

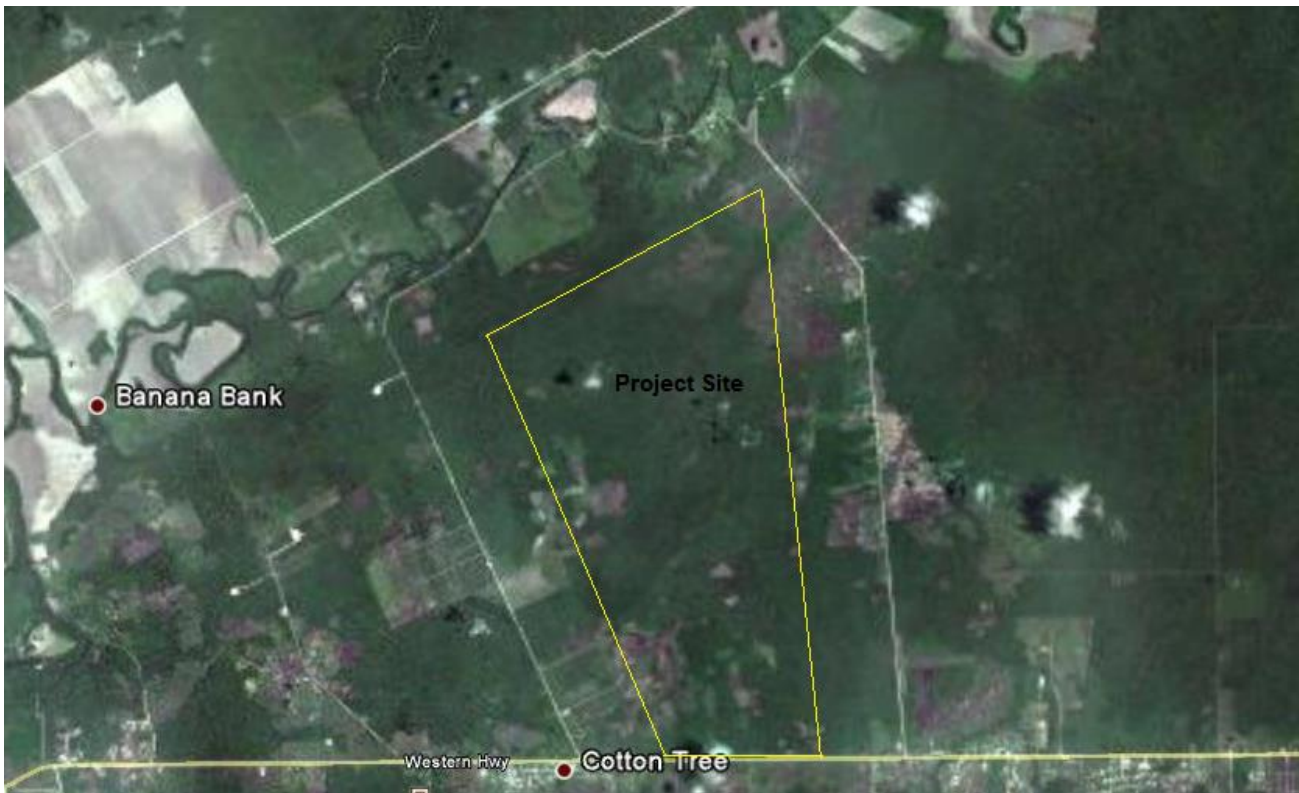
Belize Sustainable Agriculture, Ltd. Farming Report – Jun 05, 2015

General Comments & Weather

This is the first of BSA's regular fortnightly Farming Reports for the 2015 Summer (Wet) Season. We are issuing this initial report on June 5th 2015, and then on a fortnightly basis beginning on June 16th, 2015. This report's main objectives are to:

- Inform readers as to BSA's farming activities by season, farm, and crop
- Provide relevant data on climatic conditions and agricultural pests potentially affecting our crops.
- Inform readers on domestic and regional market conditions for BSA's crops.

The only area where BSA will be farming in the Summer 2015 season is at the Cayo One Estate, situated approximately between miles 40 and 42 of the George Price Highway in Belize, near the village of Cotton Tree in Cayo District. Cayo One is approximately 9 miles east of Belmopan and 38 miles east of the Belize-Guatemala border at Melchor. It is also 41 miles west of Belize City.



Belize had a challenging weather during the past twelve months: after the worse summer drought to afflict Central America since 1976, the Wet season carried into January 2015. Indeed, due to rains that continued well into January, the ground at Cayo One was not ready for land clearing & improvement operations to begin until early March, whereas it is often possible to start these operations in January.

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The table below shows rainfall at Belmopan, which is about 9 miles from Cayo One. Data are shown both for the current year and an average for the past 15 years.

