Belize Sustainable Agriculture, Ltd.
Joint Venture Farming Report – October 15, 2013

General Overview

Weather conditions continue to be good for harvesting during the week ended October 12, 2013, and have subsequently been mostly sunny, warm and breezy. Soil moisture remains moist in both Blue Creek and in San Carlos. Given harvesting is in full swing, sunshine certainly is a welcome sight.

The Harvest is progressing, albeit slowly, so this report will be somewhat shorter than normal as there is limited new information to convey. By the end of next week, however, we expect to have considerably more to report on harvest results.

The pattern of extended rains had caused us to become concerned about its impact on prospective yields. Thankfully data collected to date continue to indicate no evidence of material damage to our corn crops in the San Carlos area. We expect no more than a few bushels/acre to be lost due to some ears sprouting at their tips. Soybeans also suffered moderately; we have lost some pods due to fungus although here again we hope that the impact on yields will not be more than a few bushels/acre. The only area where we continue to believe the heavy rains will cause material damage is the last 100 acres of corn planted in Blue Creek...

As a reminder, for those so inclined, you can follow Belize's weather on:

http://www.hydromet.gov.bz/250-km-radar-loop

Also, the methodologies we are using to estimate corn and soybean yields are described in the research papers from leading US university agronomy departments linked below:

http://www.agry.purdue.edu/ext/corn/news/timeless/yldestmethod.html

http://www.ag.ndsu.edu/procrop/sds/estsyb08.htm

Our first harvest at the Thiessen Farm which began on Saturday September 28th is progressing, but is not expected to be finished until October 18th. TF Plantations began its corn harvest on October 11th but put it on hold for a few more days due to corn having high moisture. The new start date is October 16, 2013.

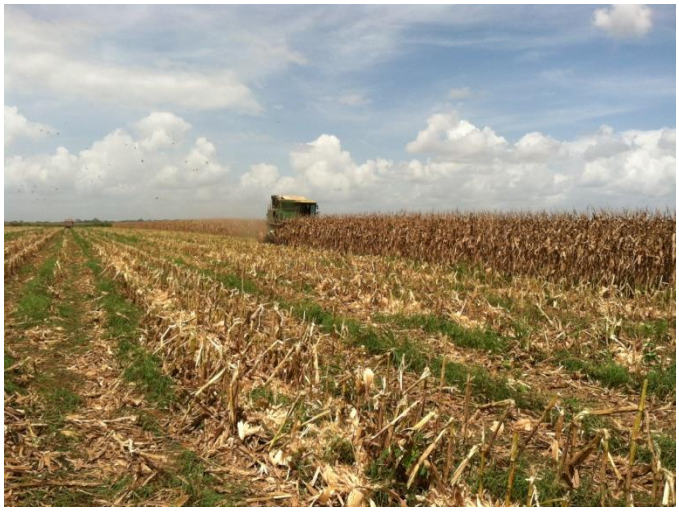
Thiessen Family Farms – 286 acres (143 Irrigated / 143 Dry – 100% Corn)

Corn was planted May 28, 2013. Harvesting began on Saturday September 28th and it looks like we should be finished around October 18th. The Thiessens' drying capacity has been a definite bottle neck. This season the Thiessens have planted more corn than ever, and their yields are higher than in past years. The first 17 acres, in the least promising section of the non-irrigated fields yielded 95 bushels/acre, as they moved into the next non-irrigated section, they harvested yields of 104 bushels/acre. By Friday evening they were harvesting 116 bushels/acre and getting their first small sections of irrigated ground. Yesterday the 15th they were harvesting on a piece if ground that had been planted for the first time and it was yielding almost 130 bushels/acre.

