to 29. And so these beans have seen 29 degrees two mornings; Monday morning and Tuesday morning too, that was down like here.

Representative: Now these beans are still making huh?

Farmer: Yeah they are still making, they are still putting all in. It's tough that we have another two weeks that we got to little making and they are filling out and doing good.

Representative: These are group four or fives?

Farmer: They are group fives. They are already group fives.

Representative: And where are we located at?

Farmer: We are about ten miles east of Yadkinville, North Carolina.

Representative: Okay. And what do you figure these beans might make, you have only been doing this for about 40 years?

Farmer: Well, what I am seeing right now, we are looking at a crop of 30 bushels.

Representative: Okay. Well, would like to see what happens.

Farmer: Oh yeah, yeah I am really looking forward to seeing what happen to these. I have never seen like a lot yields, but they were these bars, I know even the leaves and all this – all the trees is done and they were green has then turned, these has not.

Representative: Well, I am looking at panning around here and it looks like you got fall here, that's for sure.

Farmer: Yeah.

Representative: And usually that fall doesn't set in before you get some kind of a cold?

Farmer: Well, these beans have stayed green, just after spraying them with the soap, you know.

Representative: And you planted these August 1st?

Farmer: August 1st, now they still existed – this is more experimental with it.

Representative: Now this is August 1st, 2009, isn't that 2008 volunteers are they?

Farmer: No, no, they are – we planted in the ground on August the 1st.

Representative: Well, thanks a lot Freddie.

Farmer: I am on them.

Representative: Okay, well, we will see what happens.

Farmer: All right.

Representative: Thank you buddy.

Farmer: Yeah.