6.0 System Design

6.1 Design Strategies

The proposed system is designed to the MVC model. For the interface design, Boostrap and CSS was used. The interface provides set of controls and action tools that allows interactivity of the web pages of the system. The interface is also designed to have the necessary details for better user experience.

The programming language used for the system is Java and uses Apache Tomcat for the server. JDBC library is used to connect to the database MySQL.

Highcharts was the tool used to generate and display interactive charts inside the webpages. This tool offers different kinds of charts and is highly customizable.

The formula used for the forecasting was Multiple Linear Regression. The formula is as follows:

$$yi=\beta 0+\beta 1xi,1+\beta 2xi,2+\ldots+\beta p-1xi,p-1+\epsilon i.$$

Y indicates the dependent variable which is the value to be predicted/forecasted. β0 are the independent variable or the predictors that will affect the value of the dependent variable. An example would be the forecasting the future harvest or crop estimate. The Tons Cane or the production is the value we are looking for. Then the parameters that are needed according to the expert would be the area for harvest, rainfall, tiller count, and average temperature. These predictors will used in the formula along with the actual production. The actual production will be used to check how much is the difference with the forecasted value.

6.2 Data Specifications

6.2.1 ERD

6.2.2 Tables/Layouts

AGP

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
district	district name	VARCHAR(45)	ALPHA-NUMERIC
municipality	municipality in district	VARCHAR(45)	ALPHA-NUMERIC
barangay	barangay in the municipality	VARCHAR(45)	ALPHA-NUMERIC
area	area harvested	DECIMAL(10)	NUMERIC
tons_cane	cane produced	DECIMAL(10)	NUMERIC
Lkg	sugar produced	DECIMAL(10)	NUMERIC

AnnualCropEstimate

Column Name	Description	Data Type (Length)	Values

year	crop year	INT	NUMERIC
district	district name	VARCHAR(45)	ALPHA-NUMERIC
area	area harvested	DECIMAL(10)	NUMERIC
tons_cane	cane produced	DECIMAL(10)	NUMERIC
Lkg	sugar produced	DECIMAL(10)	NUMERIC

CommentScoreFarmers

Column Name	Description	Data Type (Length)	Values
Farmers_name	farmer name	VARCHAR(45)	ALPHA-NUMERIC
Comments_id	id of comments	INT	NUMERIC

CommentScoreUsers

Column Name	Description	Data Type (Length)	Values
Users_username	username	VARCHAR(45)	ALPHA-NUMERIC
Comments_id	id of comments	INT	NUMERIC

Comments

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
Posts_id	id of posts	INT	NUMERIC
Farmers_Name	name of farmer	VARCHAR(45)	ALPHA-NUMERIC
Message	message for posting	TEXT	ALPHA-NUMERIC
recommended	recommendation	CHAR	ALPHA-NUMERIC
Date	date posted	DATE	

Configuration

Column Name	Description	Data Type (Length)	Values
Date	date for configuration	DATE	

CropAssessment

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC

district	district name	VARCHAR(45)	ALPHA-NUMERIC
week_ending	last day of the week	DATE	
weather	weather report for the week	TEXT	ALPHA-NUMERIC
prices_of_sugar	price update	TEXT	ALPHA-NUMERIC
mill_operation	mill operation updates	TEXT	ALPHA-NUMERIC
prices_of_inputs	price updates of fertilizers and other farming tools	TEXT	ALPHA-NUMERIC
others	other reports	TEXT	ALPHA-NUMERIC
overall_analysis	analysis for the week	TEXT	ALPHA-NUMERIC

CropEstimateDistrict

Column Name	Description	Data Type (Length)	Values
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
area	area harvested	DECIMAL(10,3)	NUMERIC
rainfall	amount of rainfall	DECIMAL(10,3)	NUMERIC
actual_tons_cane	actual cane produced	DECIMAL(10,3)	NUMERIC
tiller_count	tiller count	DECIMAL(10,3)	NUMERIC
avg_temperature	average temperature of district	DECIMAL(10,3)	NUMERIC
forecasted1	1st forecast value	DECIMAL(10,3)	NUMERIC
forecasted2	2nd forecast value	DECIMAL(10,3)	NUMERIC
forecasted3	3rd forecast value	DECIMAL(10,3)	NUMERIC
forecasted_lkg1	1st forecast value	DECIMAL(10,3)	NUMERIC
forecasted_lkg2	2nd forecast value	DECIMAL(10,3)	NUMERIC
forecasted_lkg3	3rd forecast value	DECIMAL(10,3)	NUMERIC

CropEstimateDistrictTest

Column Name	Description	Data Type (Length)	Values
district	name of district	VARCHAR(45)	ALPHA-NUMERIC

area	area harvested	DECIMAL(10,3)	NUMERIC
rainfall	amount of rainfall	DECIMAL(10,3)	NUMERIC
actual_tons_cane	actual cane produced	DECIMAL(10,3)	NUMERIC
tiller_count	tiller count	DECIMAL(10,3)	NUMERIC
avg_temperature	average temperature of district	DECIMAL(10,3)	NUMERIC
forecast1	1st forecast value	DECIMAL(10,3)	NUMERIC
forecast2	2nd forecast value	DECIMAL(10,3)	NUMERIC
forecast3	3rd forecast value	DECIMAL(10)	NUMERIC
forecast_1lkg	1st forecast value	DECIMAL(10)	NUMERIC
forecast_2lkg	2nd forecast value	DECIMAL(10)	NUMERIC
forecast_3lkg	3rd forecast value	DECIMAL(10)	NUMERIC

CropEstimateMuncipality

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
municipality	municipality in district	VARCHAR(45)	ALPHA-NUMERIC
area	area harvested	DECIMAL(10)	NUMERIC
tons_cane	cane produced	DECIMAL(10)	NUMERIC
avg_temperature	average temperature of district	DECIMAL(10)	NUMERIC
forecasted	forecasted value	DECIMAL(10)	NUMERIC

CropStages

Column Name	Description	Data Type (Length)	Values
phase	phases of crop growth	VARCHAR(45)	ALPHA-NUMERIC

CropValidationSurvey

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
Fields_id	id of farm	INT	NUMERIC
variety	variety of cane	VARCHAR(45)	ALPHA-NUMERIC

crop_class	crop class of cane	VARCHAR(45)	ALPHA-NUMERIC
texture	texture of soil	VARCHAR(45)	ALPHA-NUMERIC
farming_system	farming system of farm	VARCHAR(45)	ALPHA-NUMERIC
topography	topography of land	VARCHAR(45)	ALPHA-NUMERIC
furrow_distance	furrow distance of farm	DECIMAL(7)	NUMERIC
planting_density	farm land density	DECIMAL(10)	NUMERIC
num_millable	number of millable cane stalks	INT	NUMERIC
avg_millable_stool	average millable stool	DECIMAL(7)	NUMERIC
brix	brix reading of cane	DECIMAL(7)	NUMERIC
stalk_length	length of cane stalk	DECIMAL(7)	NUMERIC
diameter	diameter of stalk	DECIMAL(7)	NUMERIC
weight	weight of stalk	DECIMAL(7)	NUMERIC

Crop_Calendar

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
district	district name	VARCHAR(45)	ALPHA-NUMERIC
phase	phase of crop growth	VARCHAR(45)	ALPHA-NUMERIC
date_starting	starting date of phase	DATE	

DashboardData

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
year	crop year	INT	NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
week_ending	last day of the week	DATE	
area	area harvested	DECIMAL(10)	NUMERIC
actual	actual cane produced	DECIMAL(10)	NUMERIC

lkg	sugar produced	DECIMAL(10)	NUMERIC
rainfall	amount of rainfall	DECIMAL(10)	NUMERIC
forecasted	forecasted cane produced	DECIMAL(10)	NUMERIC

DisasterAlerts

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
Problems_id	id of problems	INT	NUMERIC
message	message to be sent	TEXT	ALPHA-NUMERIC
date	date of disaster	DATE	
barangay	barangay affected by disaster	VARCHAR(45)	ALPHA-NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
municipality	municipality in district	VARCHAR(45)	ALPHA-NUMERIC

Farmers

Column Name	Description	Data Type (Length)	Values
name	name of farmer	VARCHAR(45)	ALPHA-NUMERIC
username	username of farmer	VARCHAR(12)	ALPHA-NUMERIC
password	password of account	TEXT	ALPHA-NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC

Fertilizers

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
Fields_id	id of fields	INT	NUMERIC
fertilizer	fertilizer used	VARCHAR(45)	ALPHA-NUMERIC
first_dose	first dose of fertilizer	DECIMAL(7)	NUMERIC

second_dose	second dose of fertilizer	DECIMAL(7)	NUMERIC

Fields

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
Farmers_name	name of farmer	VARCHAR(45)	ALPHA-NUMERIC
area	area of farm	DECIMAL(6)	NUMERIC
boundary	boundary of each farm	TEXT	ALPHA-NUMERIC
barangay	barangay of the field	VARCHAR(45)	ALPHA-NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
municipality	municipality in district	VARCHAR(45)	ALPHA-NUMERIC

HistoricalCVS

Column Name	Description	Data Type (Length)	Values
name	name of farmer	VARCHAR(45)	ALPHA-NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
barangay	barangay in the municipality	VARCHAR(45)	ALPHA-NUMERIC
municipality	municipality in district	VARCHAR(45)	ALPHA-NUMERIC
texture	soil texture	VARCHAR(45)	ALPHA-NUMERIC
crop_class	crop class of cane	VARCHAR(45)	ALPHA-NUMERIC
topography	topography of land	VARCHAR(45)	ALPHA-NUMERIC
furrow_distance	furrow distance of farm	DECIMAL(7)	NUMERIC
tiller_count	number of tillers	DECIMAL(10)	NUMERIC
variety	variety of cane	VARCHAR(45)	ALPHA-NUMERIC
brix	brix reading of cane	DECIMAL(7)	NUMERIC

diameter	diameter of stalk	DECIMAL(7)	NUMERIC
weight	weight of stalk	DECIMAL(7)	NUMERIC

Historical Production

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
Farmers_name	name of farmer	VARCHAR(45)	ALPHA-NUMERIC
date	date of production	DATE	ALPHA-NUMERIC
lkg	sugar produced	DECIMAL(10,3)	NUMERIC
barangay	barangay production	VARCHAR(45)	ALPHA-NUMERIC
municipality	municipality in district	VARCHAR(45)	ALPHA-NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
year	crop year	INT	NUMERIC
area	area harvested	DECIMAL(10,3)	NUMERIC
tons_cane	cane produced	DECIMAL(7)	NUMERIC

KPIs

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
Program_name	name of program	VARCHAR(45)	ALPHA-NUMERIC
name	name of kpi	VARCHAR(255)	ALPHA-NUMERIC
value	target value for kpi	DECIMAL(10,3)	NUMERIC
actual	current value for kpi	DECIMAL(10,3)	NUMERIC

MediaFile

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
Posts_id	id of posts	INT	NUMERIC
img_url	file path of image file	TEXT	ALPHA-NUMERIC

Monthly Surveys

Column Name	Description	Data Type (Length)	Values
Fields_id	id of field	INT	NUMERIC
stalk_length	length of the stalk	DECIMAL(7,3)	NUMERIC
month	month of the crop year	INT	ALPHA-NUMERIC
internodes_u	internodes of the stalk	DECIMAL(10,3)	NUMERIC
internodes_i	internodes of the stalk	DECIMAL(10,3)	NUMERIC
stalk_diameter_u	diameter of the stalk	DECIMAL(10,3)	NUMERIC
stalk_diameter_i	diameter of the stalk	DECIMAL(10,3)	NUMERIC
year	crop year	INT	NUMERIC
img_url	file path of the image	TEXT	ALPHA-NUMERIC

Notifications

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
disaster	disaster alert	CHAR	ALPHA-NUMERIC
received	received notification from disaster alert	CHAR	ALPHA-NUMERIC
Fields_id	id of the field	INT	NUMERIC
message	message to be sent	TEXT	ALPHA-NUMERIC
date	date of the notification	DATE	
Disaster_alerts_id	id of the disaster aler	INT	NUMERIC
Problem_Fields_id	id of the problem fields	INT	NUMERIC
Posts_id	id of the post	INT	NUMERIC
Recommendations_id	id of the recommendation	INT	NUMERIC
Recommendations_Fields_id	id of the recommendation	INT	NUMERIC

Post_Status

Column Name	Description	Data Type (Length)	Values
status	status of the post	VARCHAR(45)	APLHA-NUMERIC

Posts

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
title	title of the post	VARCHAR(45)	ALPHA-NUMERIC
Fields_id	id of the post	INT	NUMERIC
message	message of the post to be sent	TEXT	ALPHA-NUMERIC
date_posted	date posted	DATE	
date_started	date start of the post	DATE	
Problem_ id	id of the problems	INT	NUMERIC
date_ended	end date of the post	DATE	
Recommendations_id	id of the recommendation	INT	NUMERIC
status	status of the post	VARCHAR(45)	ALPHA-NUMERIC

Problems_Types

Column Name	Description	Data Type (Length)	Values
type	types of problems	VARCHAR(45)	ALPHA-NUMERIC

Problems

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
name	name of the problem	VARCHAR(45)	ALPHA-NUMERIC
type	type of problem	VARCHAR(45)	ALPHA-NUMERIC

description	details of the problem	TEXT	ALPHA-NUMERIC
date	date of the problem	DATE	
phase	crop phase where the problem occurred/occurs	VARCHAR(45)	ALPHA-NUMERIC

Problem-Fields

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
Problems_id	id of the problem	INT	NUMERIC
Fields_id	id of the fields	INT	NUMERIC
status	status of the problem	VARCHAR(45)	ALPHA-NUMERIC
date	date the problem occurred	DATE	
damage	damage done by the problem	DECIMAL(6,3)	NUMERIC

ProblemsMedia

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
problem_id	id of the problem	INT	NUMERIC
img_url	file path of the image	TEXT	ALPHA-NUMERIC

Production

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
year	crop year	INT	NUMERIC
Fields_id	id of the field	INT	NUMERIC
area_harvested	harvested area	DECIMAL(10,4)	NUMERIC
tons_cane	cane produced	DECIMAL(10,4)	NUMERIC
date	date of production	DATE	
lkg	sugar produced	DECIMAL(10,4)	NUMERIC

Programs

Column Name	Description	Data Type (Length)	Values
name	name of the program	VARCHAR(45)	ALPHA-NUMERIC
date_created	date the program was created	DATE	
date_intial	initial starting date of the program	DATE	
date_end	end date of the program	DATE	
description	details of the program	VARCHAR(45)	ALPHA-NUMERIC
status	status of the program	VARCHAR(45)	ALPHA-NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC

Programs-Problems

Column Name	Description	Data Type (Length)	Values
Program_name	name of program	VARCHAR(45)	ALPHA-NUMERIC
Problems_id	id of problems	INT	NUMERIC
status	status of the problem	VARCHAR(45)	ALPHA-NUMERIC

Rainfall

Column Name	Description	Data Type (Length)	Values
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
date	date of the rainfall	DATE	
amount	amount of mm of rainfall	DECIMAL(10,3)	NUMERIC

Recommendations

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
recommendation	recommendation name	VARCHAR(45)	ALPHA-NUMERIC
type	type of recommendation	VARCHAR(45)	ALPHA-NUMERIC
improvement	improvement brought by the recommendation	CHAR	ALPHA-NUMERIC
description	details of the recommendation	TEXT	ALPHA-NUMERIC
phase	crop phase	VARCHAR(45)	ALPHA-NUMERIC

Recommedations-Fields

Column Name	Description	Data Type (Length)	Values
Recommendations_id	id of the recommendation	INT	NUMERIC
Fields_id	id of the fields	INT	NUMERIC
status	status of the recommendation	VARCHAR(45)	ALPHA-NUMERIC
date	date of the recommendation	DATE	
duration_days	number of days for the recommendation	INT	NUMERIC

Recommedations-Problems

Column Name	Description	Data Type (Length)	Values
Recommendations_id	id of the recommmendation	INT	NUMERIC
Problems_id	id of the problems	INT	NUMERIC

Ref-Barangays

Column Name	Description	Data Type (Length)	Values

barangay	barangay name	VARCHAR(45)	ALPHA-NUMERIC
district	name of district	VARCHAR(45)	ALPHA-NUMERIC
municipality	name of municipality	VARCHAR(45)	ALPHA-NUMERIC

Ref-CropClass

Column Name	Description	Data Type (Length)	Values
crop_class	crop class of cane	VARCHAR(45)	ALPHA-NUMERIC

Ref-Districts

Column Name	Description	Data Type (Length)	Values
district	district name	VARCHAR(45)	ALPHA-NUMERIC
region	regions in the country	VARCHAR(45)	ALPHA-NUMERIC

Ref-FarmingSystems

Column Name	Description	Data Type (Length)	Values
farming_system	farming system of farms	VARCHAR(45)	ALPHA-NUMERIC

Ref-Fertilizers

Column Name	Description	Data Type (Length)	Values
fertilizers	name of fertilizer	VARCHAR(45)	ALPHA-NUMERIC

Ref-municipalities

Column Name	Description	Data Type (Length)	Values
district	district name	VARCHAR(45)	ALPHA-NUMERIC

municipality	municipality in the district	VARCHAR(45)	ALPHA-NUMERIC

Ref-Regions

Column Name	Description	Data Type (Length)	Values
region	region in the country	VARCHAR(45)	ALPHA-NUMERIC

Ref-Roles

Column Name	Description	Data Type (Length)	Values
role	role of users	VARCHAR(45)	ALPHA-NUMERIC

Ref-Texture

Column Name	Description	Data Type (Length)	Values
texture	texture of soil	VARCHAR(45)	ALPHA-NUMERIC

Ref-Topography

Column Name	Description	Data Type (Length)	Values
topography	topography of land	VARCHAR(45)	ALPHA-NUMERIC

Ref-Varieties

Column Name	Description	Data Type (Length)	Values
variety	variety of cane	VARCHAR(45)	ALPHA-NUMERIC

Soil Analysis

Column Name	Description	Data Type (Length)	Values
id	table id	INT	NUMERIC
ph_level	ph level of soil	DECIMAL(6,2)	NUMERIC

organic_matter	amount of organic matter	DECIMAL(6,2)	NUMERIC
phosphorus	phosphorus in soil	DECIMAL(6,2)	NUMERIC
potassium	potassium in soil	DECIMAL(6,2)	NUMERIC

Tillers

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
Fields_id	id of field	INT	NUMERIC
rep	tiller rep	INT	NUMERIC
count	tiller count	INT	NUMERIC

Users

Column Name	Description	Data Type (Length)	Values
username	username of account	VARCHAR(12)	ALPHA-NUMERIC
password	password of account	TEXT	ALPHA-NUMERIC
name	name for user	VARCHAR(45)	ALPHA-NUMERIC
role	role of user	VARCHAR(45)	ALPHA-NUMERIC
district	district name	VARCHAR(45)	ALPHA-NUMERIC

WeeklyEstimate

Column Name	Description	Data Type (Length)	Values
year	crop year	INT	NUMERIC
id	table id	INT	NUMERIC
district	district name	VARCHAR(45)	ALPHA-NUMERIC
week_ending	last day of the week	DATE	
area	area of field	DECIMAL(10,3)	NUMERIC
rainfall	rainfall amount	DECIMAL(10,3)	NUMERIC
actual	production data	DECIMAL(10,3)	NUMERIC

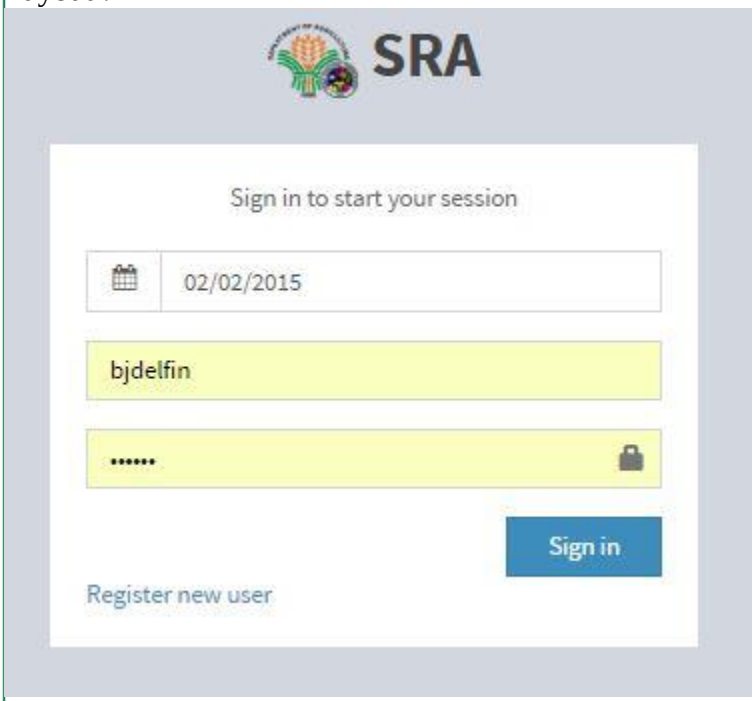
forecasted	forecasted value	DECIMAL(10,3)	NUMERIC
actual_lkg	actual value of lkg	DECIMAL(10,3)	NUMERIC
forecasted_lkg	forecasted value of lkg	DECIMAL(10,3)	NUMERIC

6.2.3 Data Coding Standards

The date has a format of "MM/DD/YYYY" respectively. The week ending in the date is the last day of the week. The fields ID comes with 3 digits respectively. An example would be field ID "787".