As we reported last week, these plentiful harvests have clearly put a major strain on the Thiessens' drying capacity, which is comprised of batch dryers with an aggregate capacity of about 5 tons/hour. As a reminder these dryers can at most operate for 20 hours per day, the Thiessens' daily drying capacity does not exceed 100 tons/day. In the past where their yields approximated 2 tons/acre they could process 50 acres/day and rarely planted more than 200 acres. At our

current yield levels they cannot even process 30 acres/day, which means they will need 10 days to bring in the JV harvest, having spent a week first bringing in some of their local corn fields in Indian Creek village. While we were aware of the Thiessens' limitations on drying capacity, the combination of unusually wet corn (longer drying periods) and bumper yields has truly stressed their capacity. We will clearly be working on work-around solutions for next summer's corn plantings. The Thiessens have brought in a neighbors harvester and dryer to get the crop off the field asap. As of Oct 15th they needed to harvest their final 60 acres which was about three days' work.

Storage has continued to be a time-consuming issue; considerable effort went into moving some 700 tons of corn from the Indian Creek Co-op to Blue Creek, where we were able to secure additional storage. This, along with some modest corn sales by the Indian Creek Co-op to a Mexican buyer, removed the immediate pressure on their storage problem. Blue Creek appears to have matters more under control; there are no major shortages expected to affect the incoming corn crop.



Thiessen Corn Field - Dekalb 7088 (Oct 4, 2013)

Thiessen Corn harvesting– October 4, 2013

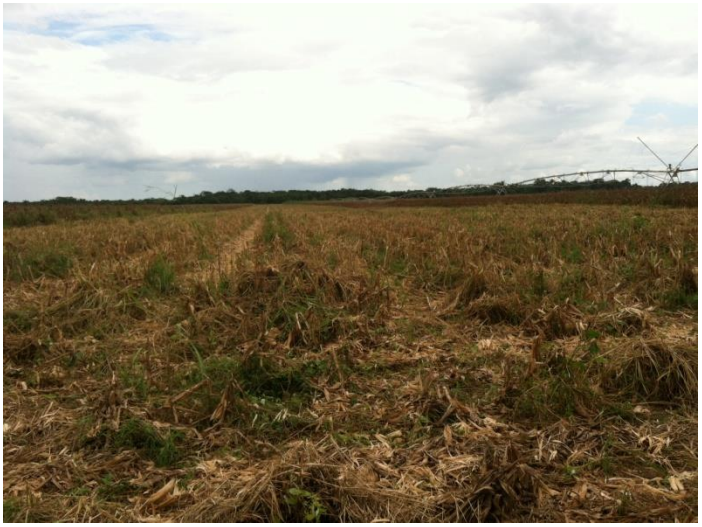
Yield Data for Thiessen fields

Based on harvests to date and our assessment of the (minor) crop damage, we are slightly reducing our yield estimates: **Our projected blended yield is now 115 to 125 bushels per acre.** The range is still wide because we have not harvested significant amounts of irrigated land. As a reminder, these numbers compare with our initial blended (irrigated and non-irrigated) target of 100 bushels per acre, and historical blended yields of 85 bushels per acre.

TF Plantations – 342 acres (259 Irrigated / 83 Dry – 100% Corn)

Fields TF1, TF2T and TF3, also known as "the small pivot field", which was planted on June 10-12, 2013 with seed varieties DeKalb 7088, Syngenta and Pioneer 30F35. TF2T is a trial plot which has strips of all 3 varieties, about double the fertilizer, and is almost 100% irrigated. There was lots of sunshine at the TF farm this past week and the soil has good moisture levels; indeed no additional water between now and harvest would be ideal. Since the soil is of the sandy red variety, water damage due to the heavy rains appears to have been minimal. Due to the need for some additional natural drying these fields are now scheduled for harvest beginning on Wednesday, October 16th. A trial run was made on October 11th, but found moisture to be in the 29% range. A decision was made to hold off a few days. Otherwise,

nothing has changed with these fields, which continue to look really good. All scheduled treatments are now finished and no further work is expected except for harvest.



TF first trial run Oct. 11, 2013

Last week we mentioned that we hoped to confirm further JV farming with TF Plantations. TF have decided that they want to farm the winter crop on their own, but have asked to farm with BSA again for the summer 2014 crop. We are disappointed by this attitude, and will reassess the situation depending on the quality of the current harvest and our success with other growers.