Belmopan Precipitation Data (mm per month)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	195	0.1	56	18	57							
2000-2014	137	55	49	31	132	245	261	238	216	252	165	129

You can (normally) follow Belize’s weather on:

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

Unfortunately, the Belize Meteorology Department weather radar is currently out of commission, and we understand that, owing to Government budget difficulties, the necessary spare parts and technical service to reinstate the weather radar have only recently been ordered and it may not be operational until the end of June. Our fall back weather radar is the US NOAA Hurricane Center weather radar network which monitors the Caribbean basin:

<http://www.nhc.noaa.gov/>

Planting at Cayo One took place between May 27th and May 30th, just after 33 mm of rain fell on May 23rd, which provided a nearly ideal moist seedbed for planting corn.

Cayo One (Corn) – 358 acres (100% Dry)

Cayo One’s goal was set in March 2015 to plant at least 500 acres, of which the original target was 300 acres of corn, 100 acres of rice, and 100 acres of milo. This target was later amended to 350 acres of corn and 150 acres of rice, as the current and prospective economics of milo proved to be abysmal, and the quality of initial ground created at Cayo One was so good that the harvesting benefits of milo (head high above the ground) were substantially eliminated.

Soil tests for the newly created farmland showed a consistently rich black soil with some clay, 3-4% organic matter, pH levels in a range of 6.0 – 6.9, and generally good soil chemistry for freshly cleared land, requiring only a modest structural amendment program. An essential part of BSA’s development program is to perform deep sub-soiling and install tiling where advisable. A shortage of time and resources prevented this from being carried out this year, although a 36 acre sub-section of Field 1 was prepared with a “deep rip sub soiling” for comparative purposes (field 1A).

As of June 4, 2015 358 acres of corn have been planted on 3 fields, which are described in the data table below. Planting took place over 4 days between May 27th and May 30th. The fields are all unirrigated and are substantially similar except for field 1A, which was subjected to a double pass with a deep ripper. We believe that this (relatively expensive) process will improve drainage and should eventually be applied to all Cayo One fields. We will be monitoring the relative progress of field 1A (ripped) compared with the rest of field 1.

All of Cayo One’s fields are virgin ground, having been converted from raw bush in the 12 month period since May 2014. After chaining and burning in 2014, these fields were mostly left untouched until March 2015, at which time they were windrowed and re-burned. Once this was completed and most of the residual timber had been burnt or removed, a

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series of operations took place to improve the ground, involving double chaining with a 15 mt VLCC anchor chain, gangs of local laborers removing larger sticks, mechanized stick clearing equipment removing smaller sticks, and then disking, planing, and harrowing of the fields. Finally, the fields were ready for pre-planting operations.

It is important to note that BSA has budgeted fertilizers based on a 150 bushel / acre (9.4 mt/Ha) yield goal. We do not expect to achieve that yield in this first year of operation, but we are fertilizing to that level in order to begin enhancing our soil quality. Our optimum outcome for this first season would be 110 bushels / acre (6.9 mt/Ha) and our financial budgets assume a yield of 81 bushels / acre (5.1 mt/Ha). It is an inherent part of the CSA's long term business model to assume that for the first five years when virgin ground is converted to farmland yields will be below model and input costs will be above model.

Pre-planting operations involved a disking, a leveling, and a harrowing of the fields, after which a granular base fertilizer was applied. Our 2015 Summer Crop is relying principally on granular based fertilizers, with a modest amount of supplemental liquid fertilizers. Specifics of the fertilizers and their applications are in the data table and lot records below, and are briefly summarized hereunder:

Base Fertilizer: 330 lbs. per acre / 13.31-30.3-13.2+1.77S +0.12B+0.04Cu+0.22Mn+1Zn+0.22Fe

Starter Fertilizer: 1 liter per acre / AlgaEnzims (soil conditioner that enhances fertilizer uptake)
3.5 liters per acre / Nachurs "K-Focus", a liquid fertilizer which provides immediately available potassium.

(Potassium Supplement)

Post-Plant Fertilizer: 275 lbs. per acre / Urea (46-0-0)

Broadly speaking, we will be applying the following core fertilizer quantities:

N: 170 lbs. /acre

P: 100 lbs. /acre

K: 43 lbs. /acre of granular + additional potassium via Nachurs "K-Focus"

There is also an extensive micro-nutrient program as well as a plan for additional ad hoc applications of foliar fertilizers based on plant development.

Weather conditions at planting were almost ideal (a true farmer would say "not entirely terrible") with Cayo One having been quite dry until May 23rd when 33 mm of rain fell.

Four separate germination tests of the DeKalb 7088 corn seed showed rapid germination rates of 97%-98%, which is nearly at the 99% rates typically seen in North America. Seeds were coated with an initial insecticide to protect against ants and ground beetles.