6.3 Screen Specifications

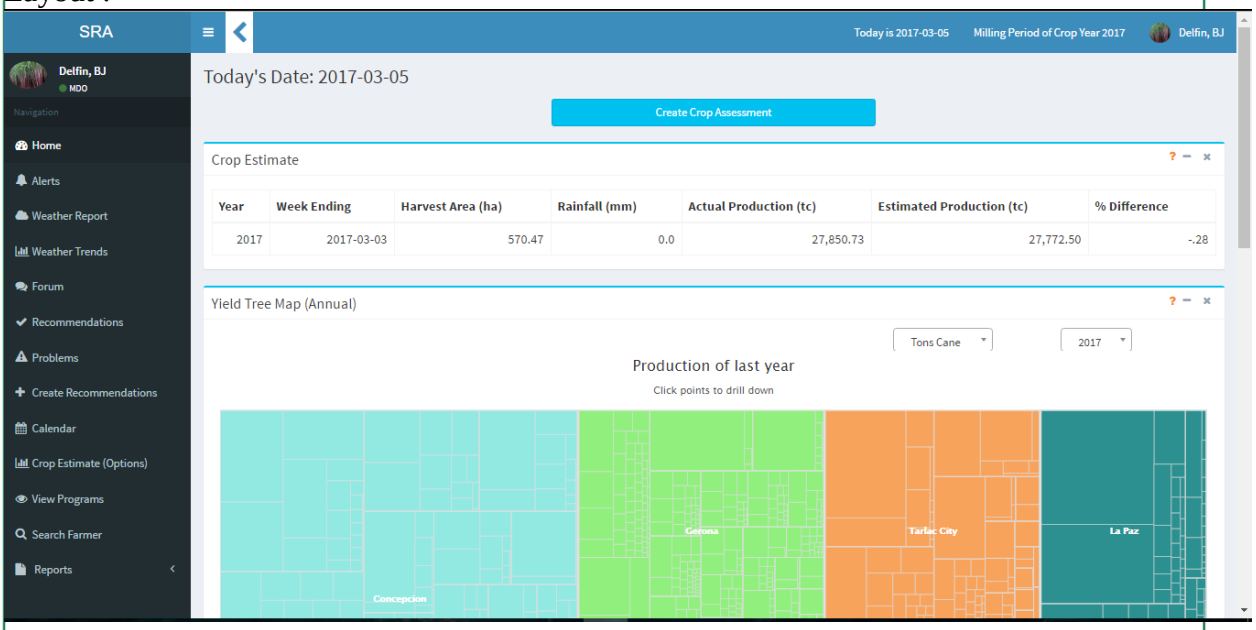
Screen Name : Login Screen
File Name : index.jsp
Description : The login page enables the user to enter his/her username and password in the input boxes. The "Login" button will transfer the user to the homepage. The "Register" button will bring the user to the register page.
Layout :

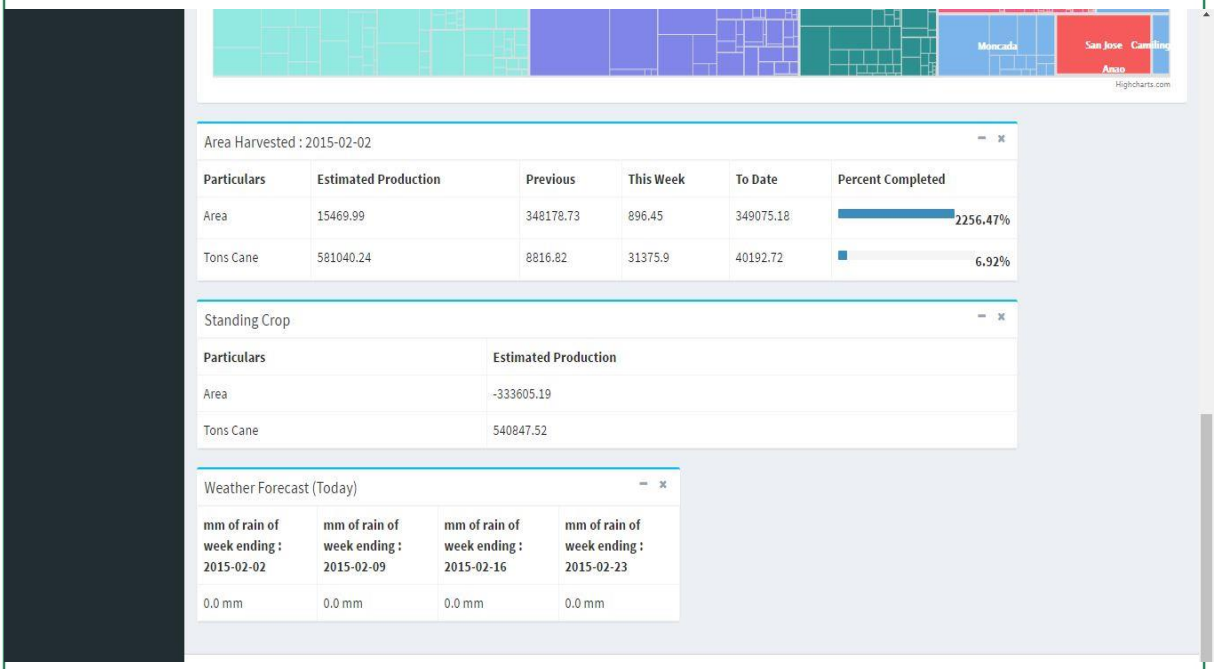


Screen Name : MDO HomeScreen
File Name : Homepage.jsp

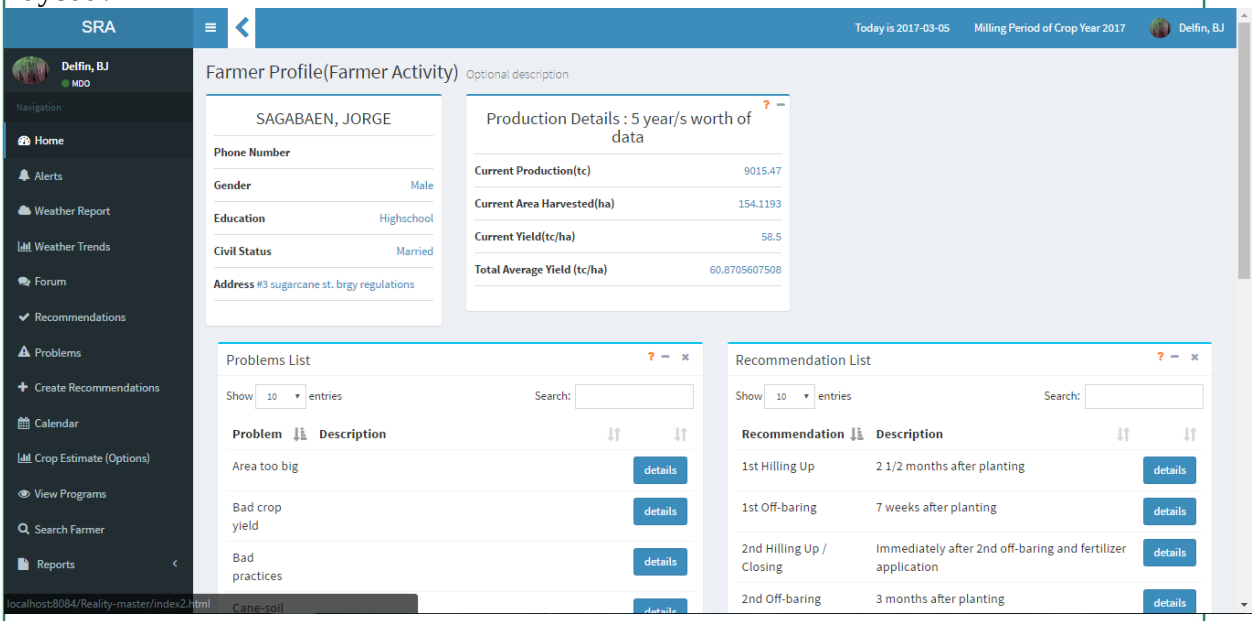
Description : The page shows the homepage for the MDO user. The weekly production can be seen here as well as the treemap where the district production can be drilled down to the farmer level. The rainfall forecast can also be seen in this page.

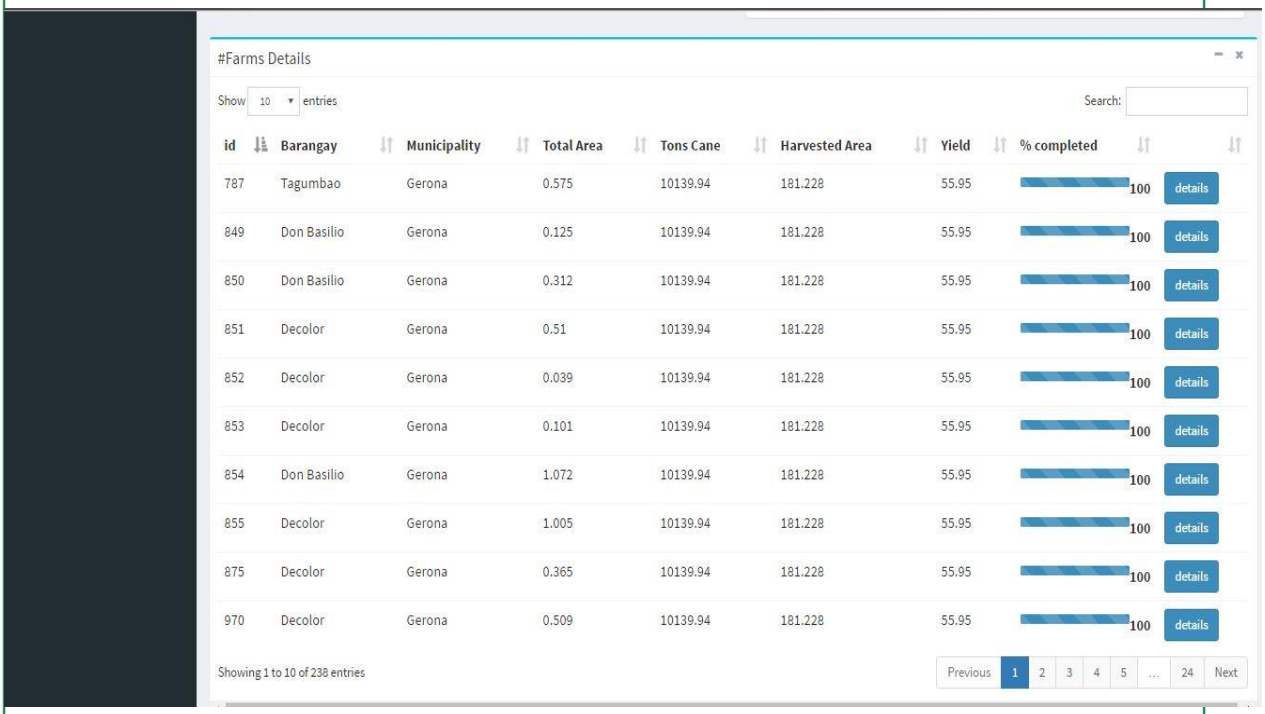
Layout :



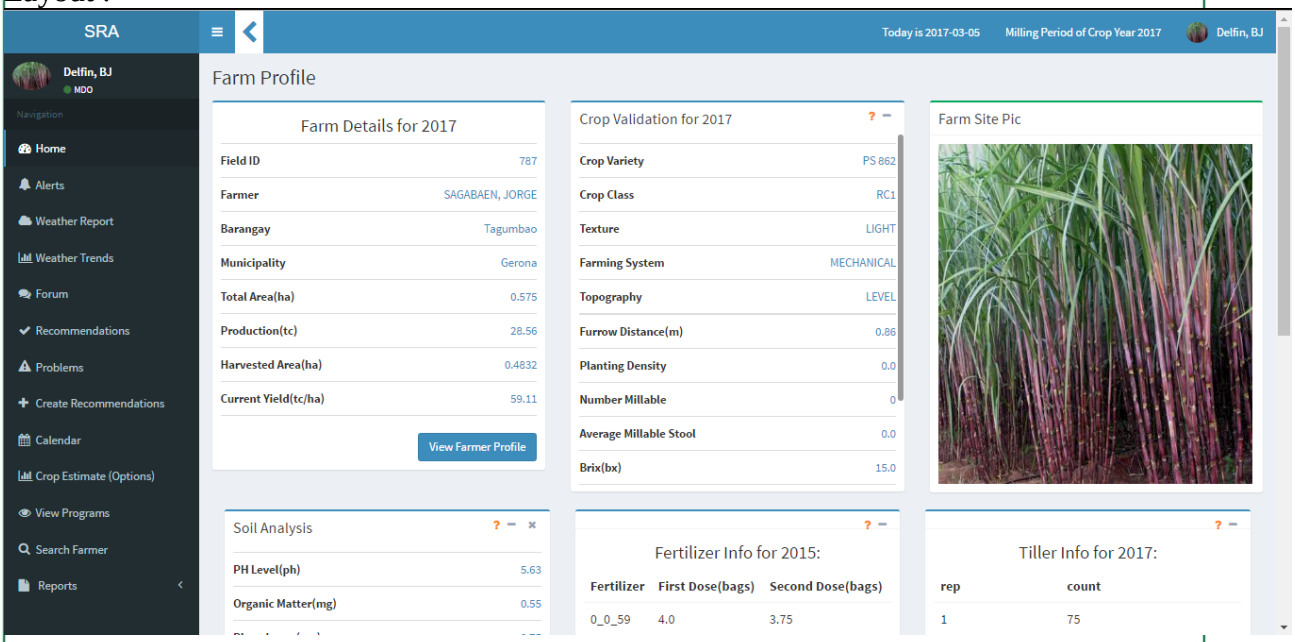


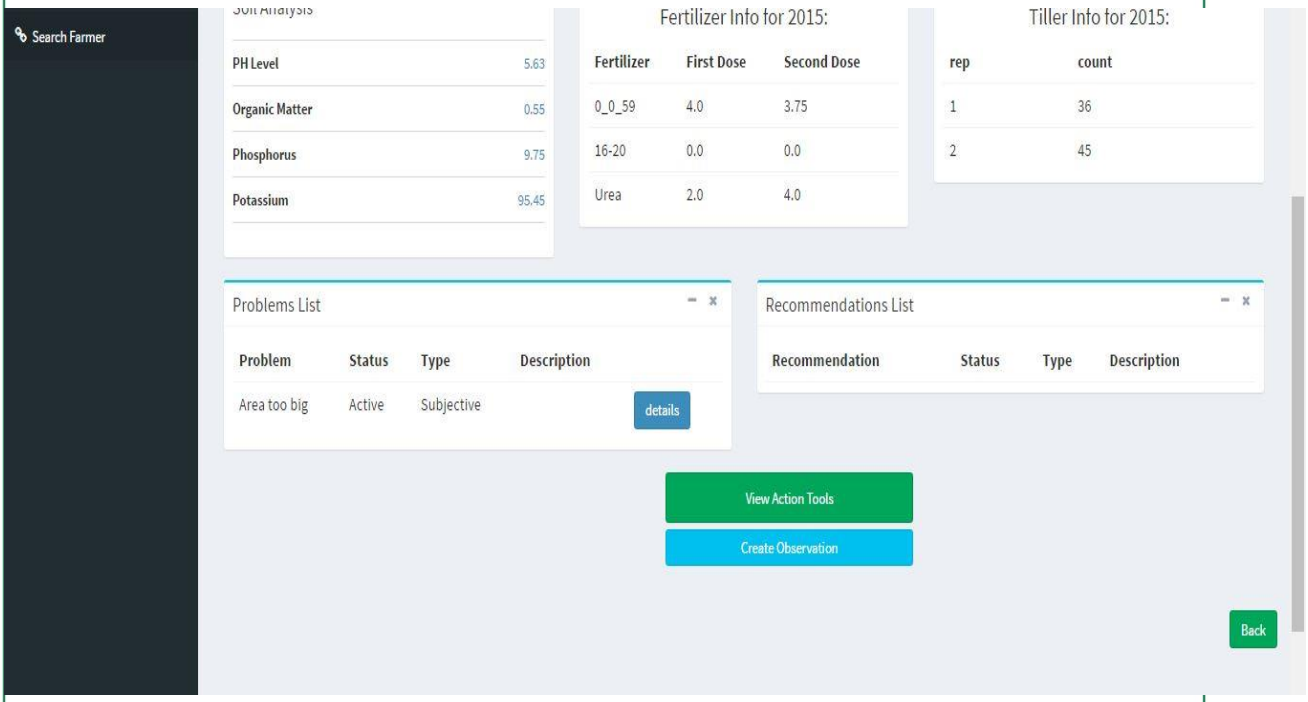
Screen Name : Farmer Profile
File Name : viewFarmerprofile.jsp
Description : The page shows the details of the farmer including his current production and the for the previous years. The list of problems can he has is displayed. The recommendations and programs can also be seen.
Layout :

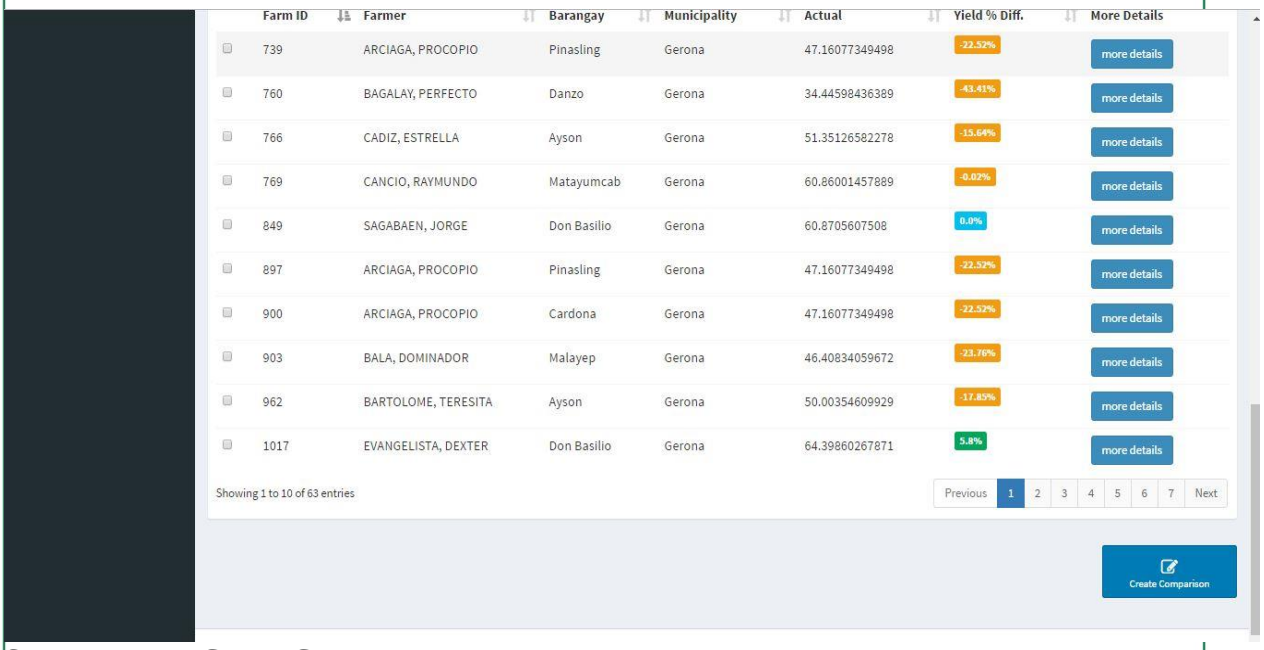




Screen Name : Farmer Profile
File Name : viewFarmerprofile.jsp
Description : The page shows the details of the farm like area and crop characteristics. Here the observation and comparison can be made.
Layout :

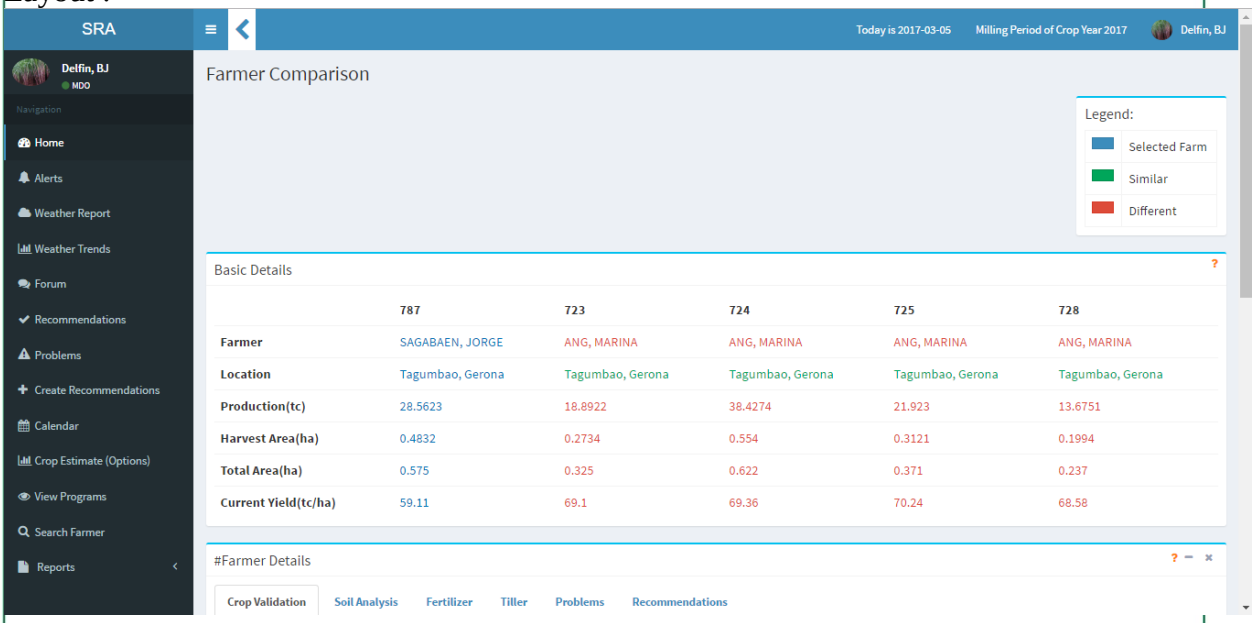




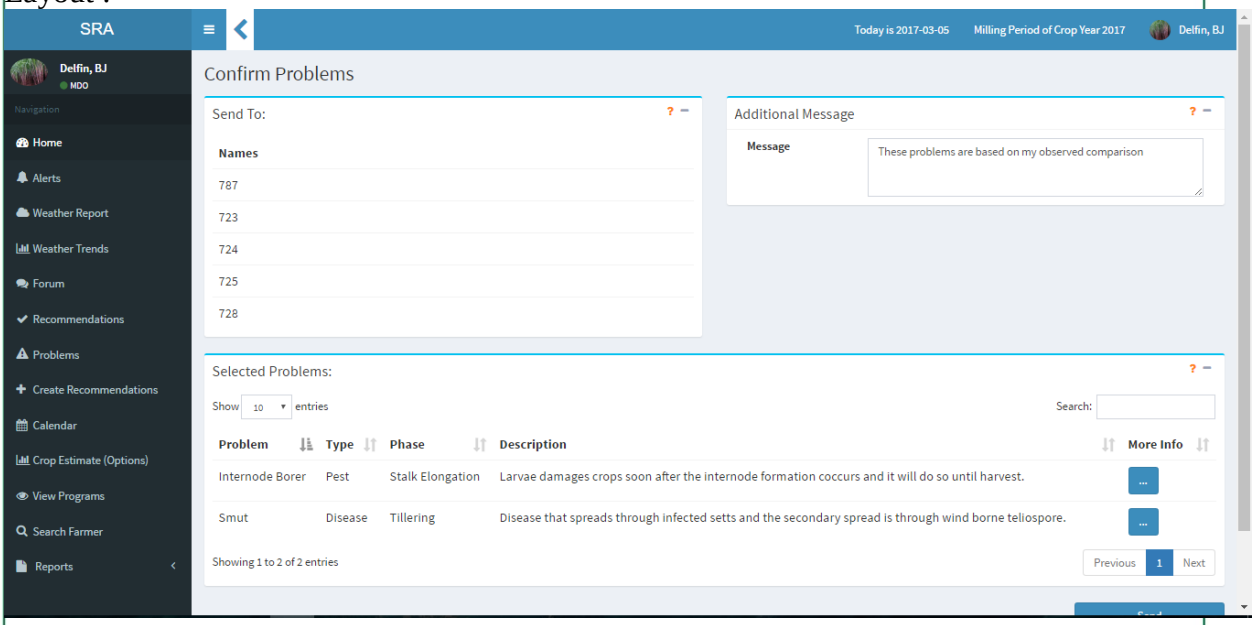


Screen Name : Create Comparison
File Name : viewFarmerdifferences.jsp
Description : The page shows the details of the farm like area and crop characteristics. Here the observation and comparison can be made.

