



Cropin™

CASE STUDY

2020



**Empowering Major Sugarcane Producer in Africa
Through Digitisation of Entire Agri-value Chain**



The Customer

The customer is a family-owned and managed business involved in various business activities, mainly in agro and agro-processing, manufacturing and real estate. In 2015, the company established a venture called Mansa (MS) in Zambia that works closely with over 10,000 small-scale farmers, cultivating a total of approximately 15,000 hectares of land in

order to ensure a constant supply of cane to the plant. The company provides agricultural know-how to the farmers as well as assistance in sourcing materials essential for the cultivation of high-quality cane. The plant is fully self-sufficient in its energy usage by generating power from waste to reduce its eco-footprint.

The Challenges

MS consists of 3 major sugarcane plantations that are subdivided into pivots and sectors, each having their own scouts, supervisors and managers. The organisation faced difficulty in operational management as there was no centralised system in place that provided effective data monitoring and management. Various teams carried out data collection and reporting using basic tools such as pen, paper and spreadsheets. This excessive dependence on human labour resulted in more data loss and inconsistencies in reports.

Some of the specific challenges that the organisation faced included:

- Cumbersome and cost-ineffective process of the scout to capture data
- Loss of data due to manual data collection through forms
- No validation of scout team data and activities
- Difficulty in monitoring the quantity of agro-chemicals applied

The Challenges

- Lack of irrigation insights for plots
- Lack of alerts for pest and diseases to take timely action
- No reporting on SMT (Small Mill Test) results
- No tracking of irrigation activities
- No tracking for scouting (root and shoot) activities



Objectives

- A centralised platform for digitizing all the farm data
- Proper record of the planting and Agri input schedules that are available on an interactive dashboard
- Increase productivity
- Promote process transparency
- Provide timely pest and disease alerts
- Track irrigation activities
- Standardise operations across teams