We witnessed rapid and vigorous emergence within 72-96 hours of planting, and our 5 day old seedlings look very healthy, as seen on the pictures below. We will conduct a first stand count prior to our next report, and while it would be unreasonable to expect an ear count in the 90th percentile of seed rate on first year ground, we are encouraged by our early indications of plant emergence and health.

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Planter being prepared – May 26th, 2015



Planter on Field 1 – May 28th, 2015



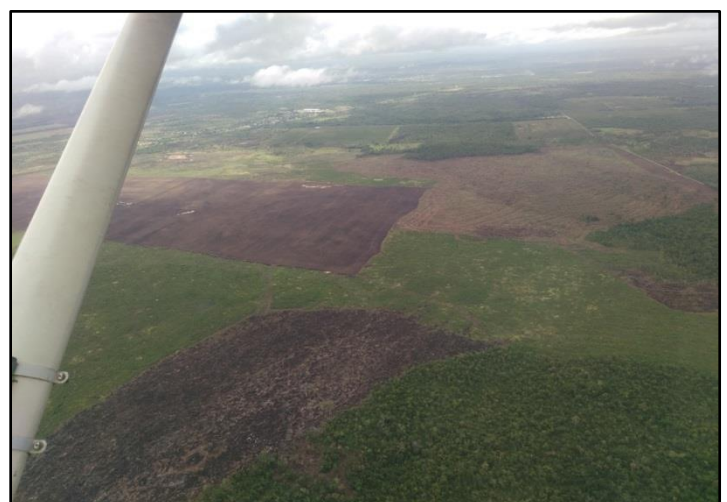
Field One emerges at Day 3 – May 30th, 2015



5 day old seedling – June 2nd, 2015



Field One at Day 8 – June 4th, 2015



Westerly view of Cayo One – June 2nd, 2015

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Summary and Conclusion

Some brief comments on current local/regional market conditions:

Corn

Corn continues to be in short supply locally in Belize, where Belizean buyers are currently paying BZD 0.25-0.27 / lb for local delivery, which equates to USD 7.00 – 7.56 per bushel and USD 276 – 299 per metric ton. Prices in Guatemala are reported to be modestly lower for feed grade corn (net of freight costs to Guatemala) but marginally higher for food grade corn.

Rice

Rice also enjoys a strong market in Belize, although for limited quantities. Local wholesale prices for rough rice (“Paddy rice”) at the mill equate to approximately USD 20.00/cwt or USD 441 /mt. Milled premium rice wholesales for USD 40.00 / cwt, although Belize’s annual consumption of milled rice is not likely to exceed 10,000 mt. We have had informal discussions with potential importers of rice from Guatemala, with prospective prices expected to be close to those achieved in Belize, but we can not yet verify the reliability of these prospective markets.

Soybeans

Soybeans continue to be in short supply in Belize, and what limited production came from the winter season was apparently sold for BZD 0.56-0.60 / lb, which equates to USD 16.80-18.00 / bushel and USD 617 – 660 / mt. We continue to believe that there is local Belizean demand for an additional 10,000-20,000 acres of soybeans to meet domestic livestock feed requirements.

Milo

The milo market in Belize is quite limited, with only a few poultry farmers using it as a staple feed. Local prices have hovered between BZD 0.18 and 0.20 / lb, which equates to 5.04 – 5.60 / bushel and \$198 - \$220 / mt. Accordingly it is one of the few grains to trade at a discount to the USDA cash price (FOB Gulf Ports) which is currently USD 246 / mt.

The entire BSA team is excited to be farming its first crop at Cayo One, and we will be reporting on progress every two weeks. If Mother Nature will look benovolently on us this year, we believe that the summer 2015 crop should be the start of an outstanding track record at Cayo One.

Thanks!

Abram Dyck, John Peters, and the Farming Report Editorial Team

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Grower	Location	Field #	Acres	Irr ?	Soil Type	Crop	Seed Variety (count/acre)	Plant Date	Stand Date	Fertilizer Program <i>(For full details of applications, refer to Lot Records)</i>	Comments
BSA	Cayo One	1A	36	N	Black	Corn	DK 7088 27,000/acre	5/27	TBA	<u>Base</u> 330lbs/acre 13+30+13+Micros <u>Starter 1</u> 1 ltr/acre Algaenzyme <u>Starter 2</u> 3.5 ltr/acre K - Focus	Western strip that received a "Deep Soil Rip" Full Base: 13.31-30.3-13.2+1.77S +0.12B+0.04Cu+0.22Mn+1Zn+0.22Fe Planted just in time ☺
BSA	Cayo One	1B	89	N	Black	Corn	DK 7088 27,000/acre	5/27	TBA	<u>Base</u> 330lbs/acre 13+30+13+Micros <u>Starter 1</u> 1 ltr/acre Algaenzyme <u>Starter 2</u> 3.5 ltr/acre K - Focus	Full Base: 13.31-30.3-13.2+1.77S +0.12B+0.04Cu+0.22Mn+1Zn+0.22Fe Planted just in time ☺
BSA	Cayo One	2	100	N	Black	Corn	DK 7088 27,000/acre	5/28	TBA	<u>Base</u> 330lbs/acre 13+30+13+Micros <u>Starter 1</u> 1 ltr/acre Algaenzyme <u>Starter 2</u>	Full Base: 13.31-30.3-13.2+1.77S +0.12B+0.04Cu+0.22Mn+1Zn+0.22Fe Planted just in time ☺

