I. System Overview

Sugarcane Monitoring and Farmer Assistance System for SRA is an information system that aims to assist and provide recommendations faster to the farmers. It is also aimed at assisting the Mill district officer in creating observations that will help in making better analysis that can be used for providing more farming practices. Lastly, it aims to assist board members in decision making with regards to programs and sugar allocation

The user manuals are provided to the users of the company for them to know how the system works and for a clear walkthrough of the modules and different features as well as for the installation of the system

II. Installation

1. System Requirements

A. Software

- Windows 7 or higher
- NetBeans 8.02
- Android Studio
- Apache Tomcat
- MySQL
- GitHub
- Google maps
- Internet Browser preferably Google Chrome

B. Hardware

- 4GB RAM and above
- Intel i3 dual core and above
- 2GB free hard disk space
- Android Smartphone
- Internet Connection

2. Preparing the Database

1. Install MySQL from https://dev.mysql.com/downloads/installer/
2. Open MySQL
3. Click "File" and Select **Open Model**
4. Choose the given file (.wbm)
5. Click Data and Select **Forward Engineer**

3. Running the Web Project

1. Open Web Browser
2. Navigate to **https://github.com/jartantupjar/Reality**

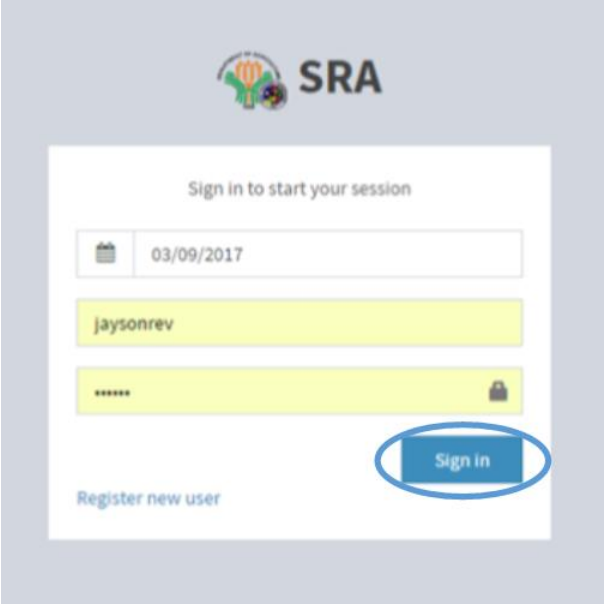
3. Click on the "Clone or download" button
4. Copy to clipboard the link being provided such as **https://github.com/jartantupjar/Reality.git**
5. Open the Netbeans IDE
6. Navigate to **Team>Git>Clone** from the main menu
7. At the Remote Repository page of the Clone Repository wizard, input the copied link URL from Github in the Repository URL field
8. Click "Next" button
9. At the Remote Branches page, tick the "master" repository
10. Click "Next"
11. At the Destination Directory page click on "Finish"
12. After the repository is cloned, the Clone Completed message displays.
13. Click the project name(**Reality**) in the Projects window in order to save it as the primary project.
14. Navigate to Reality>Source Packages>db>DBConnectionFactory.java
15. replace the **url**,**username** and **password** based on the MYSQL user settings
16. On the keyboard, press CTRL+S to save the file
17. Now click on the **Green** ► button to run the project.

4. Run SRA Mobile Application

1. Open the project in NetBeans
2. Click "File" and select Open Project
3. Click the given file named "SRAMobile"
4. Now click on the **Green** ► button to run the project.
5. For the mobile app, click the given apk file.
6. Select "Install"

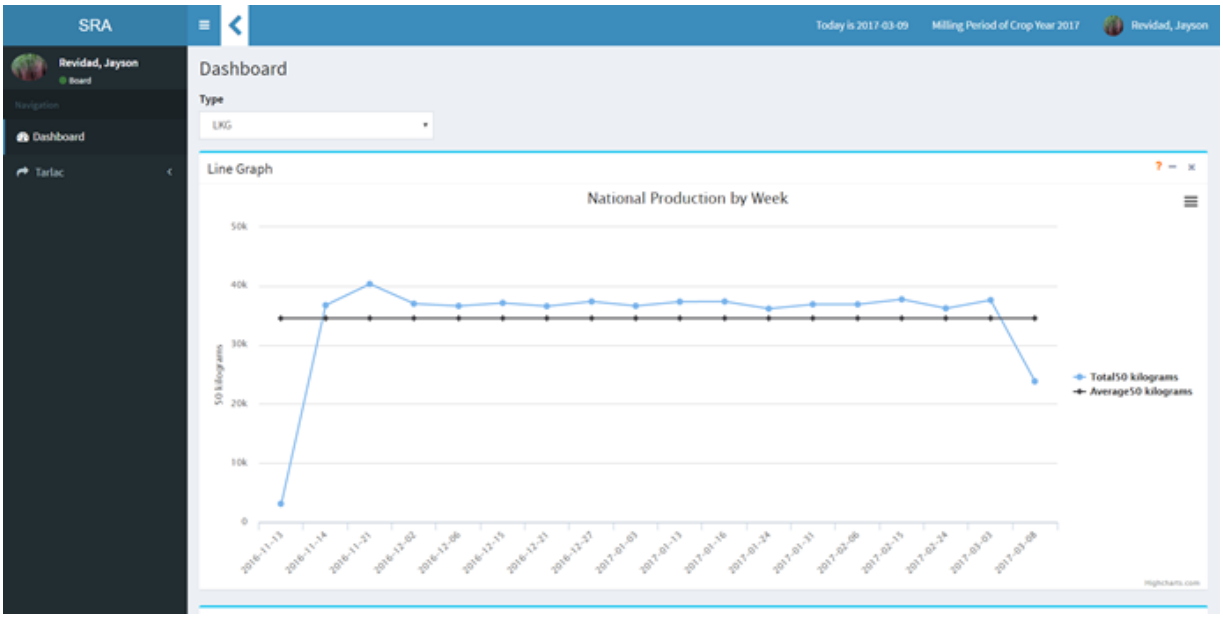
1.0 Logging in

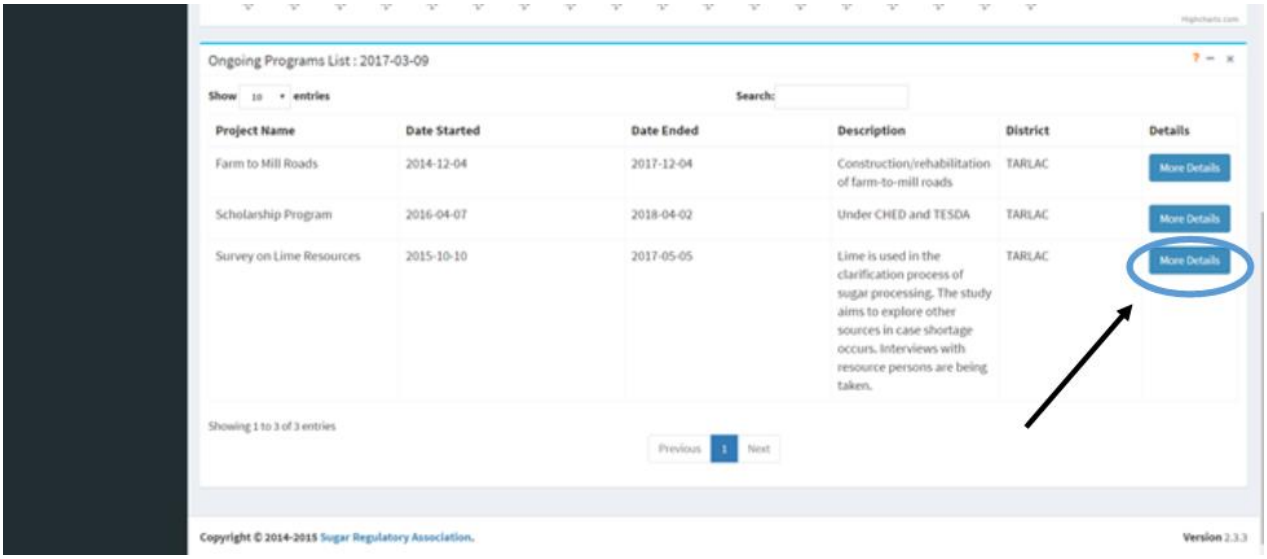
Login to the system with the board member account by entering the username and password then click "Sign in"



2.0 Homepage

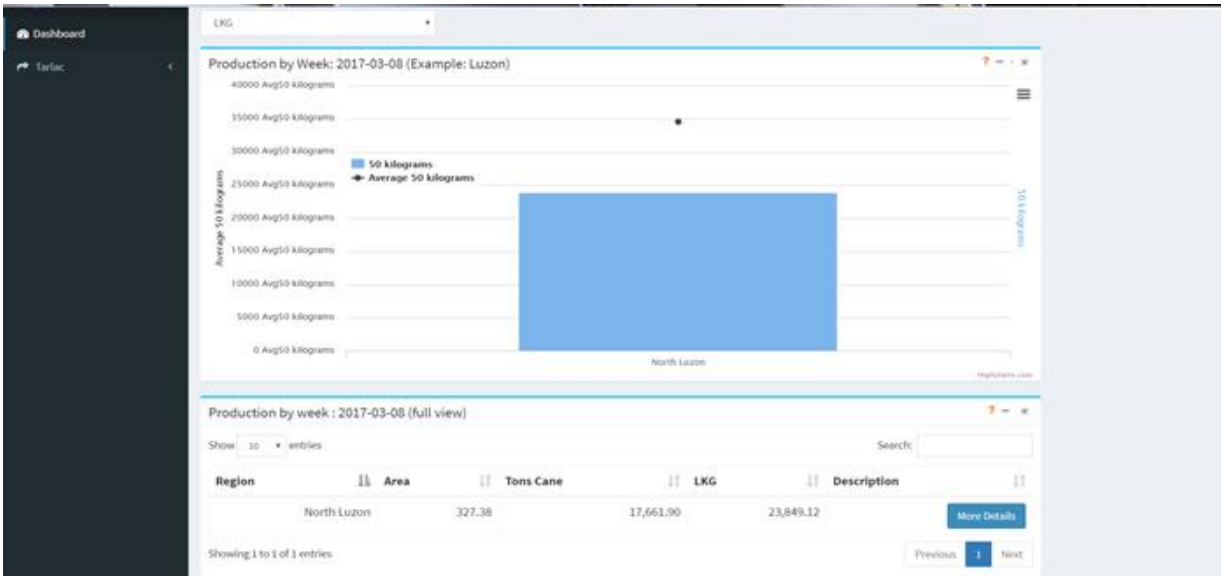
The homepage or dashboard contains the graph of the weekly production and the list of ongoing programs. The user has an option to click "More Details" to access the program details or to click the graph to drill down.





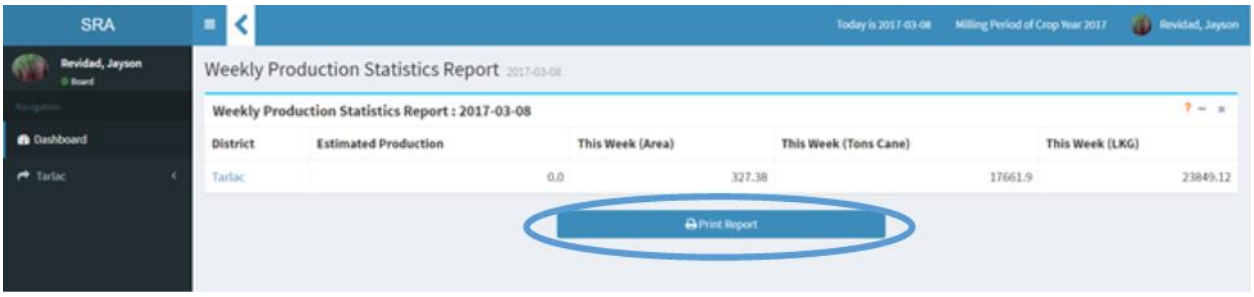
2.1 Weekly production(Region)

When the user drills down the graph, the user can see the production of Luzon. The user has the option to click "More Details" to access the production of North Luzon.



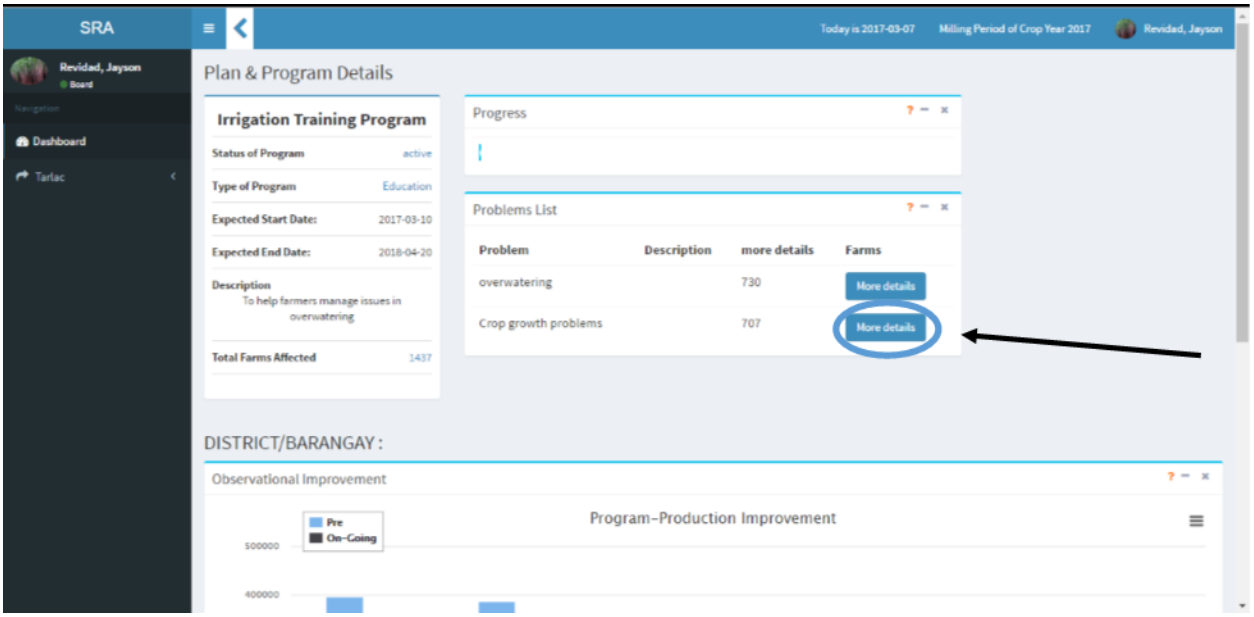
2.2 Weekly Production Statistics Report(District)

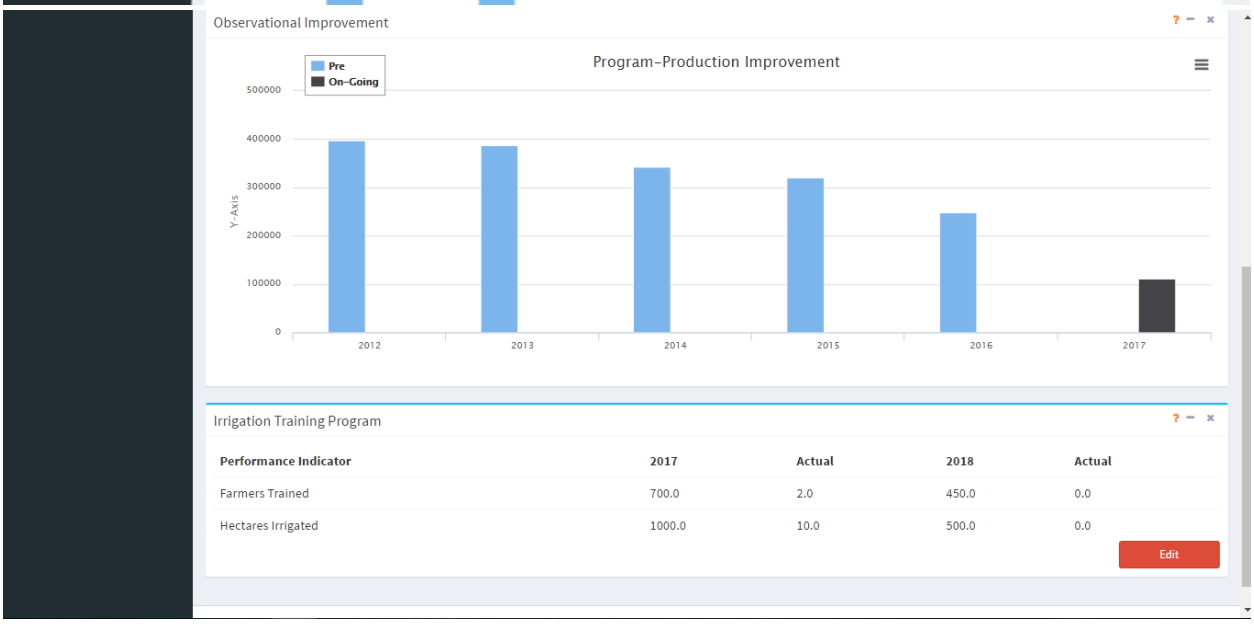
The user can see the weekly production statistics report for the district/s in North Luzon. He has the option to click "Print Report" to generate the report.



3.0 View Programs

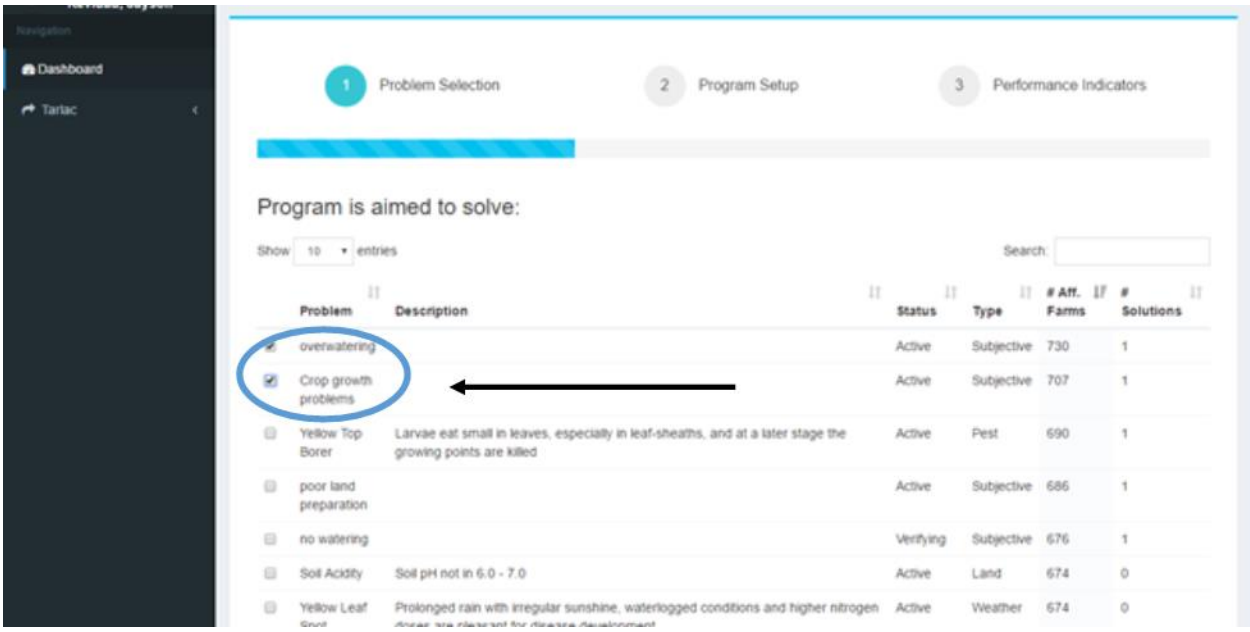
From the dashboard, when the user clicks "More Details" in the ongoing programs list, the program details are displayed



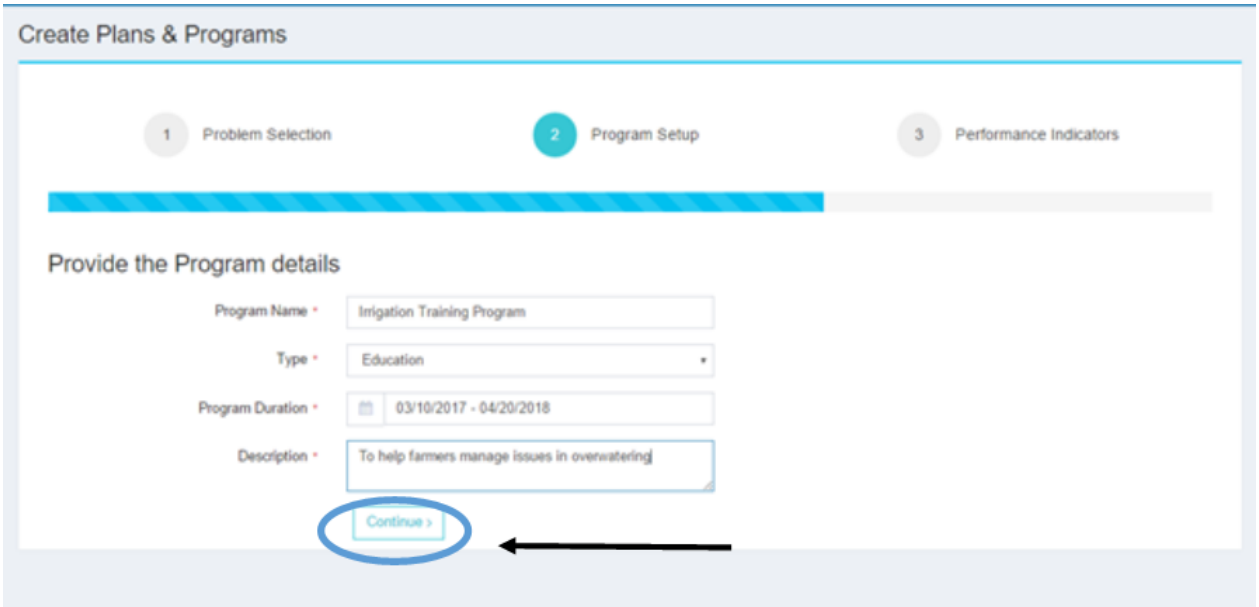


4.0 Create Programs

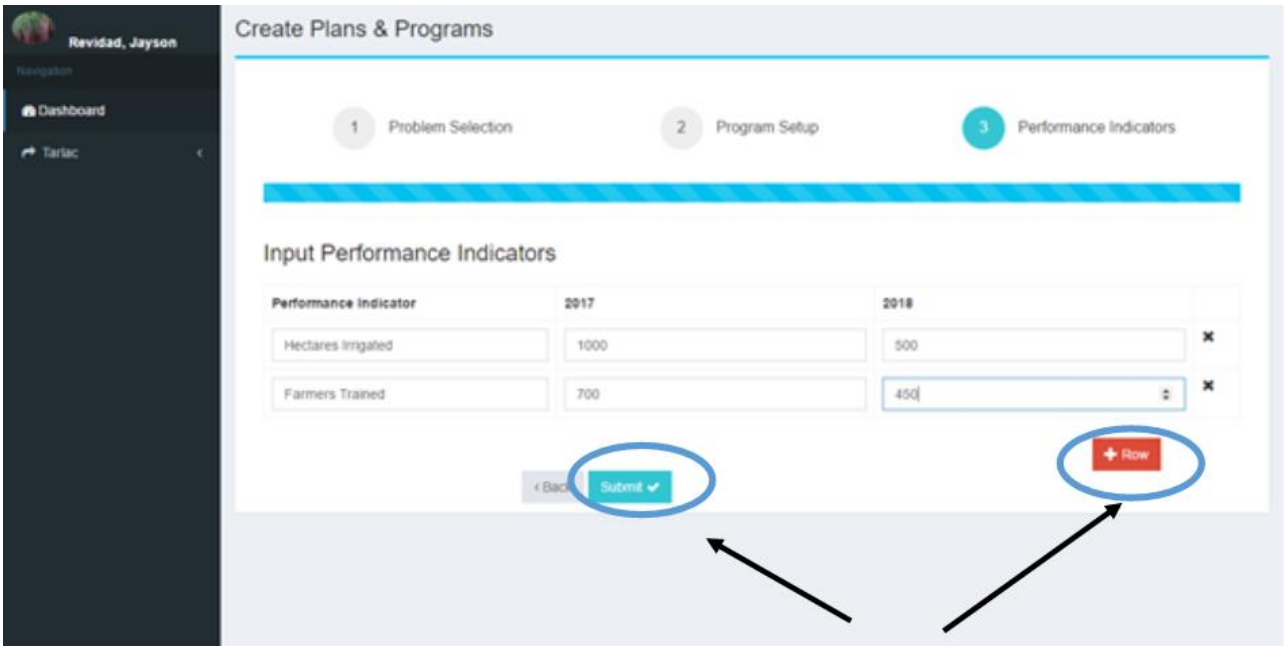
The user goes to create programs through the navigation tab. The user will first select the problems that the program will be aiming to solve. Select the problems by ticking the checkboxes from the list.



The user can input the program name, type, duration and description and click "Continue"

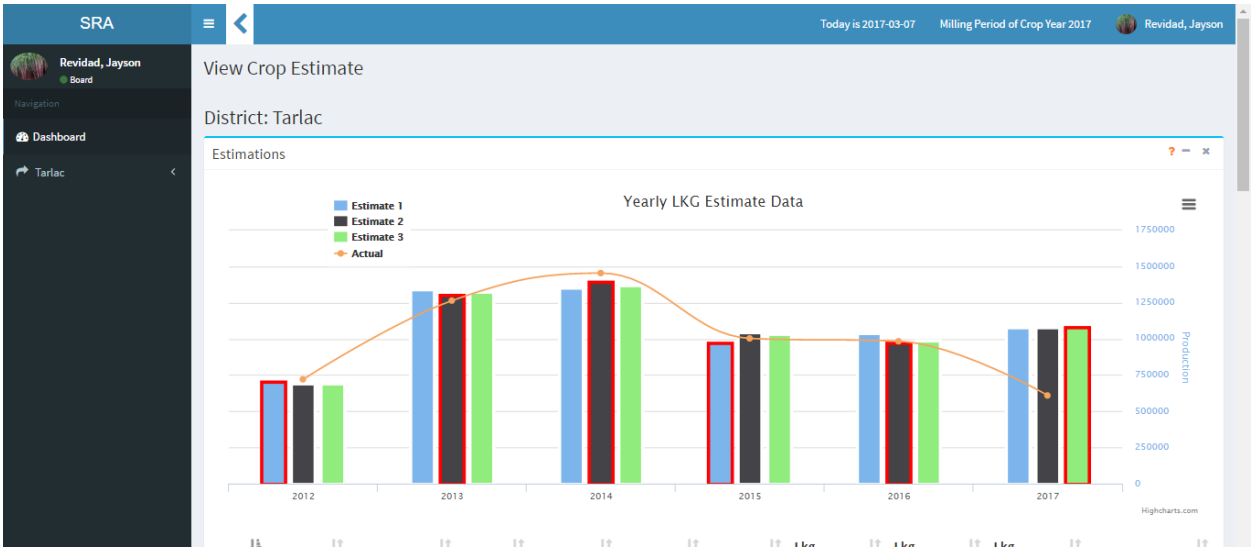


Afterwards, the user inputs the performance indicators. Click "+ROW" to add performance indicators then click "Submit"



5.0 Crop Estimate

This section shows the crop estimate of the district in terms of LKG. The bar graph shows the 3 estimates and the highlighted one indicates the closest to the actual value.