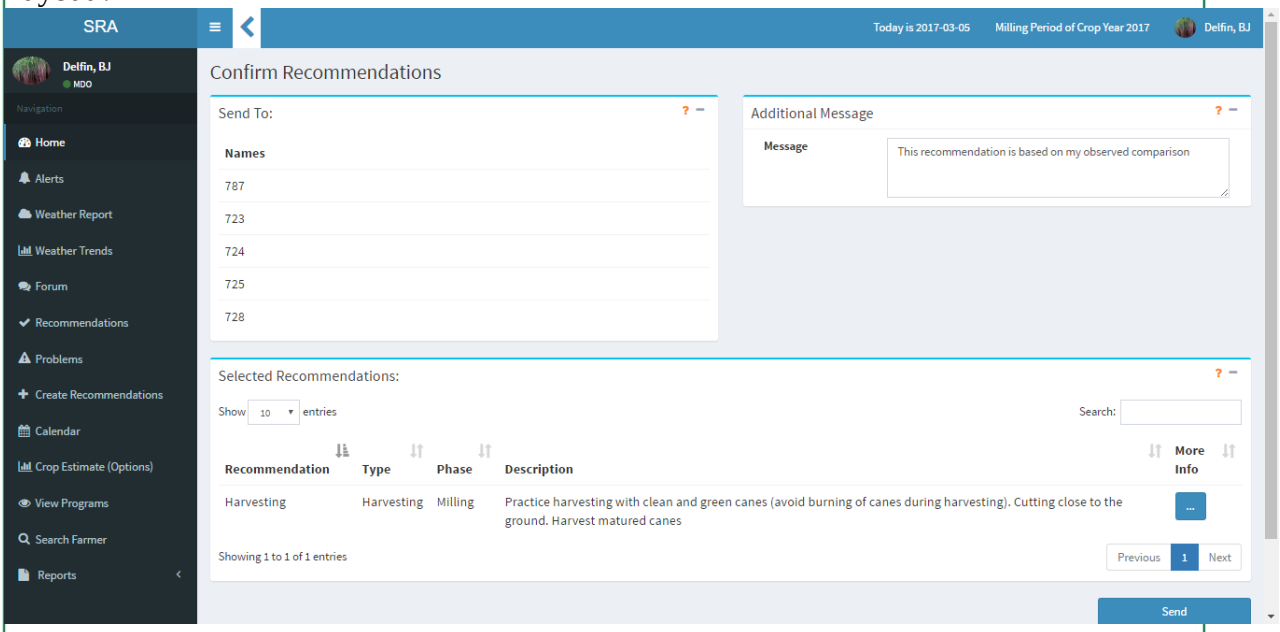
Layout :



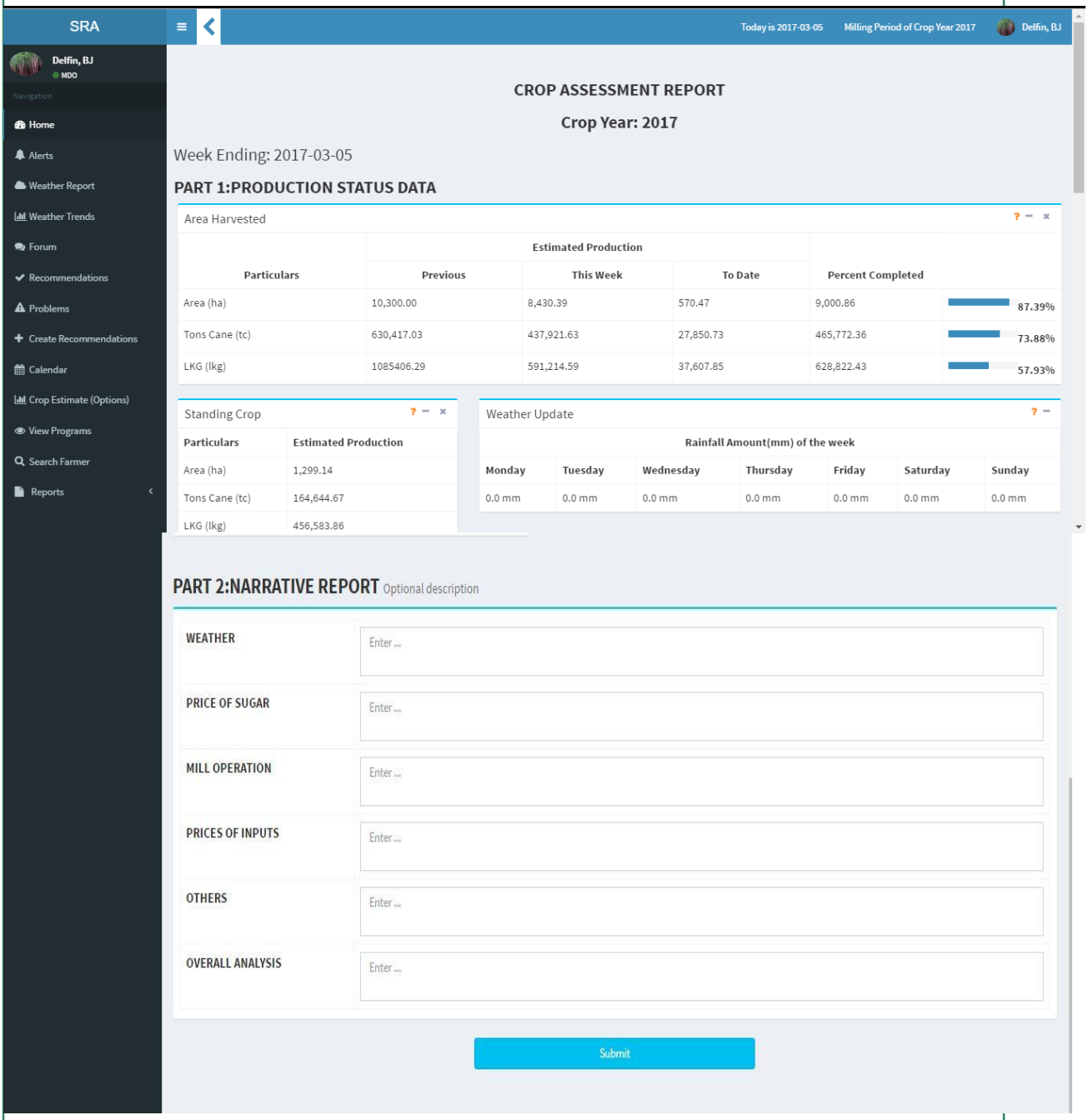
Screen Name : Determine Problem
File Name : viewSendRec.jsp
Description : The page enables the user to determine the problem by selecting the possible problems and putting additional message to be sent to the selected farmer/s.
Layout :



Screen Name : Send other recommendation
File Name : viewSendRec.jsp
Description : The page enables the user to send other recommendations and input additional messages.
Layout :

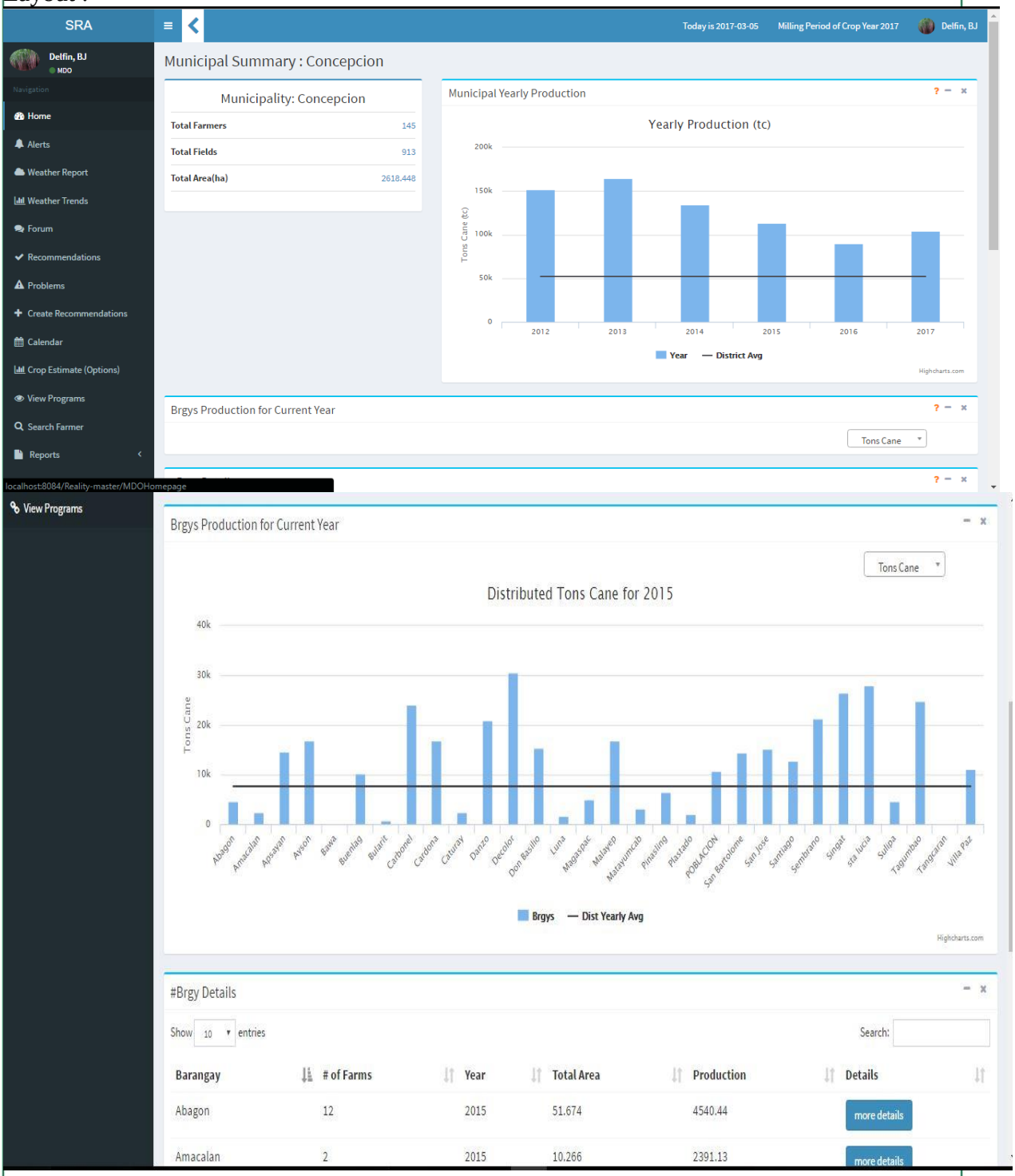


Screen Name : Create Crop Assessment
File Name : viewCropAssessment.jsp
Description : The page allows the user to create a crop assessment report with the production details.
Layout :

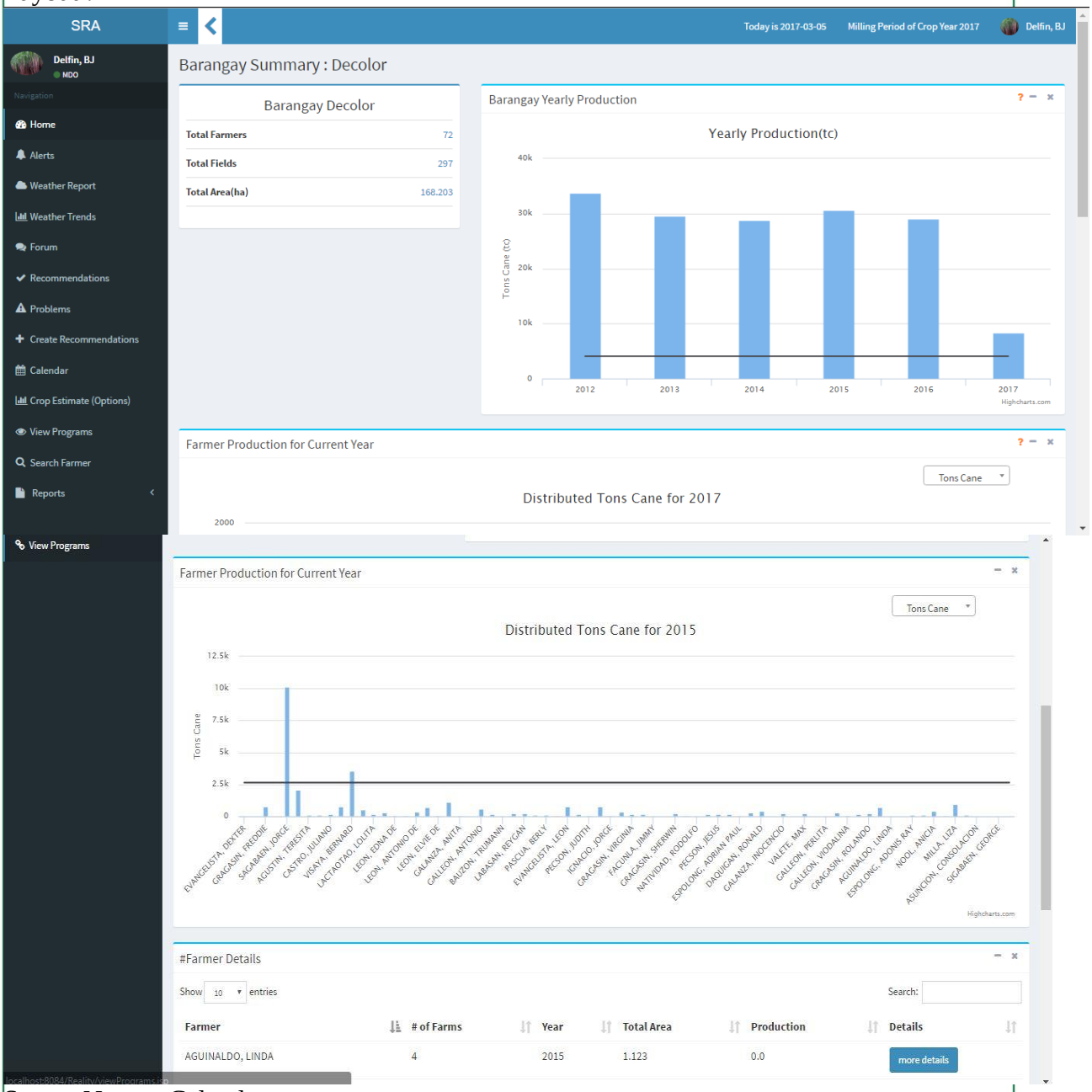


Screen Name : Municipality Summary
File Name : viewMunicipality.jsp
Description : The page shows the production summary of the municipality as well as the barangay.

Layout :

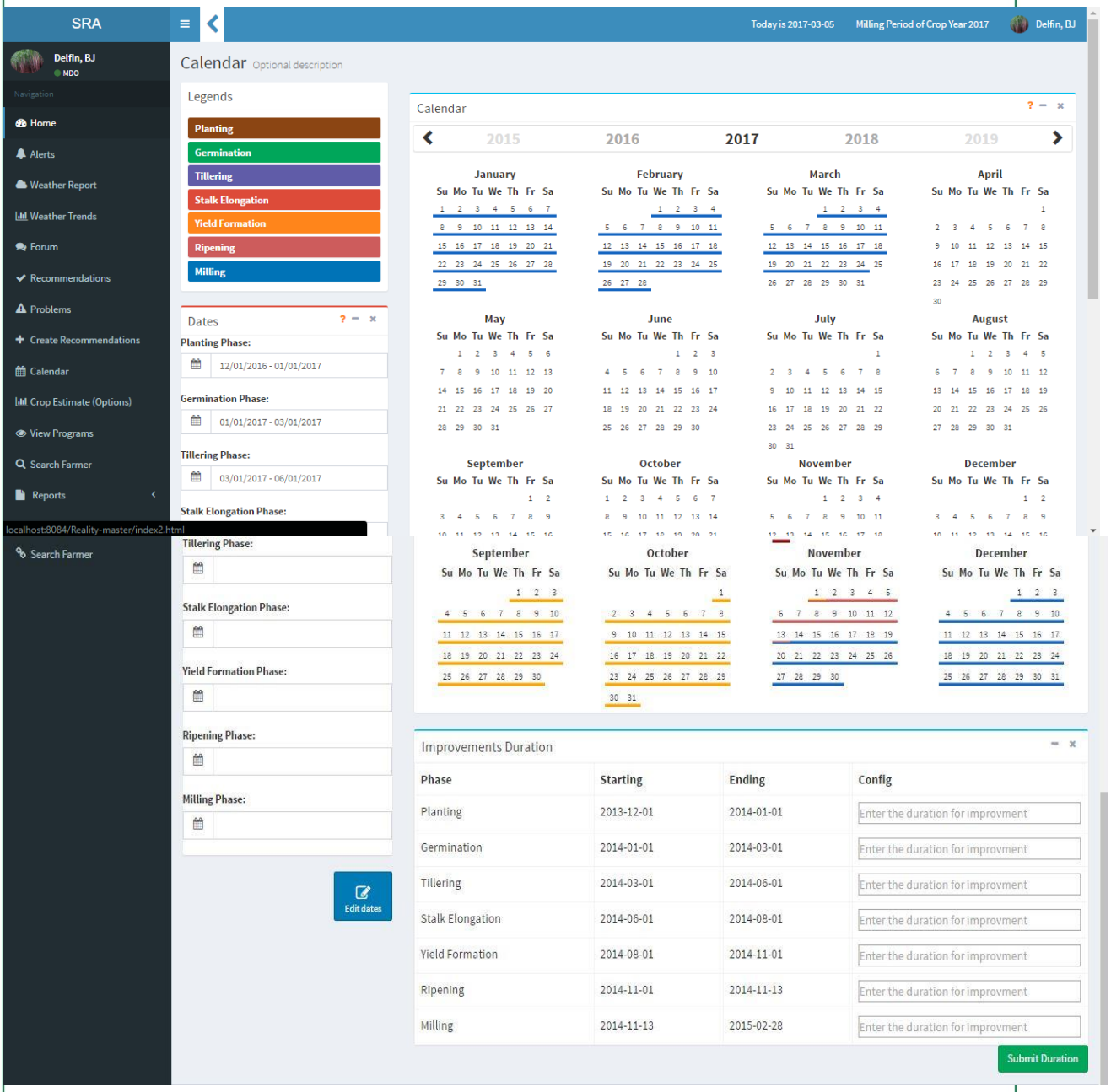

SRA
Today is 2017-03-05
Milling Period of Crop Year 2017
Delfin, BJ
Delfin, BJ
MDO
Navigation
Home
Alerts
Weather Report
Weather Trends
Forum
Recommendations
Problems
Create Recommendations
Calendar
Crop Estimate (Options)
View Programs
Search Farmer
Reports
Municipal Summary : Concepcion
Municipality: Concepcion
Total Farmers 145
Total Fields 913
Total Area(ha) 2618.448
Municipal Yearly Production
Yearly Production (tc)
Tons Cane (tc)
200k
150k
100k
50k
0
2012
2013
2014
2015
2016
2017
Year
District Avg
Highcharts.com
Brgys Production for Current Year
Tons Cane
localhost:8084/Reality-master/MDOHomepage
View Programs
Brgys Production for Current Year
Tons Cane
Distributed Tons Cane for 2015
Tons Cane
40k
30k
20k
10k
0
Abagon
Amacalan
Apsayan
Alyson
Bawa
Buenlag
Bularit
Carbonel
Cardona
Caturay
Danzo
Decolor
Don Basilio
Luna
Magasnac
Malayep
Matayumcab
Pinasling
Plastado
POBLACION
San Bartolome
San Jose
Santiago
Sembrano
Singat
sta lucia
Sulipa
Tagumbalo
Tangcaran
Villa Paz
Brgys
Dist Yearly Avg
Highcharts.com
#Brgy Details
Show 10 entries
Search:
Barangay
# of Farms
Year
Total Area
Production
Details
Abagon 12 2015 51.674 4540.44 more details
Amacalan 2 2015 10.266 2391.13 more details

Screen Name : Barangay Summary
File Name : viewbarangay.jsp
Description : The page shows the production summary of the barangay and the farmers inside it.
Layout :



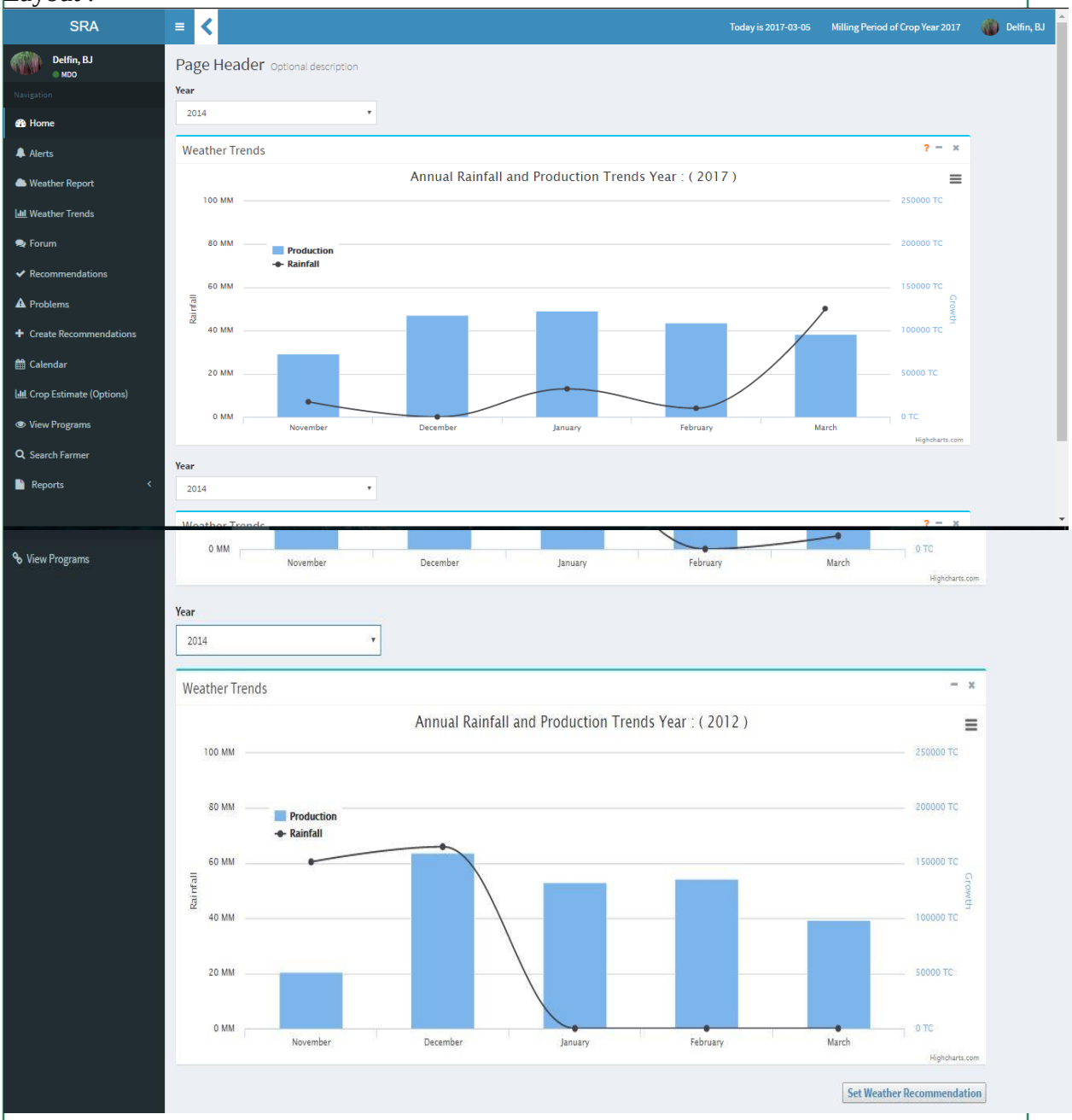
Screen Name : Calendar

File Name : viewPhaseDates.jsp
Description : The page shows the dates and duration of the crop growth phases. The user may edit the phases here and the duration of improvements per phase.
Layout :