Preliminary Yield Data for TF Plantations Fields TF1 - TF2T - TF3

At the latest Crop Survey in the TF1, TF2T and TF3 the average yield projections remain unchanged, although we are encouraged by the "heavy" feel of the cobs, which might be a source of upside surprise. **We continue to maintain our weighted average yield from the TF Plantations fields TF 1-2-3, but have narrowed the range to 130 to 135 bushels per acre.** This compares with our initial blended (irrigated and non-irrigated) target of 107 bushels per acre, and historical blended yields of 90 bushels per acre. The TF Plantations yields (historic and target) are higher than the Thiessen yields principally due to higher percentages of irrigated land.

Field TF4, also known as "the Large Pivot field"; it was planted 27-28 June, 2013. Seed varieties planted are Pioneer 30F35 - 75 acres, DeKalb - 7088 - 23 acres and Syngenta - 105 acres. Recent spot checks of TF4 show generally well formed ears (except where ear worm damaged occurred) with all ears displaying surprisingly heavy kernels. We may see a final kernel count as low as 80,000/bushel, which could provide a modest upside yield surprise. TF4 is drying nicely and the plan is to continue harvesting with TF4 as soon as TF 1-2-3 are finished. An application of herbicide was applied on TF4 to dry off vines that will impede harvest if not dealtwith.

We are narrowing the range of our forecast with a modest upside bias: 130 to 140 bushels per acre. This compares with our initial blended (irrigated and non-irrigated) target of 107 bushels per acre, and historical blended yields of 90 bushels per acre. The TF Plantations yields (historic and target) are higher than the Thiessen yields principally due to higher percentages of irrigated land.

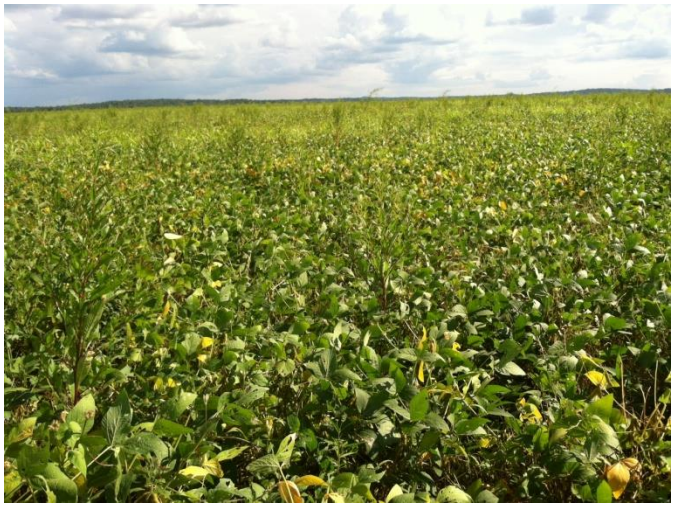
D&H Farms – 224 acres (0 Irrigated / 224 Dry – 125 acres Corn / 99 acres Soybeans)

Soybeans

The soybeans were planted June 27-28 and they are currently about 28 - 30 inches tall, pretty much as tall as they will get. Rain has given us a break again this week on this field and soil conditions are now moist. This field still has a bit of a weed problem; it does not seem to be affecting the plants too much. However we are modestly concerned about the weed problem's impact on harvesting. Now that the soybean plant has stopped growing and the weeds keep growing it does start to look messy, although the plants are looking good for the most part. Typical plant height for this variety is around 30-34" while these plants topped out at 28-30". At harvest a burn down will be applied as always, so hopefully that will take care of the weeds. With the recent return of dry, sunny weather and an application of fungicide right after all the heavy rains; we are no longer loosing pods. However, we will be actively monitoring for any sign of problems.

Pods are filling out nicely. Leaves are starting to yellow which means harvest is near. Plant count remains low (~52k/acre) with an average pod count of (~65). The critical factor to assess yield will be what percentage of the pods which have formed will fill out completely.

Harvest is scheduled for around October 24th.



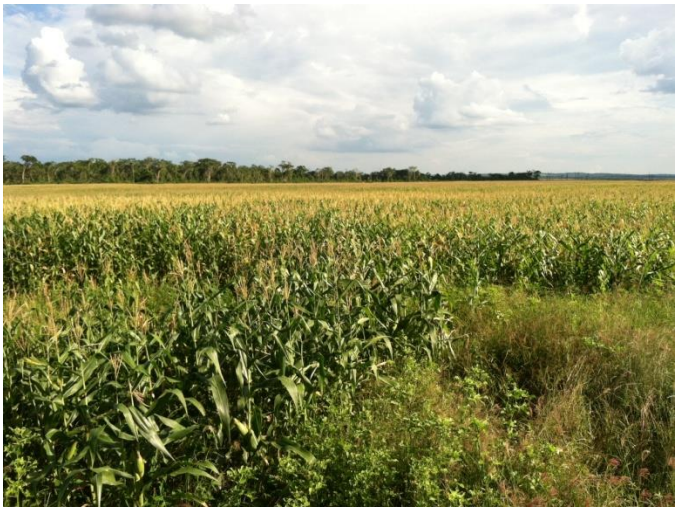
D&H Soybean Field (Oct 14, 2013)

Corn

The small field of some 24 acres planted on June 11, the corn is above 7 - 8 feet high. It is scheduled for harvesting the week of October 14th. It remains very healthy looking corn and the corn silk is drying off nicely. No further worm damage is evident.

No additional crop Survey was performed in the DHC1 Corn field since August 26th.

We are maintaining our forecasted weighted average yield from this small D&H field of 100 to 120 bushels per acre. This compares with our initial target of 71 bushels per acre (!), and historical blended yields of 70 bushels per acre.



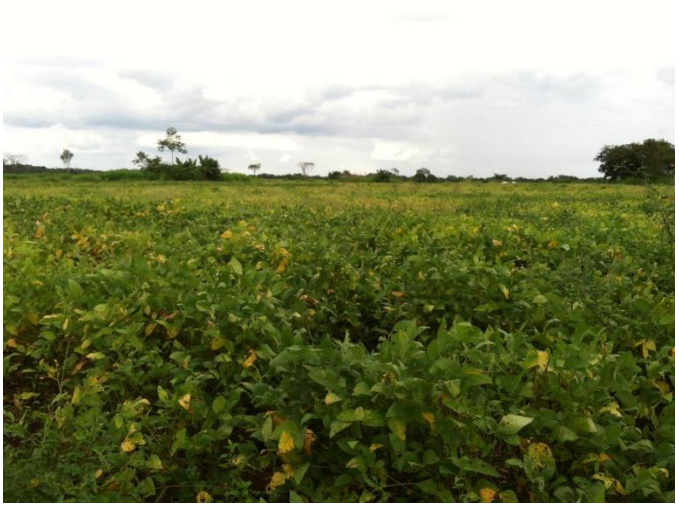
D & H Field 2 (Oct 11, 2013)

The above picture is of field DHC2 (field 2), the last of the JV crops to be planted this season, which was planted on Friday the 26th of July. Corn varies in size, from 5 feet to 7 feet tall. This difference in height in a certain area is mainly due to water logging at certain points of the field especially after constant heavy rains in late August and September. This week is the first week since planting that I have seen the field without water in between the rows. This field is in full tassel and no further nitrogen will be applied. Yields will be well short of our original hopes; we just might make some money off of this field. But the bottom line is that this field has really suffered from excessive water! Despite being planted on 30" ridges, the corn simply got too wet… The ears are small and the kernels are small. Average plant count is ~28,000/acre per acre, yet average ear count is only ~18,000 per acre with an average kernel count per ear of 425. And one thing to remember is that these kernels are smaller than normal, so kernel count will likely be 90,000-95,000/bushel, which would significantly reduce yields. This field has now been hit by what appears to be Tarspot. This will very much affect the yield. Indications are that stress makes the plant more susceptible, and with all the stress of too much water no surprise. About 10% of the field is affected. **We are lowering our yield forecast to 80-90 bushels/acre.** The late planting means that this crop will probably be harvested around December 1st, but our view was very much "better late than never".

The key lesson learned here is that the heavy black soils desperately need good drainage. At the very minimum, a field like this planted again in corn during the summer season would need 38" ridges and additional drains for protection.

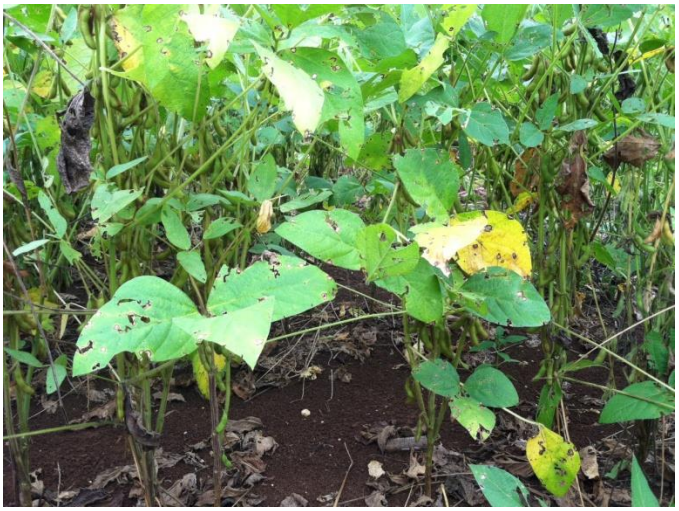
Neufeld Family Farms – 117 acres (0 Irrigated / 117 – 100% Soybeans)

Jacob Neufeld finished planting on June 28, 2013, and despite what looked at first like a low stand on his field, the crop is now looking very good. These fields have received very little rain in the last week. The fields are finished with flowering and pods are filling very nicely. A pod count was done this week again.



Field #JN4- Planted June 28, 2013: 20 acres

Field #JN3- Planted June 27, 2013: 17 acres



A preliminary survey of the four Neufeld soybean fields was carried out on September 9th, and reconfirmed during the week of September 24th. While no new detailed survey was carried out this week, spot checks confirm that pods appear to be filling out nicely and average peas in pods are about 2.5. Pod loss due to fungus appears to have stabilized so we are encouraged about prospects.

The plant count remains steady albeit low at around 27,000/acre. Yet spot checks confirm a very high pod count with good pod formation. So we may come close to our target of 40 bushels/acre.

Summary and Conclusion

We continue to be well pleased with how the various crops have developed, and most of them continue to look really good. We are very excited that the sun continues to shine. Now that things have dried out and we are harvesting, we are waiting to see final yield reports from the Thiessens.

We may come in with an average corn yield closer to 125 bushels/acre than 130 bushels/acre, but this would still be an outstanding result for our first season, especially given the 25 year rain event in August/September. Other corn harvests from non JV farmers in the Orange Walk District continue to be encouraging.

Grain prices were unchanged from last week. However, there have been consistent inquiries from Guatemala and Mexico for corn, with substantial demand around the BZD 0.23-0.24 level, which equates to $6.50-$6.75/bushel. We are in negotiations with Guatemalan buyers who have asked us for 10,000 metric tons of corn which they use to mix with their corn imported from the USA. It is encouraging to hear that they are willing to pay a substantial premium over the CBOT price not just because of cheaper transport cost, but also due to the quality of our corn. We have set a minimum price point of $0.25/lb, FOB the Co-op Gate (USD 7.00/bushel), which we gather has a reasonable chance of being accepted.

This continued further evidence of strong regional demand at a time of weak US and International Benchmark pricing supports our view that Belize is in a uniquely attractive location to address regional agronomic crop demand.

We expect next week's Report to contain final crop yields for the Thiessens and a reasonable amount of information on the TF Plantation harvest. These two farms represent almost 70% of this season's activity so we look forward to having these results. Accordingly we will wait until Friday October 25th to circulate the next report.

Thanks! –

Abe Dyck

Belize Sustainable Agriculture, Ltd. Joint Venture Farming Report – October 5, 2013

Grower	Location	Field #	Acres	Irr?	Soil Type	Crop	Seed Variety	Plant Date	Stand - Date	Fertilizer Program	Comments
Thiessen	SC	1	143.0 142.8 285.8	Y	Sandy loam (Red)	Corn	DeKalb 7088 (25,000 seeds/acre)	May 28	6.5' - 7/13 7.5' - 7/19 8.5' - 7/27 8.5' – 8/3 8.5' – 8/19	170lbs/acre 18-46-0 183lbs/acre 46-0-0	Fertilizing complete. Total pure N this season = 115lbs/acre, versus historic 40-50lbs/acre. Note lack of "K" vs TF fields. Silking underway late July Silk starting to dry off on some ears` Kernels are getting hard 8/19 Ears continue ripening/browning 9/2 + 9/9 **Very Healthy** **High Yield Forecast** **Harvesting 113bu average Oct 6**
TF Plantations	SC	TF1	57.99 14.00 71.99	Y N	Sandy loam (Red)	Corn	DeKalb 7088 (31,000 seeds/acre)	June 10	18" – 7/13 36-42"–7/19 48" – 7/27 8' – 8/3	220lbs/acre 10-26-26 110lbs/acre 0-0-60 65lbs/acre 40-0-0-6 148lbs/acre 46-0-0	Fertilizer program calls for 330lbs/acre base Fertilizer and 150 lbs/acre pure N. This is over 150% higher than historic levels and consistent with requirements for 125-150Bu/acre yields Silking underway 8/3 Silking finished, silk drying off 8/19 Ears continue ripening 9/2 + 9/9 Ears drying nicely 9/16 **Healthy, with some ear worm** **High Yield Forecast**
TF Plantations	SC	TF2T Test Plot	14.72	Y	Sandy loam (Red)	Corn	DeKalb 7088 Syngenta Pioneer 30F35 (38,000 seeds/acre)	June 11	18" – 7/13 36-42"–7/19 47" – 7/27 8' – 8/3 8' – 8/19	330 lbs/ acre 10-26-26 330 lbs/ acre 0-0-60 140lbs/acre 40-0-0-6 260lbs/acre 46-0-0	Test Plot getting major fertilizer boost (up to 100% extra) vs. TF1 and TF3 (which are already way above historic levels) Harvest will be monitored for different result vs. TF1 & TF3 Silking underway 8/3 Silking finished, silk drying off 8/19 Ears continue ripening 9/2 + 9/9 Ears drying nicely 9/16 **Healthy, with some ear worm** **High Yield Forecast**

TF Plantations	SC	TF3	46.40 5.59 51.99	Y N	Sandy loam (Red)	Corn	Pioneer 30F35 (31,000 seeds/acre)	June 12	18" – 7/13 36-42"–7/19 46" – 7/27 7' – 8/3 8' – 8/19	220lbs/acre 10-26-26 110lbs/acre 0-0-60 65lbs/acre 40-0-0-6 148lbs/acre 46-0-0	Same strategy as TF1 Little bit slower in silking 8/3 Silking finished, silk drying off 8/19 Ears continue ripening 9/2 + 9/9 Ears drying nicely 9/16 **Healthy, with some ear worm High Yield Forecast**
TF Plantations	SC	TF4	140.02 63.56 203.58	Y N	Sandy loam (Red)	Corn	Pioneer 30f35 75 acres DeKalb 7088 23 ac. Syngenta 105 ac. (27,000 seeds/ac).	June 27-28	7-8" – 7/13 12-14"-7/19 30-36"–7/27 42-46" – 8/3 7-8.5' -8/19	220lbs/ac 18-46-0 110lbs/ac 0-0-60 142lbs/acre 46-0-0	Same strategy as TF1, some difference in fertilizers due to local availability issues. Tasseling and silking 8/19 Silking finished 9/9 Silk finished drying off 9/16 More worm damage than ideal 9/16 but no new worm damage **Healthy, with some ear worm High Yield Forecast**
D & H	BC	DHS1	99.37	N	Heavy Black	Soy	Huasteca 400 33.44 lbs/acre ~94,000 seed/acre	June 27-29	3-4" – 7/13 7-8" – 7/19 8-10" – 7/27 10-12" – 8/3 14-18"–8/19 24-28"–8/25	40lbs/ac 15-15-15	Summer soybean trial in heavy black Blue Creek soil. Limited Fertilizer program due to modest soybean needs and local soil conditions. Compare with JN. Crop Replanted June 27-28 after first seed had very low germination rates. **Looking promising, water concern subsiding**
D & H	BC	DHC1	24.43	N	Heavy Black	Corn	DeKalb 7088 (Seeds/acre 26,000)	June 11	3.5' – 7/13 5' – 7/19 6.5' – 7/27 7-8' – 8/3 8'+ - 8/19	100lbs/acre 14-36-12 65lbs/acre 46-0-0	Summer corn trial in heavy black non-irrigated Blue Creek soil. Fertilizer program calls for 150lbs/acre base Fertilizer and 75 lbs/acre pure N. (low range but 50% above historic levels) **Looking healthy despite the Sept rains, and within 2-3 weeks of harvest water concerns are subsiding**

D & H	BC	DHC2	100.56	N	Heavy Black	Corn	DeKalb 7088 Syngenta Pioneer 30f35 (seed rate 28,000)	July 26-27	4" – 8/3 16"-8/19 16-36"-8/25	192 lbs/ac 14-36-12 40 lbs/ac 46-0-0 50 lbs/ac 46-0-0 50 lbs/ac 46-0-0 115 lbs/ac 46-0-0 65 acres 45 lbs/ac 46-0-0	Same as DHC1 **Looking better, but yields will definitely be impacted by Sept rains.**
Neufeld	SC	JN1	60.73	N	Sandy loam (Red)	Soy	CARDI 1088 28 lbs /acre ~78,000 seed/acre	June 27	4-6" – 7/13 7-8" – 7/19 8-10" – 7/27 15-19" 8/3 27-33"-8/19 30-36"-8/26 32-38" -9/2	120lbs/acre 15-15-15	Summer soybean trial in sandy red soil. Fertilizer program calls for moderate increase in base and foliar applications **Now looking good given below average germination rate 9/2** **Survey shows Low plant count with very high pod count 9/9** **Pod count remains good 9/17** **Pod count still very high 9/24**
Neufeld	SC	JN2	20.17	N	Sandy loam (Red)	Soy	CARDI 1088 28 lbs/acre ~78,000 seed/acre	June 27	4-6" – 7/13 7-8" – 7/19 8-10" – 7/27 15-18" – 8/3 27-33"-8/19 30-36"-8/26 32-38" -9/2	120lbs/acre 15-15-15	Same as JN1 **Now looking good given below average germination rate 9/2** **Survey shows Low plant count with very high pod count 9/9** **Pod count remains good 9/17** **Pod count still very high 9/24**
Neufeld	SC	JN3	16.56	N	Sandy loam (Red)	Soy	Huasteca 400 28 lbs/acre ~78,000 seed/acre	June 27	4-6" – 7/13 7-8" – 7/19 8-10" – 7/27 16-19" – 8/3 27-33"-8/19 30-36"-8/26 32-38" -9/2	120lbs/acre 15-15-15	Same as JN1 **Now looking good given below average germination rate 9/2** **Survey shows Low plant count with very high pod count 9/9** **Pod count remains good 9/17** **Pod count still very high 9/24**

Neufeld	SC	JN4	19.82	N	Sandy loam (Red)	Soy	CARDI 1088 28 lbs/acre ~78,000 seed/acre	June 28	4-6" – 7/13 7-8" – 7/19 8-10" – 7/27 15-18" – 8/3 27-33"-8/19 30-36"-8/26 32-38" -9/2	120lbs/acre 15-15-15	Same as JN1 **Now looking good given below average germination rate 9/2** **Survey shows Low plant count with very high pod count 9/9** **Pod count remains good 9/17** **Pod count still very high 9/24**