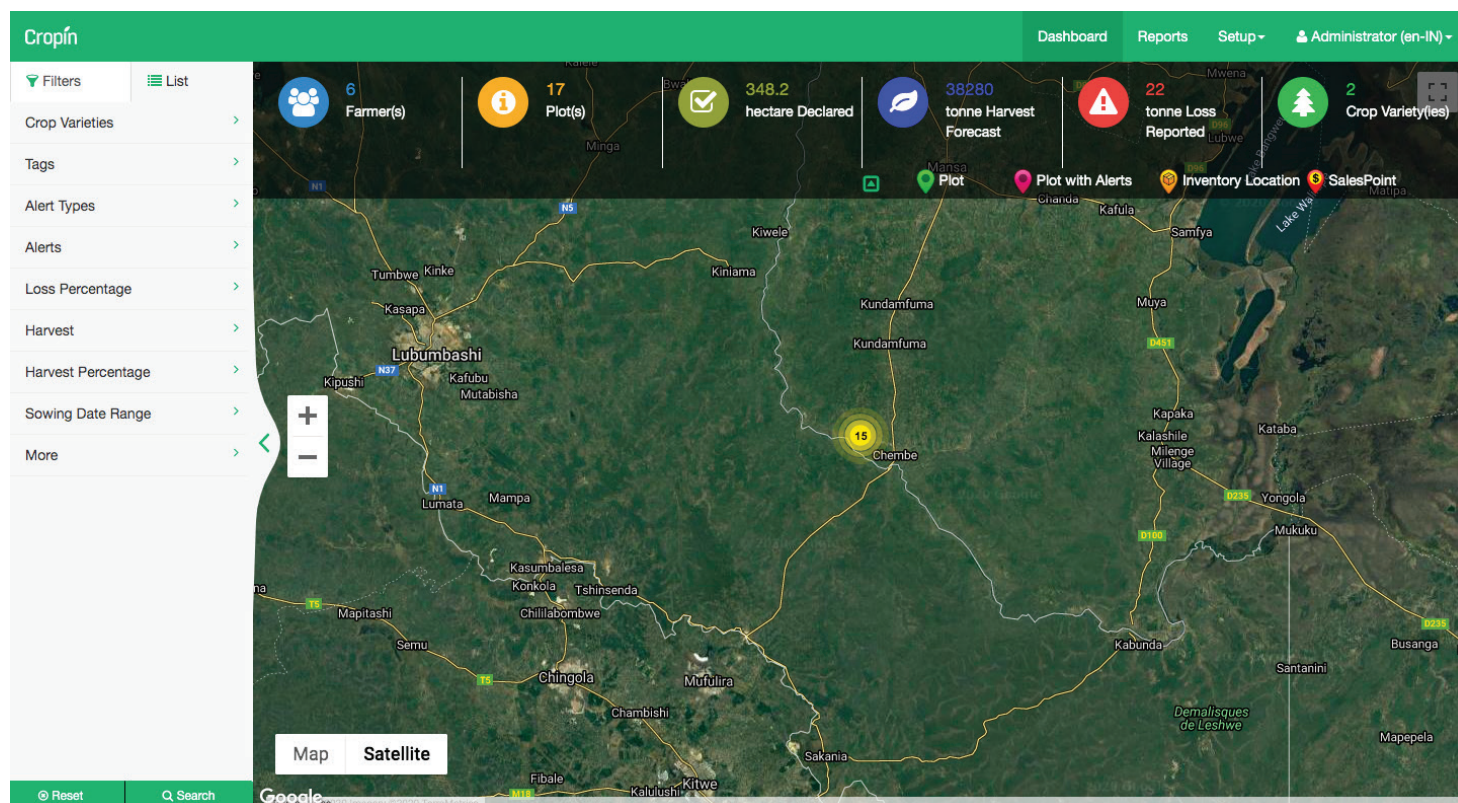
Our Solution

MS was looking to institute a sound system to monitor on-field activities and keep a keen eye on the use of agri-inputs in 3 major sugarcane farms in Africa. Evidently, digitisation of farm operations was considered the first step towards addressing their core challenges in farm management.

SmartFarm, CropIn's end-to-end farm management solution, was implemented to monitor various farm activities leading up to the harvest. The scouting team creates complete digital records of the farm along with details regarding the crop in

cultivation. The data collected from the farm is then saved on CropIn's secure cloud platform, which can then be accessed by the key members of the company anytime, anywhere.

SmartFarm also delivers accurate real-time insights in the form of customisable reports based on the ground-truth data and empowers the organisation with data-driven farming and farm management by tracking, managing and monitoring every step of the process to increase productivity, traceability, and output predictability.



- The client, convinced of CropIn’s capabilities for their unique requirements, partnered with them in 2019 and it resulted in CropIn **digitising 1500 hectares of farmland in Africa**.
- CropIn is enabling the organisation to remotely monitor and manage sugarcane plantations to achieve **100% digitisation of data** for increased visibility and efficiency of operational activities.
- **Daily task scheduling for scouts, supervisors, and field managers** was introduced so now they can focus their effort into accomplishing tasks that are more critical to business and field operations
- The organization can now keep a track of **plot-wise Agri input application** to measure the deviation from their plan
- The organisation used real-time alerts and reports for the **identification of crop stress areas** and to help farmers take preliminary action to monitor and mitigate the stressed plots. This helped the farmers to reduce the delay in taking corrective actions and increase their production
- With SmartFarm, the scout team has been able to **digitize scouting (roots and shoots)** activities so that data is organized and is readily available
- The organization has also been using SmartFarm **to register the irrigation activities** in the fields to manage water resources more efficiently
- As it can be observed, the combination of convenience and ease of use, along with a smart package of numerous practical yet unique features has resulted in the success of the CropIn- SVG partnership. In the years to come, **CropIn is set to scale up its services by leveraging its cutting-edge AI- and ML-based solutions** for all-round progress of SVG's operations

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Additional Forms | Edit Additional Forms (Farm Manager Weekly Visit form)

Select Crop Variety with Role Applicable

Search For Crop Variety

- Sugarcane - N41_Plant_Late
 - Super User Role
 - Director
 - CEO
 - Agro Director
 - Agro Ops Head
 - Farm Manager
 - Supervisor
 - Scout
- Sugarcane - N41_Plant_Very_Late
 - Super User Role
 - Director
 - CEO
 - Agro Director
 - Agro Ops Head
 - Farm Manager

Form Sequence 3 Save

Form Type * Plot Forms

Form Name * Farm Manager Weekly Visit form

Capture Image Geo Coordinates Signature Requires Approval Include in Plot Registration

Note : Custom forms which capture GeoCoordinates or Signature cannot be filled/uploaded from web

Add Field

Action	Sequence No	Field	Datatype	Default Value	Is Mandatory	Min Value	Max Value	Options
<input checked="" type="checkbox"/>	1	Soil moisture	DropDown		<input checked="" type="checkbox"/>			<input type="checkbox"/>
<input checked="" type="checkbox"/>	2	Weed Rating	DropDown		<input checked="" type="checkbox"/>			<input type="checkbox"/>
<input checked="" type="checkbox"/>	3	Crop height (cms)	Number		<input checked="" type="checkbox"/>			NA
<input checked="" type="checkbox"/>	4	Crop health	DropDown		<input checked="" type="checkbox"/>			<input type="checkbox"/>
<input checked="" type="checkbox"/>	5	Description for crop health	Text		<input type="checkbox"/>			NA
<input checked="" type="checkbox"/>	6	Pest / Disease	DropDown		<input checked="" type="checkbox"/>			<input type="checkbox"/>
<input checked="" type="checkbox"/>	7	Affected area (Ha)	Number		<input checked="" type="checkbox"/>			NA
<input checked="" type="checkbox"/>	8	Description	Text		<input type="checkbox"/>			NA
<input checked="" type="checkbox"/>	9	General comments	Text		<input type="checkbox"/>			NA



Scouting_Shoot							
Trial plot	No. of stalks	Height (cms)	No. of Nodes	Internode length (cms)	Cane Dia (cms)	Weed Rating	Remarks
2	21.0	30.0	0.0	0.0	0.0	10% - 25%	urgent weeding
1	53.2	0.5	0.0	0.0	0.0	0% - 10%	
2	58.7	0.4	0.0	0.0	0.0	0% - 10%	
3	54.7	0.5	0.0	0.0	0.0	0% - 10%	
4	59.9	0.4	0.0	0.0	0.0	0% - 10%	
5	53.7	0.4	0.0	0.0	0.0	0% - 10%	
1	53.6	0.5	0.0	0.0	0.0	0% - 10%	
2	60.8	0.4	0.0	0.0	0.0	0% - 10%	
3	56.9	0.5	0.0	0.0	0.0	0% - 10%	
4	59.2	0.5	0.0	0.0	0.0	0% - 10%	
5	53.8	0.5	0.0	0.0	0.0	0% - 10%	
1	60.7	0.9	0.0	0.0	0.0	10% - 25%	weeding is taking place. irrigation done
2	63.62	0.9	0.0	0.0	0.0	10% - 25%	weeding is going on. irrigated
3	62.7	0.8	0.0	0.0	0.0	10% - 25%	weeding is taking place. irrigation is taking place
4	63.51	6.0	0.0	0.0	0.0	10% - 25%	weeding is going on. irrigated
5	59.31	0.8	0.0	0.0	0.0	10% - 25%	weeding is going on. irrigated
1	60.72	0.9	0.0	0.0	0.0	0% - 10%	irrigated. gap filling not yet completed. weeding is going



SmartFarm™

FARM
MANAGEMENT
SOLUTION



SmartRisk™

AGRI BUSINESS
INTELLIGENCE
SOLUTION



SmartWare™

PACKHOUSE
SOLUTION &
TRACEABILITY



SmartSales™

INPUT CHANNEL
MANAGEMENT
SOLUTION



AcreSquare™

A B2B FARMER
ENGAGEMENT
APPLICATION