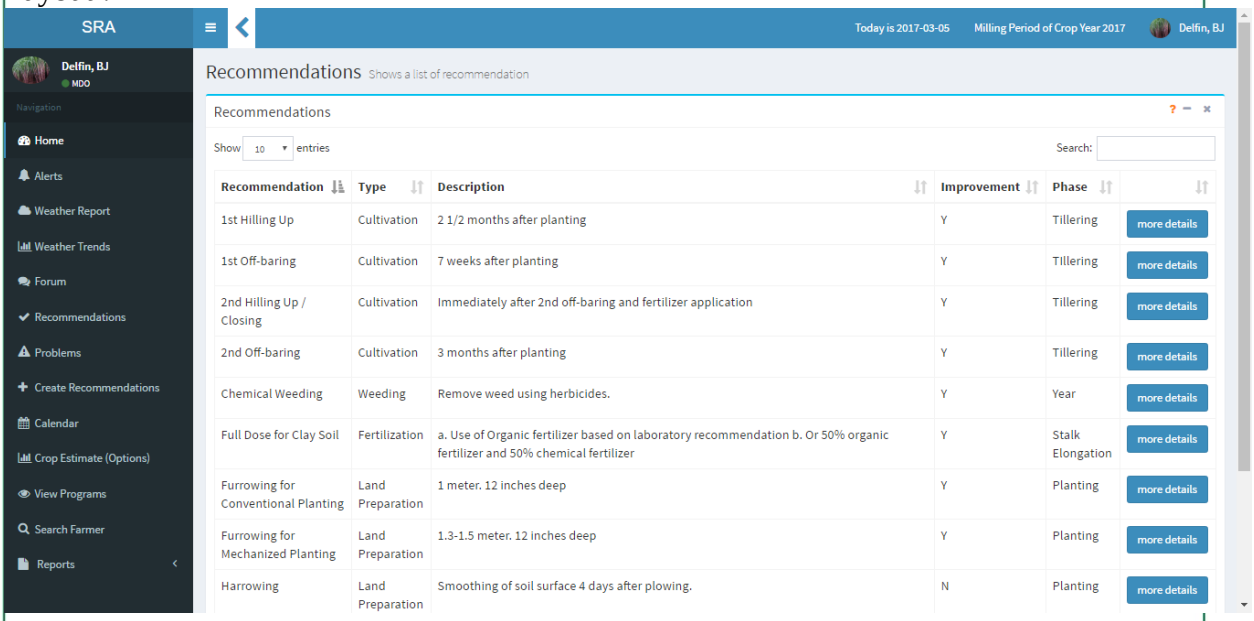


Screen Name : Weather Trends

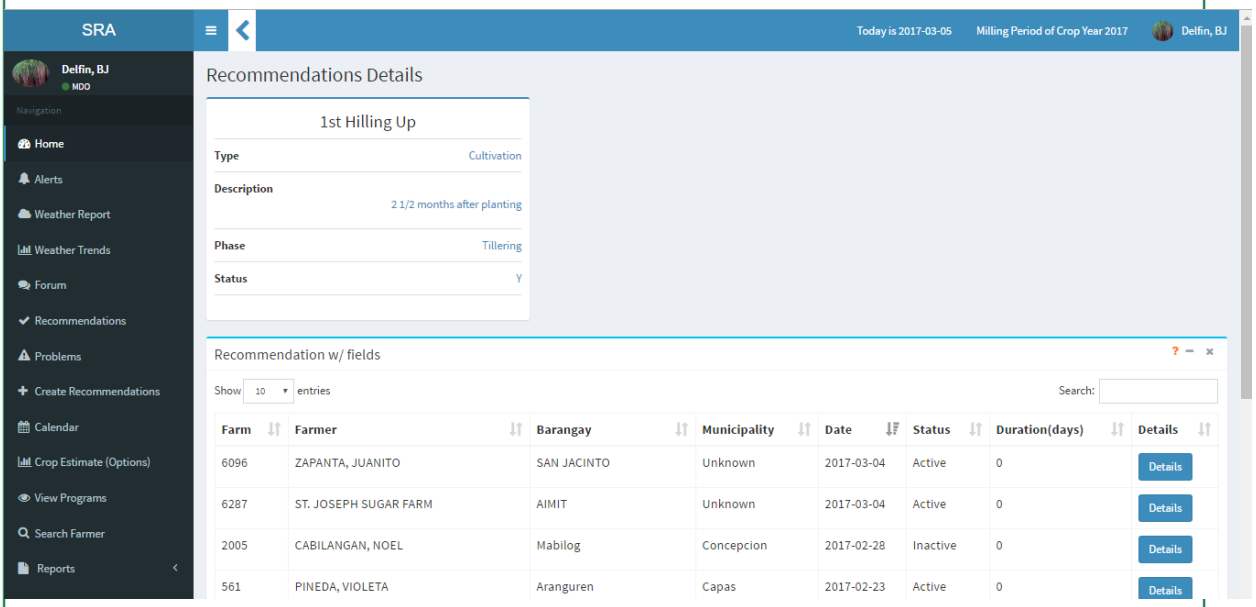
File Name : viewbarangay.jsp
Description : The page shows the rainfall trend and production per month for 2 years for comparison. Here the weather related recommendation can be modified
Layout :



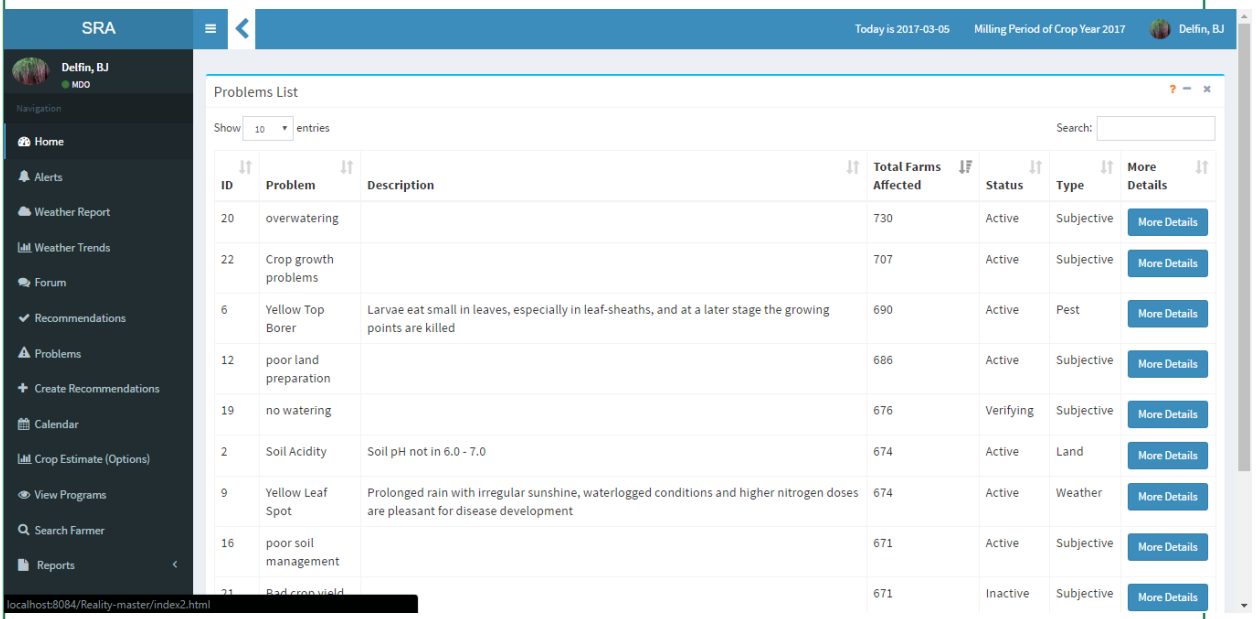
Screen Name : View Recommendations List
File Name : Recommendations.jsp
Description : The page shows the list of recommendations. The button can be clicked to see the details.
Layout :



Screen Name : Recommendation Details
File Name : viewRecdetails.jsp
Description : The page shows the details of the recommendations and the farms that have the recommendation
Layout :

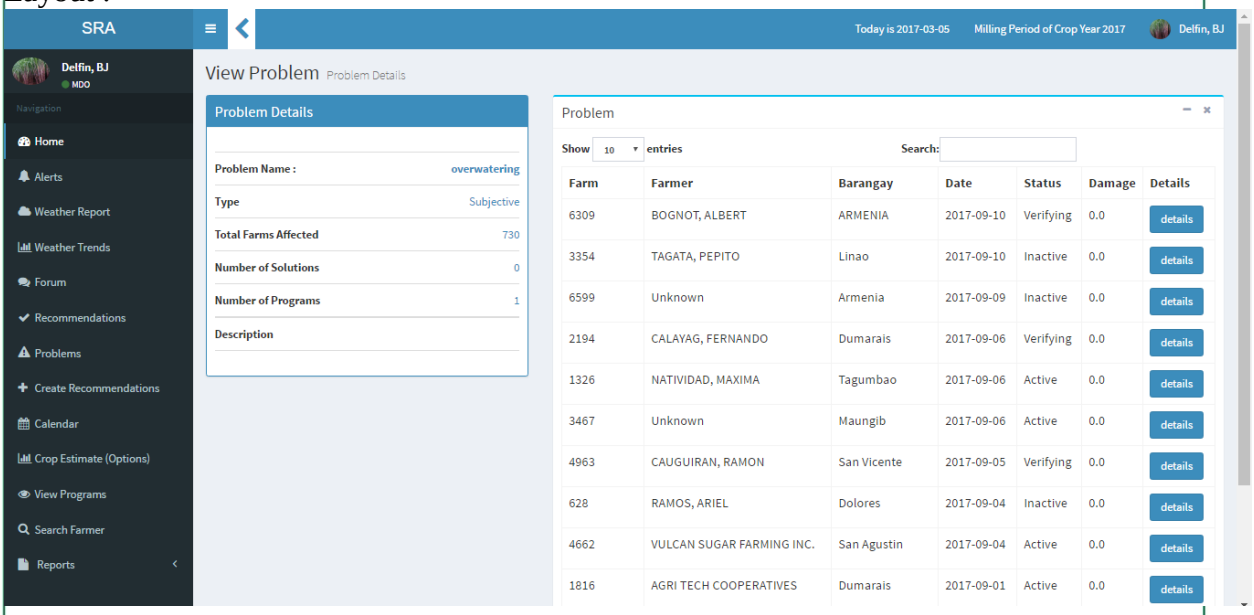


Screen Name : Problem List
File Name : Problems.jsp
Description : The page shows the list of problems.
Layout :

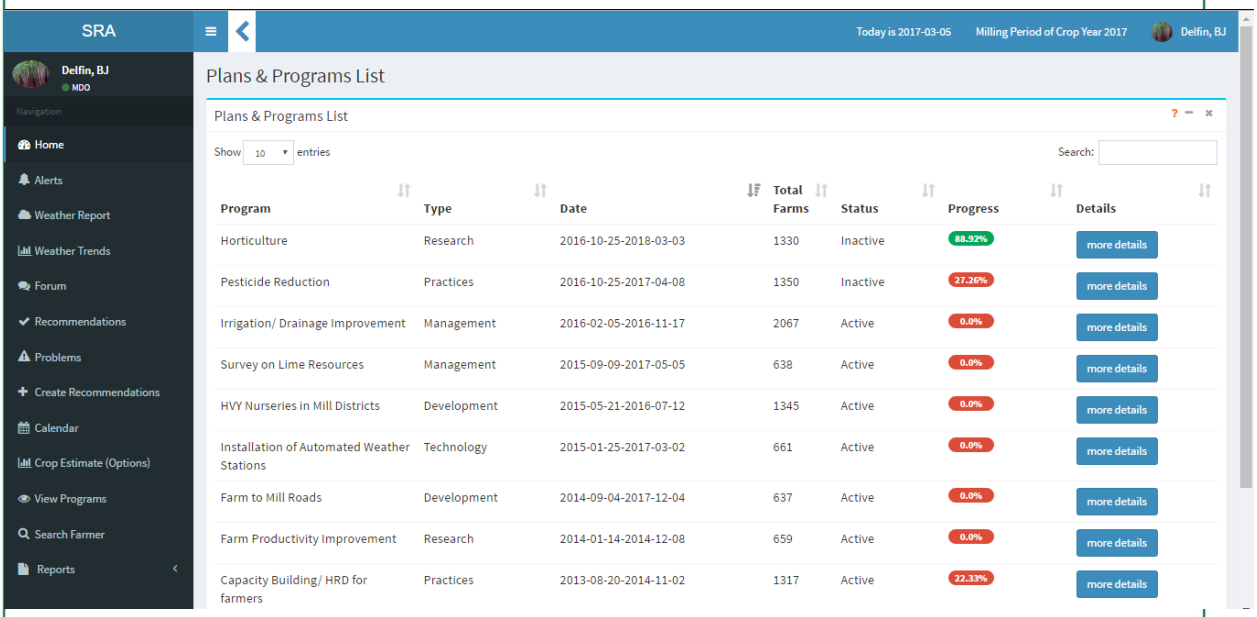


Screen Name : Problem Details

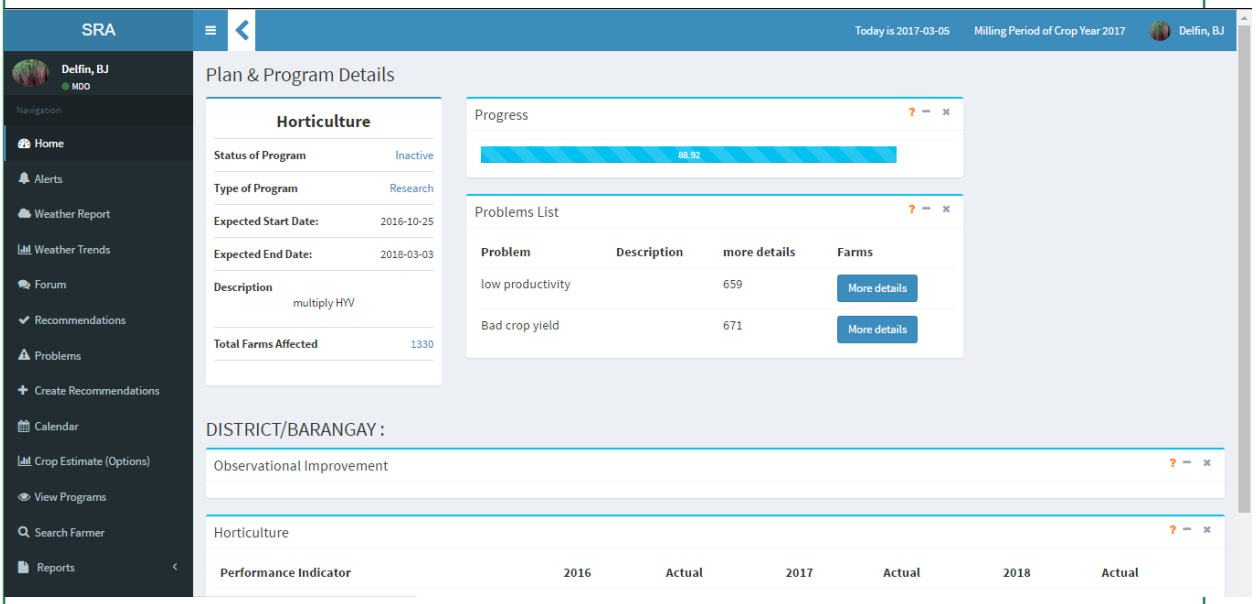
File Name : viewprobdetails.jsp
Description : The page shows the production summary of the barangay and the farmers inside it. The user is able to create a recommendation or a program
Layout :

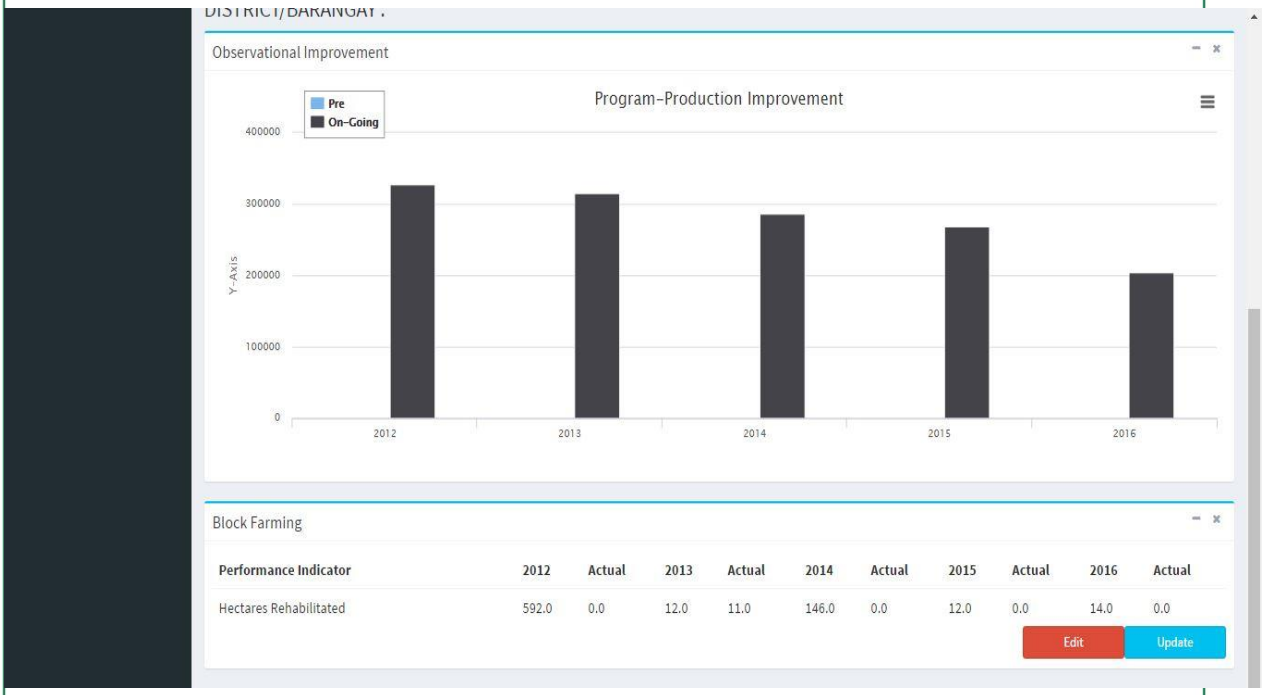


Screen Name : Program Lists
File Name : viewPrograms.jsp
Description : The page shows the list of programs
Layout :

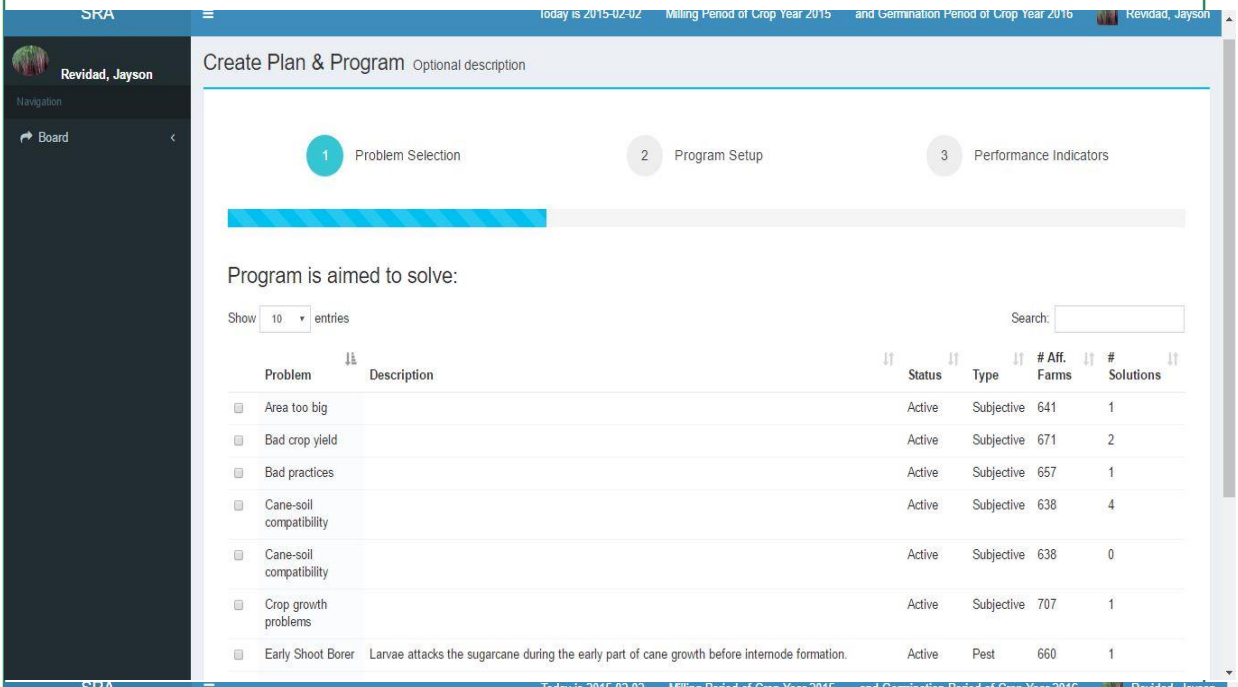


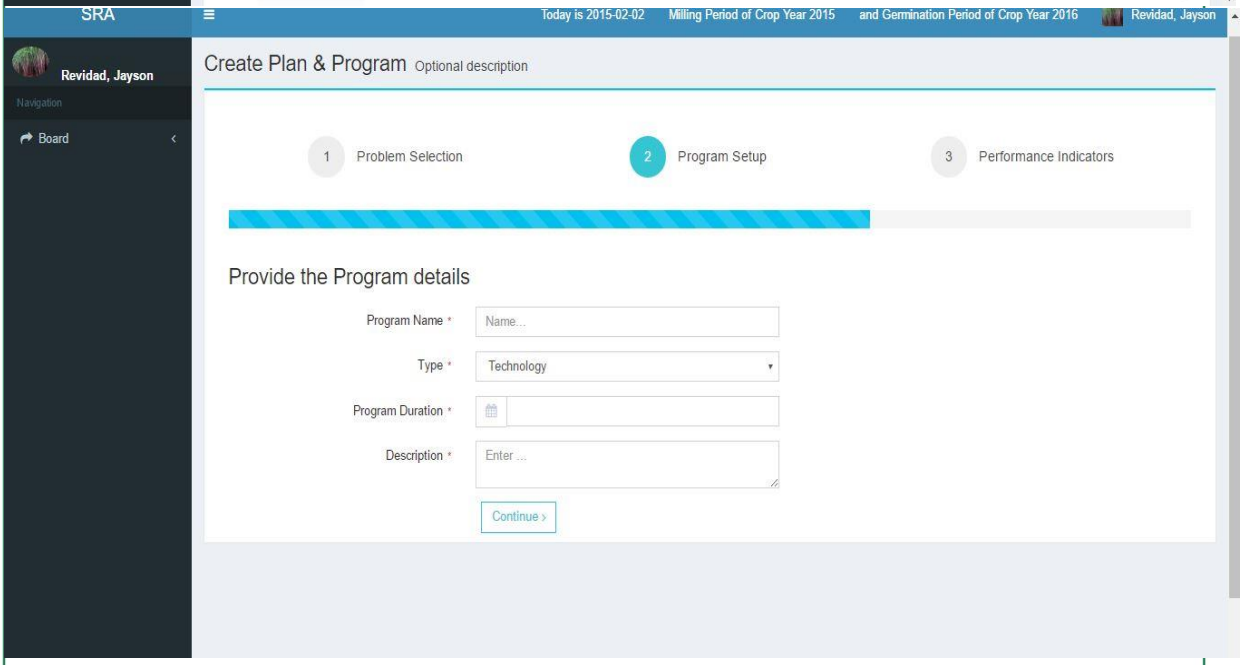
Screen Name : Program Details
File Name : viewbarangay.jsp
Description : The page shows the production summary of the barangay and the farmers inside it.
Layout :

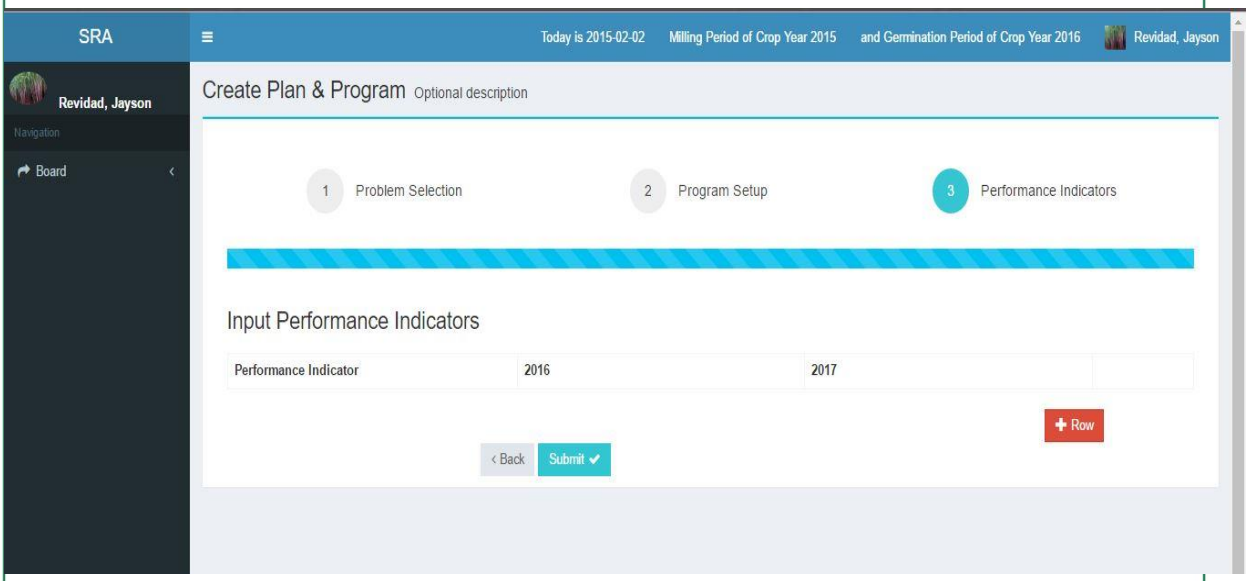




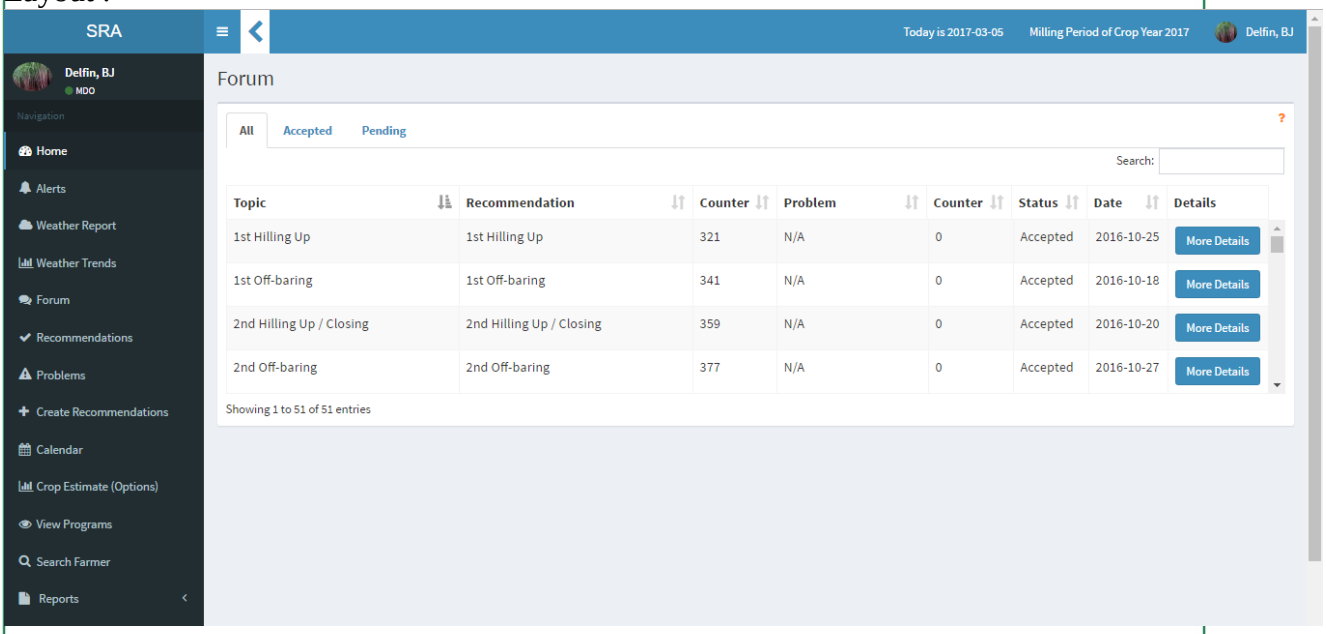
Screen Name : Create Program
File Name : createprogram.jsp
Description : The page allows the user to select problems, input the program details and set the performance indicators.
Layout :


SRA
Today is 2015-02-02
Milling Period of Crop Year 2015
and Germination Period of Crop Year 2016
Revidad, Jayson
Navigation
Board
Create Plan & Program Optional description
1 Problem Selection
2 Program Setup
3 Performance Indicators
Program is aimed to solve:
Show 10 entries
Search:
Problem
Description
Status
Type
Aff. Farms
Solutions
Area too big Active Subjective 641 1
Bad crop yield Active Subjective 671 2
Bad practices Active Subjective 657 1
Cane-soil compatibility Active Subjective 638 4
Cane-soil compatibility Active Subjective 638 0
Crop growth problems Active Subjective 707 1
Early Shoot Borer Larvae attacks the sugarcane during the early part of cane growth before internode formation. Active Pest 660 1


SRA
Today is 2015-02-02
Milling Period of Crop Year 2015
and Germination Period of Crop Year 2016
Revidad, Jayson
Navigation
Board
Create Plan & Program Optional description
1 Problem Selection
2 Program Setup
3 Performance Indicators
Provide the Program details
Program Name *
Name...
Type *
Technology
Program Duration *
Description *
Enter ...
Continue ›

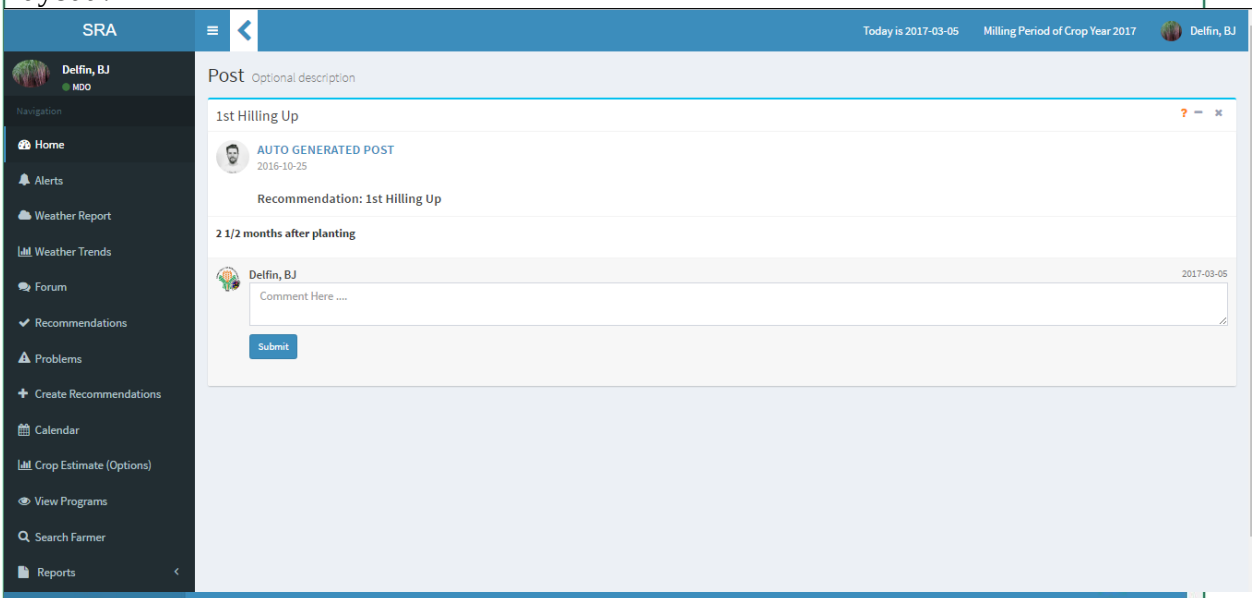


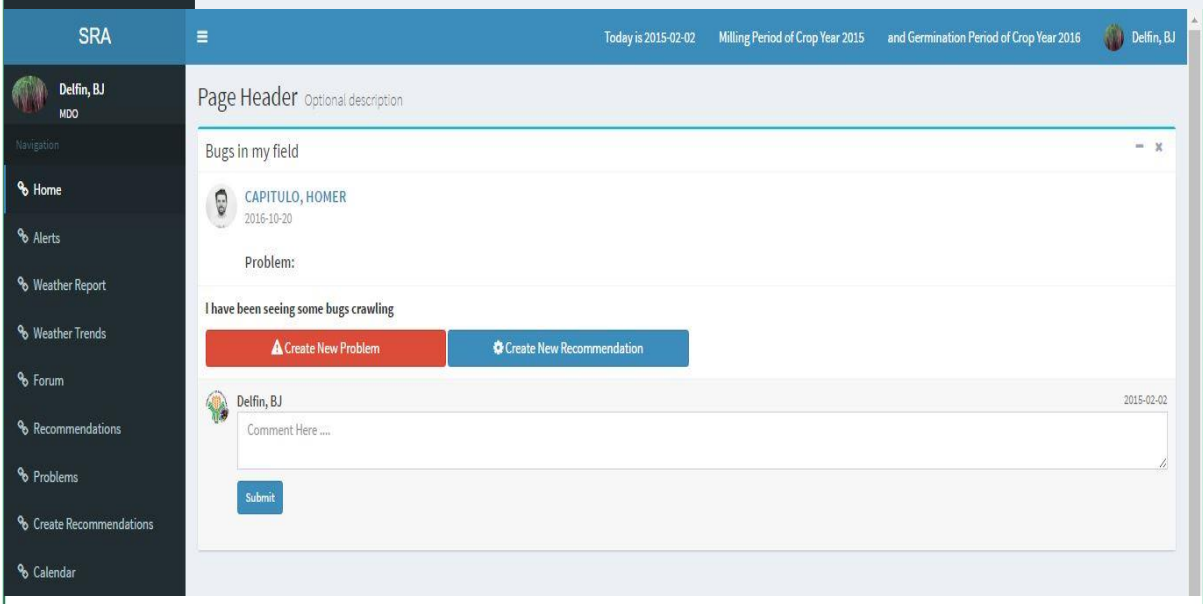
Screen Name : Forum
File Name : Forum.jsp
Description : The page shows the list of posts with their statuses.
Layout :



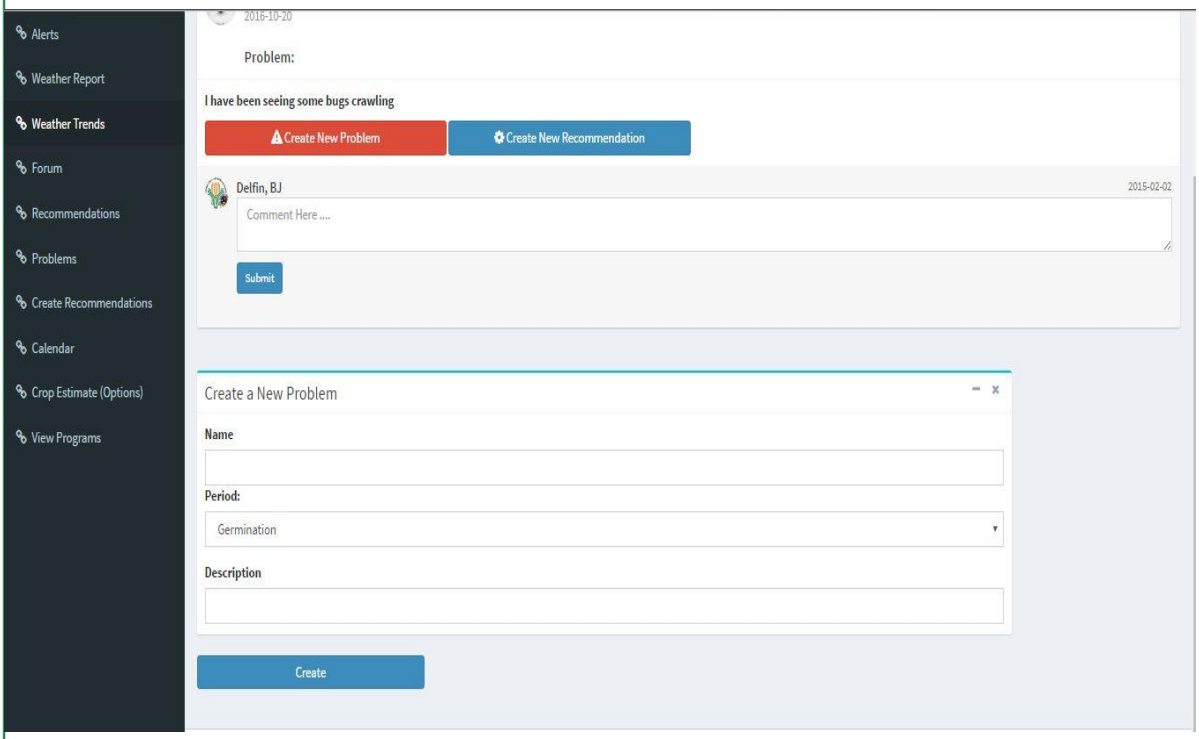
Screen Name : Forum Post
File Name : ApprovePost.jsp

Description : The page shows the post of the farmer made in the forum and the MDO can approve or reject the post.
Layout :

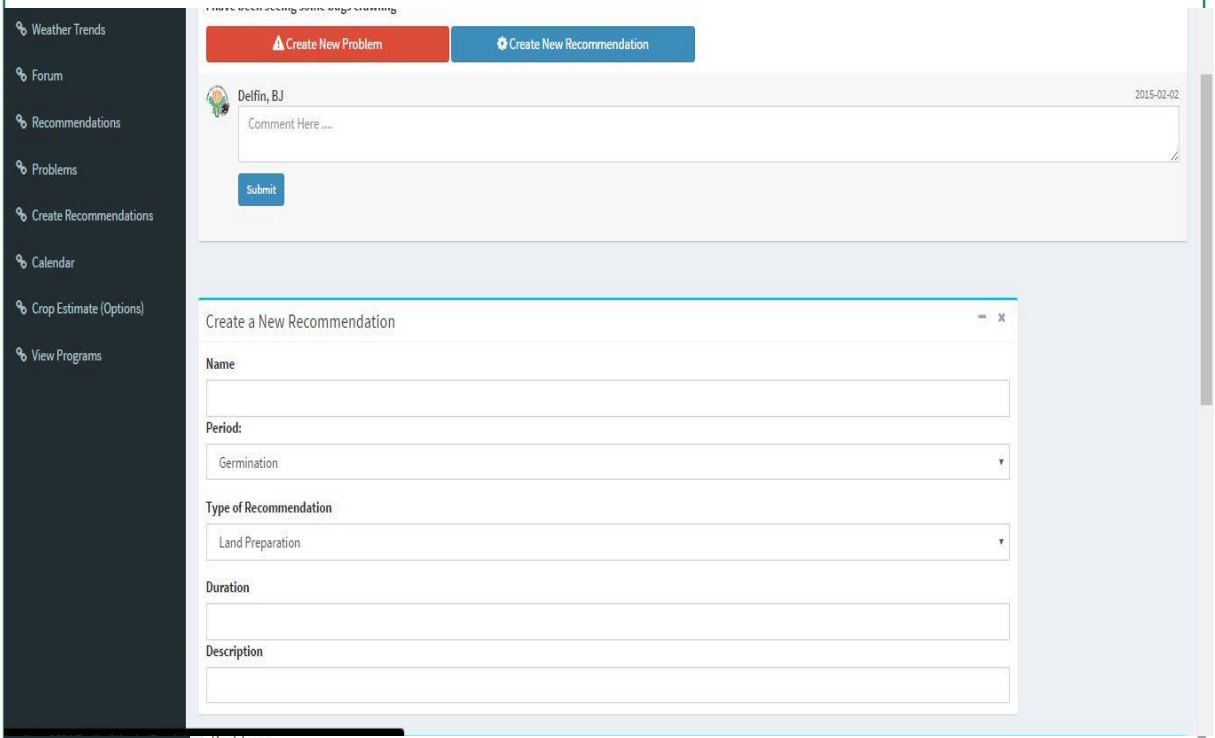


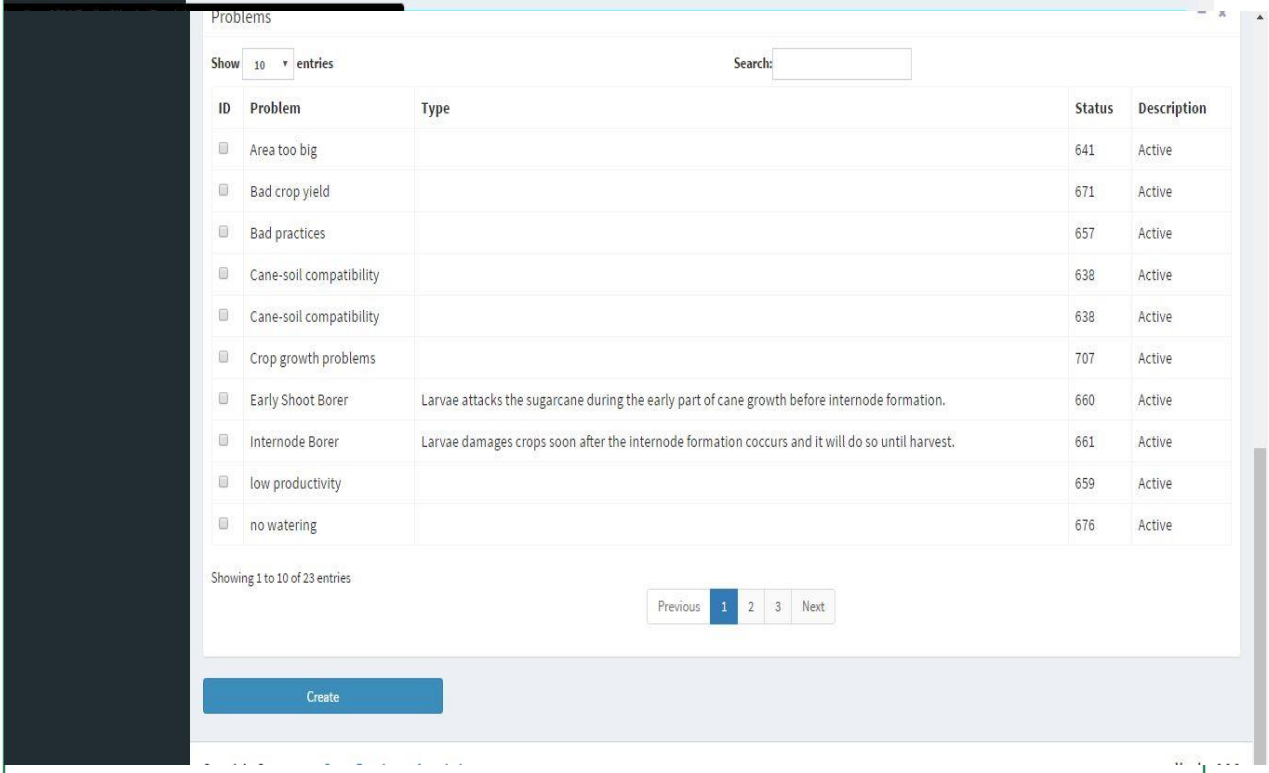


Screen Name : Create New Problem
File Name : ApprovePost.jsp
Description : The page allows the user to create a problem based on his evaluation of the post.
Layout :

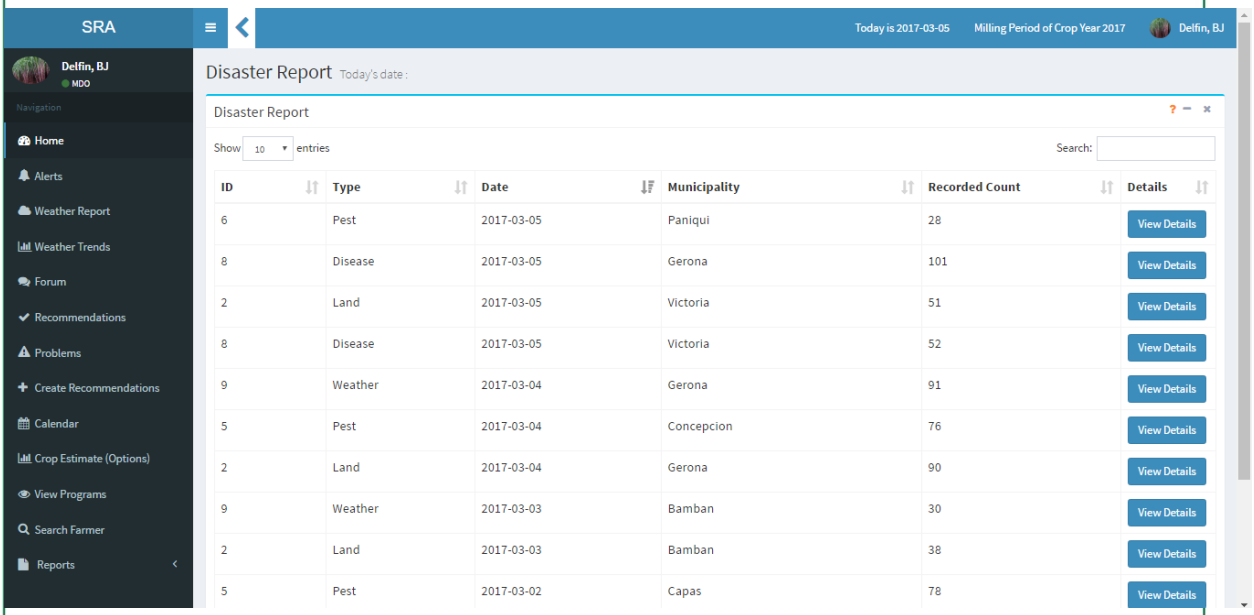


Screen Name : Create Recommendation Forum
File Name : ApprovePost.jsp
Description : The page allows the user to create a recommendation.
Layout :

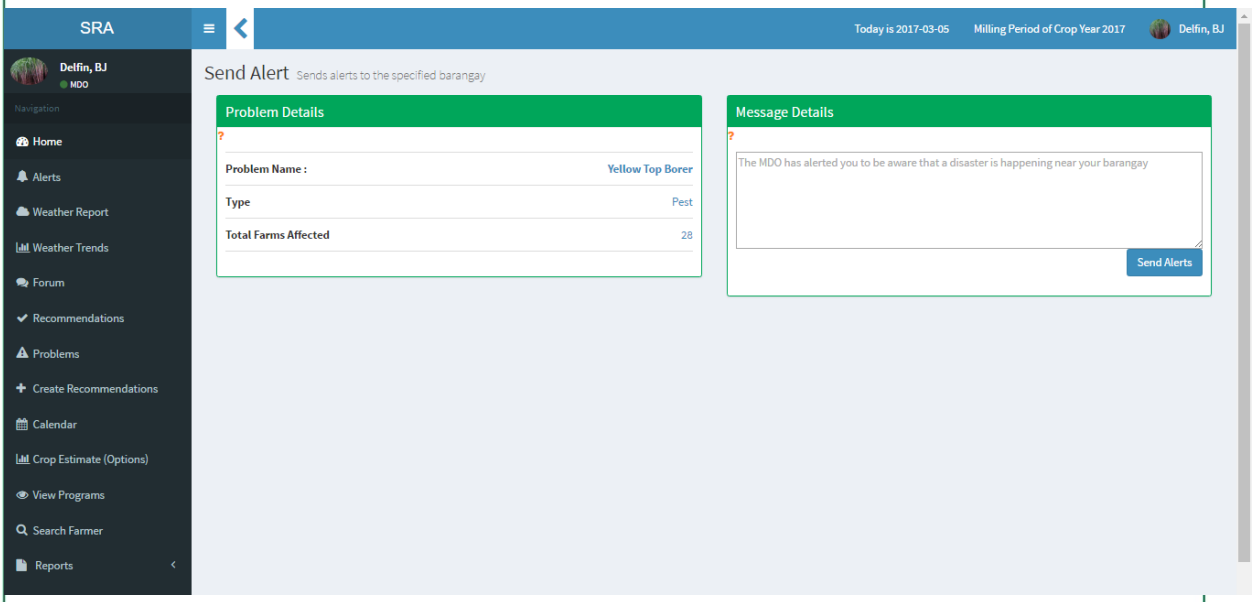

Weather Trends
Forum
Recommendations
Problems
Create Recommendations
Calendar
Crop Estimate (Options)
View Programs
Create New Problem
Create New Recommendation
Delfin, BJ
2015-02-02
Comment Here ....
Submit
Create a New Recommendation
Name
Period:
Germination
Type of Recommendation
Land Preparation
Duration
Description


Problems
Show 10 entries
Search:
ID Problem Type Status Description
Area too big 641 Active
Bad crop yield 671 Active
Bad practices 657 Active
Cane-soil compatibility 638 Active
Cane-soil compatibility 638 Active
Crop growth problems 707 Active
Early Shoot Borer Larvae attacks the sugarcane during the early part of cane growth before internode formation. 660 Active
Internode Borer Larvae damages crops soon after the internode formation coccurs and it will do so until harvest. 661 Active
low productivity 659 Active
no watering 676 Active
Showing 1 to 10 of 23 entries
Previous 1 2 3 Next
Create

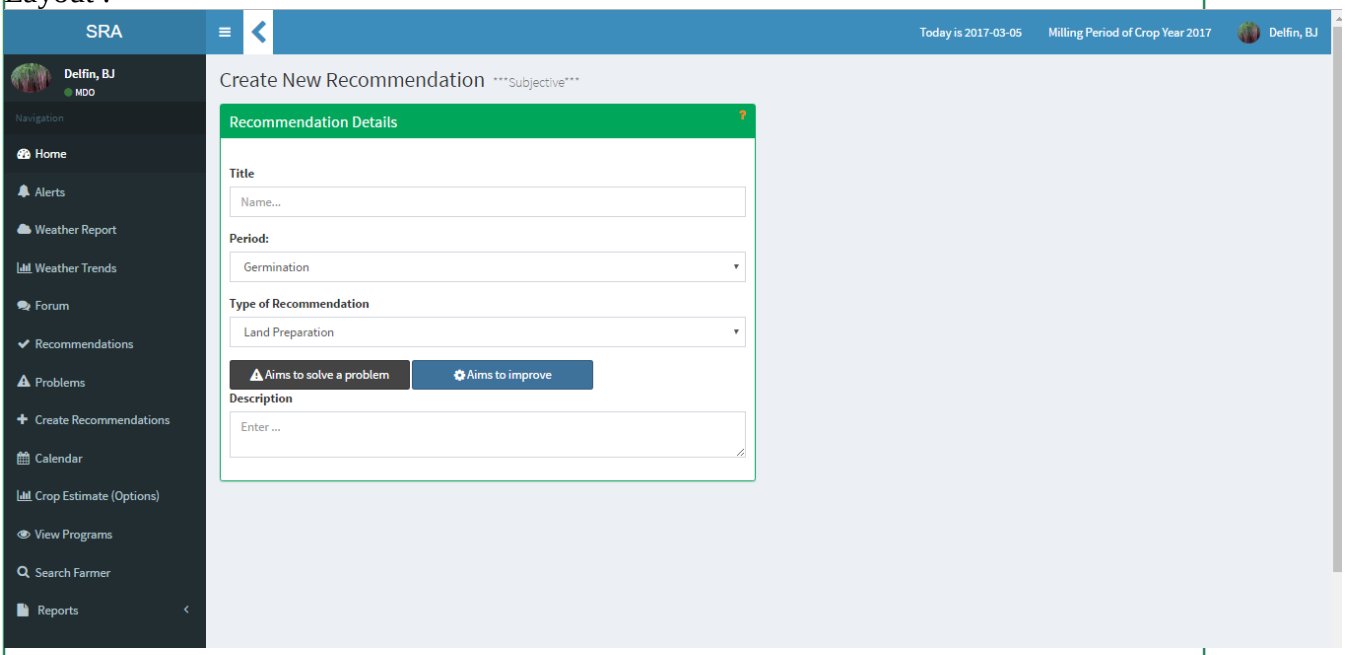
Screen Name : Disaster Report
File Name : Disaster.jsp
Description : The page shows the list of disasters reported.
Layout :

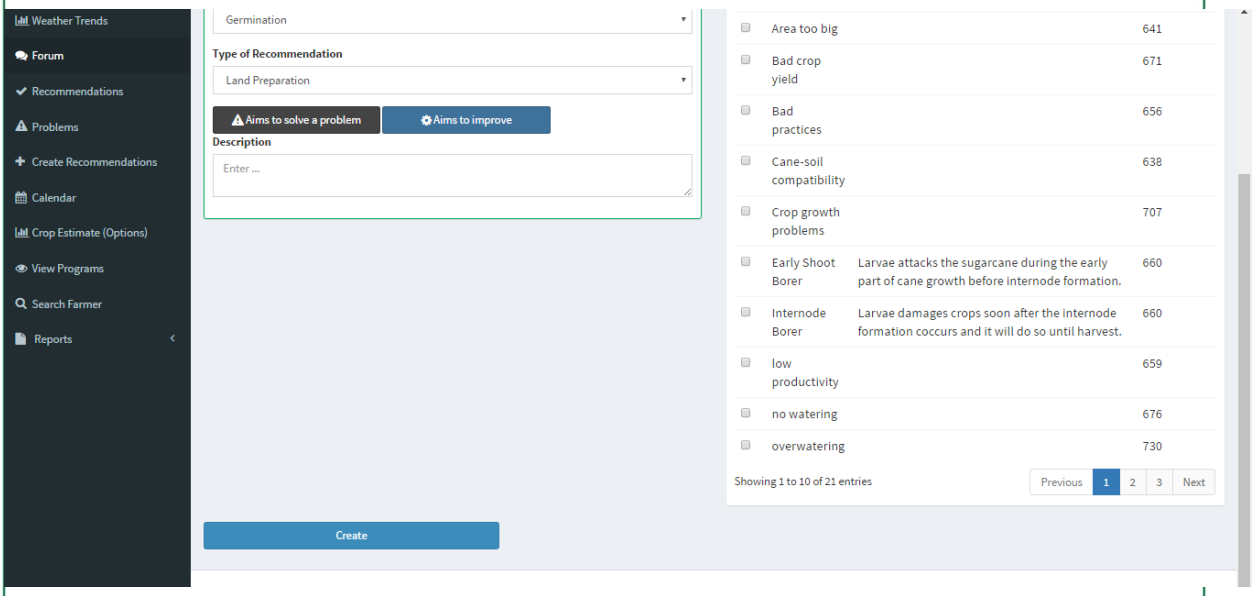


Screen Name : Send Alert
File Name : alert.jsp
Description : The page allows the user to send alerts with messages to the farmer.
Layout :

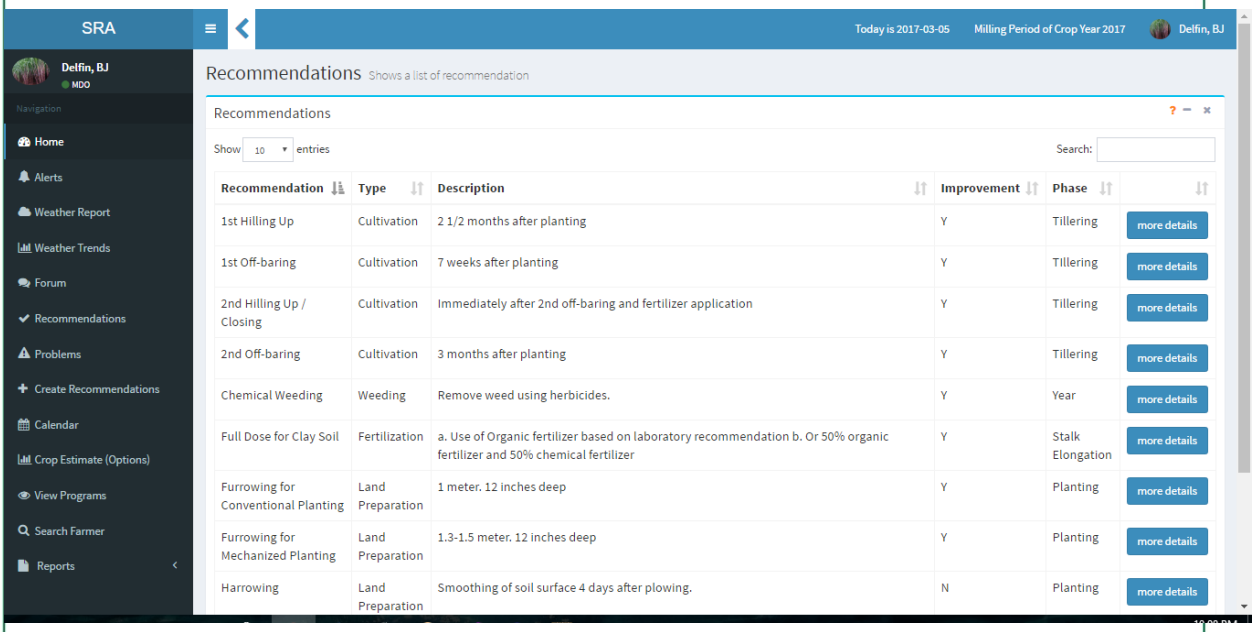


Screen Name : Create Recommendation
File Name : createNewRecommendation.jsp
Description : The page allows the user to create a new recommendation and choose between two types: solving a problem or for improvement
Layout :

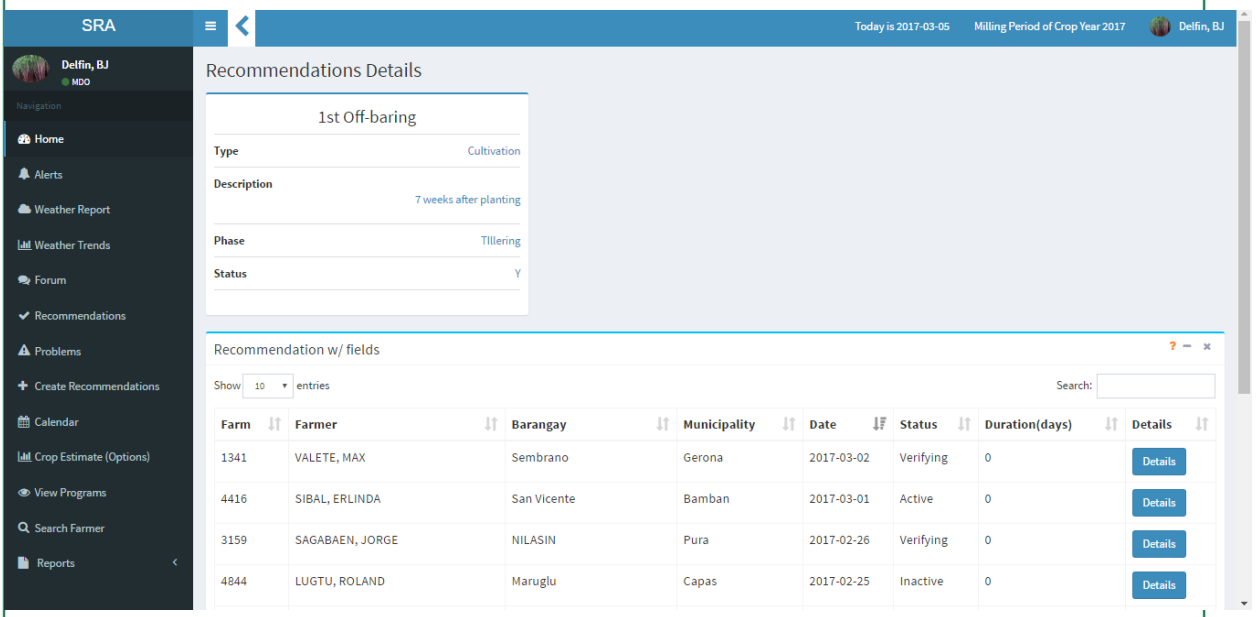




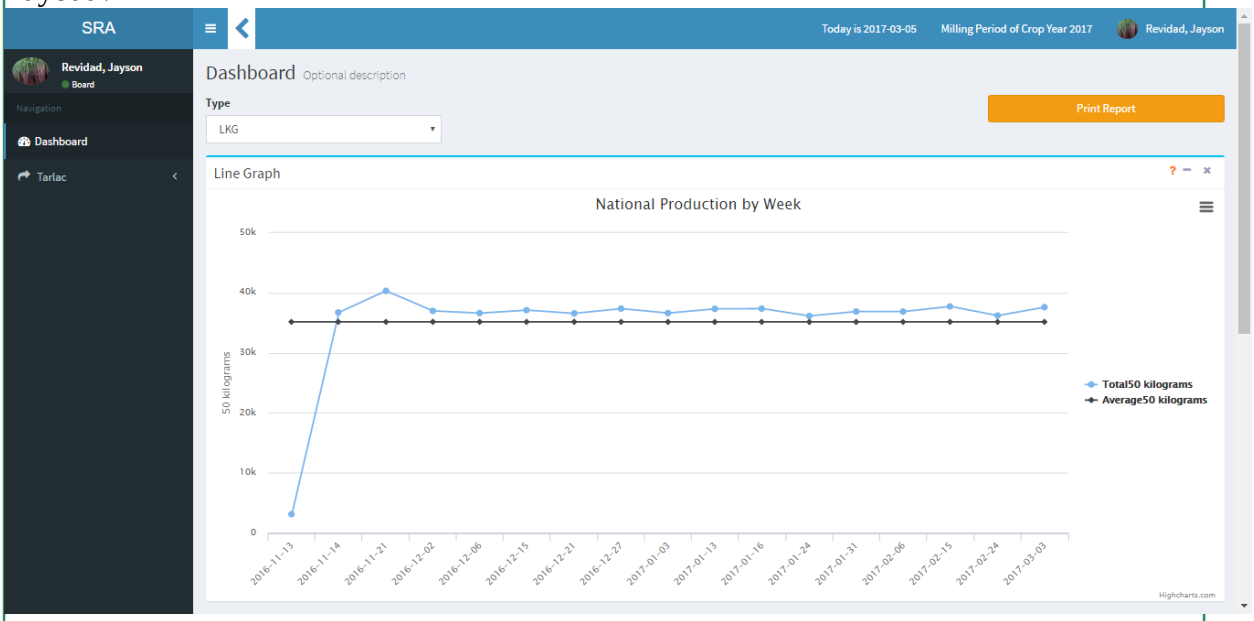
Screen Name : View Recommednation list
File Name : Recommendation.jsp
Description : The page allows the user to see the list of recommendations
Layout:

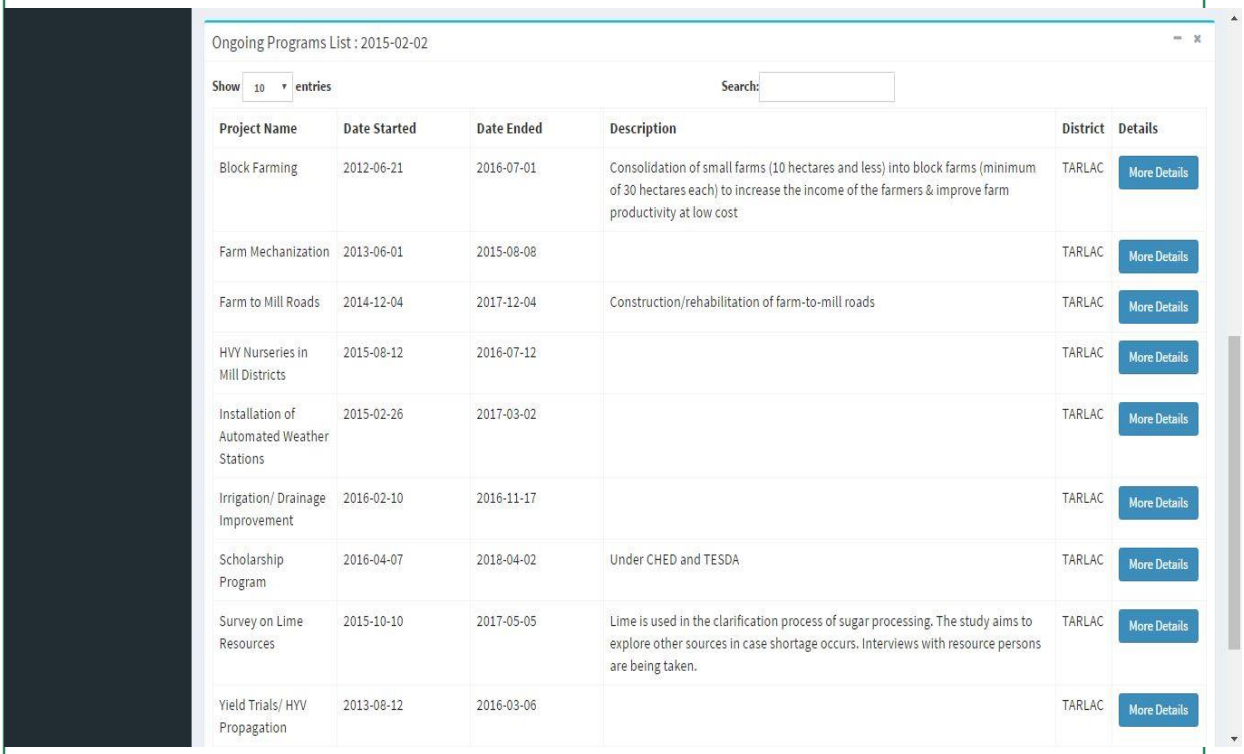


Screen Name : View Recommednation Details
File Name : Recommendation.jsp
Description : The page allows the user to see the details of the recommendation
Layout:



Screen Name : Dashboard
File Name : boardhome.jsp
Description : The page shows the user the national weekly production and the list of ongoing programs
Layout :