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										3.5 ltr/acre K - Focus	
BSA	Cayo One	3	133	N	Black	Corn	DK 7088 27,000/acre	5/29	TBA	<u>Base</u> 330lbs/acre 13+30+13+Micros <u>Starter 1</u> 1 ltr/acre Algaenzyme <u>Starter 2</u> 3.5 ltr/acre K - Focus	Full Base: 13.31-30.3-13.2+1.77S +0.12B+0.04Cu+0.22Mn+1Zn+0.22Fe Planted just in time ☺
BSA	Cayo One	4	~ 125	N	Black	Rice		TBA	TBA	TBA	Subject to weather, Fertilizer Spreading expected by June 13 th and planting by June 20 th .

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Lot Records for Fields 1, 2, & 3

GROWER: BSA Date Planted: May 28 2015
 SECTION #: 1
 FARM LOCATION: Cayo One Estates BLOCK #: _____ SOIL TYPE: Black Loam
 CROP: Corn VARIETY: DeKalb 7088 # OF ACRES: 125

LAND PREPARATION					FERTILIZERS			PLANTING			
Discing	Harrowing	Leveling or Land Plane	Cultivating	Other	PREPLANT	AT PLANTING		Seed-Rate	Condition		
2	2	2			See Below	Liquid Dry	See Below	Projected 27,000	Soil dry to moist		

FERTILIZERS						Rain		PESTICIDES					
Date	Analysis	Rate/Ac	Ground	Air	#	Date	Quantity	Date	Description	Rate/Ac	Ground	Air	#
25-May-15	13.31-30.3-13.2+1	330lb	Preplant		1			28-May-15	Cruiser	seed	X		1
28-May-15	AlgaEnzims	1 Litre	Plant		2			29-May-15	Atrazine	1.25lb	X		2
28-May-15	K-Focus	3.5 Litre	Plant		2			29-May-15	Prowl	1 Litre	X		2

COMMENTS: 36 Acre western strip was deep ripped

GROWER: BSA Date Planted: May 28-29, 2015
 SECTION #: 2
 FARM LOCATION: Cayo One Estates BLOCK #: _____ SOIL TYPE: Black Loam
 CROP: Corn VARIETY: DeKalb 7088 # OF ACRES: 100

LAND PREPARATION					FERTILIZERS			PLANTING			
Discing	Harrowing	Leveling or Land Plane	Cultivating	Other	PREPLANT	AT PLANTING		Seed-Rate	Condition		
2	2	2			See Below	Liquid Dry	See Below	Projected 27,000	Soil dry to moist		

FERTILIZERS						Rain		PESTICIDES					
Date	Analysis	Rate/Ac	Ground	Air	#	Date	Quantity	Date	Description	Rate/Ac	Ground	Air	#
25-May-15	13.31-30.3-13.2+1	330lb	Preplant		1			28-May-15	Cruiser	seed	X		1
28-May-15	AlgaEnzims	1 Litre	Plant		2			30-May-15	Atrazine	1.25lb	X		2
28-May-15	K-Focus	3.5 Litre	Plant		2			30-May-15	Prowl	1 Litre	X		2

COMMENTS:

GROWER: BSA Date Planted: May 30, 2015
 SECTION #: 3
 FARM LOCATION: Cayo One Estates BLOCK #: _____ SOIL TYPE: Black Loam
 CROP: Corn VARIETY: DeKalb 7088 # OF ACRES: 133

LAND PREPARATION					FERTILIZERS			PLANTING			
Discing	Harrowing	Leveling or Land Plane	Cultivating	Other	PREPLANT	AT PLANTING		Seed-Rate	Condition		
2	2	2			See Below	Liquid Dry	See Below	Projected 27,000	Soil dry to moist		

FERTILIZERS						Rain		PESTICIDES					
Date	Analysis	Rate/Ac	Ground	Air	#	Date	Quantity	Date	Description	Rate/Ac	Ground	Air	#
27-May-15	13.31-30.3-13.2+1	330lb	Preplant		1			30-May-15	Cruiser	seed	X		1
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COMMENTS: