



***Advancing for a
better tomorrow***

2019 SOUTH EAST ASIA SUGARCANE SUMMIT

JULY 7-10, 2019 | KHAO YAI, THAILAND

75 years **AUSTOFT**

CASE IH
AGRICULTURE



***Advancing for a
better tomorrow***

Biomass Operations – Biopower Philippines

Paul Eric Coveny





- AC Energy is the energy platform of Ayala, one of the largest business groups in the Philippines.
- AC Energy is one of the fastest growing energy companies with over \$1 billion of invested and committed equity in renewable and thermal energy in the Philippines and around the region.



- Independent investment management and banking group based in London
- Principal financial sponsor
- Holds equity positions
- Provides construction finance



BRONZE OAK PHILIPPINES

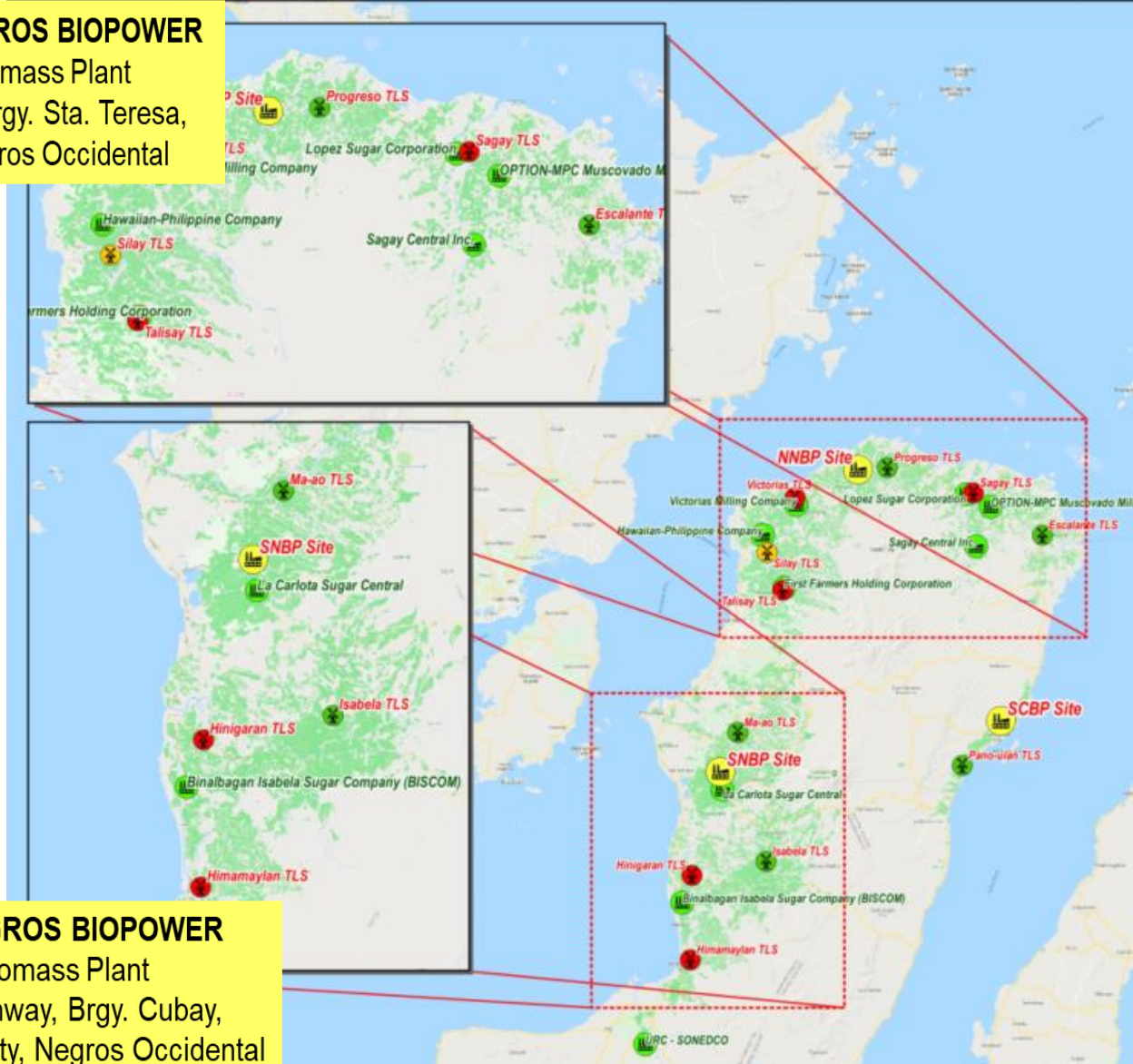
- Leading developer of **renewable energy** in the Philippines
- Plants completed, underway, pipeline
 - Bioethanol plant (SCBI), 143 MW solar plants in 4 locations (Sacasol, Islasol-II & III, Montesol, 70 MW biomass plants (SCBP, SNBP and NNBP under construction)

NORTH NEGROS BIOPOWER

24.99 MW Biomass Plant
Hda. Bariw, Brgy. Sta. Teresa,
Manapla, Negros Occidental

SAN CARLOS BIOPOWER

19.99 MW Biomass Plant
San Carlos Ecozone, Brgy. Palampas,
San Carlos City, Negros Occidental



SOUTH NEGROS BIOPOWER

24.99 MW Biomass Plant
National Highway, Brgy. Cubay,
La Carlota City, Negros Occidental



Project benefits

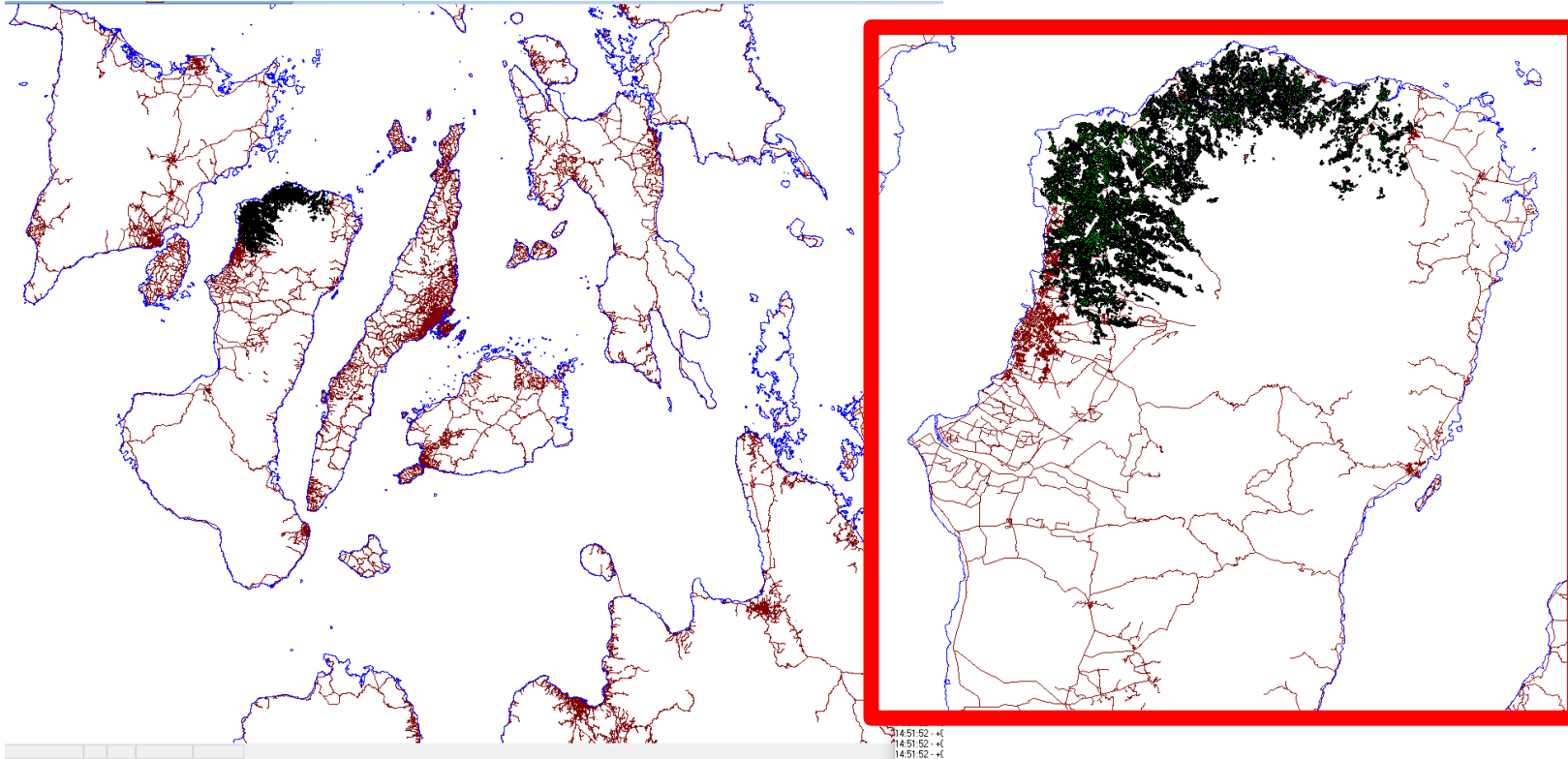
- Increased LGU income
- Creation of jobs and businesses in downstream industries
- Increase in modern agri-mechanical skills