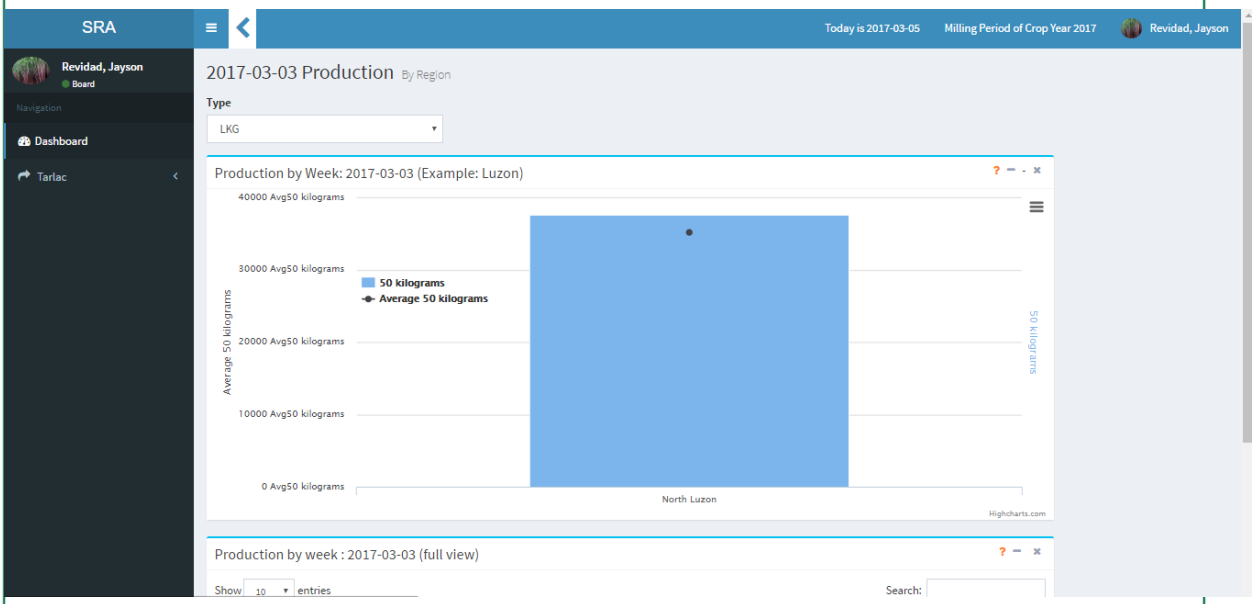


Ongoing Programs List : 2015-02-02

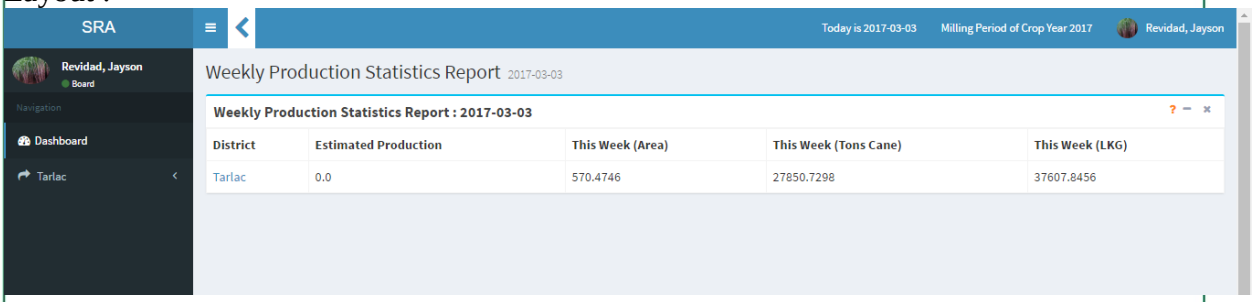
Show 10 entries Search:

Project Name	Date Started	Date Ended	Description	District	Details
Block Farming	2012-06-21	2016-07-01	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	TARLAC	More Details
Farm Mechanization	2013-06-01	2015-08-08		TARLAC	More Details
Farm to Mill Roads	2014-12-04	2017-12-04	Construction/rehabilitation of farm-to-mill roads	TARLAC	More Details
HVY Nurseries in Mill Districts	2015-08-12	2016-07-12		TARLAC	More Details
Installation of Automated Weather Stations	2015-02-26	2017-03-02		TARLAC	More Details
Irrigation/ Drainage Improvement	2016-02-10	2016-11-17		TARLAC	More Details
Scholarship Program	2016-04-07	2018-04-02	Under CHED and TESDA	TARLAC	More Details
Survey on Lime Resources	2015-10-10	2017-05-05	Lime is used in the clarification process of sugar processing. The study aims to explore other sources in case shortage occurs. Interviews with resource persons are being taken.	TARLAC	More Details
Yield Trials/ HYV Propagation	2013-08-12	2016-03-06		TARLAC	More Details

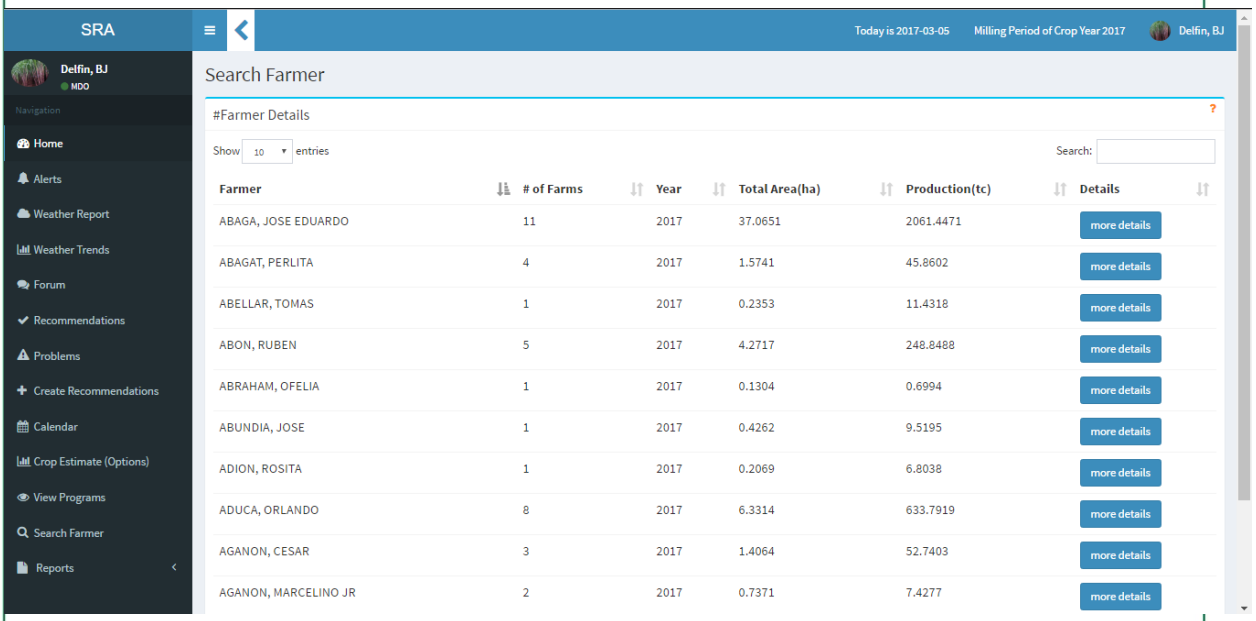
Screen Name : Weekly Produced
File Name : viewWeeklyProductionReport.jsp
Description : The page allows the user to drill down the dashboard and view the production of each region
Layout :



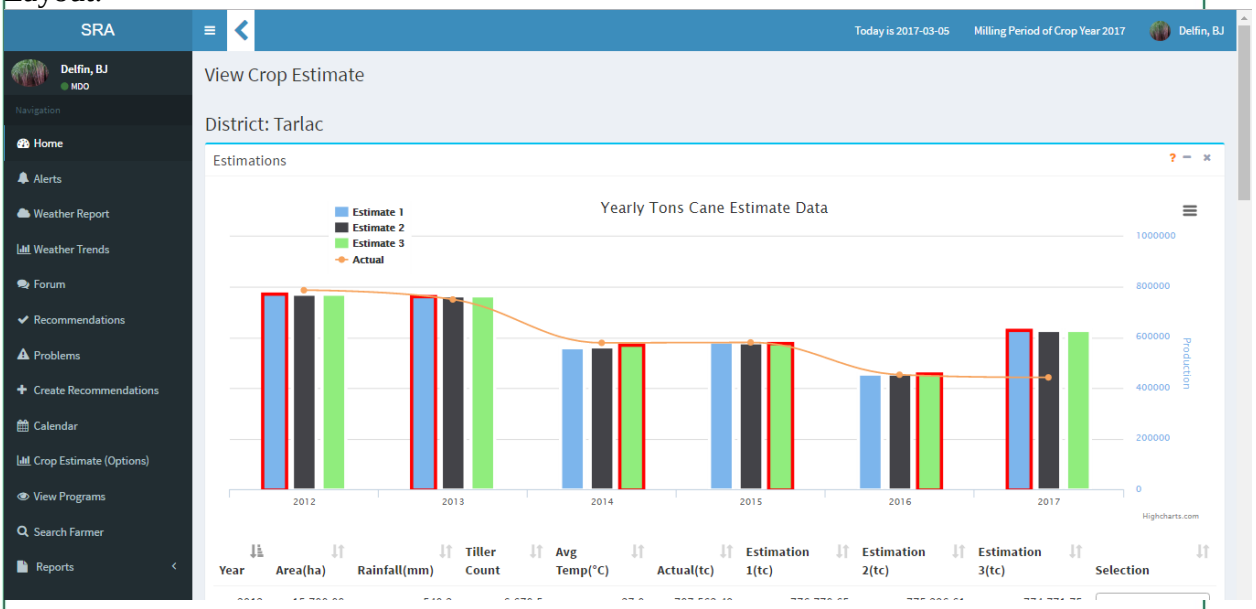
Screen Name : Weeky Statistics
File Name : Productiondetails.jsp
Description : The page shows the details of the selected region.
Layout :

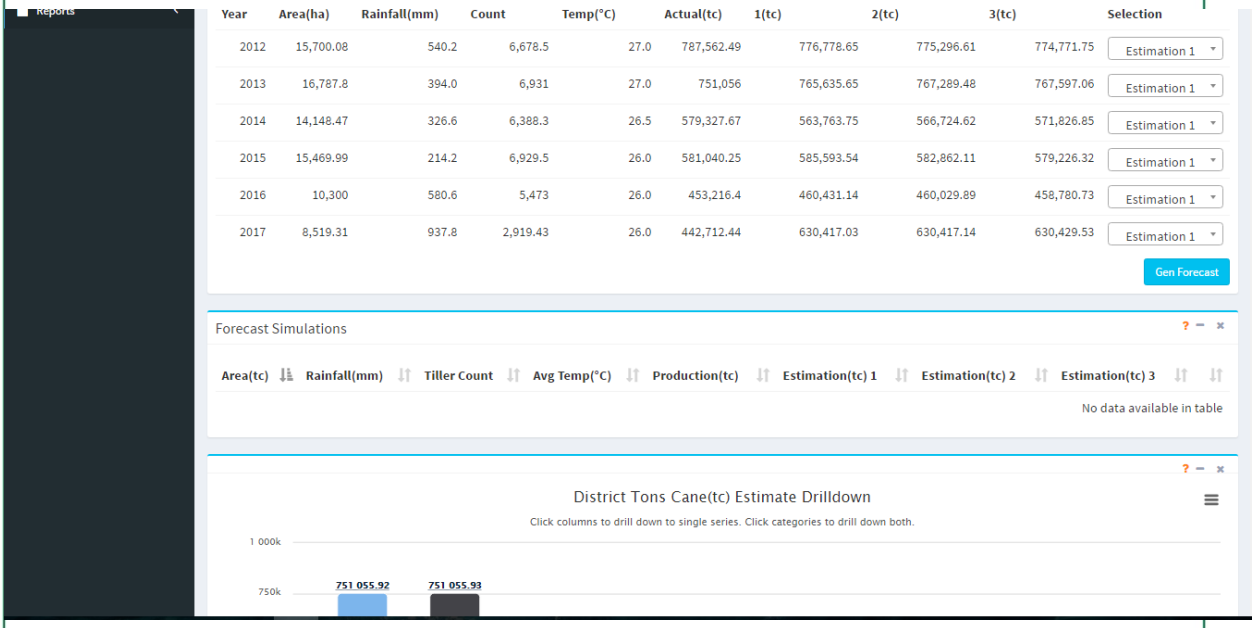


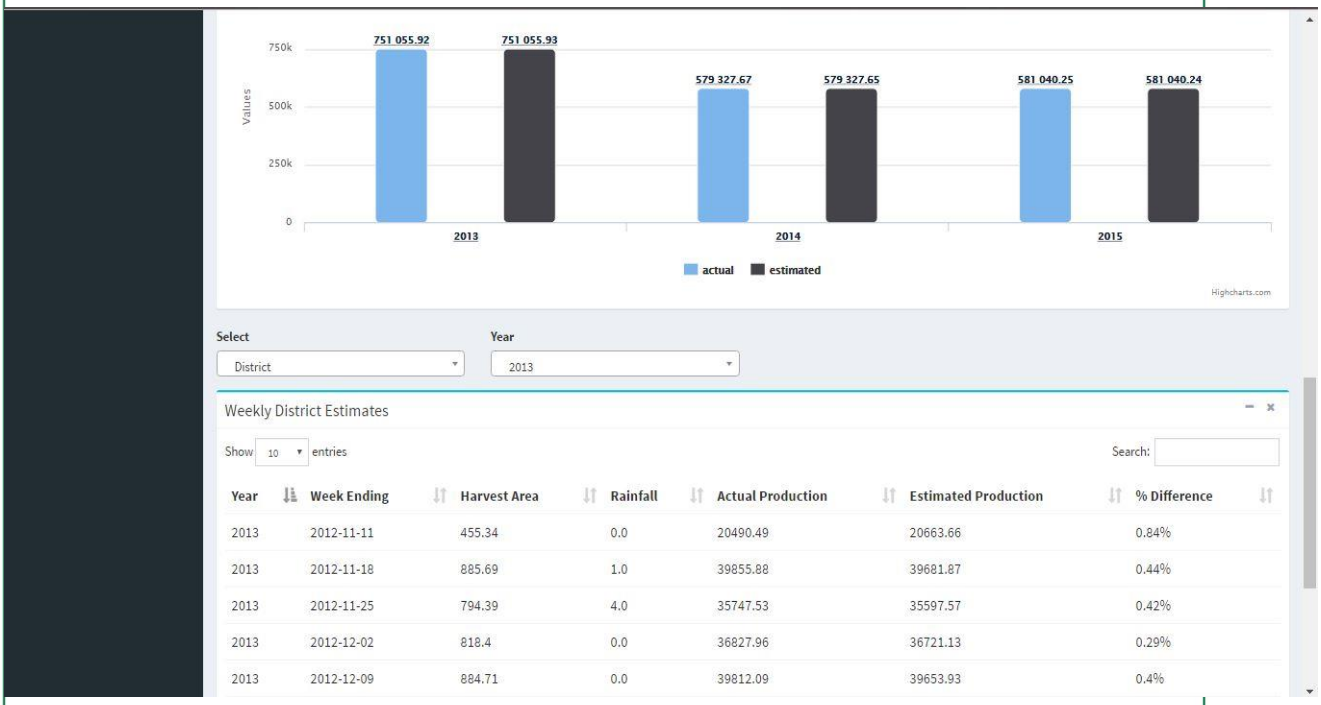
Screen Name : Search Farmer
File Name : SearchFarmer.jsp
Description : The page allows the user to see the list of farmers
Layout:



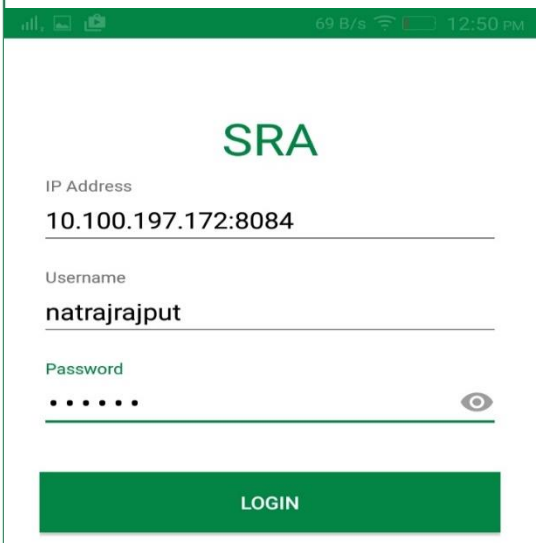
Screen Name : Crop Estimate
File Name : CropEstimate.jsp
Description : The page allows the user to generate forecasts and compare them
Layout:



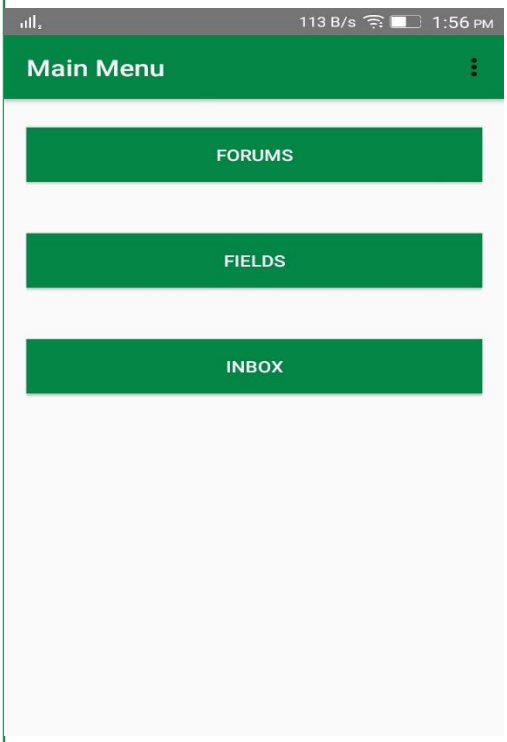




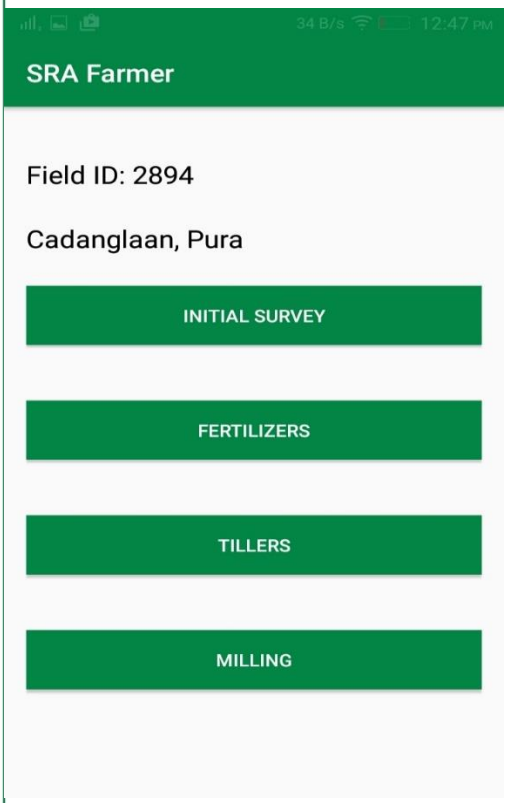
Screen Name : Farmer Login
Description : The page shows the login for the farmer's mobile application
Layout :



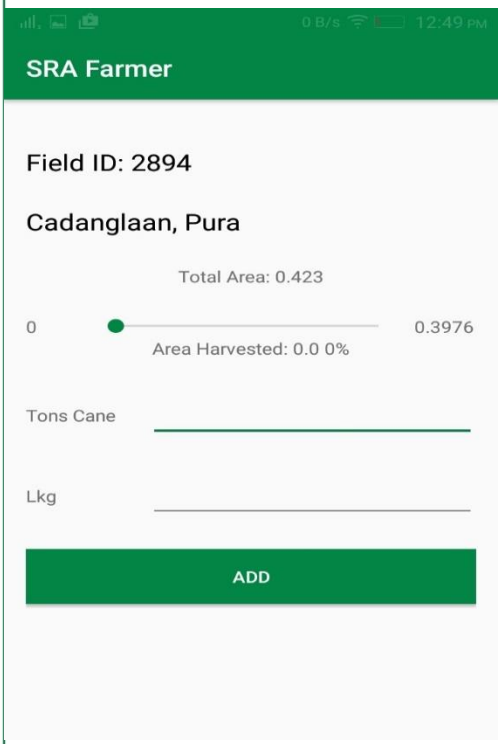
Screen Name : Farmer Main Menu
Description : The page shows the main menu for farmer's mobile application
Layout :



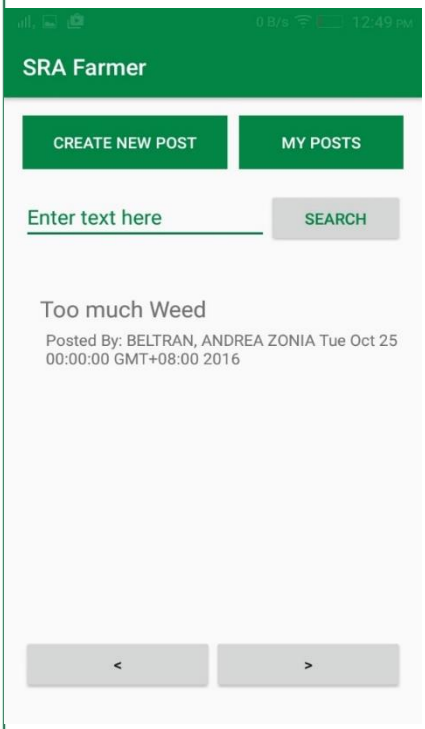
Screen Name : Farm Survey Menu
Description : The page shows the menu for the different parts of the Crop Validation Survey
Layout :



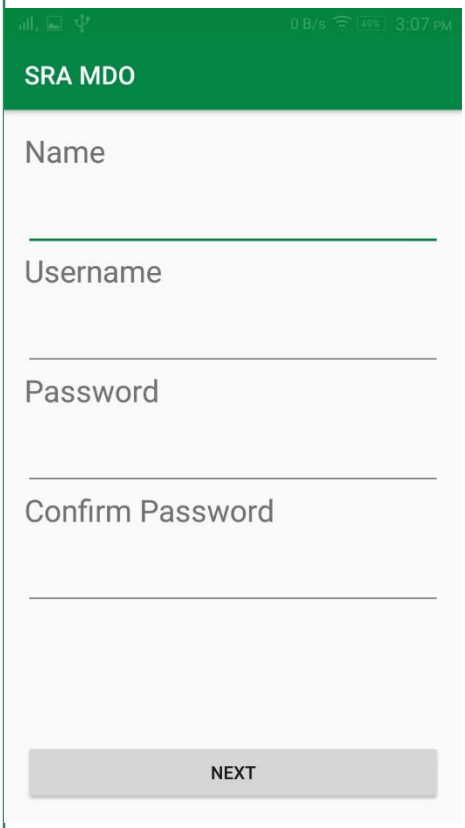
Screen Name : Input Production
Description : The page allows the user to input his area harvested and production
Layout :