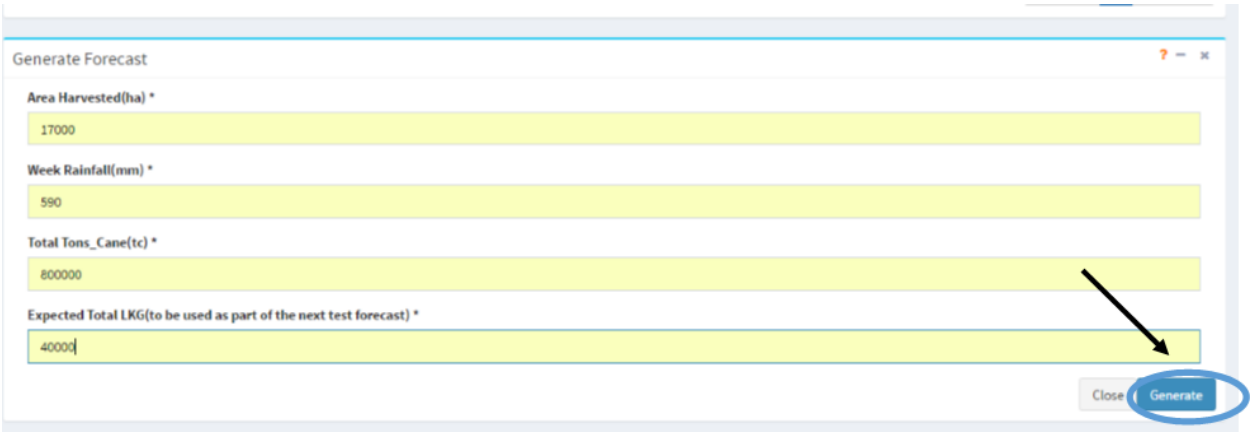


The user can also select an estimate to use from the dropdown.

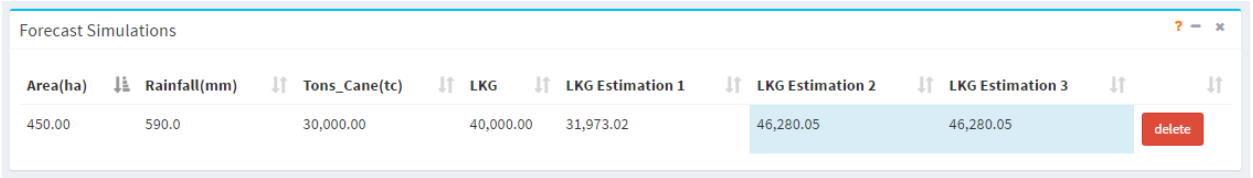
Year	Area(ha)	Rainfall(mm)	Tiller Count	Avg Temp(°C)	Tons Cane(tc)	LKG	Lkg Estimation 1	Lkg Estimation 2	Lkg Estimation 3	Selection
2012	15,700.08	540.2	6,678.5	27.0	787,562.49	721,011.8	707,289.5	697,396.8	693,772.23	Estimation 1
2013	16,787.8	394.0	6,931	27.0	751,056	1,264,515.78	1,343,568.38	1,307,028.29	1,327,131.31	Estimation 1
2014	14,148.47	326.6	6,388.3	26.5	579,327.67	1,454,325.37	1,357,285.62	1,398,061.2	1,373,350.14	Estimation 1
2015	15,469.99	214.2	6,929.5	26.0	581,040.25	1,003,379.82	974,060	1,047,060.92	1,040,099.21	Estimation 1
2016	10,300	580.6	5,473	26.0	453,216.4	983,764.26	1,044,793.53	977,449.82	992,644.13	Estimation 1
2017	8,868.99	937.8	2,919.43	26.0	460,422.34	621,565.91	1,085,406.29	1,085,414.31	1,085,372.8	Estimation 1

5.1 Generate Forecast

The user has the option to use this tool to generate a forecast that is used to assist in Sugar Allocation. He can input the parameters needed to generate a forecast simulation.



This will generate a forecast simulation that can be used as a guide to choose which estimate to use from the dropdown



Forecast Simulations

Area(ha)	Rainfall(mm)	Tons_Cane(tc)	LKG	LKG Estimation 1	LKG Estimation 2	LKG Estimation 3	
450.00	590.0	30,000.00	40,000.00	31,973.02	46,280.05	46,280.05	delete

This table which as at the end of Crop Estimate page, shows the weekly estimates of the district. It displays the production data of every week as well as the forecast that the system generated for that specific week. The user is allowed to select the 'Year' from the dropdown and it is used to filter the table to view only the selected crop year weeks. The percentage difference shows the accuracy of the estimate to that of the actual for the week. This is used to provide more insight to

the board members when sugar allocating.

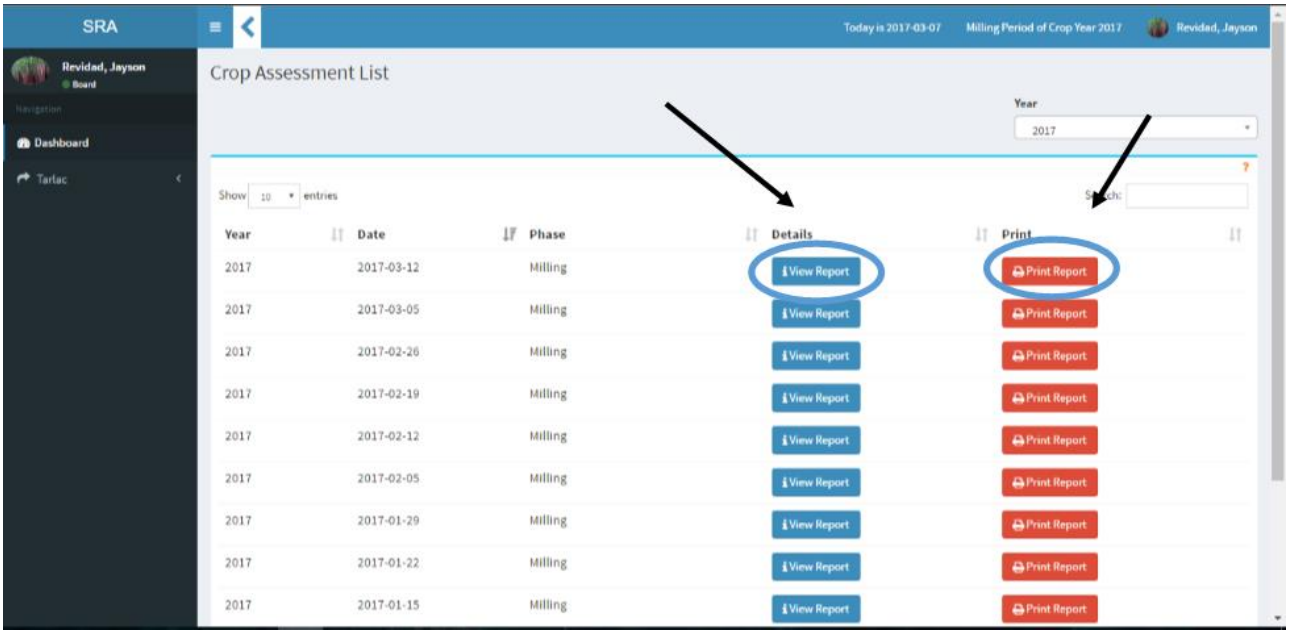
2017	2016-12-02	482.74	0.0	27,398.85	27,966.18	2.03	36,993.88	37,752.81	2.01
2017	2016-12-06	487.39	14.0	27,129.22	28,765.72	5.69	36,617.53	38,816.24	5.66
2017	2016-12-15	501.13	0.0	27,508.18	30,320.72	9.28	37,120.07	40,921.86	9.29
2017	2016-12-21	483.33	0.0	27,072.18	30,414.71	10.99	36,573.76	41,048.70	10.90
2017	2016-12-27	510.50	0.0	27,661.91	30,488.87	9.27	37,370.43	41,150.63	9.19
2017	2017-01-03	542.38	6.4	27,117.68	30,515.23	11.13	36,628.61	41,187.83	11.07
2017	2017-01-13	568.48	5.0	27,658.21	29,777.98	7.12	37,335.05	40,200.89	7.13

Showing 1 to 10 of 18 entries

Previous 1 2 Next

6.0 Crop Assessment Report

The user can view the list of crop assessment reports submitted by the mill district officer. He can click "View Report" to view the contents of the crop assessment report. He can also click "Print Report" to generate a printable version.



The contents of the crop assessment are as follows:

Tons Cane (tc)	137,604.43	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm
LKG (lkg)	420,059.06							

PART 2: DISTRICT IMPROVEMENT STATUS REPORT

A. Farmer Performance

	Last Week		This Week		
Particulars	Name	TC/Yield	Name	TC/Yield	Improvement
Highest Producing Farmer	AGRIKULTO	1848.4912 TC	AGRIKULTO	1647.7274 TC	↓ 200.76
Lowest Producing Farmer	ABRAHAM, OFELIA	0.042 TC	ABRAHAM, OFELIA	0.0432 TC	↑ 0
Highest Yielding Farmer	YAQUITEN, ARNOLD	166.06502016 Yield	VALLES, RONALD	220.43400211 Yield	↑ 54.37
Lowest Yielding Farmer	CRUZ, PAOLO MARTIN	0.89914738 Yield	CRUZ, PAOLO MARTIN	1.01578451 Yield	↑ 0.12

B. District Improvements

	Improvements		
Particulars	Previous Week	This Week	Improvement
Recommendations Suggested	27	27	↓ 0
Recommendations Implemented	55	38	↓ 17
Problems Reported	35	70	↑ 35
Problems Solved	9	11	↑ 2

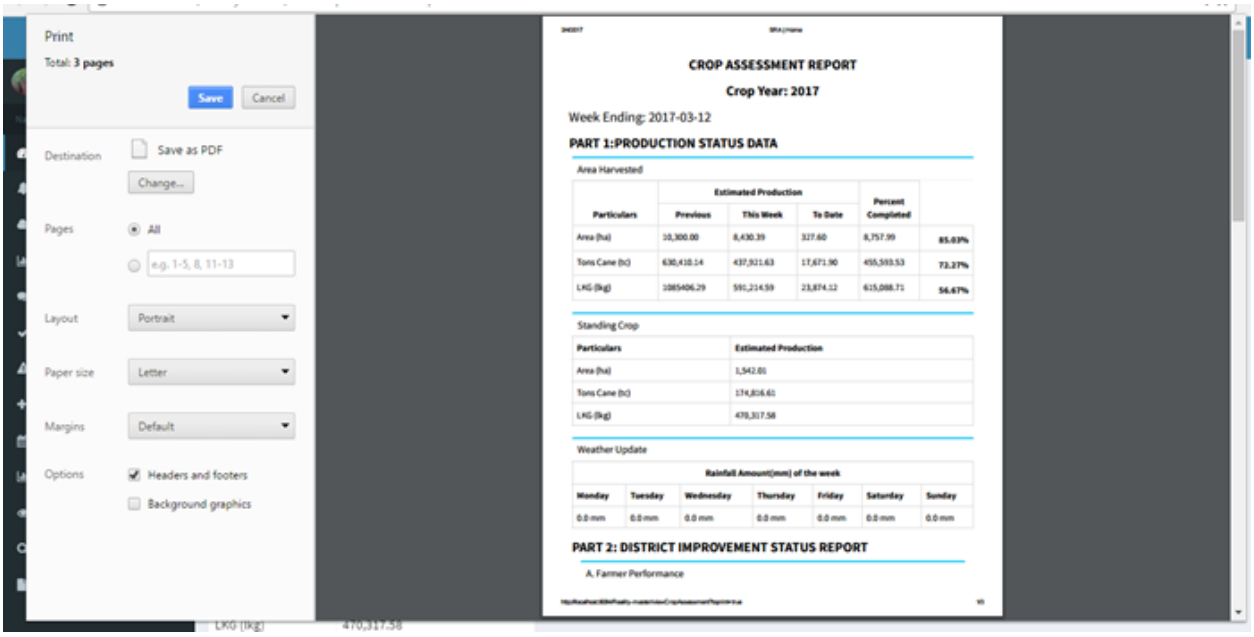
The user can finalize the report by inputting his findings and analysis.

Narrative Report for Week Ending 2017-03-12

WEATHER	There was no rain, sunny day
PRICE OF SUGAR	P1500
MILL OPERATION	Normal
PRICES OF INPUTS	Fertilizer at P500 per bag
FINDINGS	There were a lot of reported problems for the week
OVERALL ANALYSIS	Low productivity
BOARD NARRATIVE	
FINDINGS (PROBLEMS & SUGGESTIONS)	
OVERALL ANALYSIS	

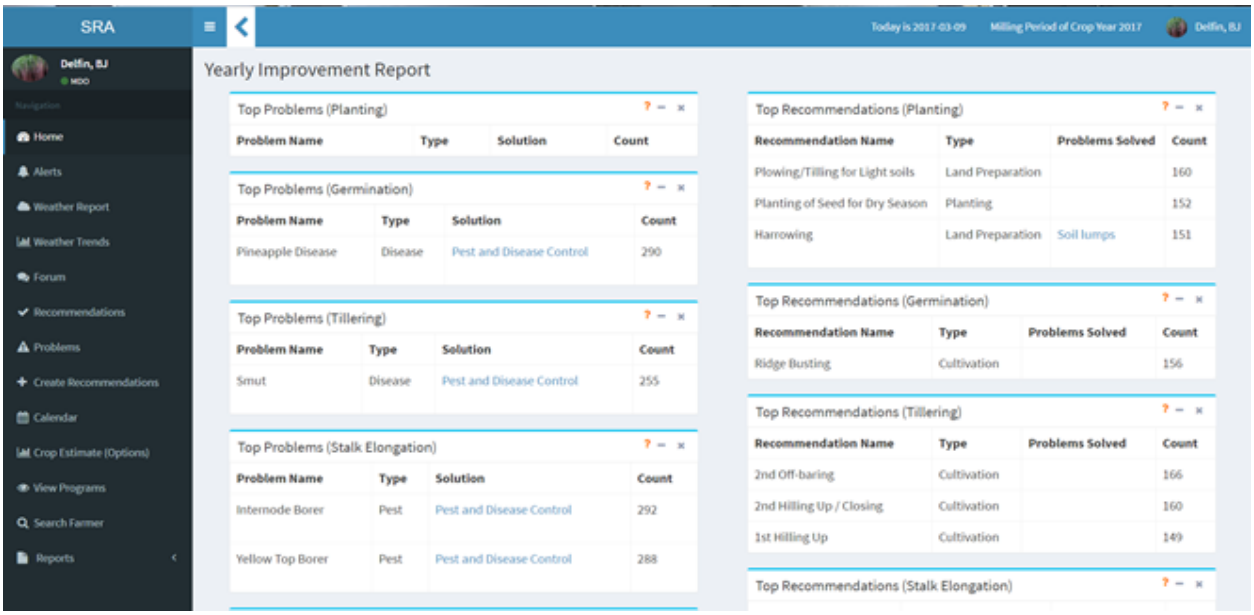
Print Crop Assessment

Clicking "Print Crop Assessment" generates a printable version of the report.



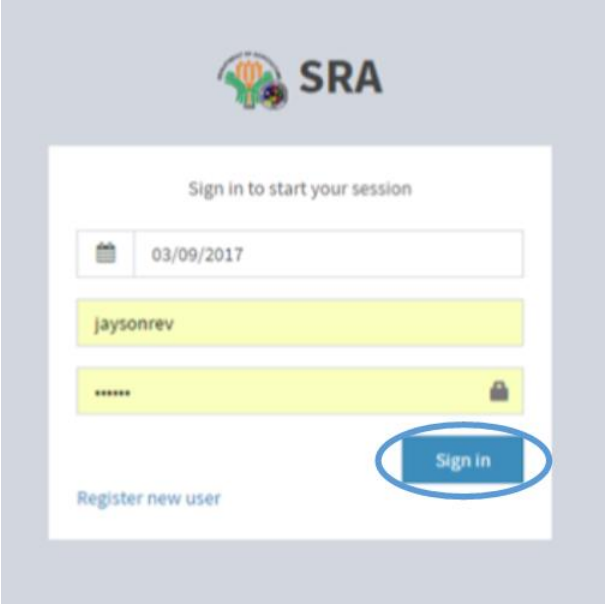
7.0 Yearly Improvement Report

This shows all the top occurring problems and the top recommendations implemented for the crop year. The user can "Print" the report.



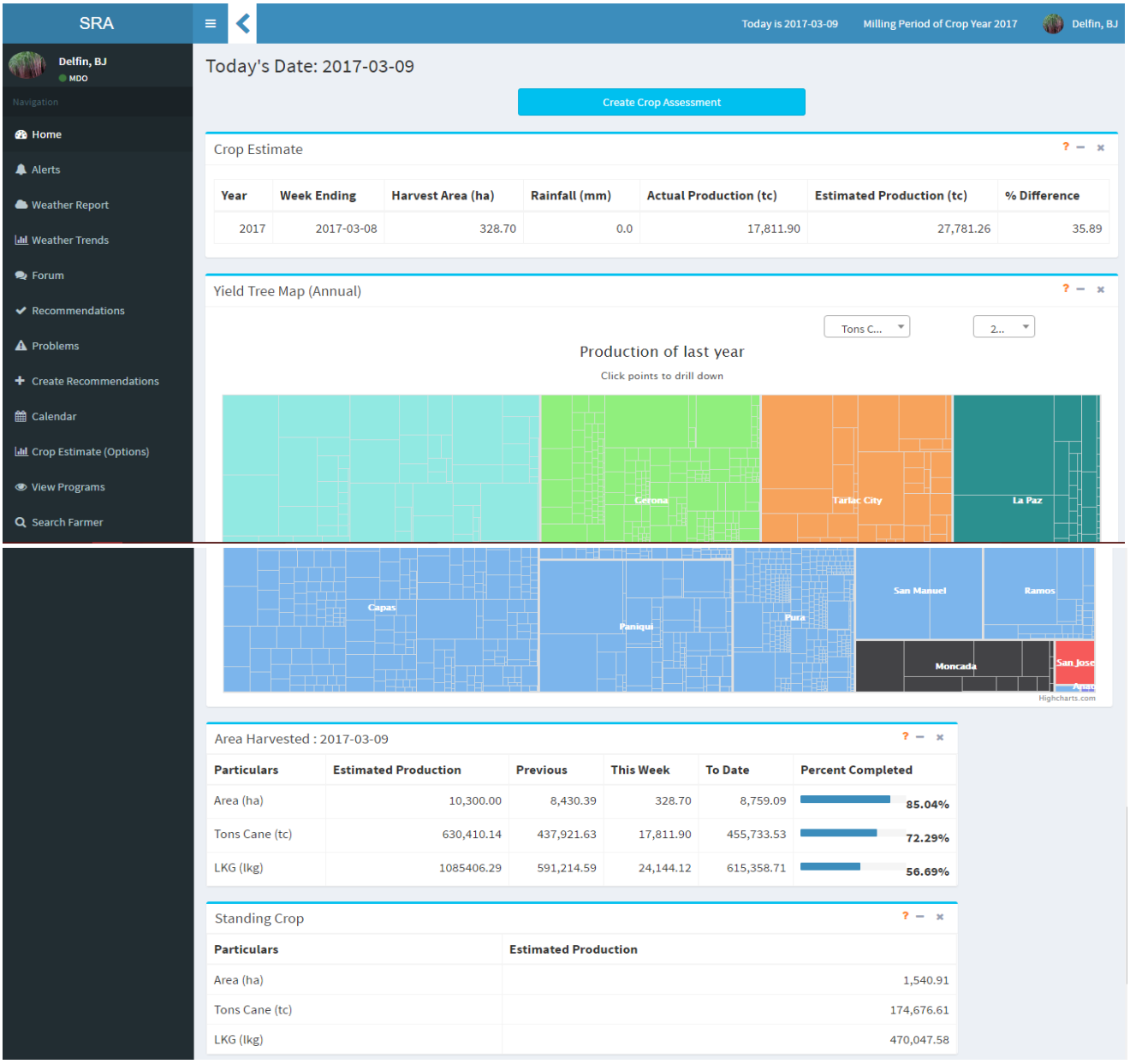
1.0 Logging in

Login to the system with the mill district officer member account by entering the username and password then click "Sign in".



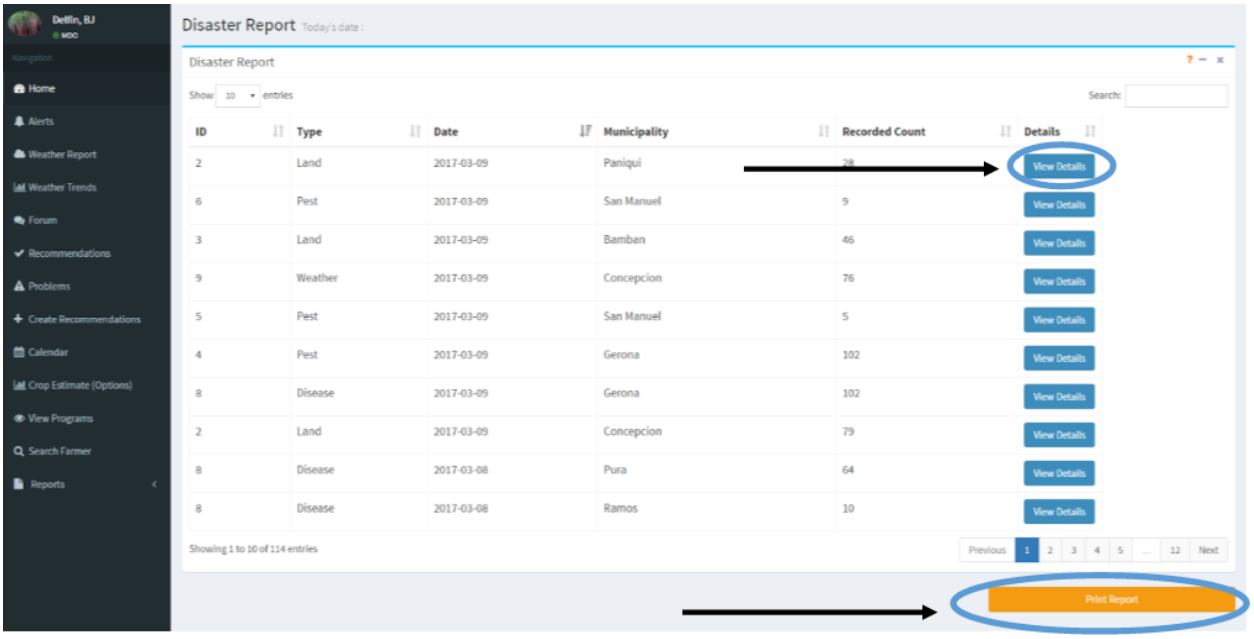
2.0 Homepage

In the 'Homepage' page, the user is able to see the weekly production statistics report, the weekly crop estimates, rainfall, and yield tree map. The user has an action to 'Create Crop Assessment' (take note that this action will only be available in ***Milling Phase***). The user also has another action which is 'View Treemap Data'. To do this, simply click the name (Whether it is ***Municipality***, ***Barangay***, or a ***Farmer***) in the treemap and it will lead you to a new tab.



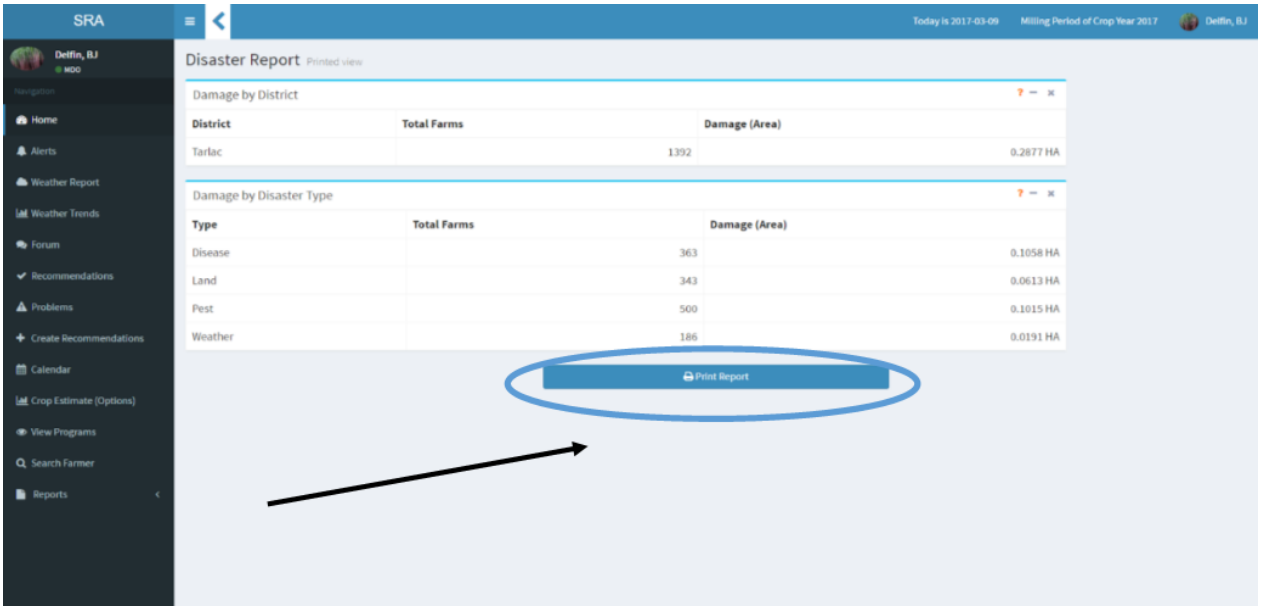
3.0 Alerts

The Alerts page shows the list of disasters happening in a municipality. In this page, the user has two options: 'View Details' and 'Print Report'.