Sustainable and Clean Energy

- A renewable energy project utilizing biomass as boiler fuel meeting the Clean Air Act and Clean Water Act standards.

Biomass operations

Phase	Description
Data Gathering	Farm Evaluation and Digitization



Biomass operations

Phase	Description
Real Time Field Monitoring	Field validation and inspection

BIOPOWER

AGTRIX

TORMES, CASSANDRA PAULINE C

Dashboard

Non-Suit & Non-Avail

Available Paddocks

To Be Harvested Within Two Weeks

On-going Harvesting

RFR / Action

On-going Collection

To Dos (10)

Users

Reports

Paddocks Table

(Current data from last update: Feb 27 2019 07:43:17 AM)

Search Field Name, Field Group, Farm

Search

- Cluster -

- Filter by TLS -

- Status -

- Area -

Clear All Filters

- Company -

*** Note: Please use the filters to display specific items.

1

2

3

4

5

...

next

Farm	Field Group	Field Name	Cluster	TLS	Farm Name	Total Area	N-Suit	N-Avail	Crop	Harvesting	Inspected	Cond. RFR	RFR	Raking	RFC	Collecting	Collected	Decline	Deter	Date Added
Soya	Soya	0.50E		Jonobjo nob TLS	Soya	0.46	0.46													Feb 26 2019 10:49:43 PM
Soya	Soya	0.60B		Jonobjo nob TLS	Soya	0.38	0.38													Feb 26 2019 10:49:43 PM

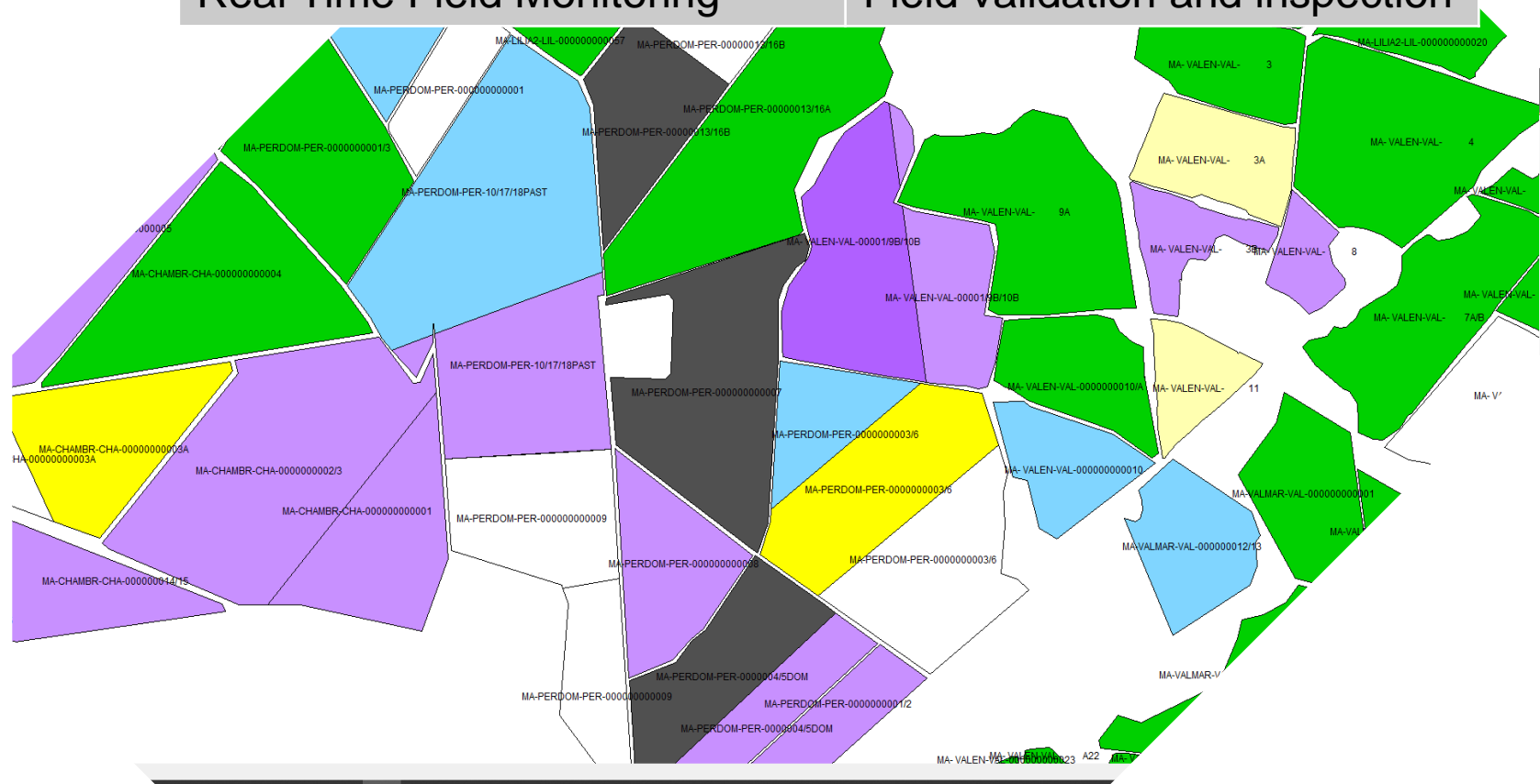
TOTAL

N-Suit	3,906.83	Raking	8.13
N-Avail	9,866.72	RFC	39.30
Crop	75,556.36	Collecting	25.40
Harvesting	1,909.18	Collected	3,196.34
Inspected	1,116.55	Burnt	5,928.09
RFR	17.29	GDC	779.82
RFR	166.10	Deter	419.54

Values will change depending on the filters and user's company.

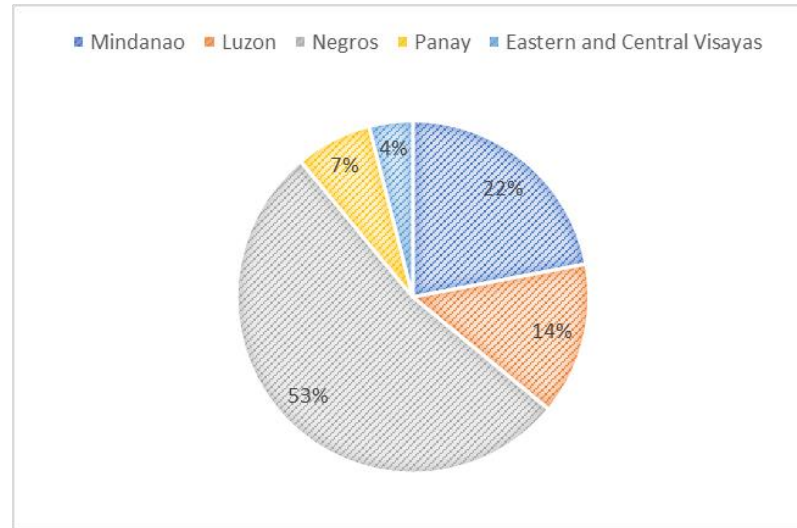
Biomass operations

Phase	Description
Real Time Field Monitoring	Field validation and inspection



Biomass operations

- Philippines' Cane Area 423, 333 hectares



Digitized To-date:

111, 856 has. of which
87% suitable

- Annual Fuel Requirement for 3 Plants
 - 650, 000 tons from approx. 43, 000 hectares

Biomass operations

Phase	Description
Actual Biomass Operations	Real time vehicle tracking and activity logging

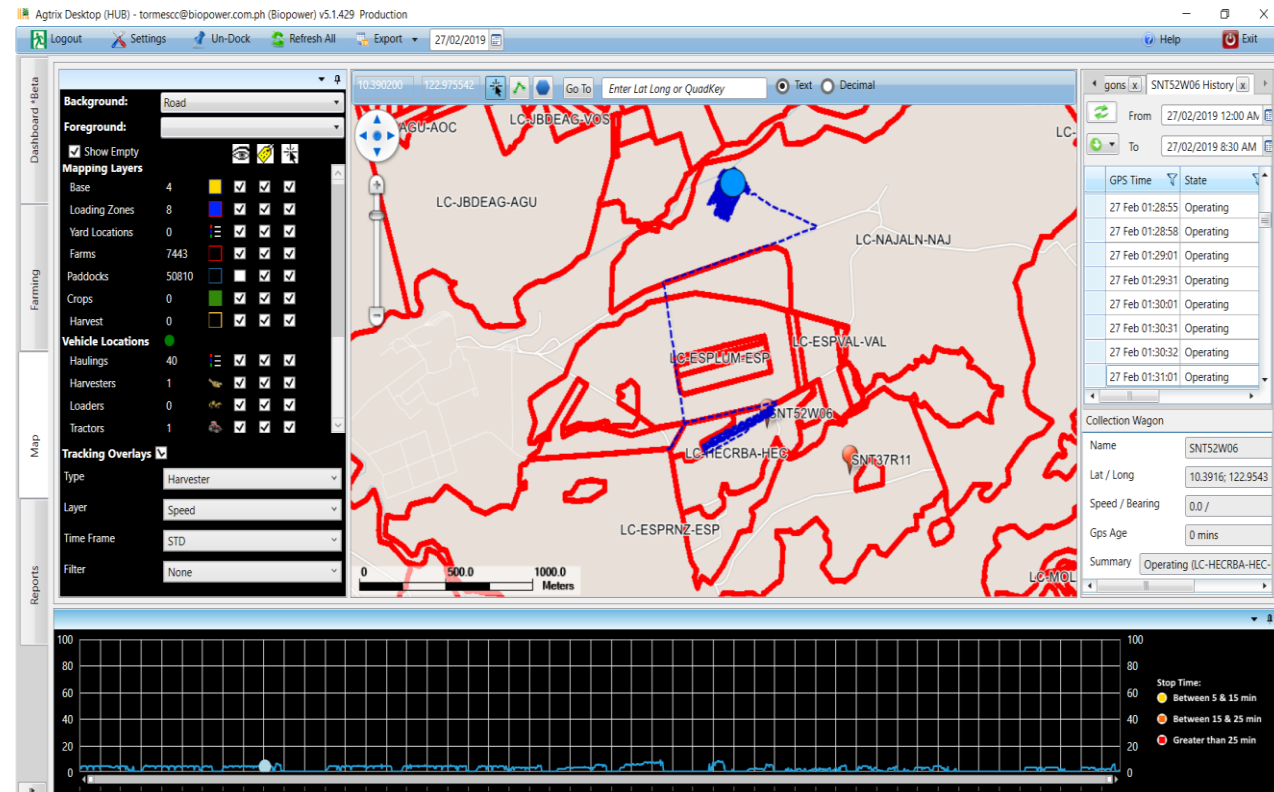
The screenshot displays the Agtrix Desktop (HUB) interface. The main window shows a map of the Philippines with several red location pins labeled with codes like SNT56W10, SNT56W03, SNT56W01, SNT56W04, SNT56W05, SNT56W06, SNT56W07, SNT56W08, SNT56W09, SNT56W10, SNT56W11, SNT56W12, SNT56W13, SNT56W14, SNT56W15, SNT56W16, SNT56W17, SNT56W18, SNT56W19, SNT56W20, SNT56W21, SNT56W22, SNT56W23, SNT56W24, SNT56W25, SNT56W26, SNT56W27, SNT56W28, SNT56W29, SNT56W30, SNT56W31, SNT56W32, SNT56W33, SNT56W34, SNT56W35, SNT56W36, SNT56W37, SNT56W38, SNT56W39, SNT56W40, SNT56W41, SNT56W42, SNT56W43, SNT56W44, SNT56W45, SNT56W46, SNT56W47, SNT56W48, SNT56W49, SNT56W50, SNT56W51, SNT56W52, SNT56W53, SNT56W54, SNT56W55, SNT56W56, SNT56W57, SNT56W58, SNT56W59, SNT56W60, SNT56W61, SNT56W62, SNT56W63, SNT56W64, SNT56W65, SNT56W66, SNT56W67, SNT56W68, SNT56W69, SNT56W70, SNT56W71, SNT56W72, SNT56W73, SNT56W74, SNT56W75, SNT56W76, SNT56W77, SNT56W78, SNT56W79, SNT56W80, SNT56W81, SNT56W82, SNT56W83, SNT56W84, SNT56W85, SNT56W86, SNT56W87, SNT56W88, SNT56W89, SNT56W90, SNT56W91, SNT56W92, SNT56W93, SNT56W94, SNT56W95, SNT56W96, SNT56W97, SNT56W98, SNT56W99, SNT56W100. The sidebar on the left contains sections for Background (Road), Foreground (Show Empty), Mapping Layers (Base, Loading Zones, Yard Locations, Farms, Paddocks, Crops, Harvest, Haulings, Harvesters, Loaders, Tractors, Mud Trucks, Trailers, Rakes, Collection Wagons, Spares, Utility Vehicles), Vehicle Locations (Type: Harvester, Layer: Speed, Time Frame: STD, Filter: None), and Tracking Overlays. The right sidebar shows a table of Farms with columns for Name, Code, Owner, Area, and Volume.

Name	Code	Owner	Area	Volume
ES-	ES-	Biopo	3.41	
ES-	ES-	Biopo	10.05	
ES-	ES-	Biopo	3.20	
ES-	ES-	Biopo	1.36	
ES-	ES-	Biopo	7.12	
ES-	ES-	Biopo	1.01	
ES-	ES-	Biopo	3.12	
ES-	ES-	Biopo	53.08	
ES-	ES-	Biopo	28.54	
ES-	ES-	Biopo	55.87	
ES-	ES-	Biopo	2.78	
ES-	ES-	Biopo	1.08	
ES-	ES-	Biopo	1.50	
ES-	ES-	Biopo	12.87	
ES-	ES-	Biopo	5.48	
ES-	ES-	Biopo	0.36	
ES-	ES-	Biopo	1.01	
ES-	ES-	Biopo	11.30	
ES-	ES-	Biopo	22.74	
ES-	ES-	Biopo	4.47	
ES-	ES-	Biopo	4.64	
ES-	ES-	Biopo	2.07	
ES-	ES-	Biopo	3.29	
ES-	ES-	Biopo	14.26	

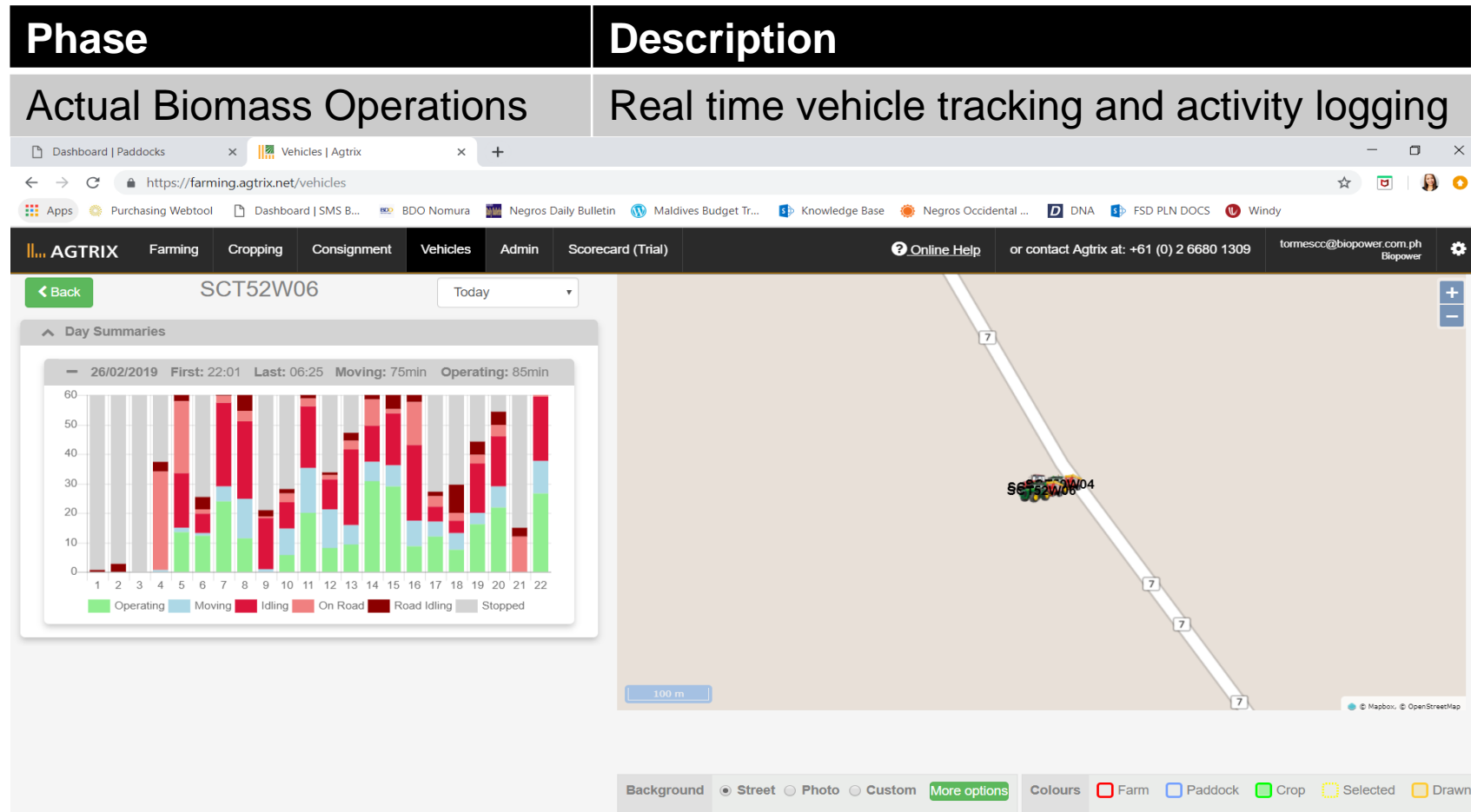
Biomass operations

Phase	Description
Actual Biomass Operations	Real time vehicle tracking and activity logging

Collection Wagons <input type="text" value="x"/>		
Grouping <input type="text" value="None"/>		
Name	Summary	Gps
SCT48W02	Moving (ES-BONBER-B	✓
SCT56W10	Operating (MA-CHAM	✓
SCT50W04	Stopped (MA-FZBYBS-I	✓
SCT57W11	Stopped (MA-CHAM-C	✓
SCT51W05	Stopped	✓
SNT52W06	Operating (LC-HECRBA	✓
SNT51W05	Moving (LC-CANMAN-	✓
SCT58W12	Operating (LC-BANTOL	✓
SCT47W01	Stopped (SC-VALFO-I	✓
SCT55W09	Stopped	✓
SCT52W06	Stopped (MA-FZBYBS-I	✓
SNT50W04	Operating (LC-CRIDAD-	✓
SNT55W09	Stopped	✗
SCT58W12	13 hours	✗
SCT56W10	16 hours	✗
SCT54W08	19 hours	✗
SCT53W07	20 hours	✗
SNT48W02	2 days	✗
SNT47W01	3 days	✗
SNT54W08	5 days	✗
SNT53W07	7 days	✗
SNT49W03	7 days	✗
SCT49W03	10 days	✗
SNT57W11	10 days	✗



Biomass operations



Biomass operations

Phase	Description
Actual Biomass Operations	Real time vehicle tracking and activity logging

AGTRIX

Farming

Cropping

Consignment

Vehicles

Admin

Scorecard (Trial)

Online Help

or contact Agtrix at: +61 (0) 2 6680 1309

tormesco@biopower.com.ph

Biopower

Harvest Front

Select Harvesting Front...

Configuration

Farm

Field

Wet

✖

Burned

(Local)

Summary Period From: 27/02/2019 12:00:00 am

Harvest Front	Mill	Last Received	Total	08 AM	07 AM	06 AM	
SNT50W04 : SNT50W04	-	08:18 am Wed 27/02/2019	12	1/0	1/0	2/0	
SCT48W02 : SCT48W02	-	08:36 am Wed 27/02/2019	12	2/0	4/0	2/0	
SNT55W09 : SNT55W09	-	03:25 am Wed 27/02/2019	7	-	-	-	
SCT57W11 : SCT57W11	-	08:34 am Wed 27/02/2019	8	2/0	-	3/0	
SNT51W05 : SNT51W05	-	08:27 am Wed 27/02/2019	21	4/0	3/0	14/0	
SCT52W06 : SCT52W06	-	06:31 am Wed 27/02/2019	9	-	-	1/0	
SCT56W10 : SCT56W10	-	08:30 am Wed 27/02/2019	12	2/0	3/0	1/0	
SNT58W12 : SNT58W12	-	07:31 am Wed 27/02/2019	9	-	1/0	1/0	
SCT47W01 :							

Farm Block	Bin	Split	Cut	Green	LZ
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9642	100	08:18 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9641	100	07:17 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9640	100	06:59 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9639	100	06:36 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9638	100	05:56 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9637	100	05:29 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9636	100	03:32 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9635	100	03:04 am Wed 27/02/2019 +0800	B	LCCentral
LC-CRIDAD-HIN - LC-CRIDAD-HIN-000000000015	9634	100	02:24 am Wed 27/02/2019 +0800	B	LCCentral

Challenges

- Weather
- Non-mechanize farming practices
- Slow harvesting rate
- General lack of the adaption of technology in all sectors
- Spontaneous combustion

Road map

- Finalize the 3 current projects
- Expand the operations throughout the Philippines
- Work closely with growers to implement modernize farming practices
- Possible vertical integration to commercial harvesting

Our Case IH range

- Current Fleet
 - 48 Puma 155
 - 18 Maxxum 140
 - 20 Farmall 100JX
- Upcoming Deliveries
 - 3 Puma 155
 - 2 Maxxum 140
 - 2 Farmall 100JX
 - 14 Farmlift 632 Telehandlers

Why Case IH?

- Excellent local support by Filholland Group
- High parts stocking to keep our fleet operational
- Great back up support from CNHi Asia Pacific
- Filholland and CNHi proven to be the best partner to support our business needs