

Belize Sustainable Agriculture, Ltd.
Joint Venture Farming Report – April 7, 2014

General Overview

Weather conditions are windy, hot, and humid; soil conditions on our JV rice fields in Blue Creek are drying out. In San Carlos the soil is becoming very dry due to the red soil type. There was some lighting and thunder activity in the west; a sign that our dry season is coming to an end. The weather forecast predicts thunder storms in the days ahead.

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

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

Thiessen Family Farms – 215 acres (143 Irrigated / 72 Dry – 100% Red Kidney Beans)

The beans were planted December 9th, 17th, and 21st with seed imported from the USA. Seed count at planting was 40,000 seeds/acre with an average of 34,000 plants/acre. We did plant counts in numerous areas and at some acres we got as high as 38,000 plants /acre. Farmers surrounding our farm have planted seeds from the USA and locally collected seed, and the US imported seed definitely performed better. The lack of the latest planting equipment might also play a role in the lower than desired germination rate.

Harvesting of the 215 acres of red kidneys is complete. We are waiting on the final yield report from the Thiessens, which should average about 1,500 lbs/acre. As of today the Thiessens still don’t have a final yield count as that information will only be available after the last of the beans have been cleaned, but it should be close to our 1,500lbs/acre estimate. Approximately 2,000 100lb bags have been already been processed.

The LRKs have been a highly successful crop. Crop cost/acre was ~BZD 1,050 versus revenue per acre of ~BZD 2,600! While LRK prices are historically high and may fall back in the future, we also believe that yields have the potential for further improvement, which could offset lower prices. We consider this crop clearly demonstrates the potential of a dry season crop of edible beans. Moreover, there is very substantial demand for edible beans throughout the Caricom region, where Belize benefits from a highly preferential tariff position that should ensure favorable pricing.



Thiessen RK Beans (March 6, 2014)



Thiessen RK Beans (March 31, 2014)

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RK Beans loaded for shipping; ~500 bags (100lbs each) will be loaded into a 20' Container (March 25, 2014)

Neufeld Family Farms – 336 acres total (100 acres Black Eyed Beans - 0 % Irrigated / 236.34 acres Rice – 100 % irrigated)

Jacob planted 70 acres of BEB on February 18th and 30 acres on February 21st, for a total of 100 acres. The beans are 7 weeks into their growing stage. A few small spots are suffering from nutrient deficiency due to varying soil conditions. Overall though, the black eyed beans look good.



JSN Black Eye (April 7, 2014)



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Jacob has planted all 236 acres of his rice field and weather conditions continue to look good. However, there have been a few setbacks with Jacob's rice. Firstly, there seems to be a slight algae problem, which we attribute to improper fertilization techniques; with proper water management he should be able to control this issue. Secondly, the last 30 acres Jacob planted seemed to have a problem with germination and vigor, which required a replanting. We believe this was due to the germ of the seed being damaged from being stored in a shipping container for a prolonged period of time in the heat, resulting in a lower than desired germination and lack of vigor. Overall, we consider that about 20% of Jacob's fields are looking to generate sub-target yields and will be marginally profitable. The balance of his fields look promising to good.



JSN Rice Fields (April 7, 2014)



JSN Rice Fields (April 7, 2014)

Marlon Dyck – 420 acres (Rice 100 % irrigated)

Marlon has now planted 100% of his fields. Only 90 acres are planted with the original seed, the balance being planted or replanted with new Cheniere seed, which was locally sourced and subjected to rigorous germination tests.

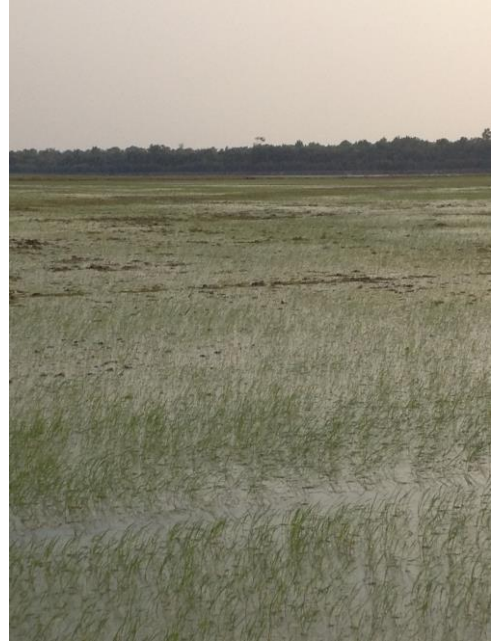
Early indications show that the new plantings are progressing satisfactorily; the original 90 acres are showing adequate behavior albeit not as vigorous as we would have liked. Going forward, we expect to be more inclined to replant any fields that do not show prompt and vigorous growth.

By the next report we expect to have clear indications of stand quality, and while we do not expect to immediately achieve the record yields these fields delivered in the past, we are convinced that this crop has good prospects to deliver very attractive returns, especially in light of the continuing strong domestic demand for rice at a time when domestic production has significantly faltered.

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Marlon Dyck Rice Fields (April 7, 2014)



Marlon Dyck Rice Fields (April 7, 2014)



Close up view of early germination – Marlon Dyck 220 Fields (April 7, 2014)

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Summary and Conclusion

The LRK crop which is now concluded (one last container load is awaiting collection but has been pre-sold at favorable prices) has been an unqualified success. We believe that it is a clear example of the excellent potential of a dry season bean edible bean crop grown on well-drained soil. We averaged yields of 1,500lbs/acre on ground that was 65% irrigated. We believe that over the next 3 to five years, assuming our beans are grown on 100% irrigated ground, a yield target of 2,000 to 2,500 lbs/acre is achievable. Farming margins of BZD 1,200/1,800 per acre should therefore be realized on a consistent basis, thanks notably to Belize's preferential position within Caricom. Lastly, CSA will also be able to establish itself as a reliable supplier that can ensure that Belize's domestic bean requirements will always be met.

We are looking forward to great potential with rice this year; the local prices are high and we can farm some of the best rice land in the country. We expect this to be an attractive first season thanks to our ability to access well developed and proven ground, as well as a highly seasoned partner. We are now convinced that rice can play a very useful role in terms of CSA's crop portfolio diversification as well as allowing us to contribute meaningfully to Belize's food security.

We are also seeing a clear divergence between the performances of our JV partners. Some definitely appear more prepared than others to accept new and different production methods. Prior to the Summer JV period, we expect to be making a selection of those JV partners with which we will be prepared to enter into long term agreements.

Lastly, local grain prices remain steady, with corn selling around the BZD 0.25/lb level, with a few container loads moving off each month to Jamaica and Guyana at slightly higher prices. Edible beans remain strongly bid, as do soybeans and rice...

Thanks.

Ruben Froese

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Grower	Location	Field #	Acres	Irr?	Soil Type	Crop	Seed Variety	Plant Date	Stand - Date	Fertilizer Program	Comments
Thiessen Brothers	SC	T1	24 16 <hr/> 40	Y	Sandy loam (Red)	RK Beans	Red Kidney (40,000 seeds/acre) Pink panther/ Clau Sue	DEC 9/2013	Harvested	14-36-12 35.8lbs/acre 18-46-0 79.3 lbs/acre	Harvest complete 1,500 lb /acre yields Excellent Result
Thiessen Brothers	SC	T2	47 <hr/> 47	Y N	Sandy loam (Red)	RK Beans	Red Kidney (40,000 seeds/acre) Pink panther/ Clau Sue	Dec 17/13	Harvested	14-36-12 35.8lbs/acre 18-46-0 79.3 lbs/acre	Harvest complete 1,500 lb /acre yields Excellent Result
Thiessen Brothers	SC	T3	108 <u>20</u> 128	Y N	Sandy loam (Red)	RK Beans	Red Kidney (40,000 seeds/acre) Pink panther/ Clau Sue	Dec 21/13	Harvested	14-36-12 35.8lbs/acre 18-46-0 79.3 lbs/acre	Harvest complete 1,500 lb /acre yields Excellent Result
Marlon Dyck	San Felipe		80	N	Sandy loam	Milo	(seeds/acre)				Not planted due to weather
Marlon Dyck	Rio Bravo	210- 212 220- 225 231- 236	420	Y	Heavy Black	Rice			220s replanted	21-0-0 1 L/ac. Sinerba Plus .5 L/ac.	210, 220 & 230s planted Mostly strong early germination Stand reports expected April 21 st .
Jacob S Neufled	San Felipe		209	N	Sandy Black	Black-eyed Beans	seed/acre				100 acres planted 18-21/2/14 Mostly promising with a few patchy spots due to local soil conditions.
Jacob S Neufeld	Rio Bravo	110- 113 121- 122	230	Y	Heavy Black	Rice	CHENIERE	5-6- 7/3/14		15-15-15 75 lbs/acre 12-24-12 75lbs/acre	230 acres planted 80% of fields look to produce solid returns.