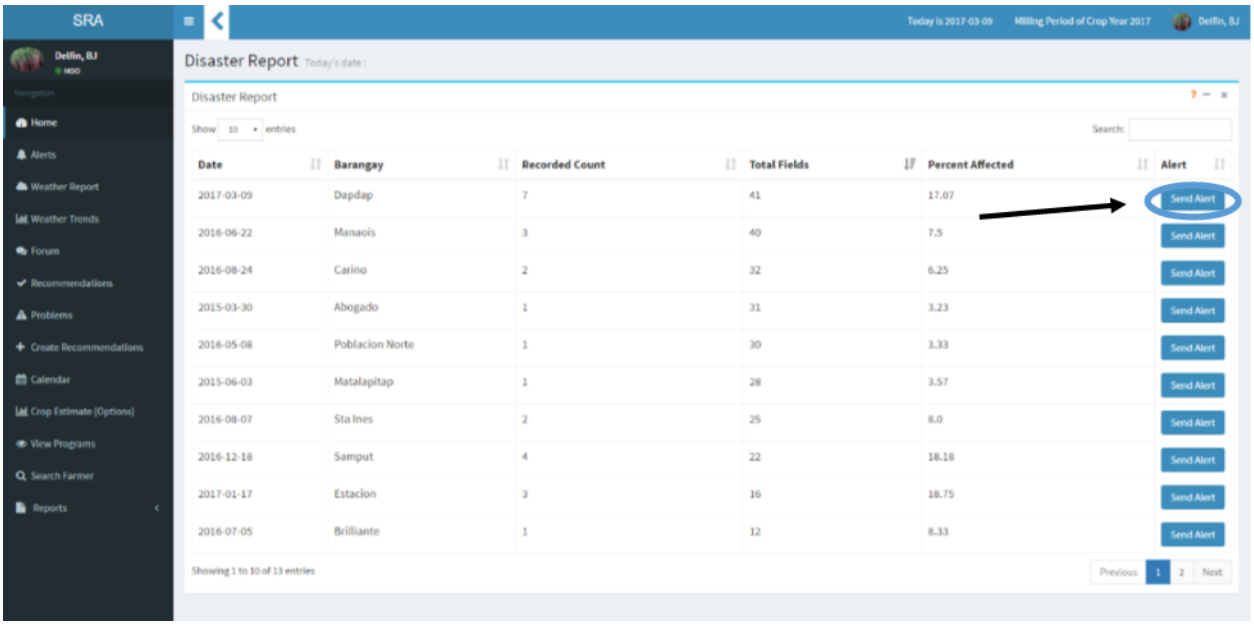
3.1 Print Report (Alerts)

The 'Print Report' page shows a summary of damage by district and disaster type. In this page, the user has a option to print the report by simply clicking the button 'Print Report'.



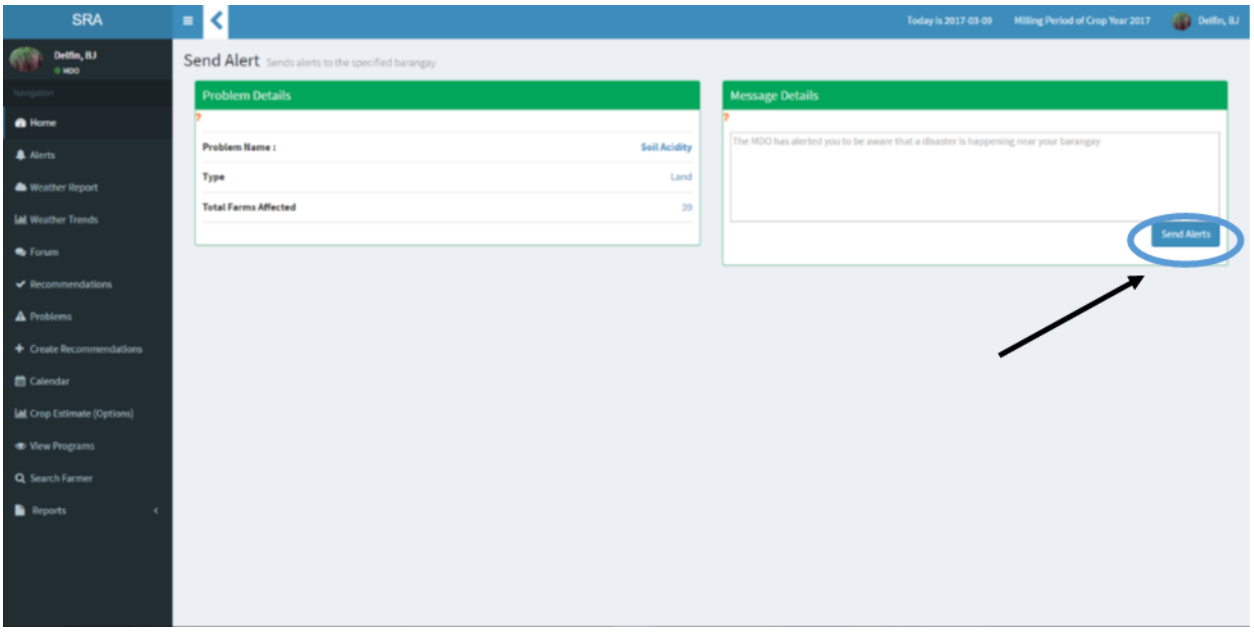
3.2 View Details (Alerts)

The 'View Details' page shows the list of disaster that happened in all the barangays of the chosen municipality. In this page the user has an action to 'Send Alerts'.



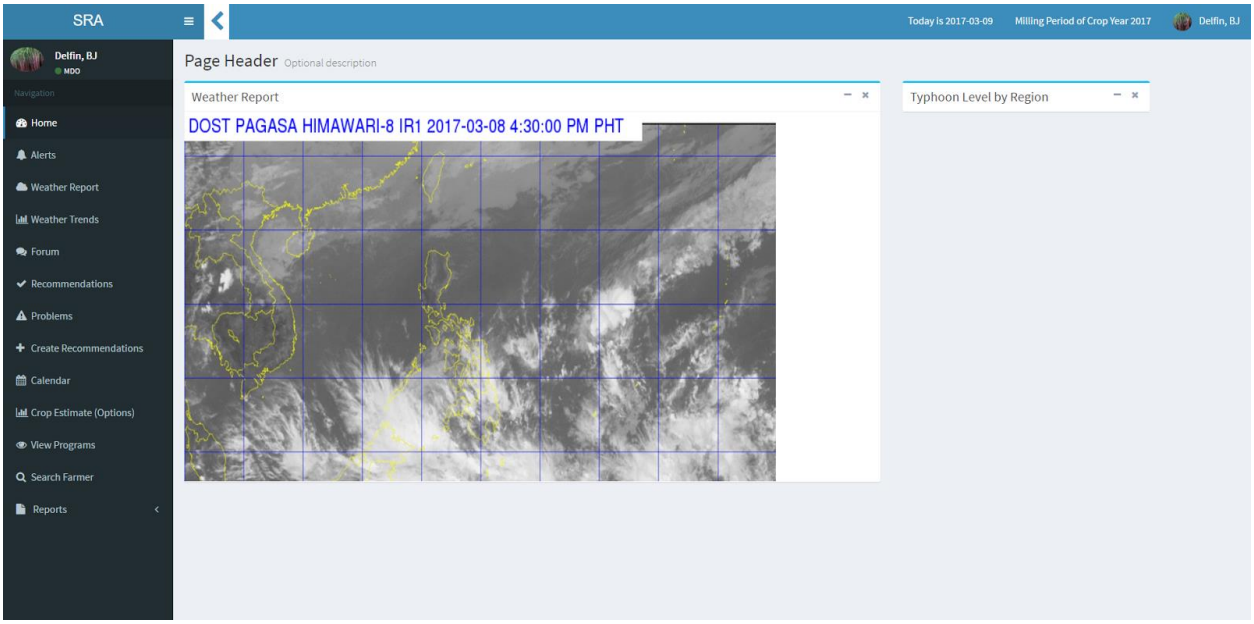
3.3 Send Alerts

The 'Send Alerts' is used to notify all farmers inside the chosen barangay that a disaster is happening near their place. In this page, the user has an option to write a message that will be sent to all farmers.



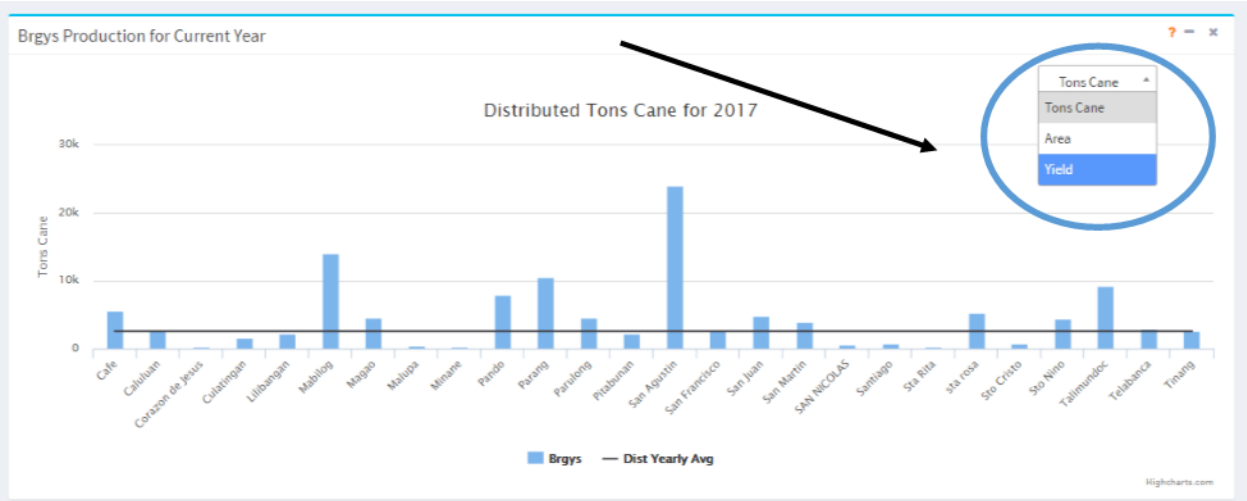
4.0 Weather Report

In the 'Weather Report' page, you'll be able to see the weather forecast coming from PAGASA in a form a weather report.



5.0 Municipal Summary

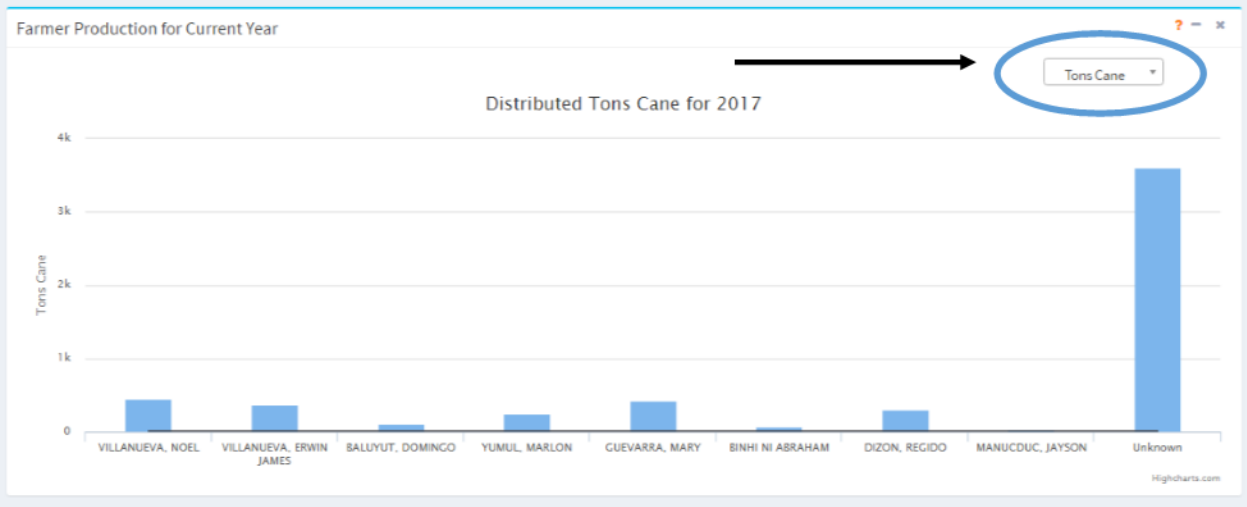
The municipal summary contains the yearly production of the municipal. The horizontal line in the bar graph indicates the average production of the whole district. The user can select from the dropdown the following: "Tons Cane", "Area" and "Yield".



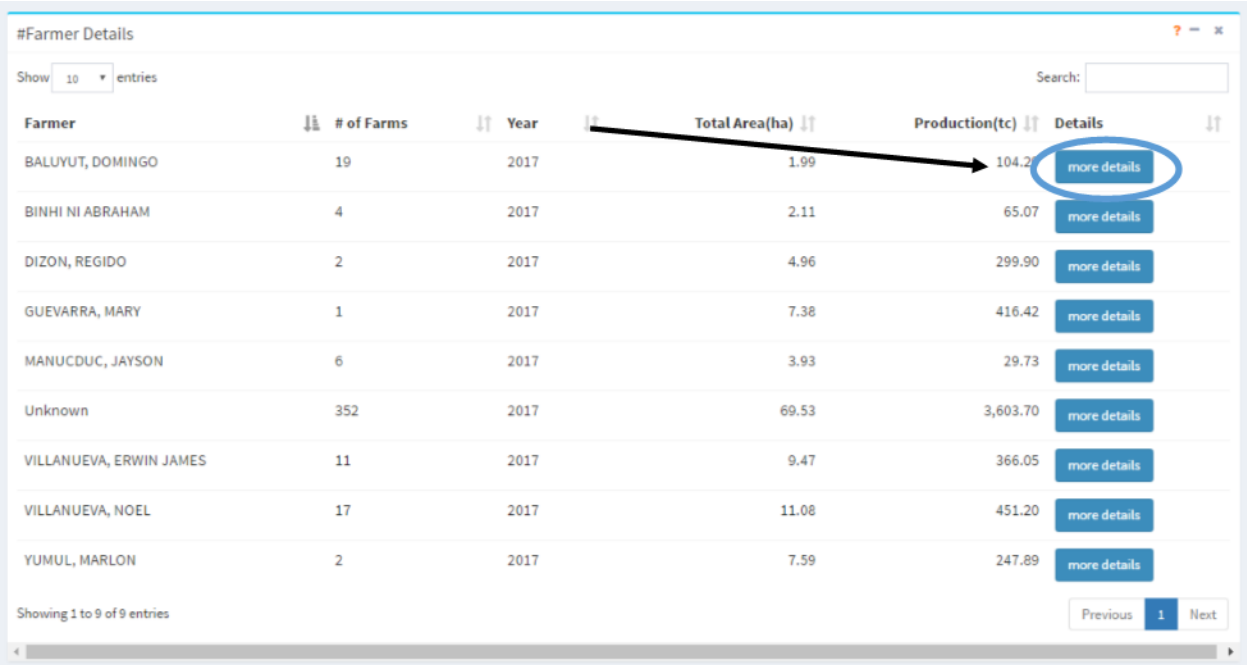
This is a list of all the barangays that are part of the chosen municipal. The user can use the search box to quickly find a barangay. He can also click "More Details" to access the barangay summary page.

6.0 Barangay Summary

The barangay summary contains the yearly production of the barangay. The horizontal line in the bar graph indicates the average production of the whole district. The user can select from the dropdown the following: "Tons Cane", "Area" and "Yield".

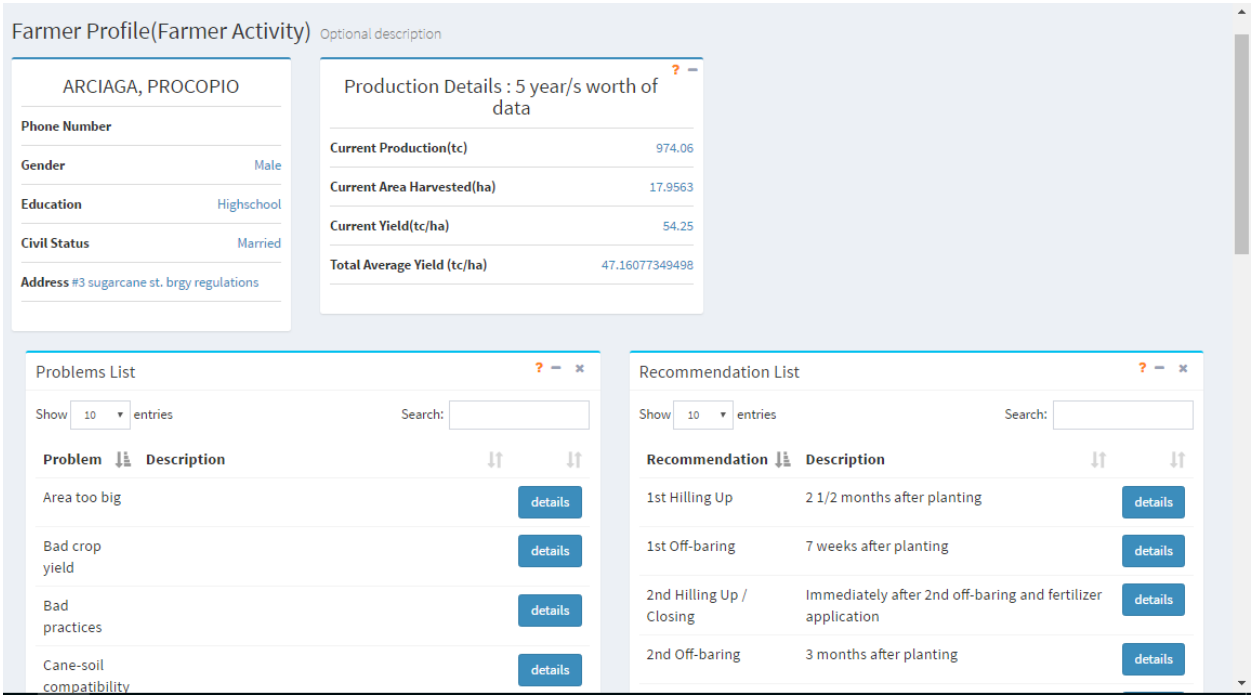


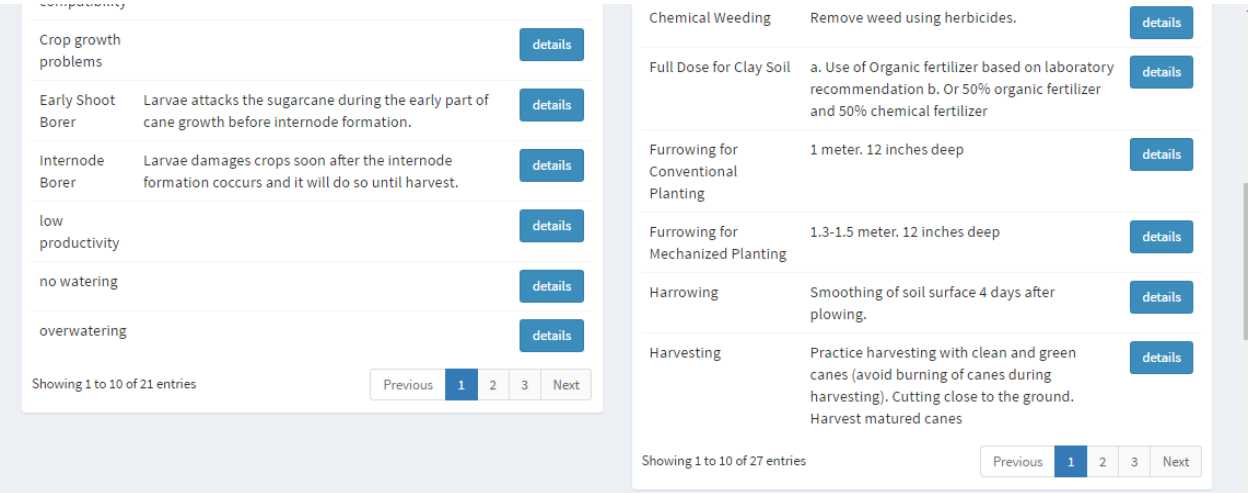
This is a list of all the farmers that are part of the chosen barangay. The user can use the search box to quickly find a farmer. He can also click "More Details" to access the farmer profile.



7.0 Farmer Profile

This shows the information of the farmer and his production. The list of problems and recommendations can be seen. The user can click "More Details" to access the problem details, recommendation details or program details.





Crop growth problems		details
Early Shoot Borer	Larvae attacks the sugarcane during the early part of cane growth before internode formation.	details
Internode Borer	Larvae damages crops soon after the internode formation coccurs and it will do so until harvest.	details
low productivity		details
no watering		details
overwatering		details

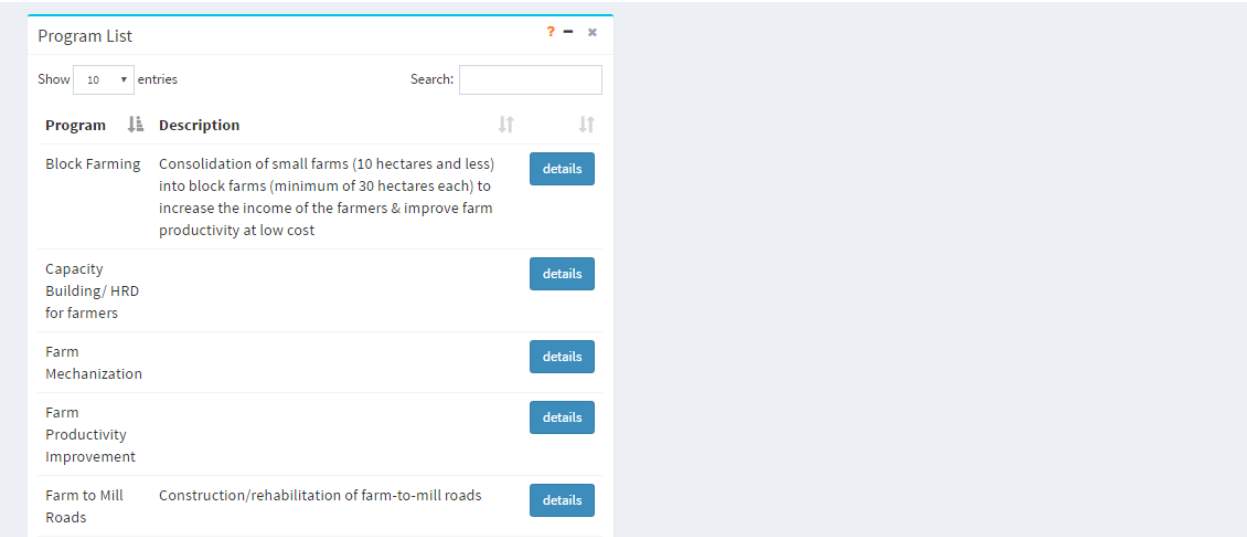
Showing 1 to 10 of 21 entries

Previous 1 2 3 Next

Chemical Weeding	Remove weed using herbicides.	details
Full Dose for Clay Soil	a. Use of Organic fertilizer based on laboratory recommendation b. Or 50% organic fertilizer and 50% chemical fertilizer	details
Furrowing for Conventional Planting	1 meter. 12 inches deep	details
Furrowing for Mechanized Planting	1.3-1.5 meter. 12 inches deep	details
Harrowing	Smoothing of soil surface 4 days after plowing.	details
Harvesting	Practice harvesting with clean and green canes (avoid burning of canes during harvesting). Cutting close to the ground. Harvest matured canes	details

Showing 1 to 10 of 27 entries

Previous 1 2 3 Next

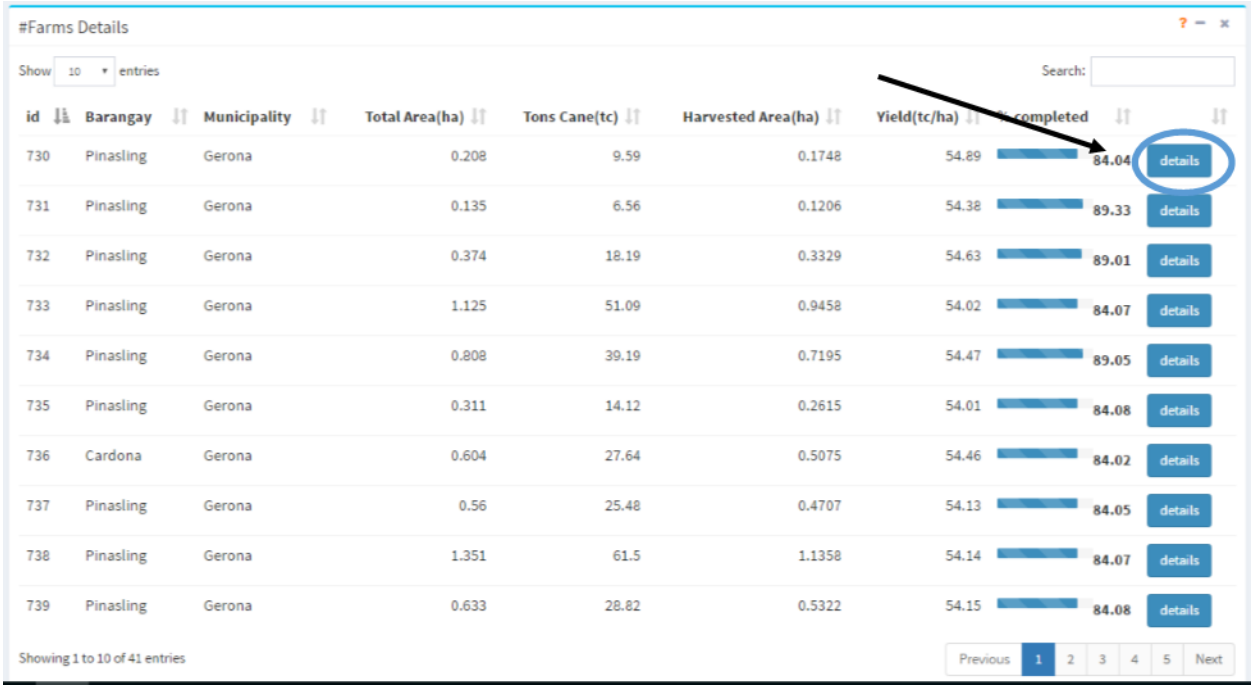


Program List

Show 10 entries Search:

Program	Description	
Block Farming	Consolidation of small farms (10 hectares and less) into block farms (minimum of 30 hectares each) to increase the income of the farmers & improve farm productivity at low cost	details
Capacity Building/ HRD for farmers		details
Farm Mechanization		details
Farm Productivity Improvement		details
Farm to Mill Roads	Construction/rehabilitation of farm-to-mill roads	details

This shows the list of farms that the farmer owns. Click "details" to access the farm profile.



#Farms Details

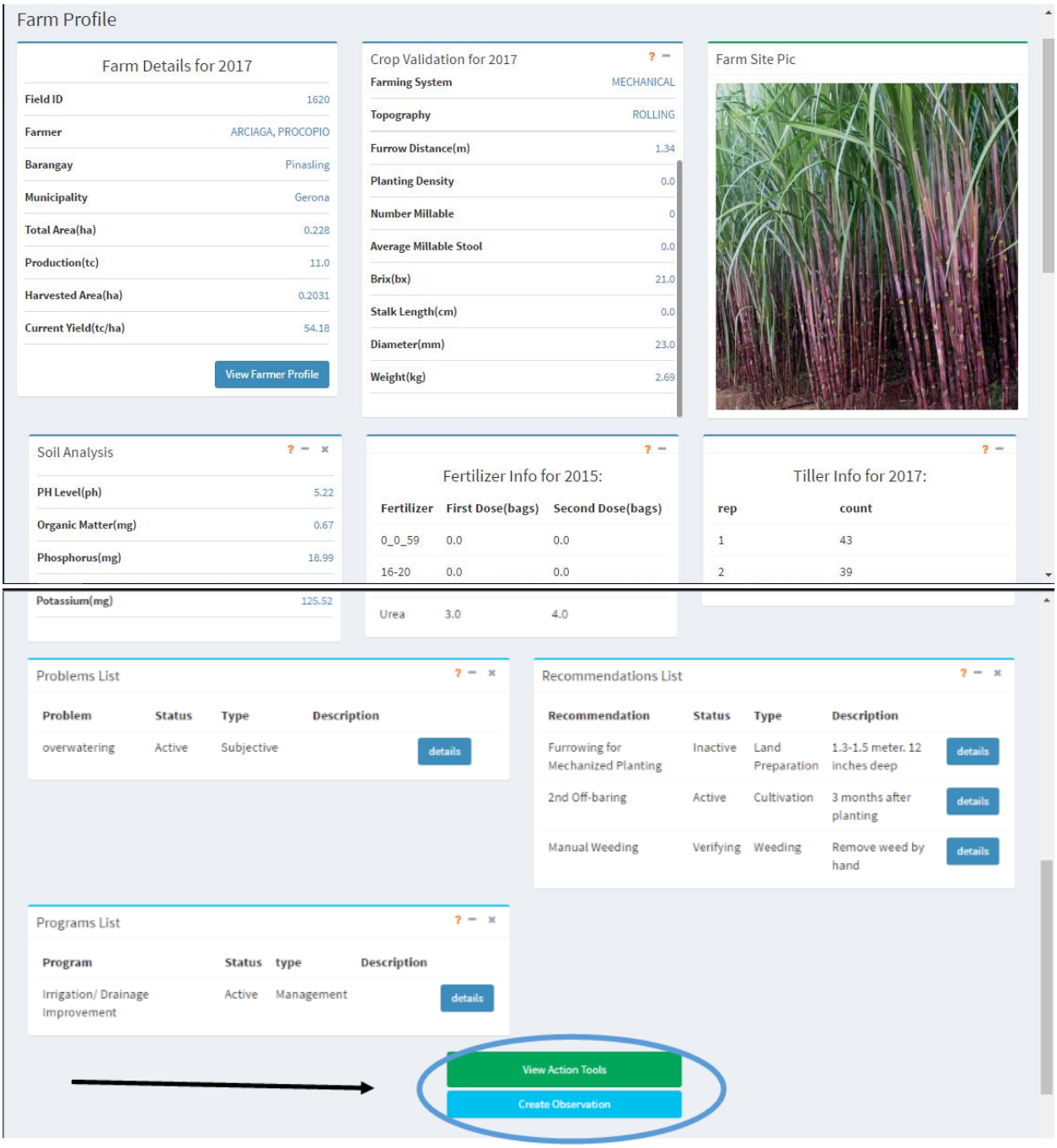
Show 10 entries Search:

id	Barangay	Municipality	Total Area(ha)	Tons Cane(tc)	Harvested Area(ha)	Yield(tc/ha)	% completed	
730	Pinasling	Gerona	0.208	9.59	0.1748	54.89	84.04	details
731	Pinasling	Gerona	0.135	6.56	0.1206	54.38	89.33	details
732	Pinasling	Gerona	0.374	18.19	0.3329	54.63	89.01	details
733	Pinasling	Gerona	1.125	51.09	0.9458	54.02	84.07	details
734	Pinasling	Gerona	0.808	39.19	0.7195	54.47	89.05	details
735	Pinasling	Gerona	0.311	14.12	0.2615	54.01	84.08	details
736	Cardona	Gerona	0.604	27.64	0.5075	54.46	84.02	details
737	Pinasling	Gerona	0.56	25.48	0.4707	54.13	84.05	details
738	Pinasling	Gerona	1.351	61.5	1.1358	54.14	84.07	details
739	Pinasling	Gerona	0.633	28.82	0.5322	54.15	84.08	details

Showing 1 to 10 of 41 entries Previous 1 2 3 4 5 Next

8.0 Farm Profile

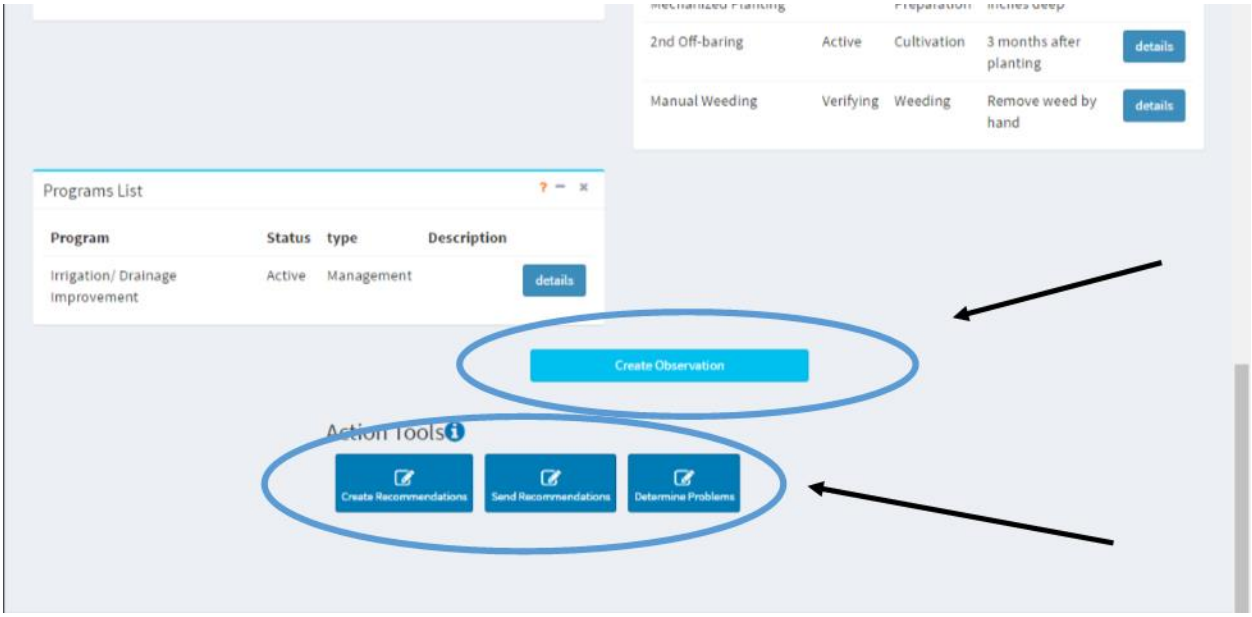
The Farmer Profile shows detailed information of the farm. An analysis can be made of the farm from the details provided however the user may choose to select from the tools provided. The Farm details box shows the basic details of the farmer for the current crop year. The Crop Validation Box shows the details that the farmer or MDO has last submitted. The user is also shown the current problems and recommendations existing in the farm. Program List shows the programs that the farm may be included based on his problems. The user may choose to select the 'View Action Tools' or the 'Create Observation' to assist in the analysis.



8.1 View Action Tools

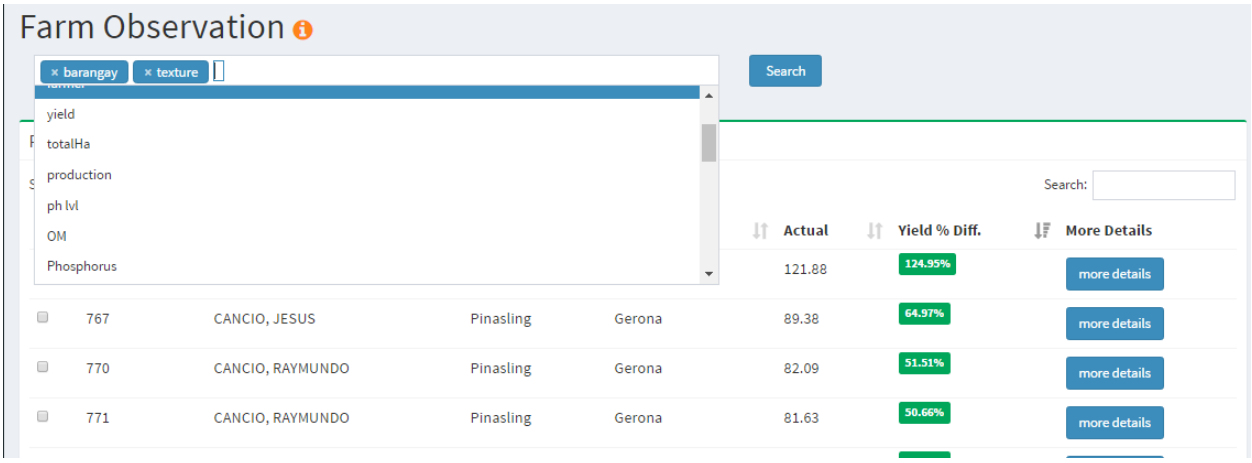
View Action Tools is a tool that the MDO can use to give specific recommendation/s or problem/s to a farm. He may choose to create a new recommendation based from an analysis he found from the farm or farmer by clicking "Create Recommendations". He may also choose to be redirected to the Send Recommendation page on clicking the "Send Recommendation" button. Lastly he may choose to report a problem he observed by clicking on the

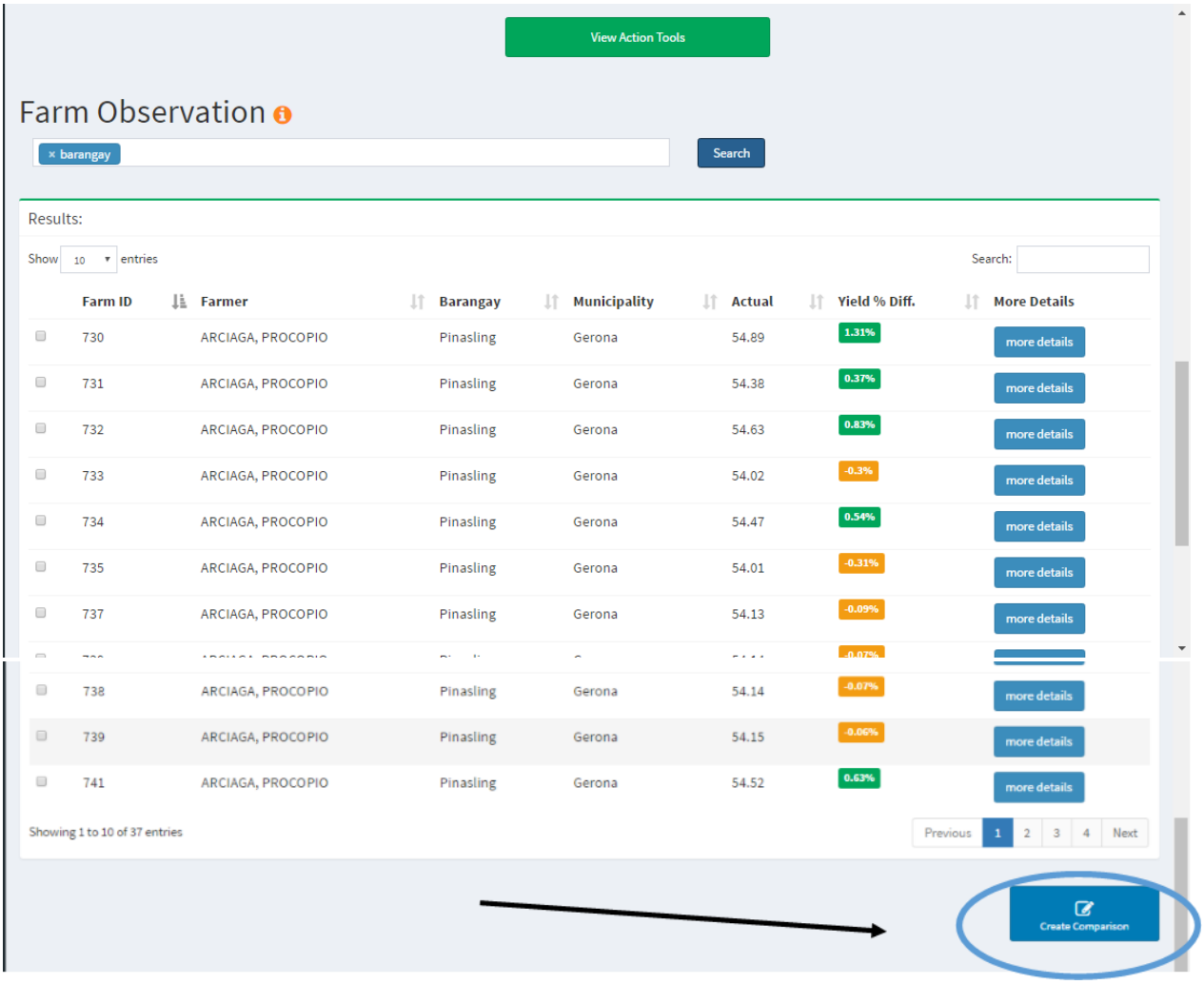
"Determine Problems" button.



8.2 Create Observation

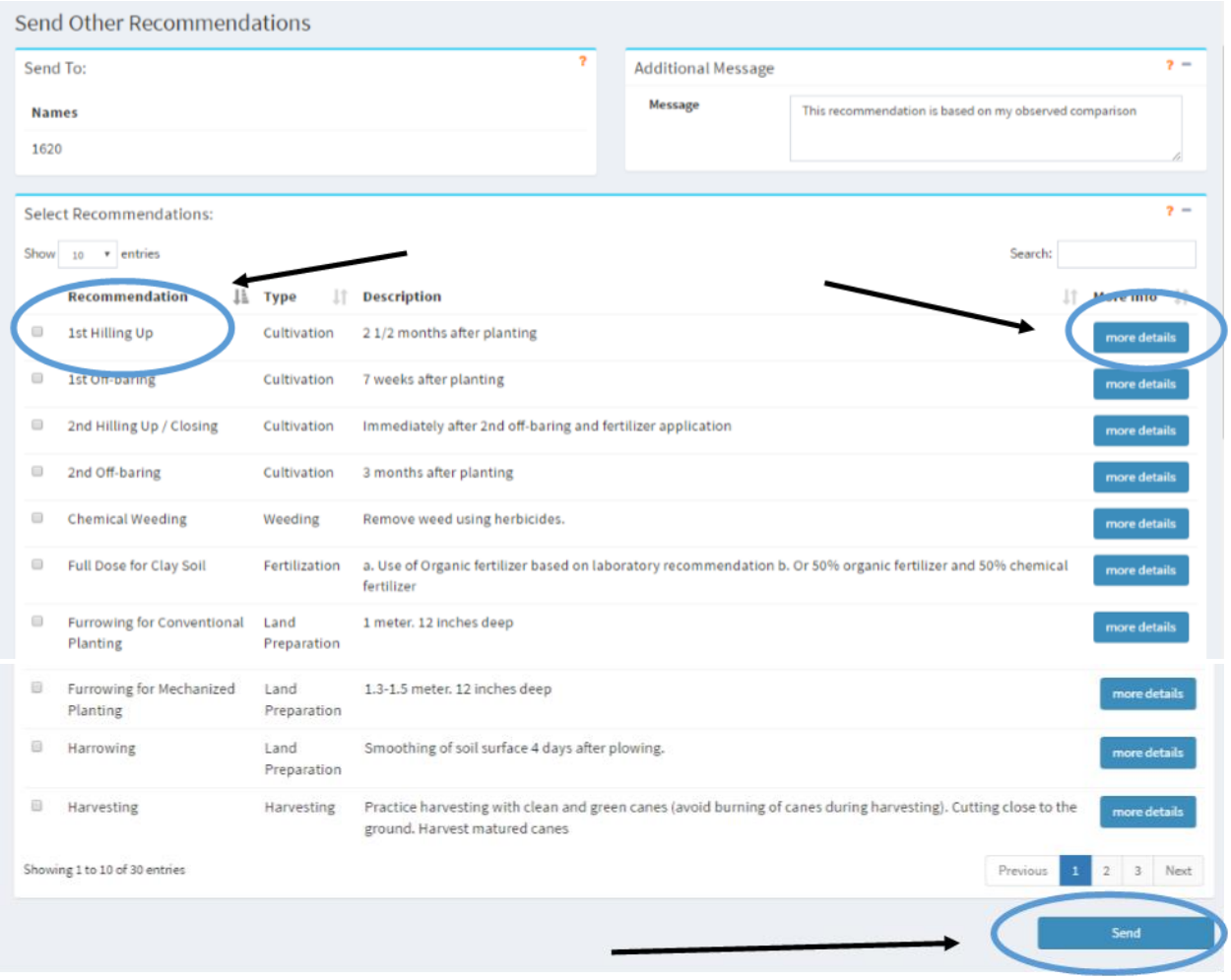
Create Observation is a tool that can be used to create a comparison from the farm profile. The system finds farms that have the same information as the current farm based on the tags the user selects. The filtered farms are all shown on the table below. The user may proceed creating an observation by ticking the box of the farms and clicking "Create Comparison". However, the maximum number of farms that can be selected is 5 which includes the current farm. Alternatively, the user may choose to view more details of a farm by clicking on the "More Details" button.





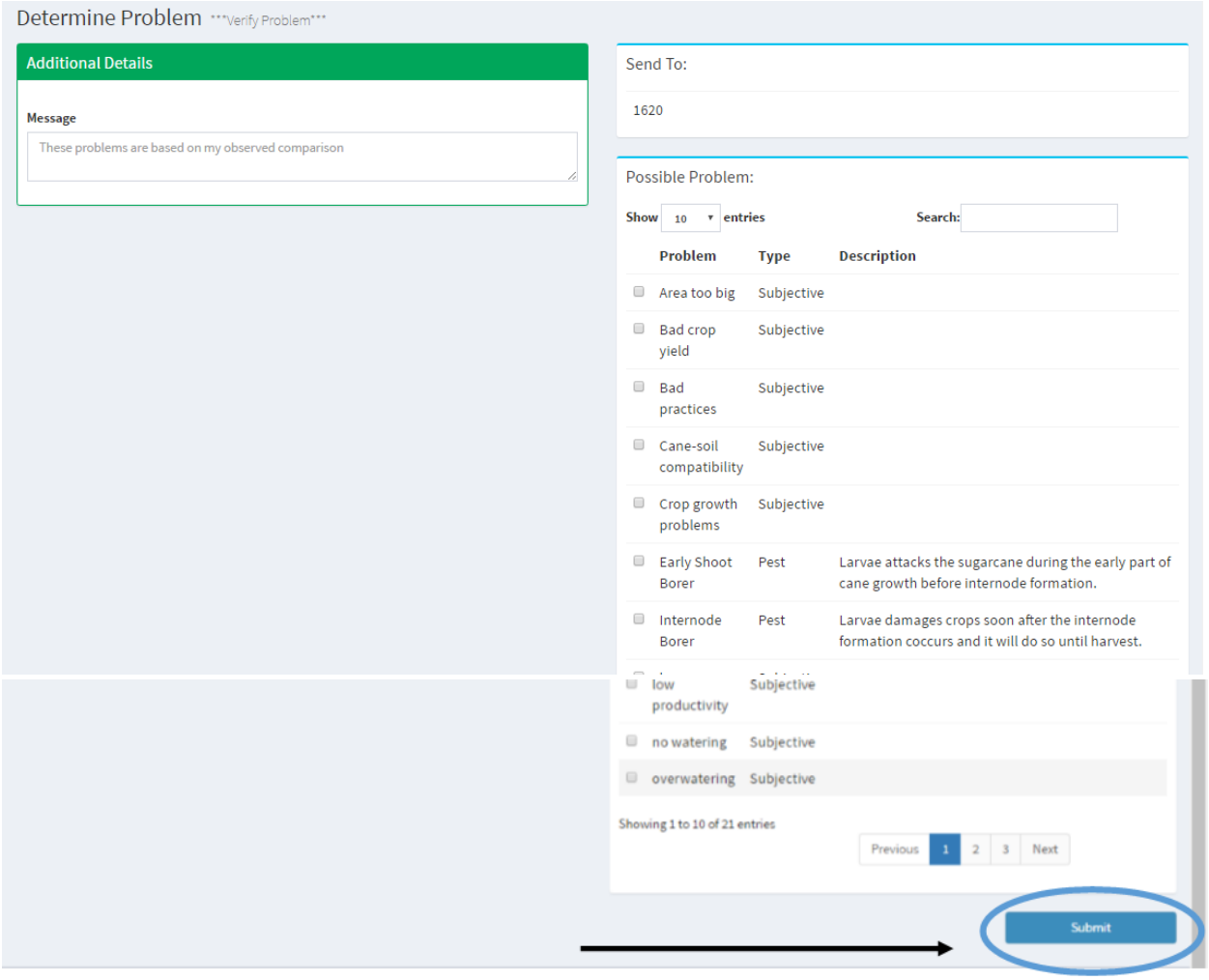
9.0 Send Recommendations

After clicking on 'Send Recommendations' in the action tool of farm profile page, the user is led to this page. This page is used to send the recommendations the MDO might want to suggest to the farm. He may check the recommendations he wants to suggest from the table provided. The table lists down all the recommendations that currently exist in the district. The MDO may also choose to add or edit the existing message to better communicate with the farmer. On clicking 'Send', the farmer that owns the selected farm will receive the notification.



10.0 Determine Problems

After clicking on 'Determine Problems' in the action tool of farm profile page, the user is led to this page. This page is used to report any problems the MDO has noticed the farm might have. He may check the problems he wants to report from the table provided. The table lists down all the problems that currently exist in the district. The MDO may also choose to add or edit the existing message to better communicate with the farmer. On clicking 'Send', the farmer that owns the selected farm will receive the notification.



11.0 Farm Comparison

Farm Comparison page is used when an observation is created in the Farm Profile page. The Farm Comparison page is designed to facilitate the analysis of the MDO by listing down all key elements of the selected farms side by side. The Basic Details lists down all the basic details of each farm. The farm details box, comprises of various tabs such as Crop Validation, Soil Analysis, Fertilizer, Tiller, Problems and Recommendations. The user is also given the option of creating a recommendation by clicking "Create Recommendation" aside from the 'send recommendations' and "report problems" option.

Farmer Comparison

Legend:
- Selected Farm
- Similar
- Different

Basic Details

	1620	1421	767	6134	1254
Farmer	ARCIAGA, PROCOPIO	ESTABILLO, PIO	CANCIO, JESUS	BATENGA, AGNES	CORTES, RAUL
Location	Pinasling, Gerona	Pinasling, Gerona	Pinasling, Gerona	PINASLING, Gerona	Pinasling, Gerona
Production(tc)	11.0047	27.2888	332.3606	7.2595	12.5498
Harvest Area(ha)	0.2031	0.2239	3.7187	0.2256	0.5059
Total Area(ha)	0.228	0.251	4.176	0.253	0.602
Current Yield(tc/ha)	54.18	121.88	89.38	32.18	24.81

#Farmer Details

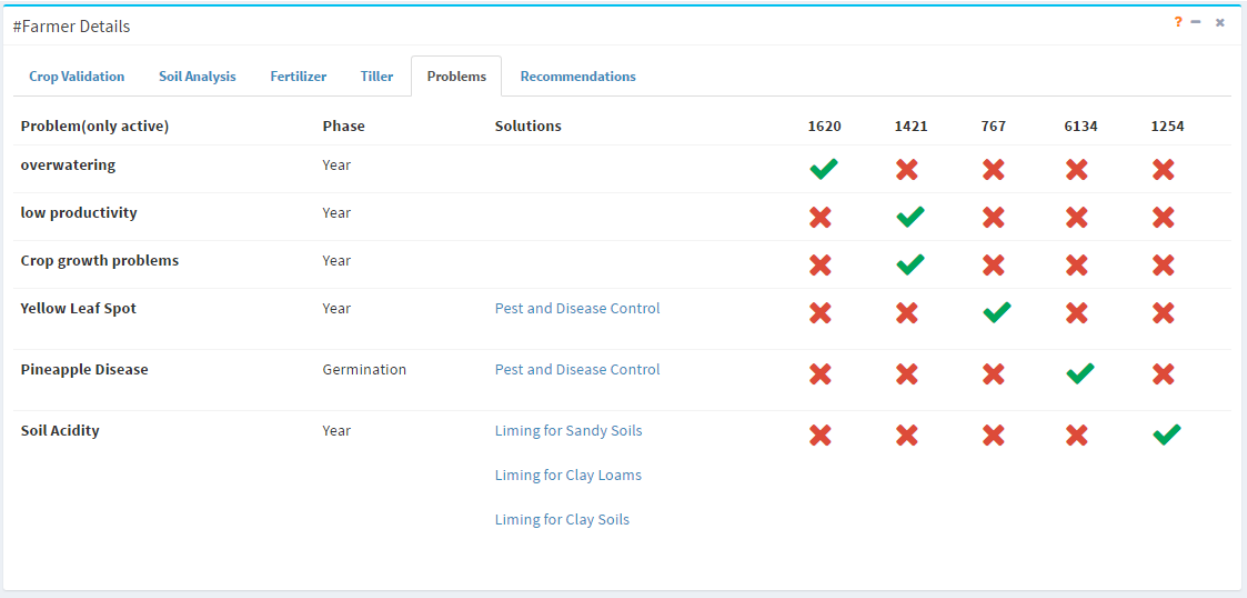
Crop Validation | Soil Analysis | Fertilizer | Tiller | Problems | Recommendations

Details	1620	1421	767	6134	1254
Crop Variety	PHIL 72-70	PHIL 70-72	K 84-200		VMC 84-524
Crop Class	PC	pc	PC		RC1
Texture	LIGHT	HEAVY	LIGHT	LIGHT	LIGHT
Farming System	MECHANICAL	MECHANICAL	MECHANICAL		MECHANICAL
Topography	ROLLING	ROLLING	LEVEL	LEVEL	LEVEL
Furrow Distance(m)	1.34	1.3	1.51	1.26	1.38
Planting Density	0.0	0.0	0.0	0.0	0.0
Number Millable	0	0	0	0	0
Average Millable	0.0	0.0	0.0	0.0	0.0
Brix(bx)	21.0	23.0	15.0	22.0	15.0
Stalk Length(cm)	0.0	0.0	0.0	0.0	0.0
Diameter(mm)	23.0	25.0	24.0	24.0	24.0
Weight(kg)	2.69	2.2	2.38	1.62	1.31

11.1 Problems Tab

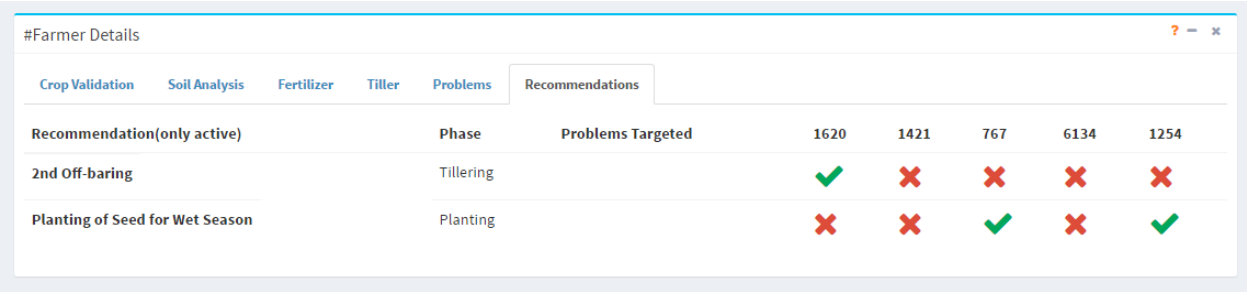
The following details can be seen when the user clicks on the Problems Tab in the Farm Comparison page. This tab shows all active problems of the selected farms in a tabular format. The tab also lists down any existing recommendations for

each problem. The Check (✓) is seen when the farm is actively encountering the problem. The Cross (✖) is seen when the farm has not actively been encountering the problem. The tab is used to help assist the user in sending appropriate recommendations / Report problems



11.2 Recommendations Tab

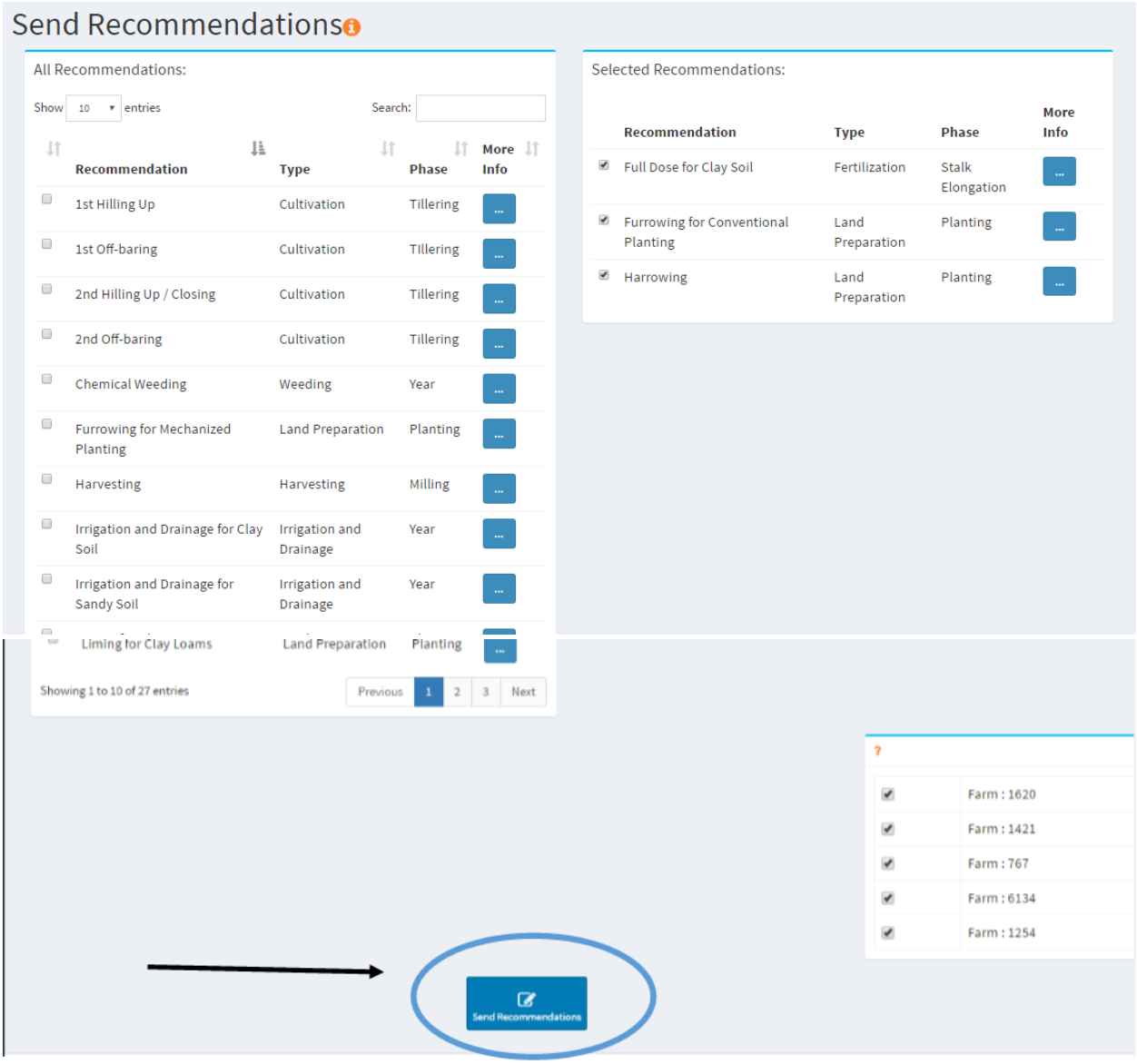
The following details can be seen when the user clicks on the Recommendations Tab in the Farm Comparison page. This tab shows all active recommendations of the selected farms in a tabular format. The tab also lists down the problem/s each recommendation solves if there are any. The Check (✓) is seen when the farm is following the recommendation. The Cross (✖) is seen when the farm is not actively using the recommendation. The tab is used to help assist the user in sending appropriate recommendations / Report problems.



11.3 Send Recommendations

When the user clicks the 'Send Recommendations' button in farm comparison page, the user is displayed two tables. The first table lists down all recommendations that currently exist in the district. The second table however,

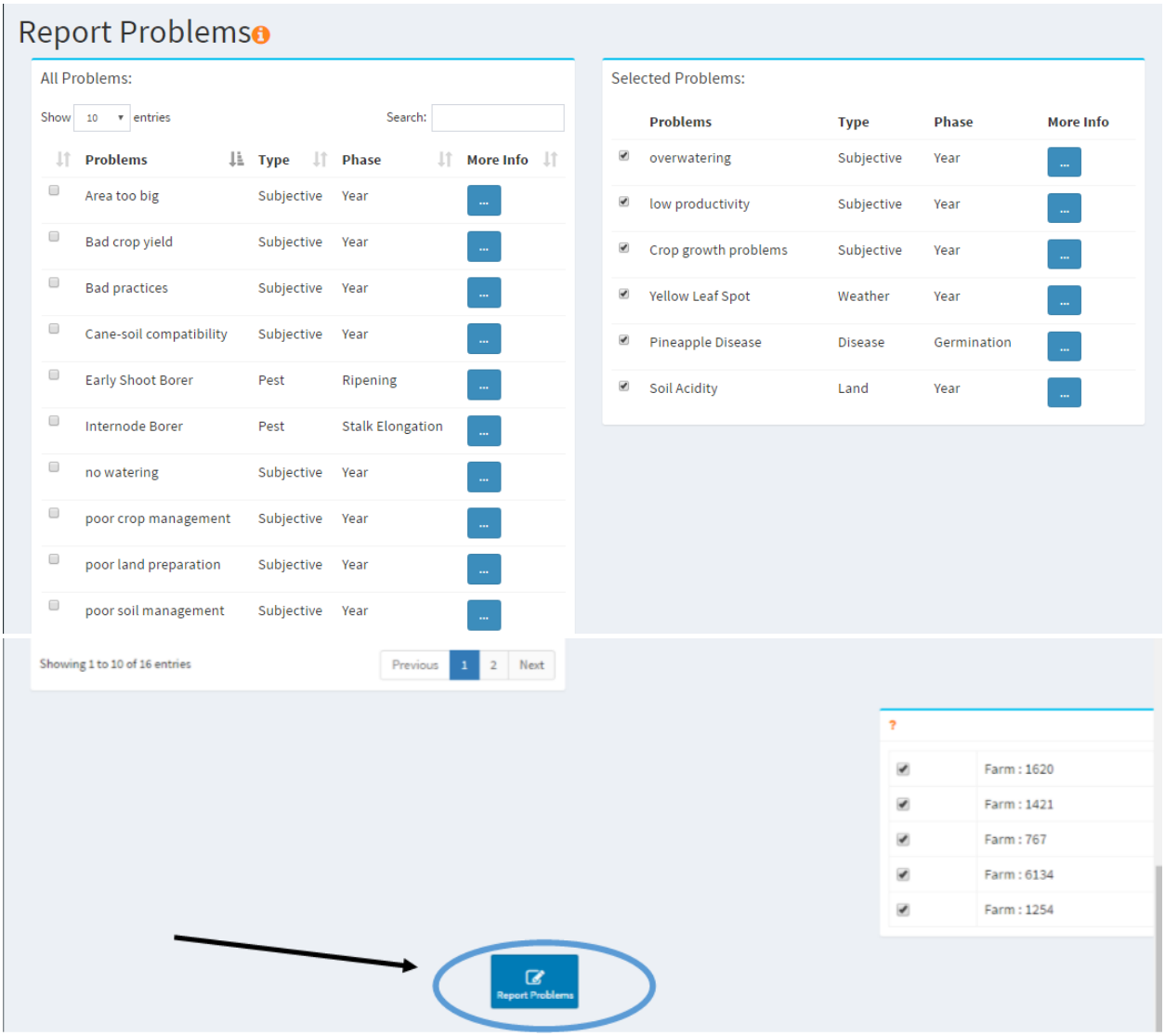
initially lists down recommendations automatically based on the current farm comparison. The user may choose to add or remove from the list. He is also allowed to click on the "..." button to view the recommendation details. To submit, click the 'Send Recommendations' button below the two tables. On submit, the user is redirected to the Confirm Recommendations page.



11.4 Report Problems

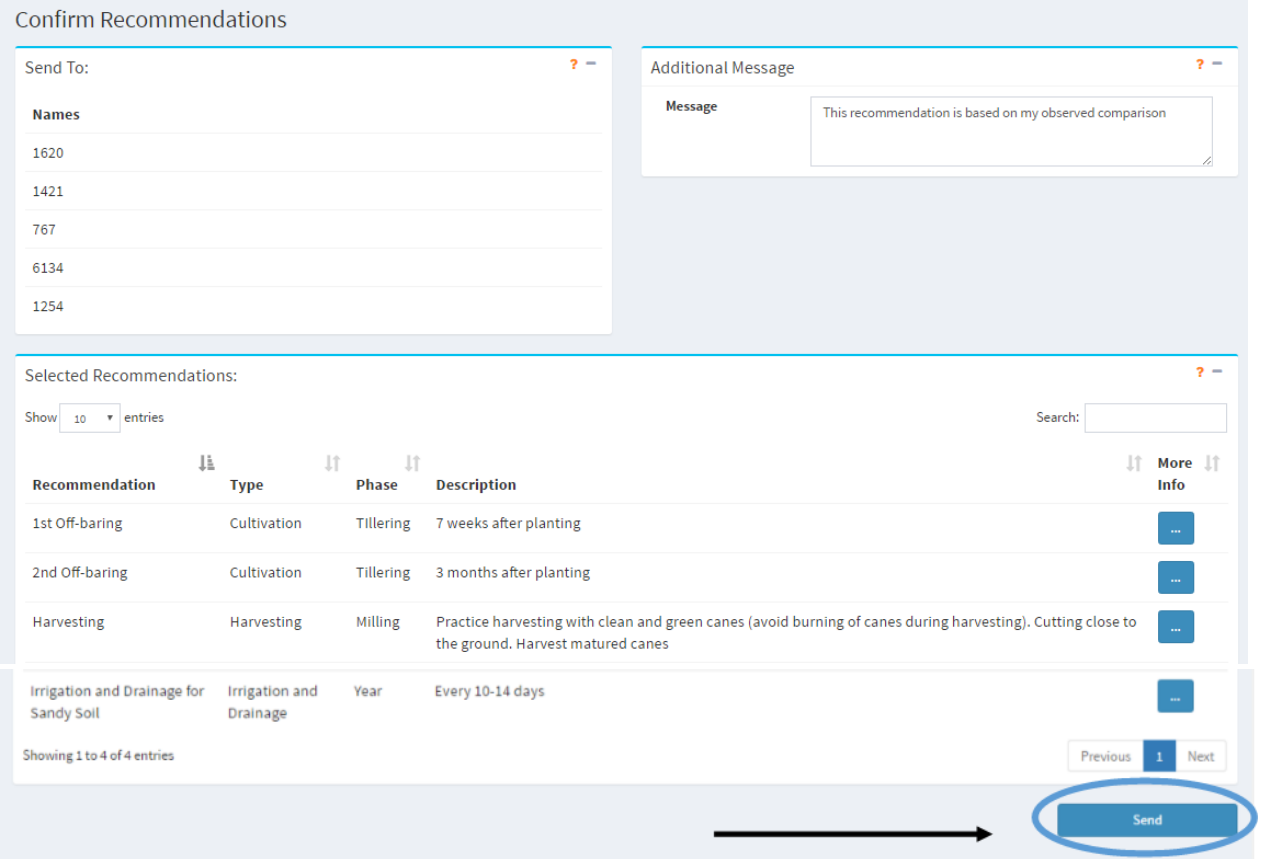
When the user clicks the 'Report Problems' button in farm comparison page, the user is displayed two tables. The first table lists down all problems that currently exist in the district. The second table however, initially lists down problems automatically based on the current farm comparison. The user may choose to add or remove from the list. He is also allowed to click on the "..." button to view the problem details. To submit, click the 'Report Problems' button below the two

tables. On submit, the user is redirected to the Confirm Problems page.



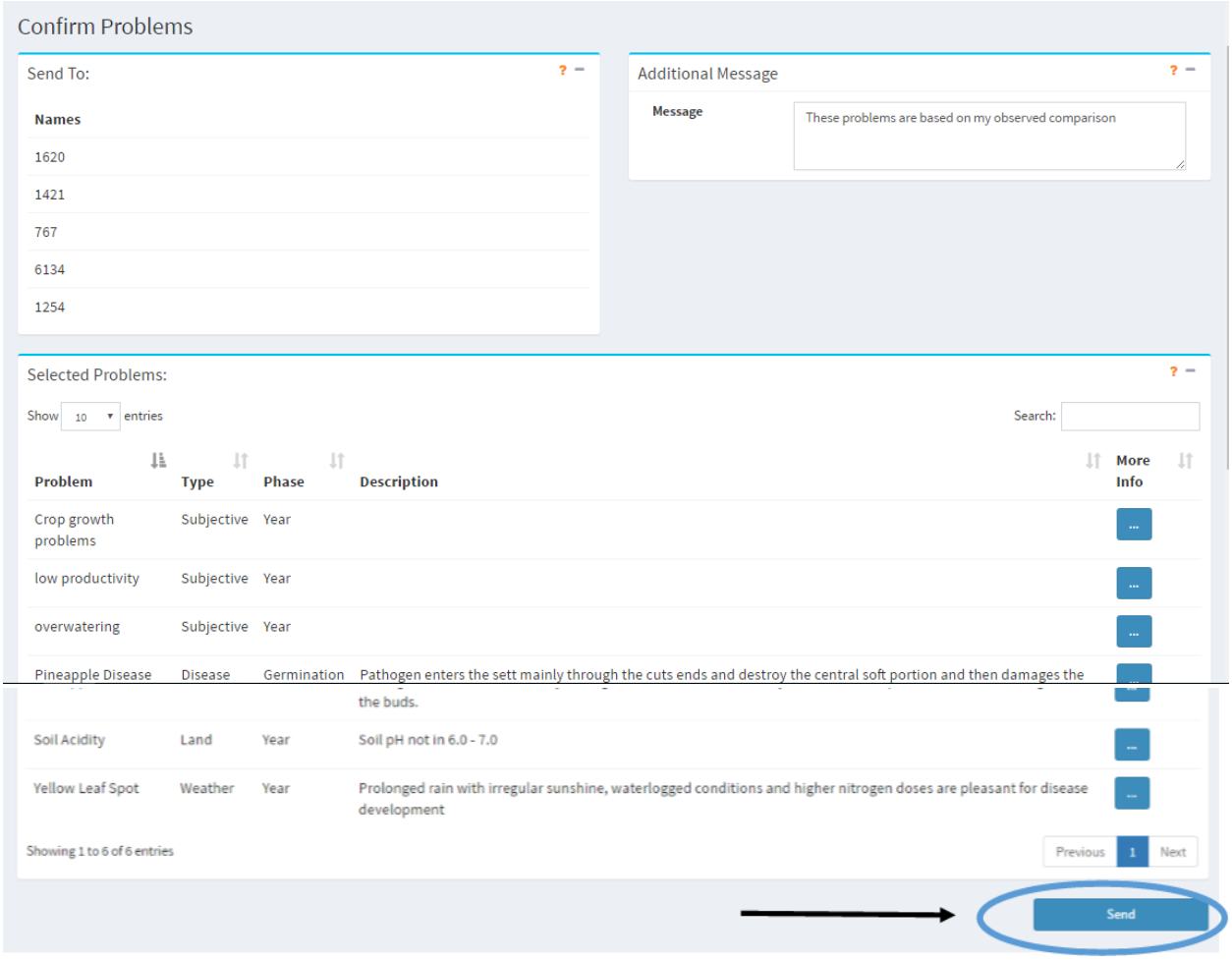
12.0 Confirm Recommendations

After clicking on 'Send Recommendations' in the farm comparison page, the MDO is led to this page. This page is used to verify the recommendations that the user has selected as well as the farms. The MDO may also choose to add or edit the existing message to better communicate with the farmers. On clicking 'Send', the farmers that own the selected farms receive the notification.



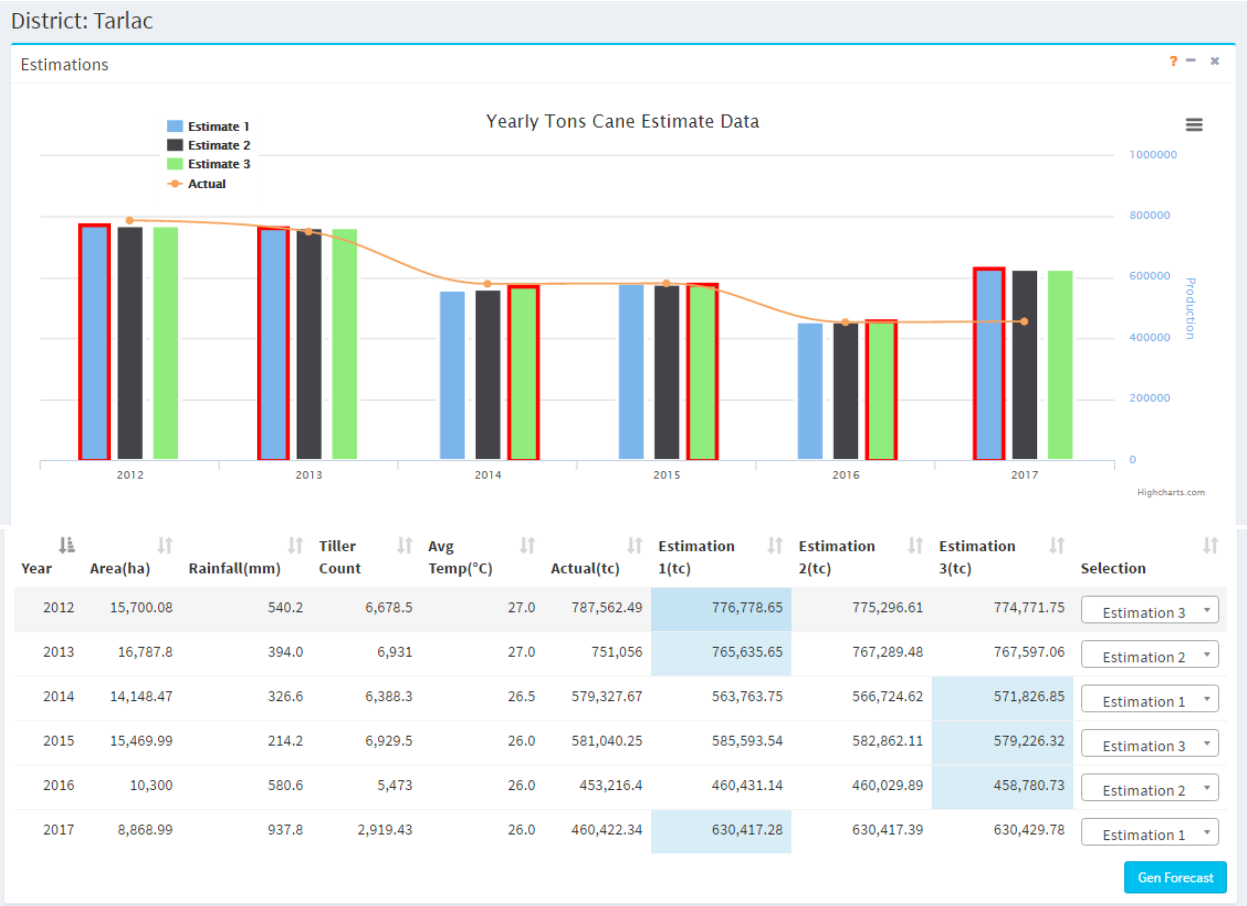
13.0 Confirm Problems

After clicking on 'Report Problems' in the farm comparison page, the MDO is led to this page. This page is used to verify the problems that the user has selected as well as the farms. The MDO may also choose to add or edit the existing message to better communicate with the farmers. On clicking 'Send', the farmers that own the selected farms receive the notification.



14.0 Crop Estimate

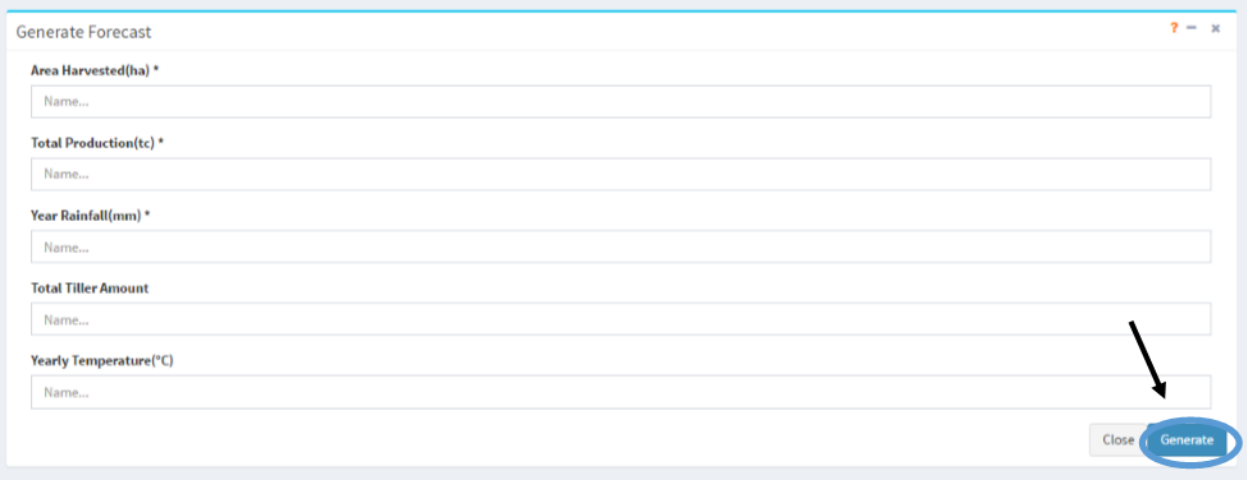
The Crop Estimate page shows the crop estimate of a district in terms of Tons Cane. The bar graph of the first table shows the 3 estimates and the actual tons cane is presented as a line. The red highlighted Column of the bar graph shows the closest estimate to the actual. The MDO uses this to influence his selection of the estimate for the current year.



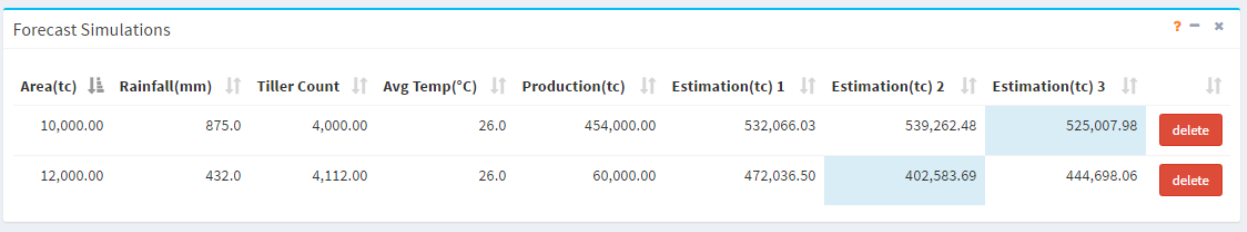
Year	Area(ha)	Rainfall(mm)	Tiller Count	Avg Temp(°C)	Actual(tc)	Estimation 1(tc)	Estimation 2(tc)	Estimation 3(tc)	Selection
2012	15,700.08	540.2	6,678.5	27.0	787,562.49	776,778.65	775,296.61	774,771.75	Estimation 3
2013	16,787.8	394.0	6,931	27.0	751,056	765,635.65	767,289.48	767,597.06	Estimation 2
2014	14,148.47	326.6	6,388.3	26.5	579,327.67	563,763.75	566,724.62	571,826.85	Estimation 1
2015	15,469.99	214.2	6,929.5	26.0	581,040.25	585,593.54	582,862.11	579,226.32	Estimation 3
2016	10,300	580.6	5,473	26.0	453,216.4	460,431.14	460,029.89	458,780.73	Estimation 2
2017	8,868.99	937.8	2,919.43	26.0	460,422.34	630,417.28	630,417.39	630,429.78	Estimation 1

14.1 Generate Forecast

The MDO will be able to see a form the moment he clicks the "**Gen Forecast**" button. This is another tool that can be used to influence the selection of an estimate for the current year. In the form, the user may input the values he deems necessary to test which estimate would be most appropriate to select. Area Harvested, Total Production, Year Rainfall, Total Tiller Amount, Yearly Temperature are all the inputs the user may add. To create a forecast, click on "Generate" button and the MDO will be able to see the new Forecast in the Forecast Simulator. The MDO may choose to remove previously made forecast in the Forecast simulator by pressing on the row's "delete" button.



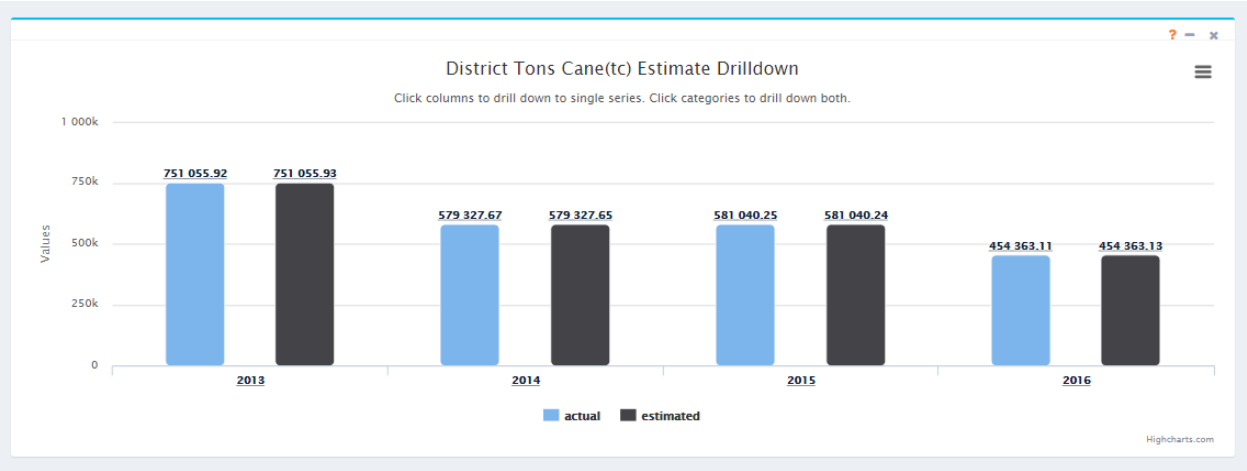
The MDO may choose to remove previously made forecast in the Forecast simulator by pressing on the row's "delete" button. The forecast simulator takes into account the previous year's data and previously made forecast simulations to calculate for the newly created forecast.

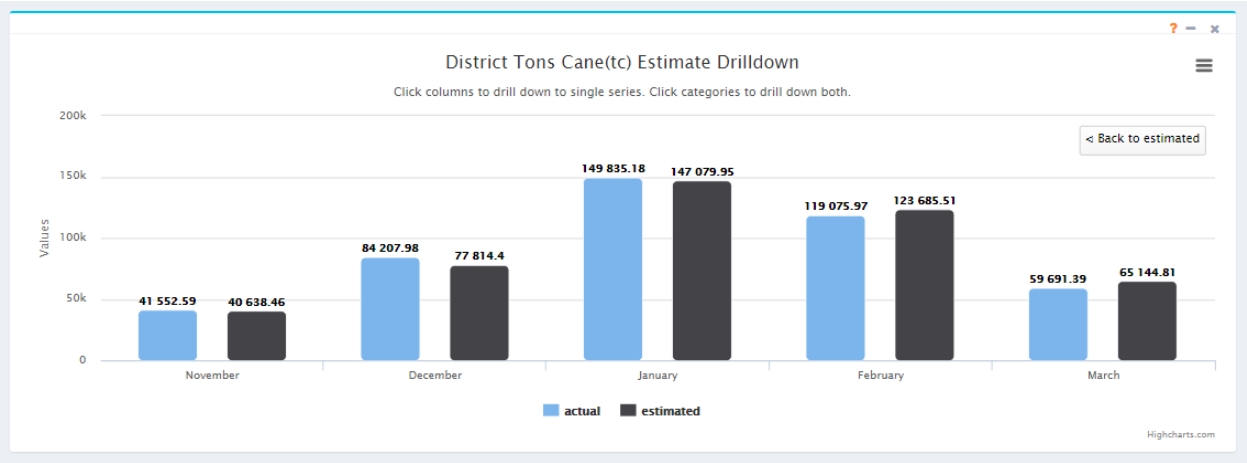


Area(tc)	Rainfall(mm)	Tiller Count	Avg Temp(°C)	Production(tc)	Estimation(tc) 1	Estimation(tc) 2	Estimation(tc) 3	
10,000.00	875.0	4,000.00	26.0	454,000.00	532,066.03	539,262.48	525,007.98	delete
12,000.00	432.0	4,112.00	26.0	60,000.00	472,036.50	402,583.69	444,698.06	delete

A selection can be made from the dropdown of the first table, where the MDO should choose from the "Estimation 1", "Estimation 2" and "Estimation 3". The selection of the estimate in the first table for the current crop year will affect the values used in the Crop Assessment Page as well as the Board's Weekly Production Statistics Report. The values of the crop estimate are automatically updated when there are farmers who have input their production. It would also automatically reduce when there has been reported damage due to a disaster.

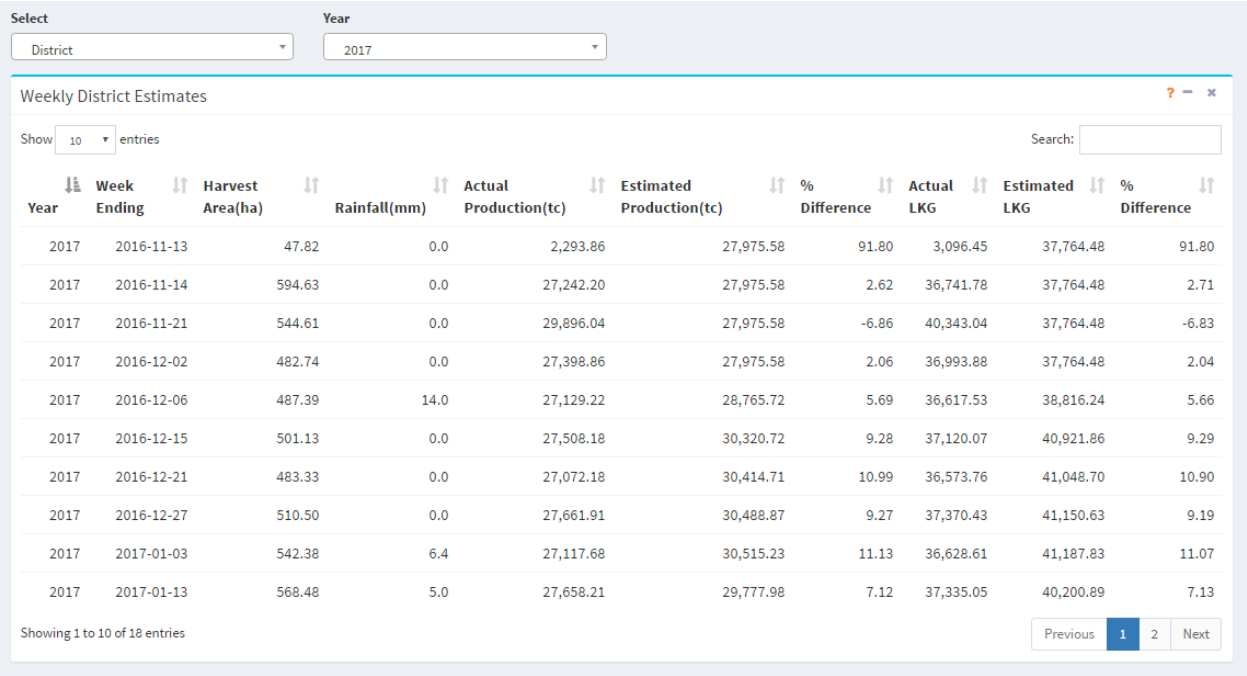
The MDO may use the second bar graph to drill down the estimates from year to months. He can use this to have a visual comparison of the estimate to that of the actual. It only shows months that have production data.





14.2 Weekly District Estimates

This table which as at the end of Crop Estimate page, shows the weekly estimates of the district. It displays the production data of every week as well as the forecast that the system generated for that specific week. The user can select the 'Year' from the dropdown and it is used to filter the table to view only the selected crop year weeks. The percentage difference shows the accuracy of the estimate to that of the actual for the week. This is used to provide more insight to the board members when sugar allocating.



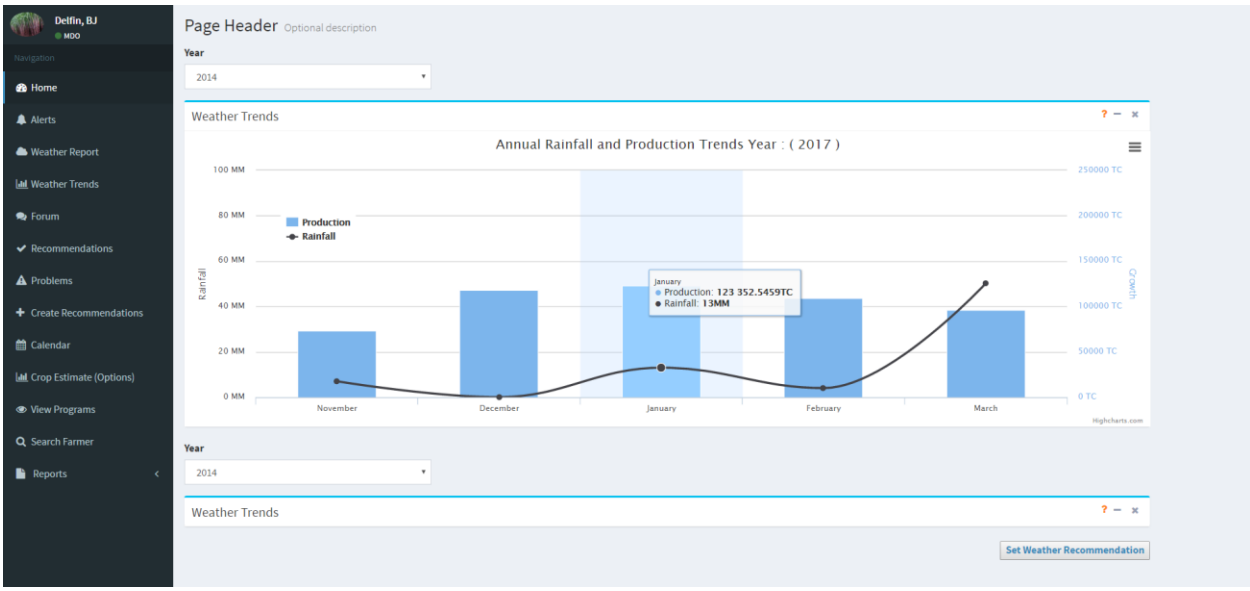
Year	Week Ending	Harvest Area(ha)	Rainfall(mm)	Actual Production(tc)	Estimated Production(tc)	% Difference	Actual LKG	Estimated LKG	% Difference
2017	2016-11-13	47.82	0.0	2,293.86	27,975.58	91.80	3,096.45	37,764.48	91.80
2017	2016-11-14	594.63	0.0	27,242.20	27,975.58	2.62	36,741.78	37,764.48	2.71
2017	2016-11-21	544.61	0.0	29,896.04	27,975.58	-6.86	40,343.04	37,764.48	-6.83
2017	2016-12-02	482.74	0.0	27,398.86	27,975.58	2.06	36,993.88	37,764.48	2.04
2017	2016-12-06	487.39	14.0	27,129.22	28,765.72	5.69	36,617.53	38,816.24	5.66
2017	2016-12-15	501.13	0.0	27,508.18	30,320.72	9.28	37,120.07	40,921.86	9.29
2017	2016-12-21	483.33	0.0	27,072.18	30,414.71	10.99	36,573.76	41,048.70	10.90
2017	2016-12-27	510.50	0.0	27,661.91	30,488.87	9.27	37,370.43	41,150.63	9.19
2017	2017-01-03	542.38	6.4	27,117.68	30,515.23	11.13	36,628.61	41,187.83	11.07
2017	2017-01-13	568.48	5.0	27,658.21	29,777.98	7.12	37,335.05	40,200.89	7.13

Showing 1 to 10 of 18 entries

Previous 1 2 Next

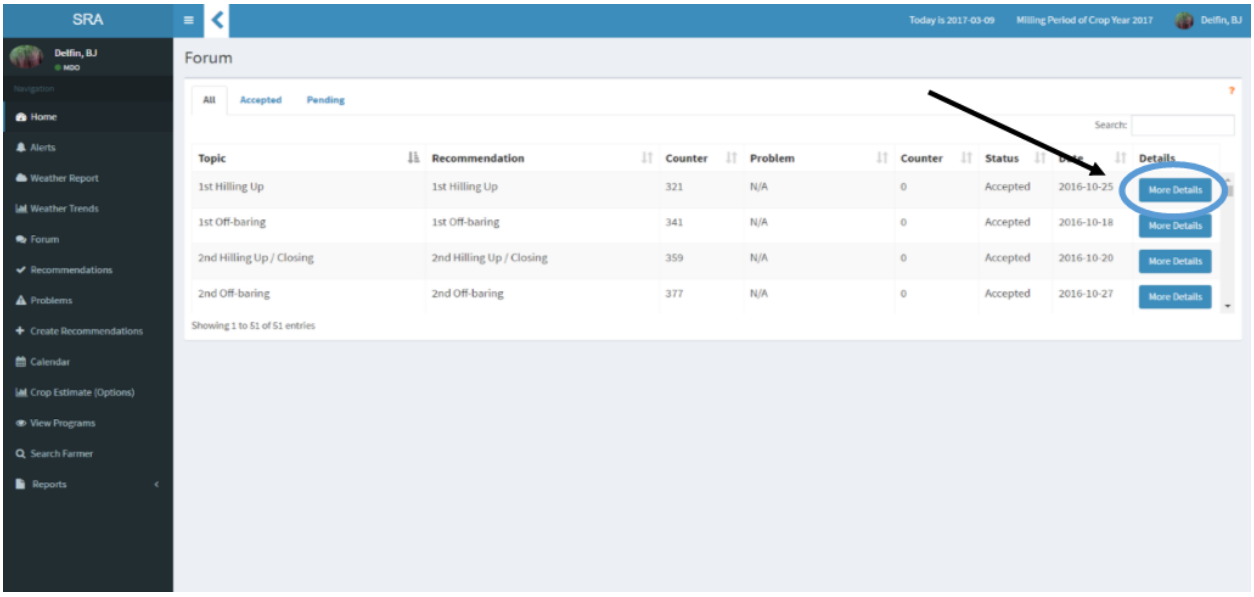
15.0 Weather Trends

In 'Weather Trends' page, the user can see a graph of rainfall and production by year. The user has an option to view the graph of rainfall and production by simply selecting the list of years in the drilldown.



16.0 Forum

In 'Forum' page, the user can see all posts created by farmers and their corresponding problems/recommendations. You can filter it by "Accepted", "Pending" or the default "All". The user has an option to view the details of the post by clicking 'More Details'.

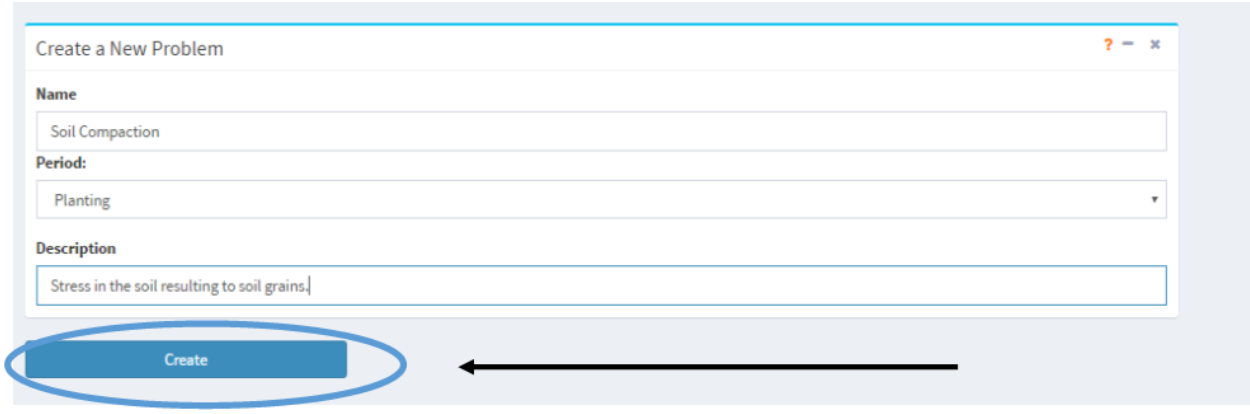


16.1 Accept Post

In this page, you can see the details of the chosen post. Here, the user has two options: 'Approve' or 'Reject' post. If the user has clicked 'Approve', he is now given two options: 'Create New Problem' or 'Create New Recommendation'.

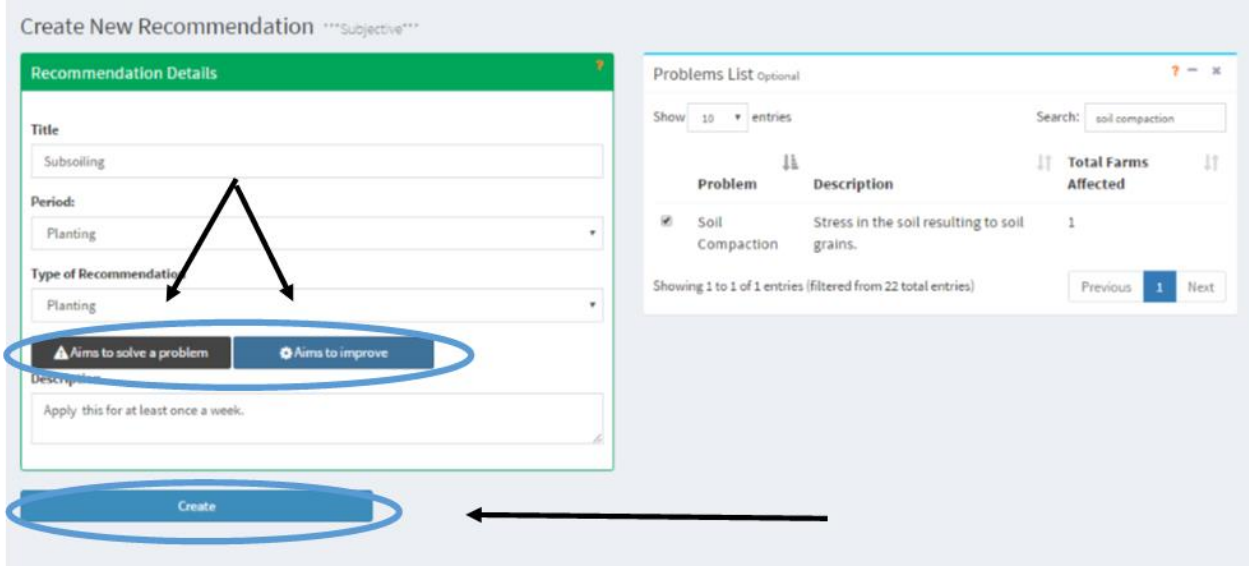
16.2 Create New Problem

Should the user choose 'Create New Problem', he is now required to input data in order create the problem. Once completed, the user now can click 'Create' and it will save the new problem to database and link the chosen post to the newly created problem.



16.3 Create New Recommendation

Should the user choose 'Create New Recommendation', he is now required to input data in order create the recommendation. If the recommendation does not solve any problems, then click 'Aims to improve'. If it does, then click 'Aims to solve' and select the problem it aims to solve. Once completed, the user now can click 'Create' and it will save the new problem to database and link the chosen post to the newly created recommendation.

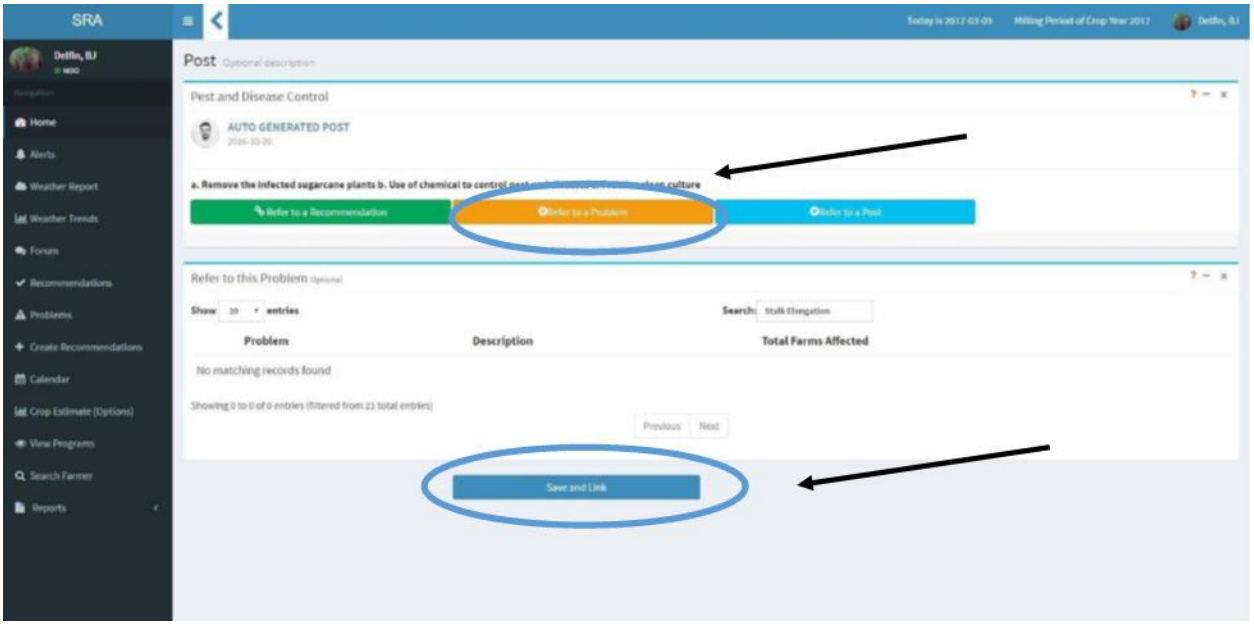


16.4 Reject Post

If the user chose 'Reject Post', the user is given the option: 'Refer to Recommendation', 'Refer to Problem', or 'Refer to Post'.

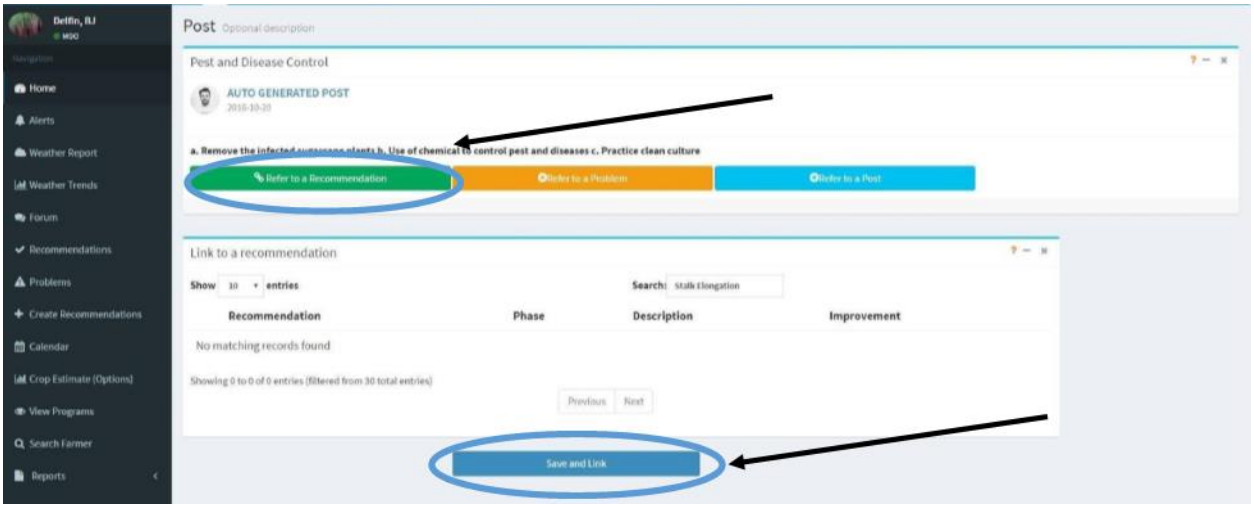
16.5 Refer to Problem

If the user selects 'Refer to Problem', the problem list is shown where the user can link the post to the chosen problem



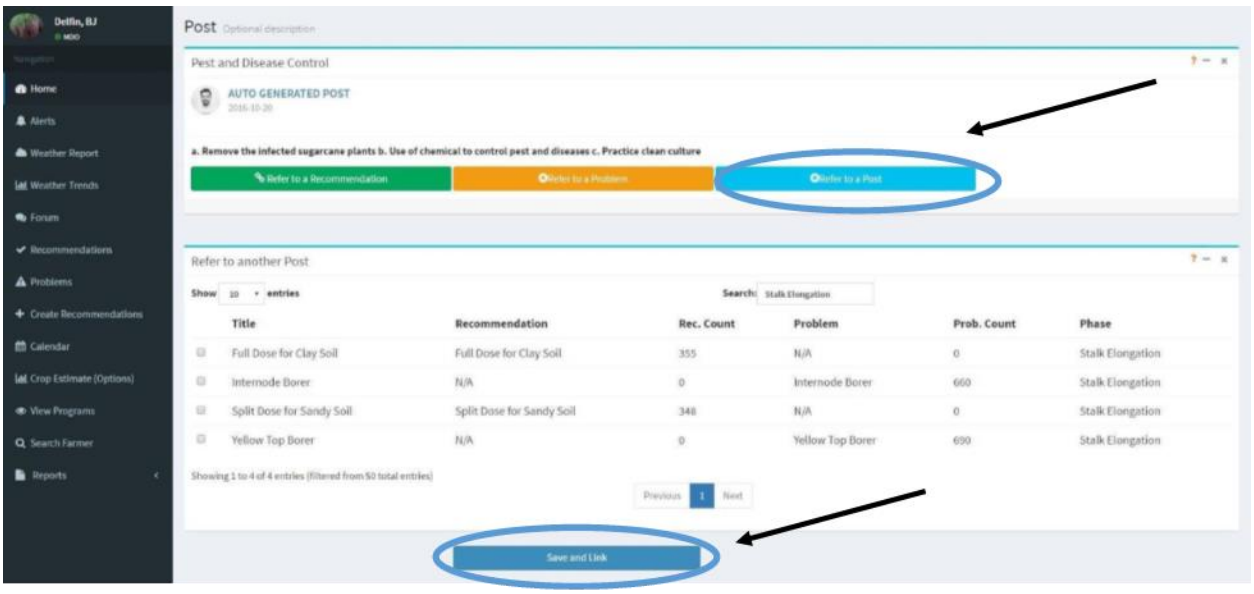
16.6 Refer to Recommendation

If the user selects 'Refer to Recommendation, the recommendation list is shown where the user can link the post to the chosen recommendation



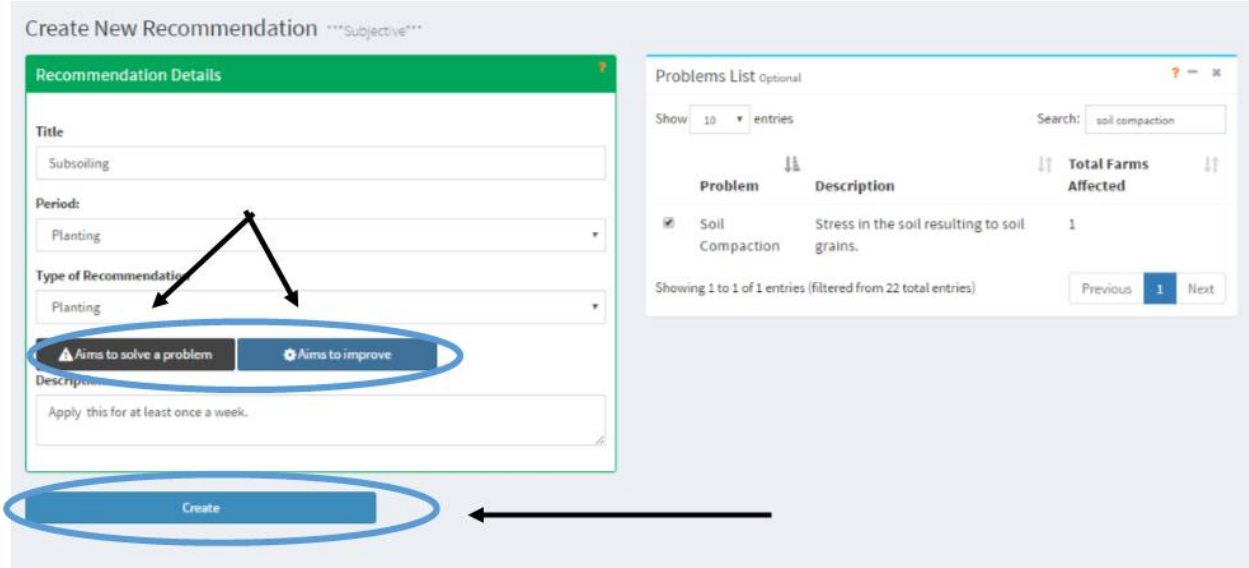
16.7 Refer to Post

If the user selects 'Refer to Post, the forum list is shown where the user can link the post to the chosen post.



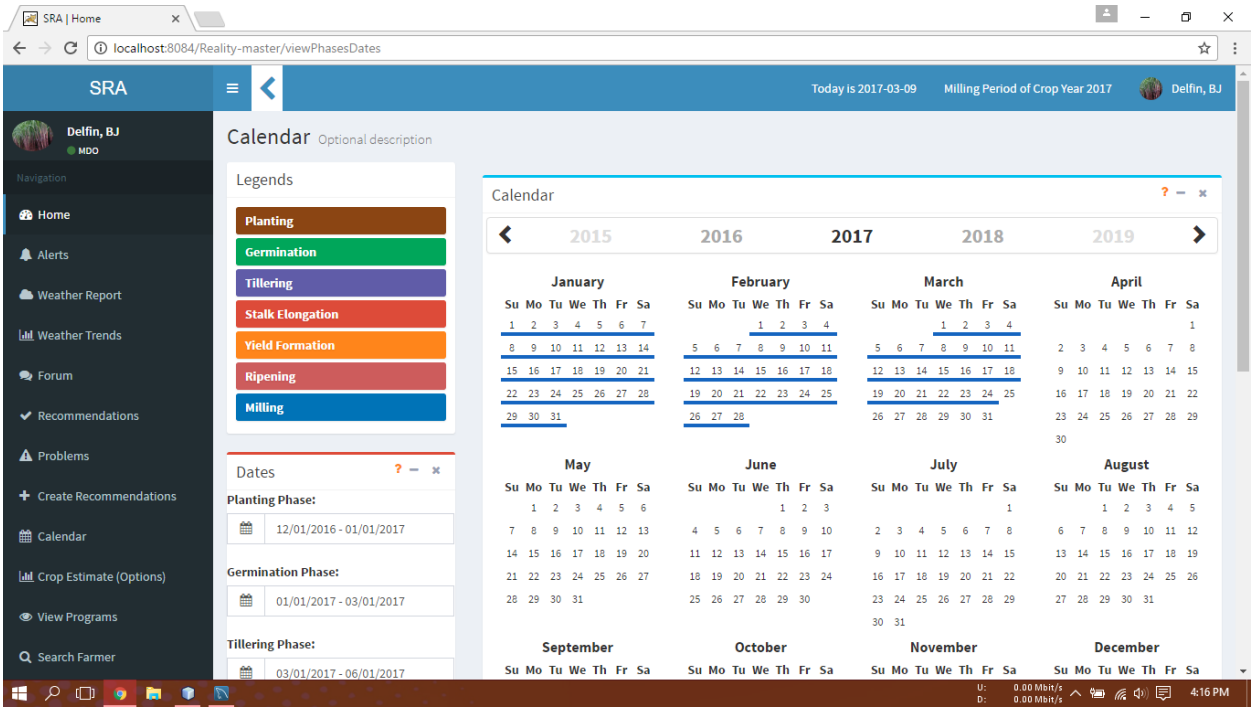
17.0 Create Recommendation

In 'Create New Recommendation', The user has an option to create new recommendations. The user is required to fill the data necessary to create the recommendation. If the recommendation does not solve any problems, then click 'Aims to improve'. If it does, then click 'Aims to solve' and select the problem it aims to solve. Once completed, the user now can click 'Create' and it will save the new problem to database and link the chosen post to the newly created recommendation.

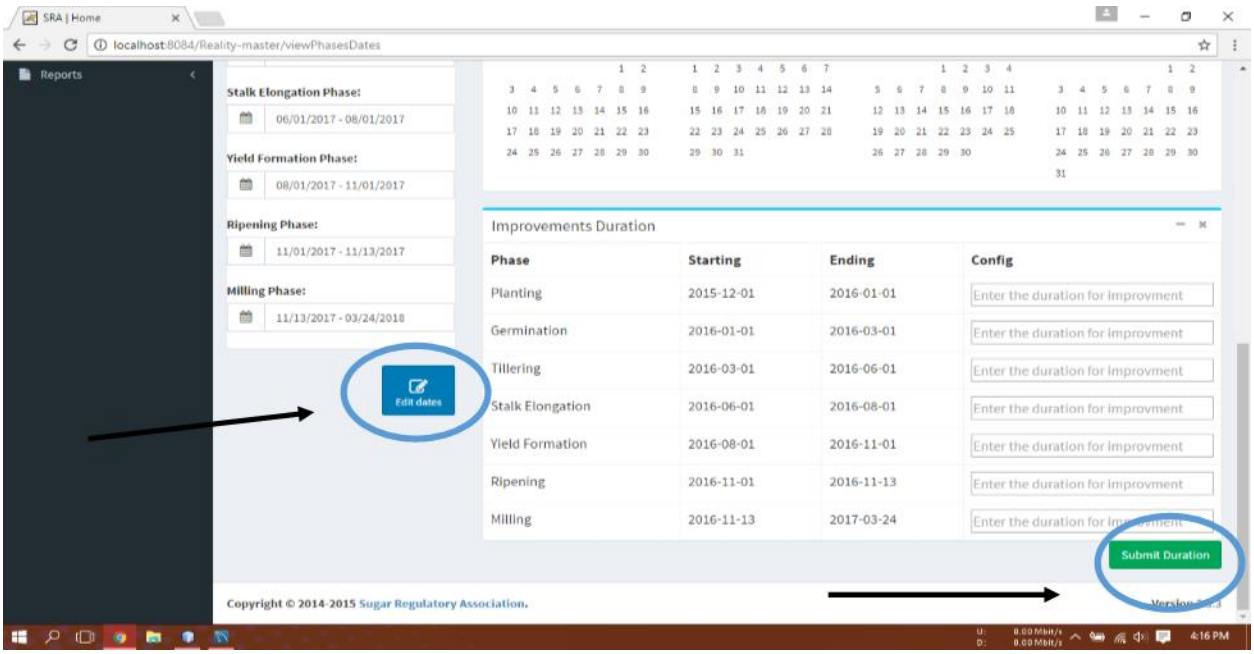


18.0 Calendar

In 'Calendar' page, you can see the dates set for every phase via year calendar. The user also has an option to set the dates for the next crop year. Simply enter the dates for every phase and click 'Edit dates'.



The user can also set the days of duration per phase. To do this, simply enter the number of duration per phase and click 'Submit Duration'.



19.0 Create Crop Assessment Report

On clicking "Create Crop Assessment" report, the user is led to this report. The report lists down all production data of the week, daily rainfall as well as all the performance updates of the week such as recommendations and problems. The report however will not show any production data for phases that is not milling phase. The user can also click on a farmer from the Farmer Performance to view the "Farmers profile".

CROP ASSESSMENT REPORT

Crop Year: 2017

Week Ending: 2017-03-12

PART 1:PRODUCTION STATUS DATA

Area Harvested

Particulars	Estimated Production			Percent Completed	
	Previous	This Week	To Date		
Area (ha)	10,300.00	8,442.69	159.12	8,601.81	83.51%
Tons Cane (tc)	630,417.26	437,945.63	8,630.13	446,575.76	70.84%
LKG (lkg)	1085406.29	591,232.71	11,648.97	602,881.68	55.54%

Standing Crop

Particulars	Estimated Production
Area (ha)	1,698.19
Tons Cane (tc)	183,841.50
LKG (lkg)	482,524.61

Weather Update

Rainfall Amount(mm) of the week

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm

PART 2: DISTRICT IMPROVEMENT STATUS REPORT

A. Farmer Performance

Particulars	Last Week		This Week		Improvement
	Name	TC/Yield	Name	TC/Yield	
Highest Producing Farmer	AGRIKULTO	1848.4912 TC	AGRIKULTO	1647.7274 TC	↓ 200.76
Lowest Producing Farmer	ABRAHAM, OFELIA	0.042 TC	ABRAHAM, OFELIA	0.0432 TC	↑ 0
Highest Yielding Farmer	YAQUITEN, ARNOLD	166.06502016 Yield	VALLES, RONALD	220.43400211 Yield	↑ 54.37
Lowest Yielding Farmer	CRUZ, PAOLO MARTIN	0.89914738 Yield	CRUZ, PAOLO MARTIN	1.01578451 Yield	↑ 0.12

B. District Improvements

Particulars	Improvements		Improvement
	Previous Week	This Week	
Recommendations Suggested	27	25	↓ 2
Recommendations Implemented	54	36	↓ 18
Problems Reported	35	70	↑ 35
Problems Solved	9	10	↑ 1

19.1 Narrative Report

In the Crop Assessment Report, the MDO is required to submit a narrative based on the data being provided and his analysis from Part 1 and 2 of the Crop Assessment Report. The narrative includes, weather, price of sugar, mill operation, price of inputs, findings and overall analysis. On submit, The Board members may now use this to have a quick overview/update of the district.

PART 3:NARRATIVE REPORT

A. MDO Narrative

WEATHER	Enter ...
PRICE OF SUGAR	Enter ...
MILL OPERATION	Enter ...
PRICES OF INPUTS	Enter ...
FINDINGS (PROBLEMS & RECOMMENDATIONS)	Enter ...
OVERALL ANALYSIS	Enter ...

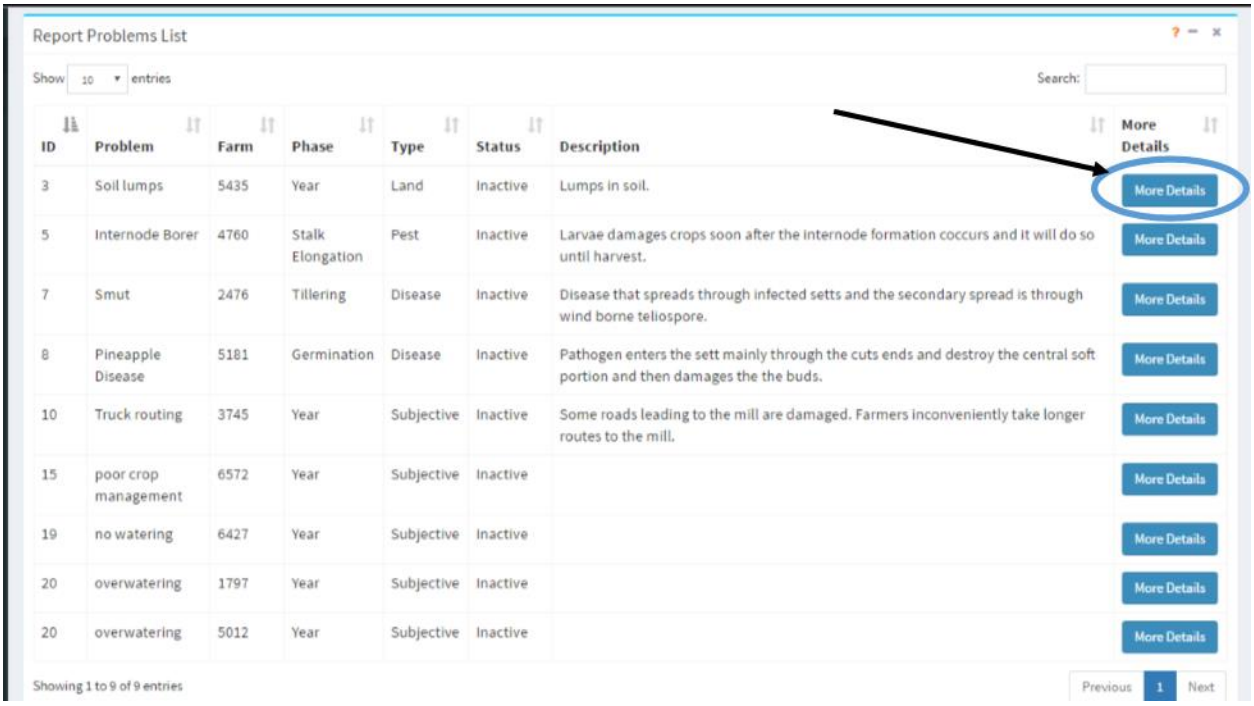
Print Report

Submit

19.2 Problem and Recommendation Drilldown

On clicking a value in the District Improvement Section of a Crop Assessment

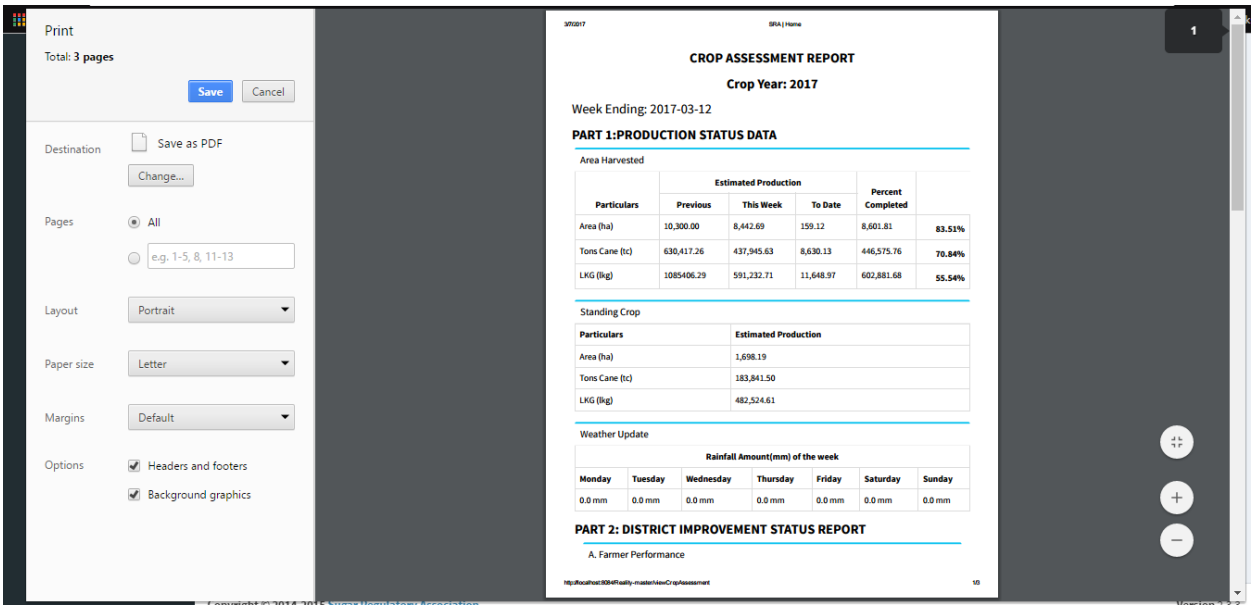
Report, the user will be redirected to this page. Depending on the choice like "Recommendations implemented" or "Problems Solved", the user will be able to see the full list of problems/recommendations that were encountered during the week. The user may also choose to view "More Details", to view the selected Recommendation/Problem



ID	Problem	Farm	Phase	Type	Status	Description	More Details
3	Soil lumps	5435	Year	Land	Inactive	Lumps in soil.	More Details
5	Internode Borer	4760	Stalk Elongation	Pest	Inactive	Larvae damages crops soon after the internode formation coccurs and it will do so until harvest.	More Details
7	Smut	2476	Tillering	Disease	Inactive	Disease that spreads through infected setts and the secondary spread is through wind borne teliospore.	More Details
8	Pineapple Disease	5181	Germination	Disease	Inactive	Pathogen enters the sett mainly through the cuts ends and destroy the central soft portion and then damages the the buds.	More Details
10	Truck routing	3745	Year	Subjective	Inactive	Some roads leading to the mill are damaged. Farmers inconveniently take longer routes to the mill.	More Details
15	poor crop management	6572	Year	Subjective	Inactive		More Details
19	no watering	6427	Year	Subjective	Inactive		More Details
20	overwatering	1797	Year	Subjective	Inactive		More Details
20	overwatering	5012	Year	Subjective	Inactive		More Details

19.3 Print Report

The user is given the option to print the report from either the "Crop Assessment List" or from viewing a "Crop Assessment Report". The user can print the report by clicking the "Print Report" button. He may choose to either save the report as pdf or print it directly.



Print

Total: 3 pages

Save Cancel

Destination: Save as PDF

Change...

Pages: All

e.g. 1-5, 8, 11-13

Layout: Portrait

Paper size: Letter

Margins: Default

Options: Headers and footers

Background graphics

3/7/2017 SRA | Home

CROP ASSESSMENT REPORT

Crop Year: 2017

Week Ending: 2017-03-12

PART 1:PRODUCTION STATUS DATA

Area Harvested

Particulars	Estimated Production			Percent Completed	
	Previous	This Week	To Date		
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Standing Crop

Particulars	Estimated Production
Area (ha)	1,698.19
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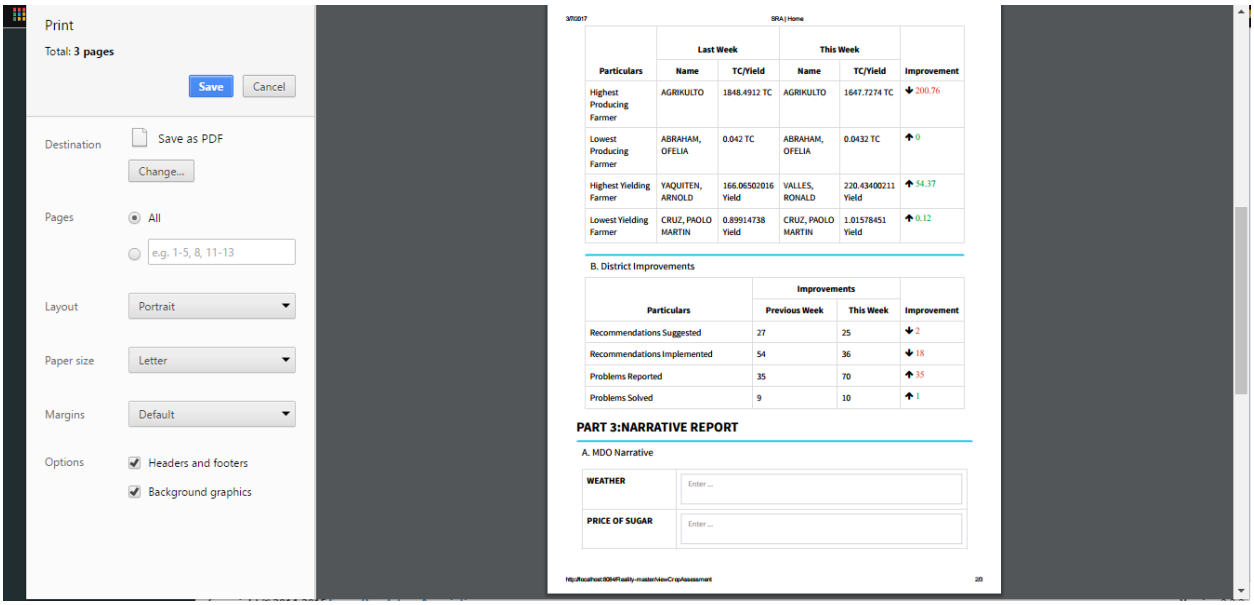
Weather Update

Rainfall Amount(mm) of the week						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm

PART 2: DISTRICT IMPROVEMENT STATUS REPORT

A. Farmer Performance

http://localhost:8084/Reality-master/NewCropAssessment 1/5



Print

Total: 3 pages

Save Cancel

Destination: Save as PDF

Change...

Pages: All

e.g. 1-5, 8, 11-13

Layout: Portrait

Paper size: Letter

Margins: Default

Options: Headers and footers

Background graphics

3/7/2017 SRA | Home

Particulars	Last Week		This Week		Improvement
	Name	TC/Yield	Name	TC/Yield	
Highest Producing Farmer	AGRIKULTO	1848.4912 TC	AGRIKULTO	1647.7274 TC	↓ 200.76
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B. District Improvements

Particulars	Improvements		Improvement
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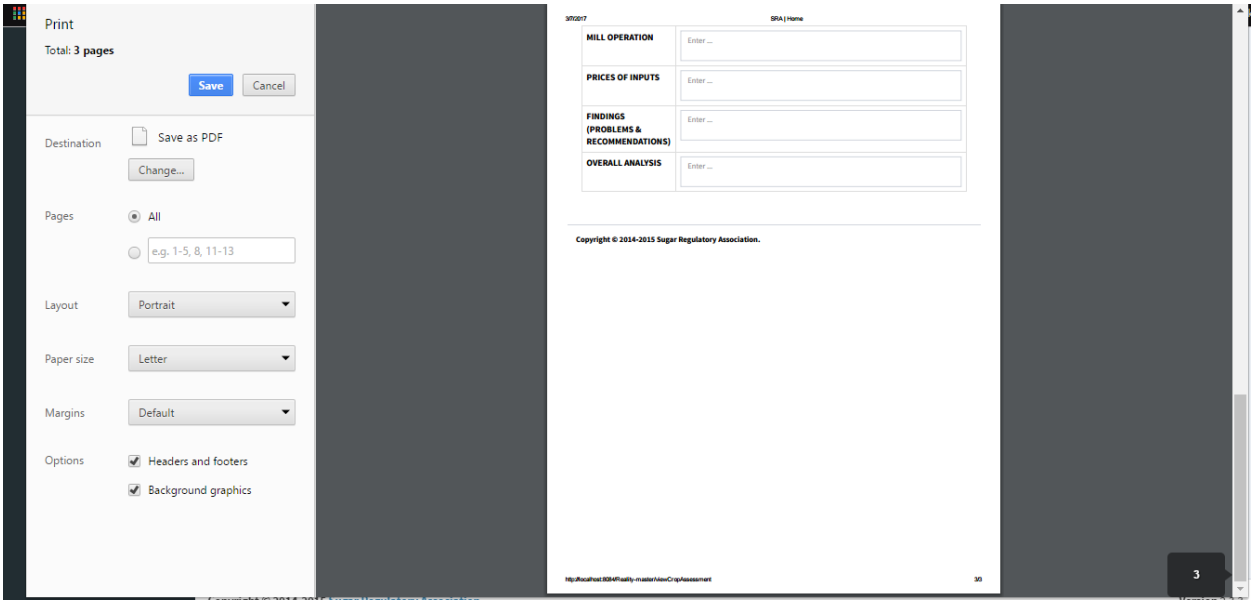
Recommendations Suggested	27	25	↓ 2
Recommendations Implemented	54	36	↓ 18
Problems Reported	35	70	↑ 35
Problems Solved	9	10	↑ 1

PART 3:NARRATIVE REPORT

A. MDO Narrative

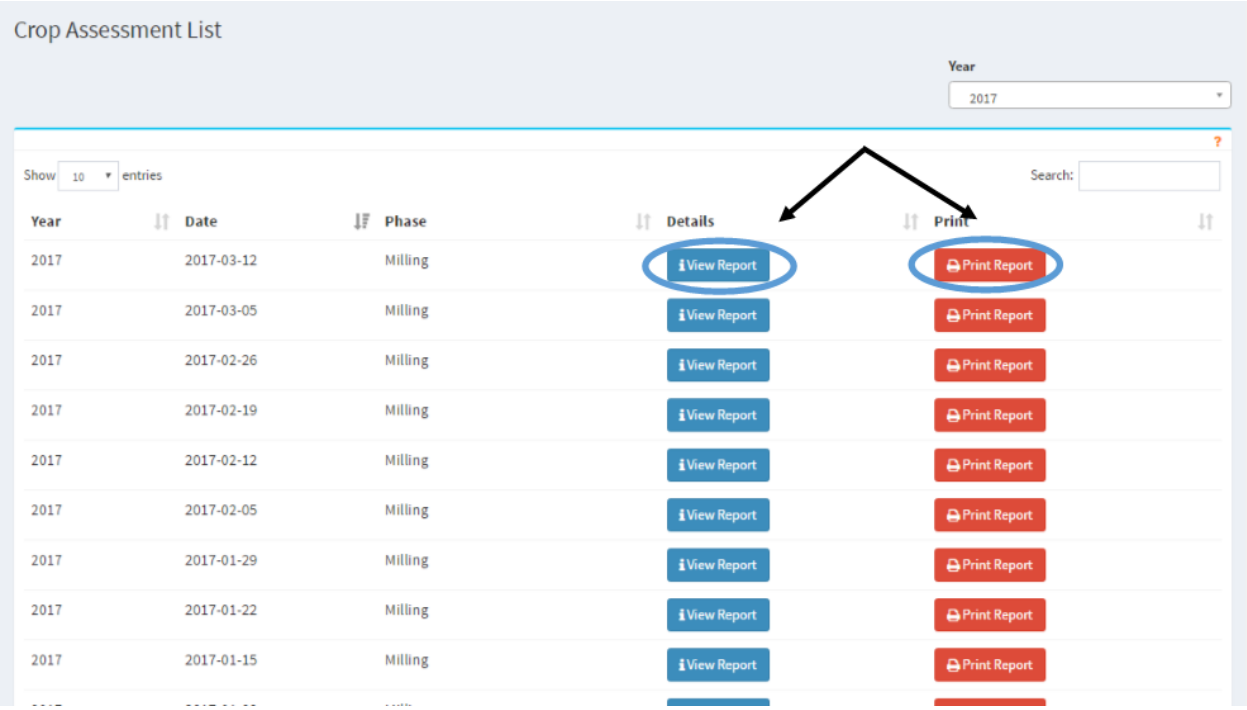
WEATHER	Enter ...
PRICE OF SUGAR	Enter ...

http://localhost:8084/Reality-master/NewCropAssessment 2/5



20.0 Crop Assessment List

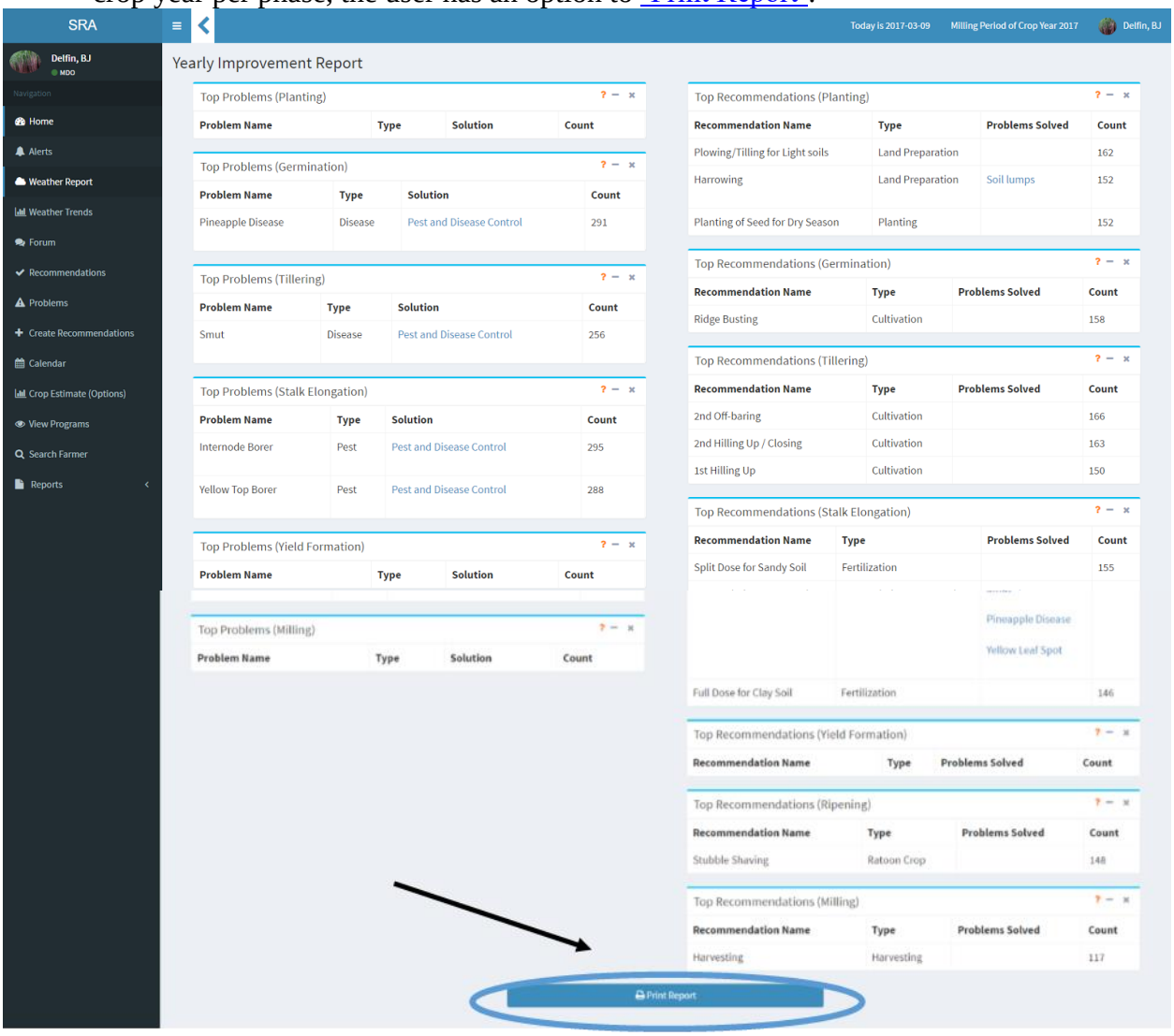
After clicking the 'Crop Assessment Reports' in the menu, the user will be led to the crop assessment list page. The user can use this list to view all the previous crop assessment reports. The user can select the specific year from the "Year" dropdown to filter the table. He can click "View Report", to view the contents of the crop assessment report. He can also click "Print Report" to generate a printable version.



21.0 Yearly Improvement Report

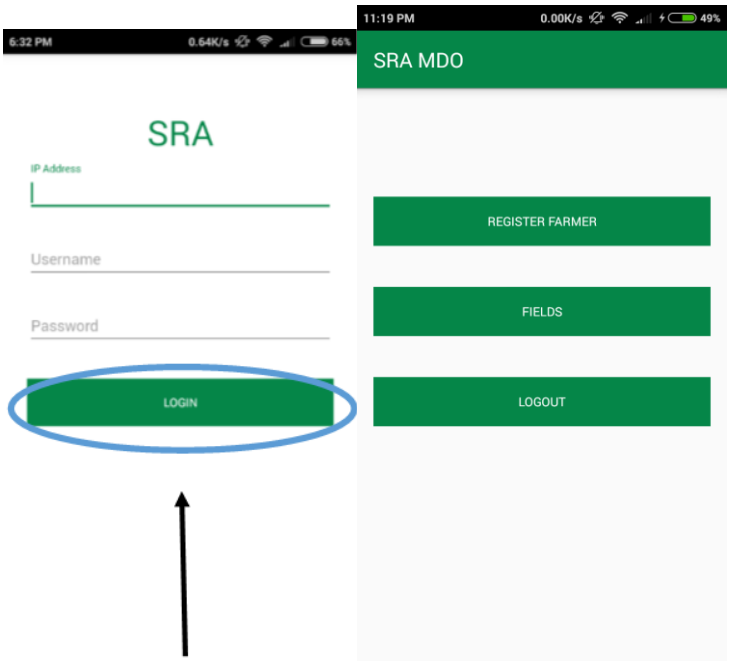
In this page, the user is able to see the top 3 recommendations and problems in the whole

crop year per phase, the user has an option to 'Print Report'.



22.0 Logging In

To use the mobile application, login information is required. Enter your username and password.



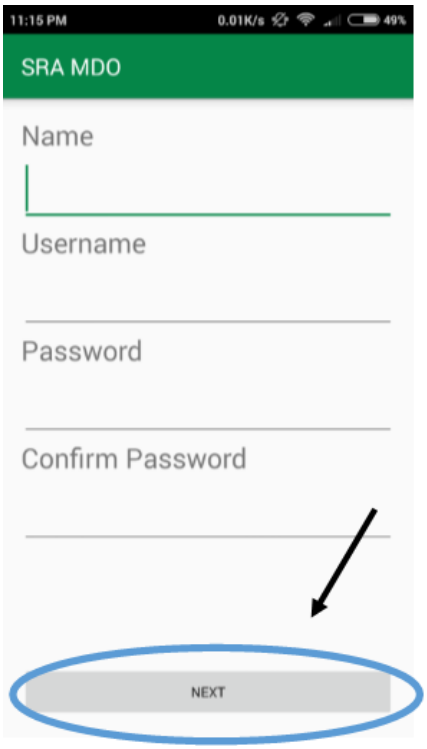
23.0 Registering a Farmer

To register a farmer, create the fields first. To create a field, tap on the map to plot the boundaries (or points) of field. Pressing the "Add Field" button will add the field to the map. More fields can be created by creating another polygon after pressing the "Add Field" button.

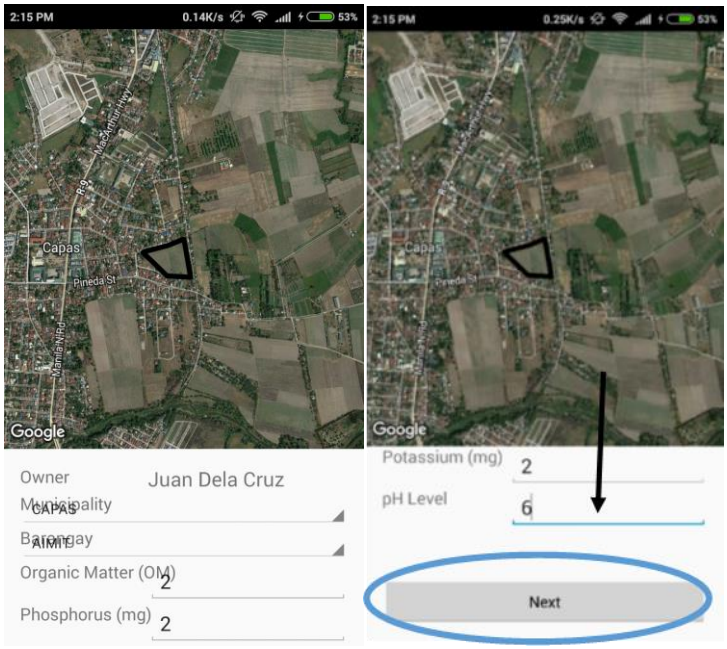
To remove a field, tap on it and press the "Remove" button. When creating a field, press the "Undo" button to remove the last plotted point from the map.

When done creating the fields, press the "Next" button to proceed to the next step.

The next step is to enter the name of the farmer as well as the login information to be used by the farmer for the farmer's mobile application.

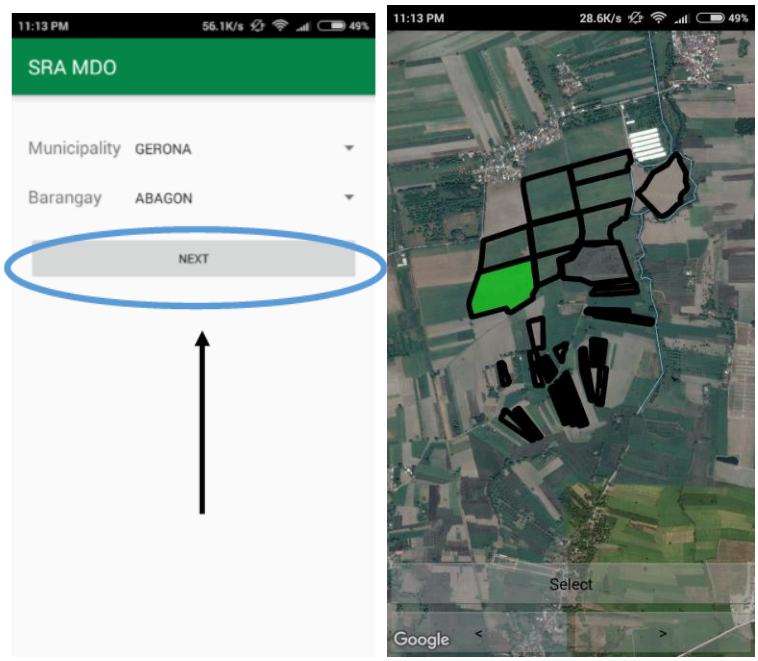


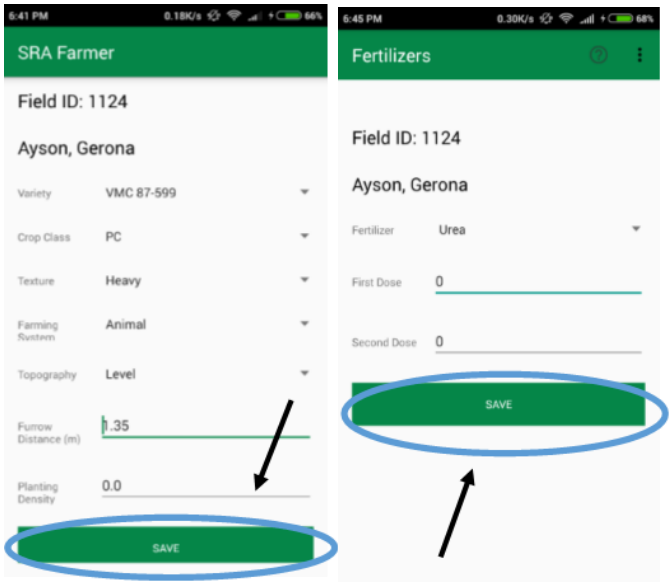
The final step is to enter the municipality and barangay, and the soil analysis of each of the fields created.



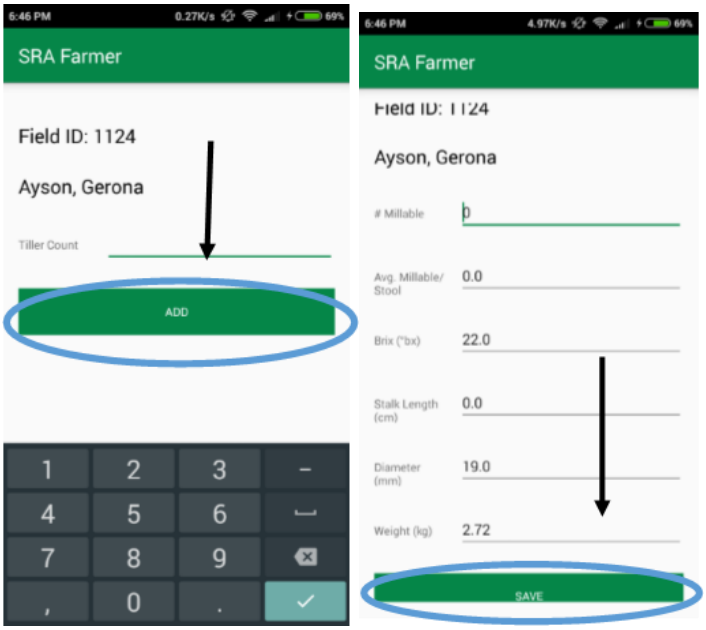
24.0 Crop Validation Survey

To create or update the Crop Validation Survey of a field, enter the municipality and barangay. Next, a map is shown and displays all the fields from the barangay. Each polygon represents a field. To select a field, you can either touch a polygon or use the left/right buttons at the bottom. To proceed with the selection, press the "Select Field" button.





The Crop Validation Survey consists of (a) the initial survey for planting or land preparation phase, (b) fertilizers used, (c) tiller count, and (d) milling information. Each page can only be accessed when current date is on the proper phase.

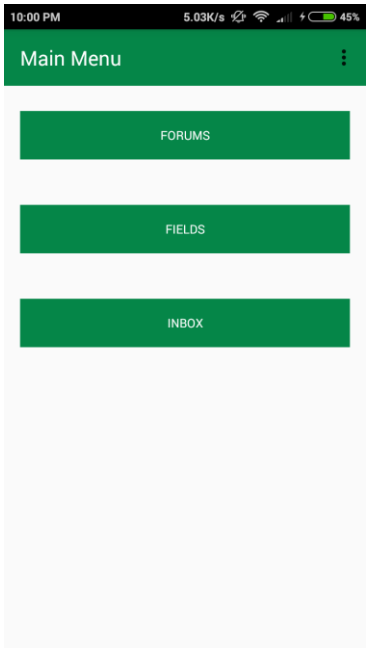


1.0 Logging In

Farmers enter the application by inputting their username and password through the login screen. The farmer's account is registered by the MDO through the MDO's mobile application.

2.0 Home

The home screen of the application shows the main menu. Options available are forums, fields, and inbox.



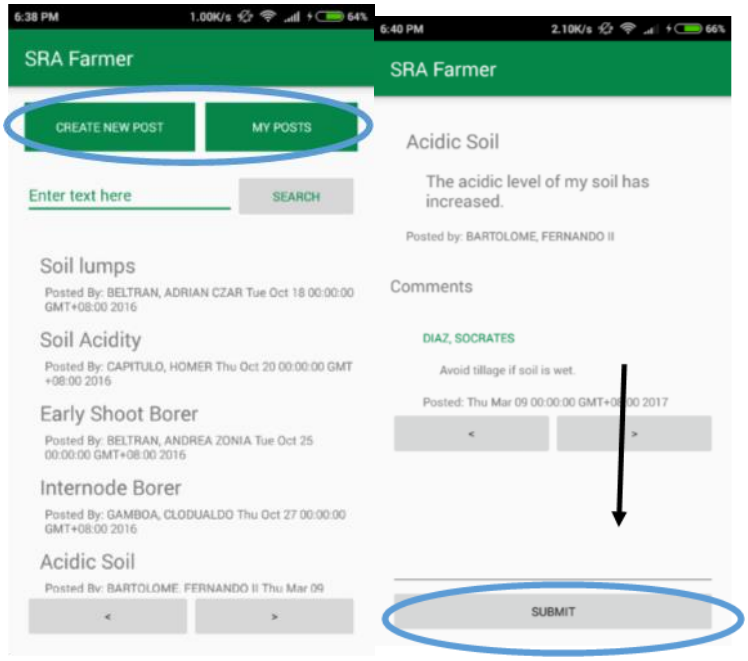
3.0 Map

The map displays all the fields of the farmer. Each polygon represents a field. To select a field, you can either touch a polygon or use the left/right buttons at the bottom. To

proceed with the selection, press the "Select Field" button.

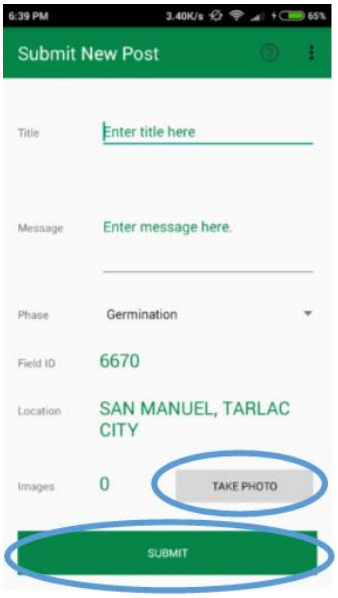
4.0 Forum

The forum shows all the threads or posts of the problems or recommendations that have been approved by the MDO.

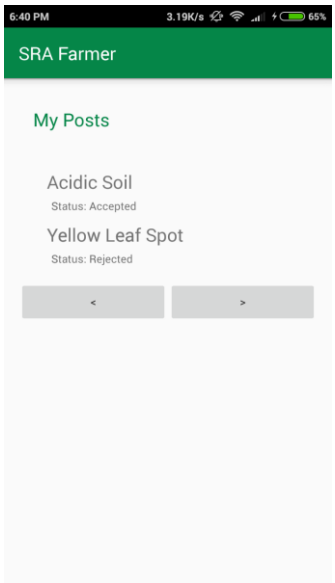


To create a new post, enter the title, message/description, and phase after selecting a field from the map. Photos are required in order to submit a post. The "Take Photo" button

will open your camera app for you to be able to take a photo. Multiple photos can be taken. The number of photos taken are indicated on the left of the button.

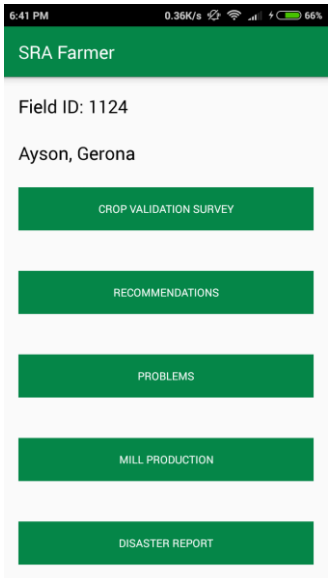


All posts you've submitted can be viewed at My Posts.



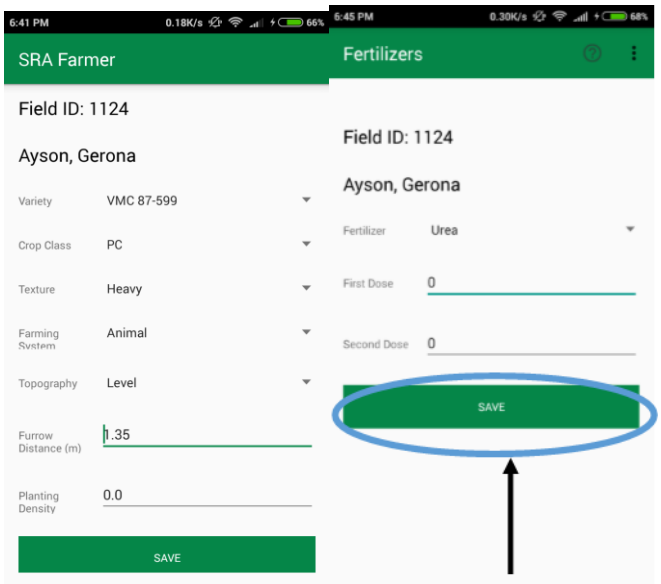
5.0 Fields Menu

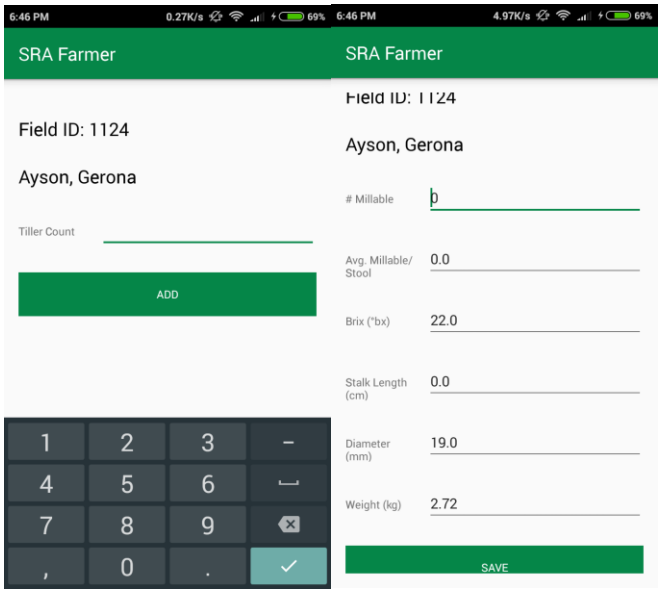
The Fields Menu can be accessed after pressing the "Fields" button from the home menu and selecting a field from the map.



6.0 Crop Validation Survey

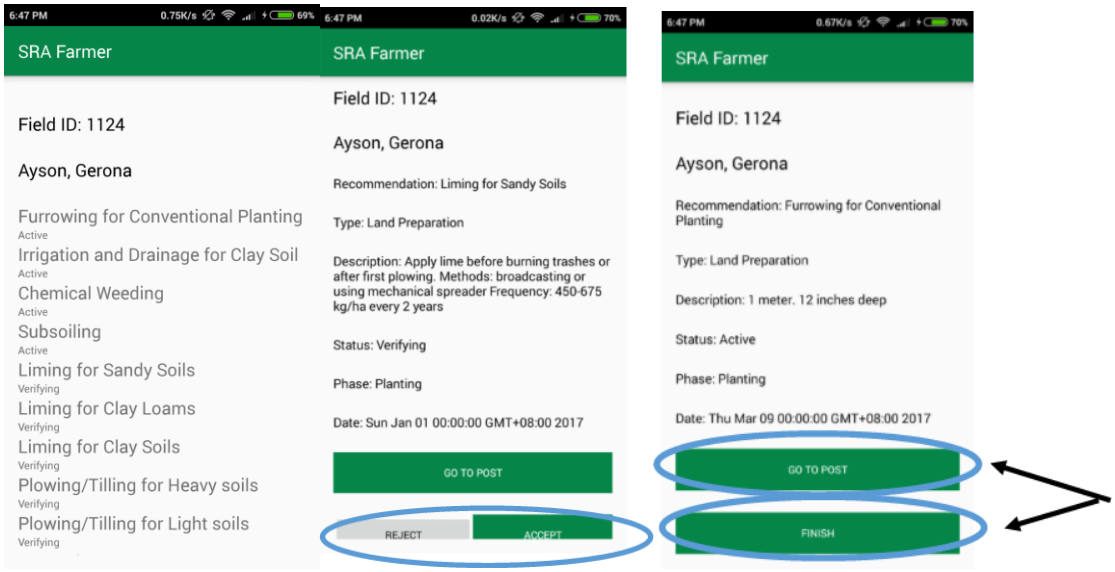
The Crop Validation Survey consists of (a) the initial survey for planting or land preparation phase, (b) fertilizers used, (c) tiller count, and (d) milling information. Each page can only be accessed when current date is on the proper phase.





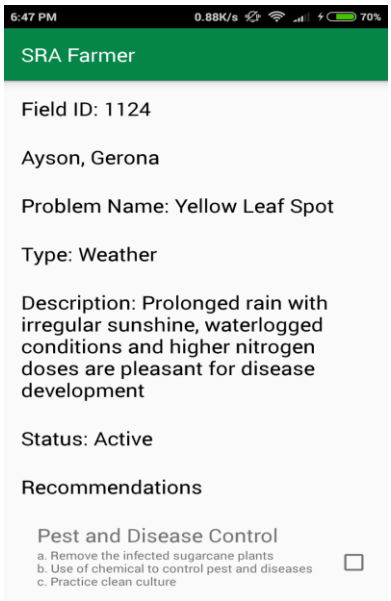
7.0 Recommendations

The recommendations list shows all the active and verifying recommendations. The recommendations page displays more information about a recommendation. To verify a recommendation, press on either the "Accept" or "Reject" button. Active recommendations can be removed by pressing the "Finish" button. The thread of the selected recommendation can be view by pressing the "Go to Post" button.



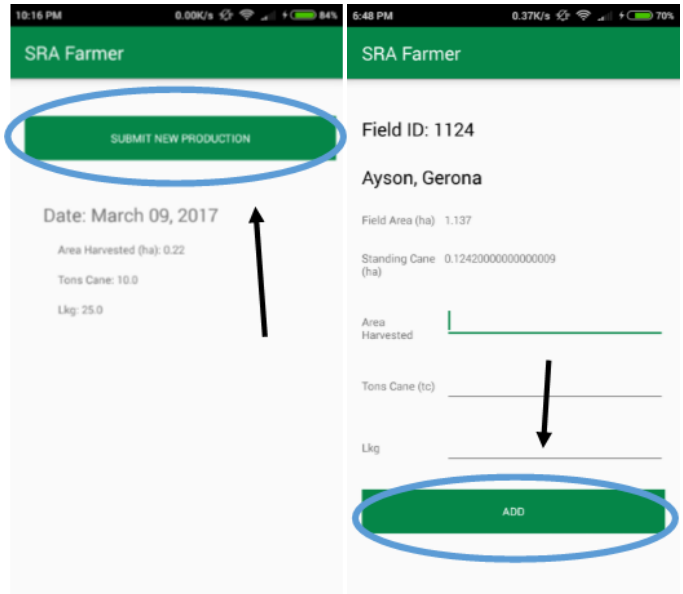
8.0 Problems

The problems page shows more information about the selected problem from the problems list. Selecting a recommendation will remove the problem from the problems list.



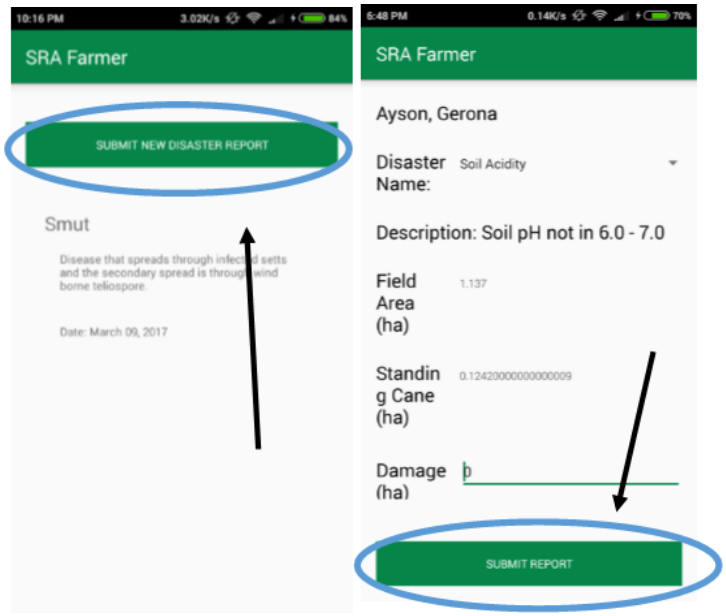
9.0 Mill Production

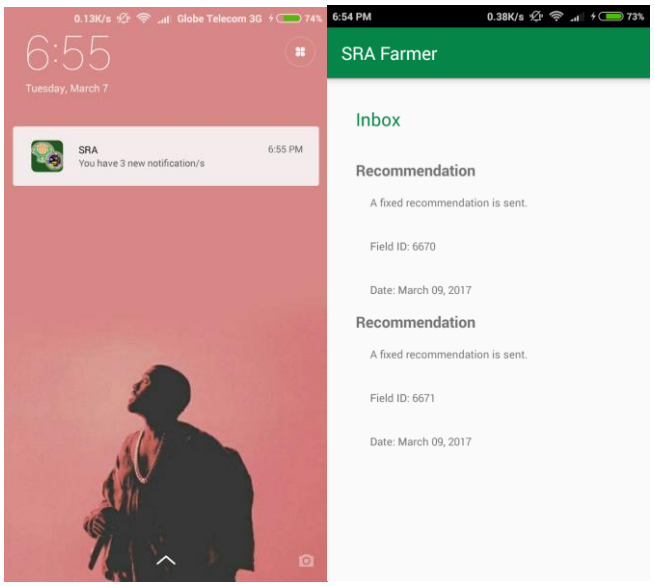
The Mill Production page allows you to submit production data and view previously submitted production. Enter the area harvested, tons cane produced, and LKG produced. Then press the "Add" button to submit your production.



10.0 Disaster Report

To submit a disaster report, select a disaster from the dropdown and enter the damaged area in hectares.



11.0 Notifications and Inbox

The MDO can give notifications and are seen at the inbox page. Selecting the notifications will redirect you to the inbox page.