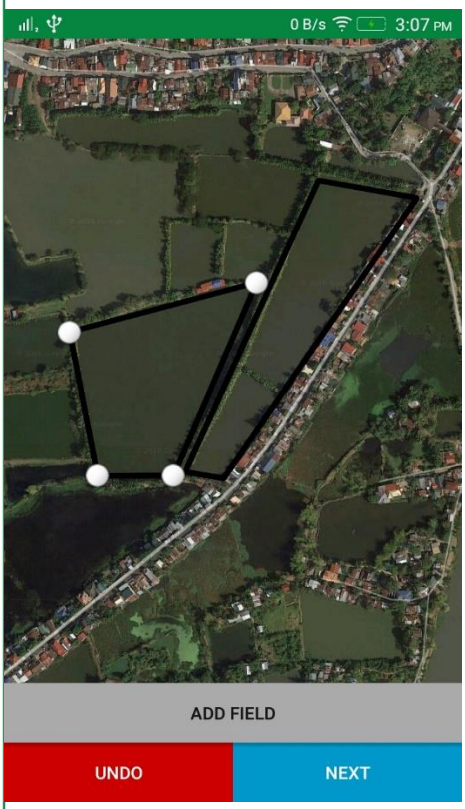


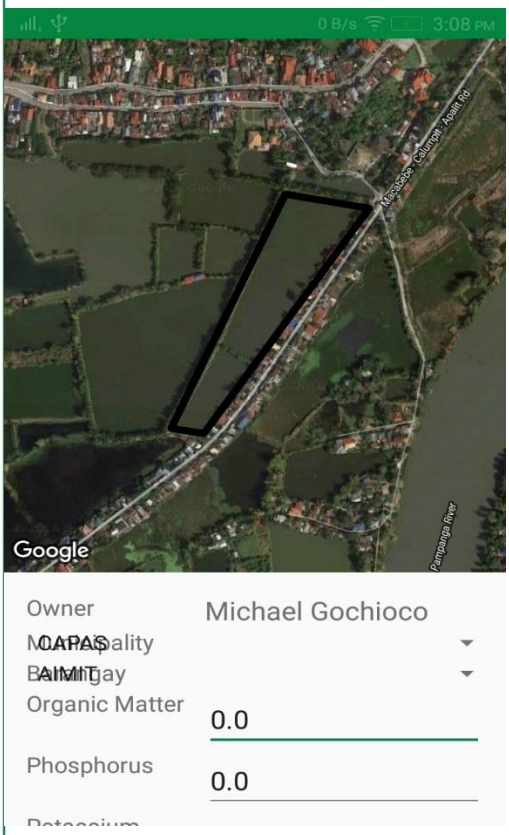
Screen Name : Farmer Forum
Description : The page allows the farmer to view and search posts
Layout :

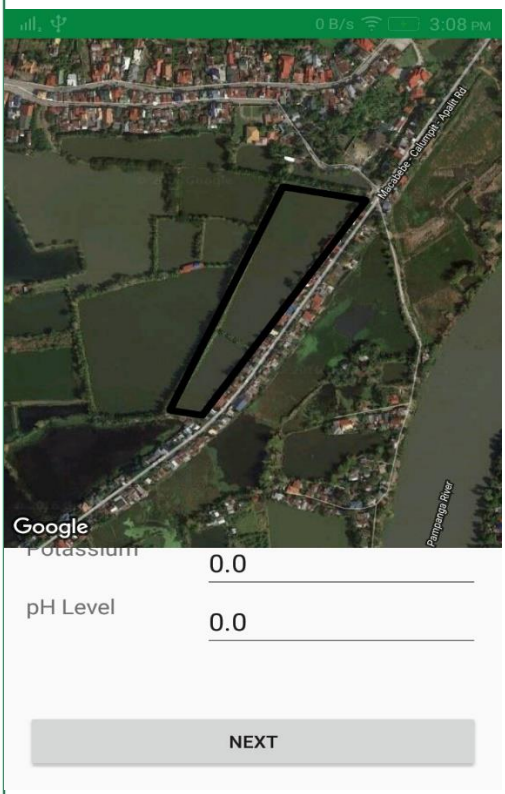


Screen Name : Create Farmer
Description : The page allows the mdo to create/register a farmer and plot his area.
Layout :

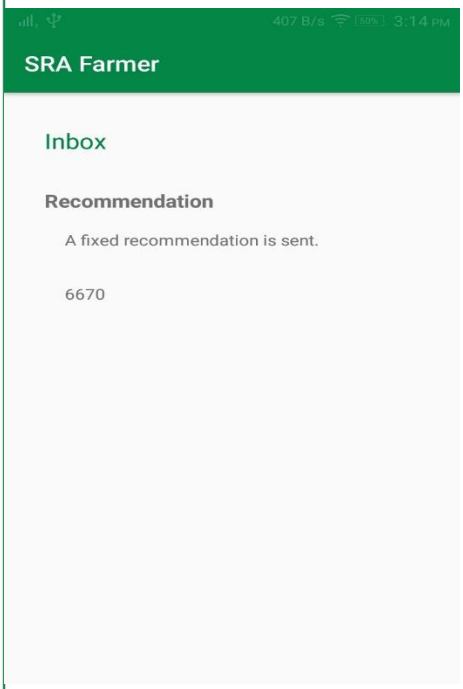

0 B/s
3:07 PM
SRA MDO
Name
Username
Password
Confirm Password
NEXT


0 B/s
3:07 PM
ADD FIELD
UNDO
NEXT

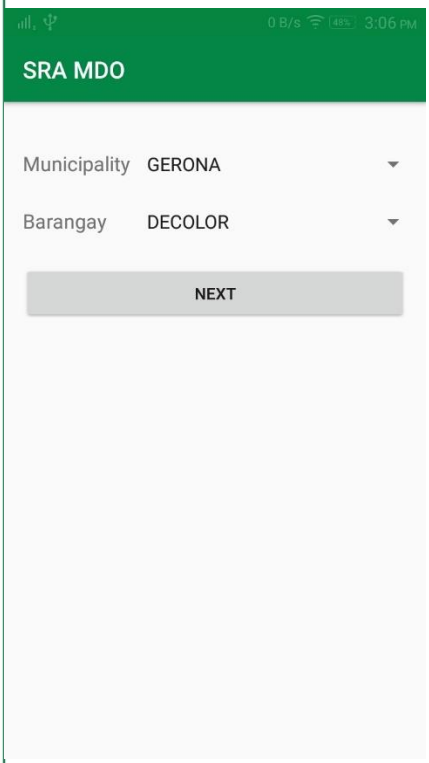

0 B/s
3:08 PM
Magsaysay - Calumpit - Apalit Rd
Pampanga River
Google
Owner
Michael Gochioco
Municipality
CAPAS
Barangay
AIMIT
Organic Matter
0.0
Phosphorus
0.0



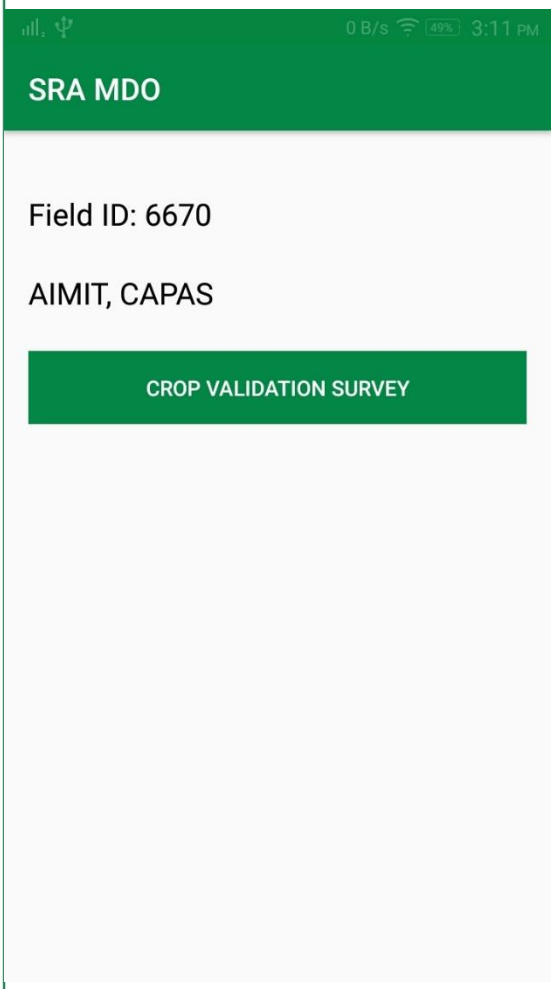
Screen Name : Inbox
Description : The page shows the farmer's notifications for new recommendations, problems and updates to forum posts.
Layout :

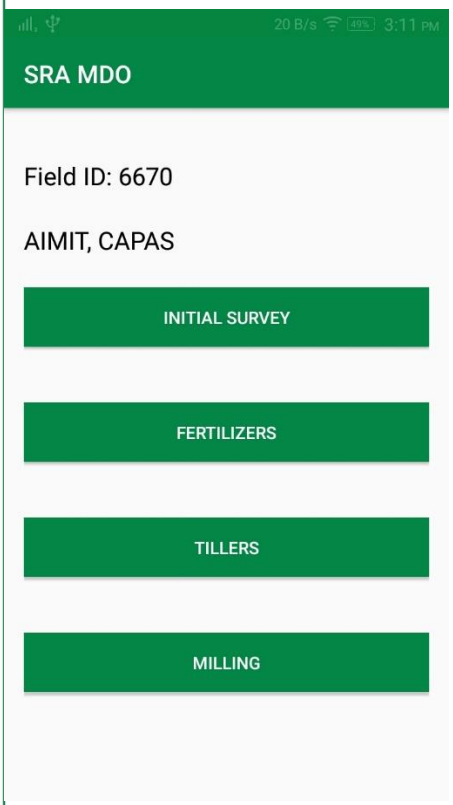


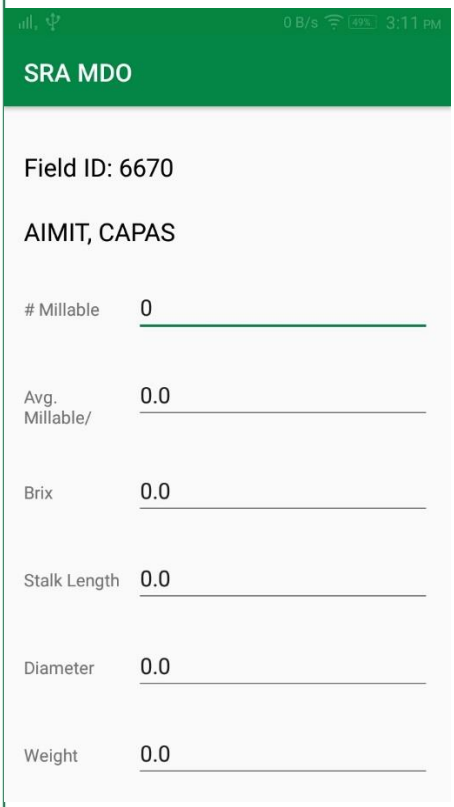
Screen Name : Crop Validation Survey for MDO
Description : The page allows the MDO to fill up the farmer's Crop Validation Survey.
Layout :

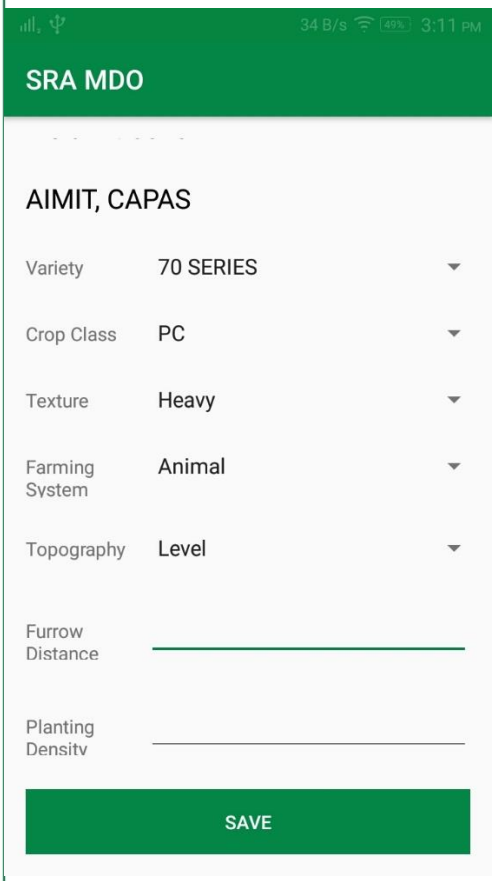

0 B/s
3:06 PM
SRA MDO
Municipality
GERONA
Barangay
DECOLOR
NEXT

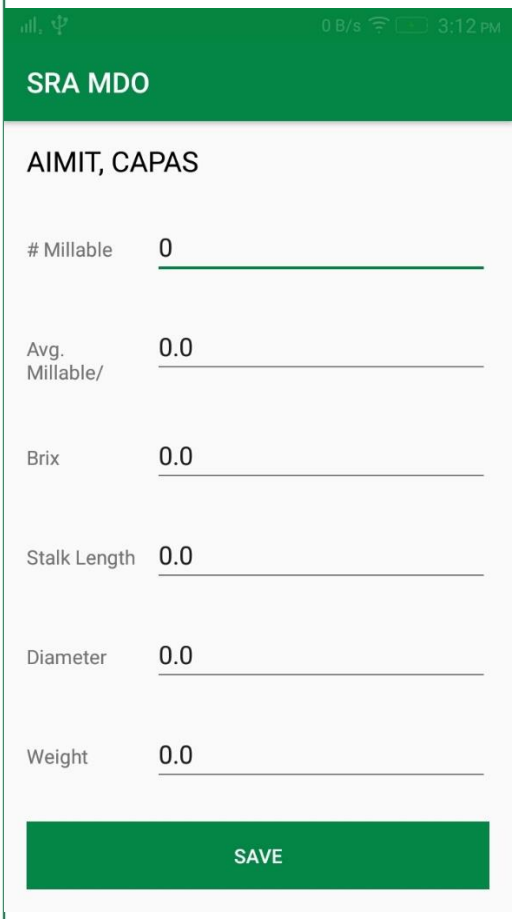
20 B/s
3:09 PM
SELECT
<
>


0 B/s
49%
3:11 PM
SRA MDO
Field ID: 6670
AIMIT, CAPAS
CROP VALIDATION SURVEY

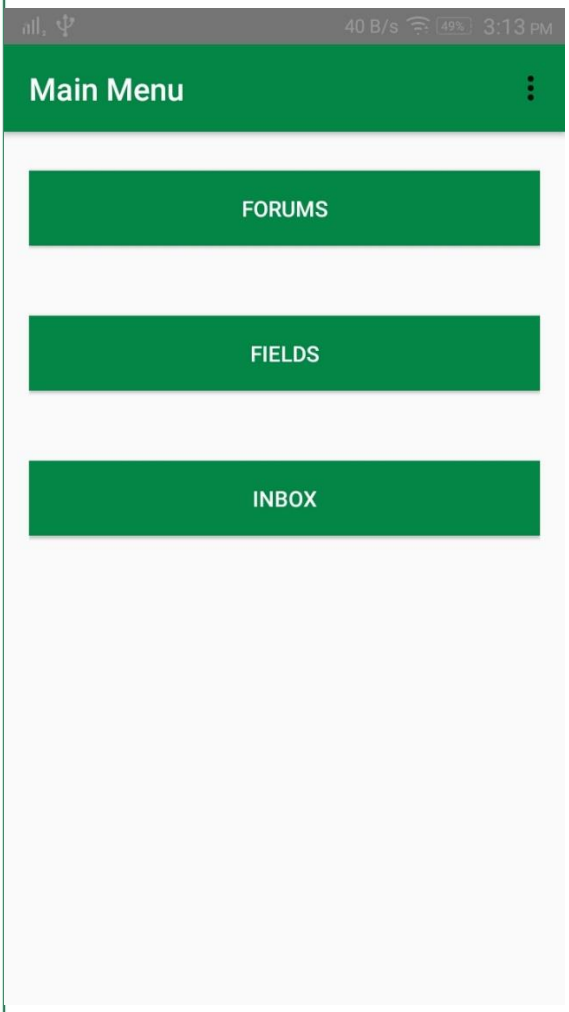

20 B/s
3:11 PM
SRA MDO
Field ID: 6670
AIMIT, CAPAS
INITIAL SURVEY
FERTILIZERS
TILLERS
MILLING


0 B/s
3:11 PM
SRA MDO
Field ID: 6670
AIMIT, CAPAS
Millable
0
Avg. Millable/
0.0
Brix
0.0
Stalk Length
0.0
Diameter
0.0
Weight
0.0

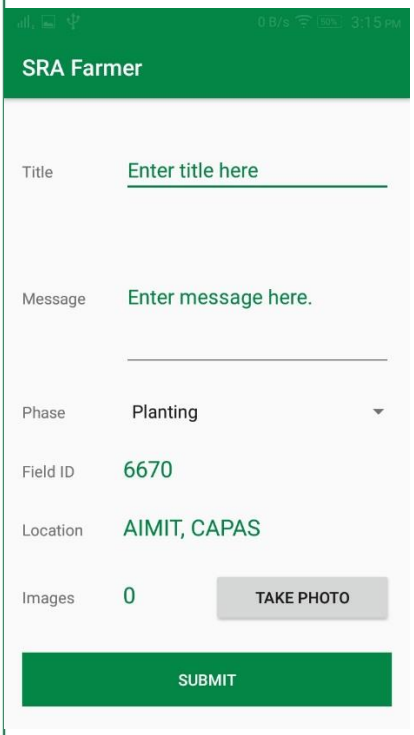

34 B/s
3:11 PM
SRA MDO
AIMIT, CAPAS
Variety
70 SERIES
Crop Class
PC
Texture
Heavy
Farming System
Animal
Topography
Level
Furrow Distance
Planting Density
SAVE



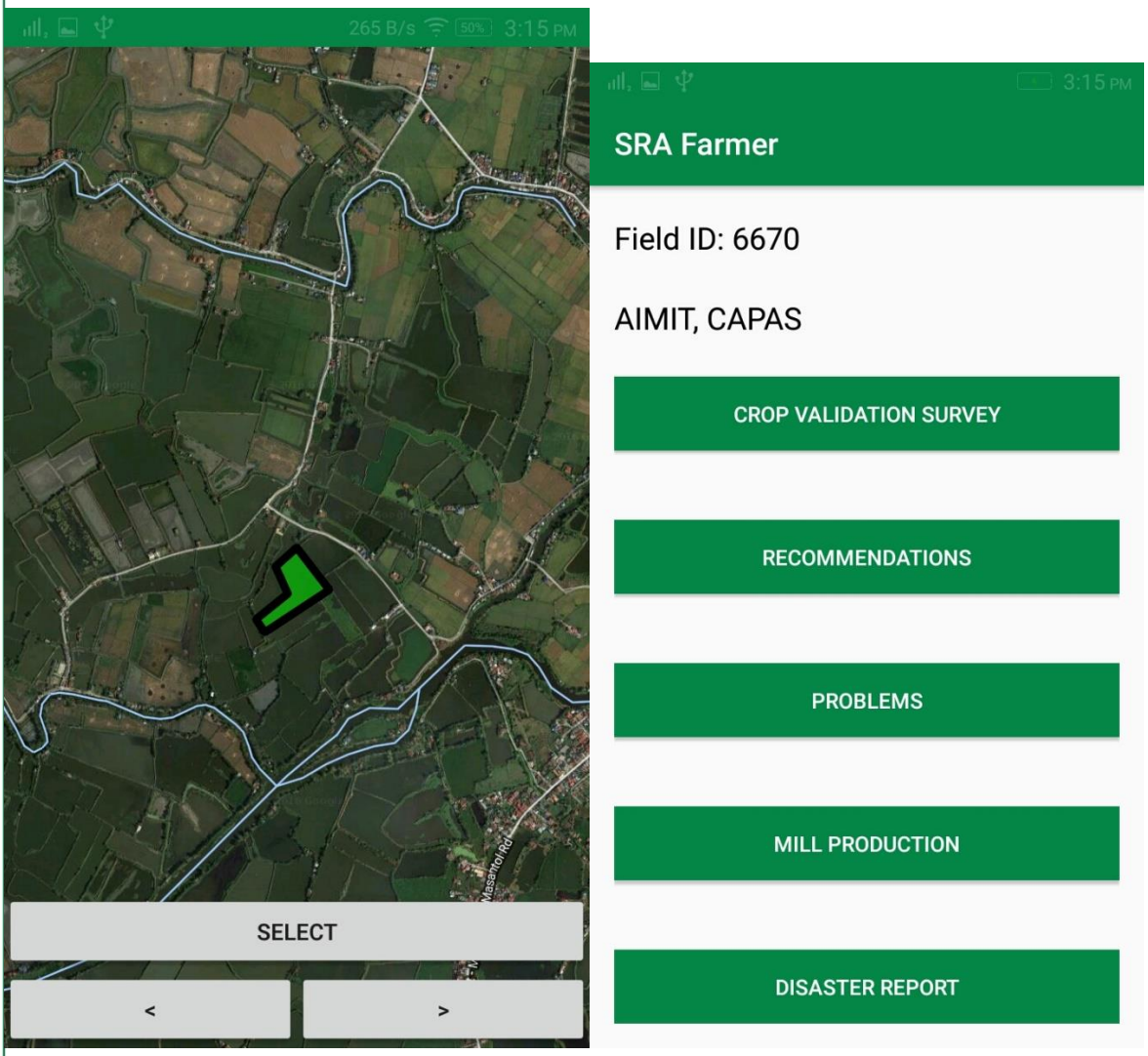
Screen Name : Farmer's Main Menu
Description : The page contains the main menu for the farmer's mobile application.
Layout :



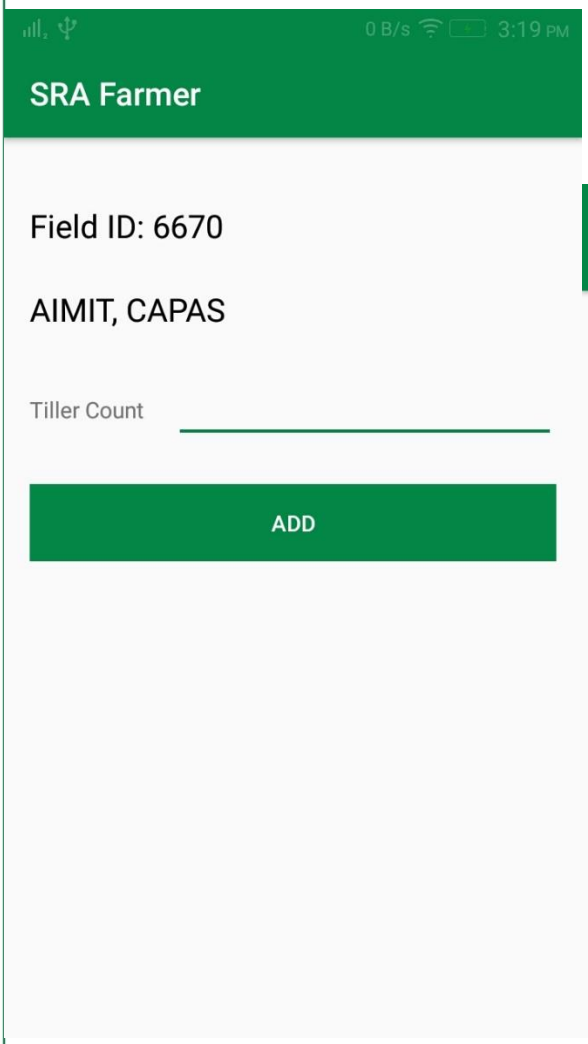
Screen Name : Create Forum Post
Description : The page allows the farmer to submit a forum post.
Layout :

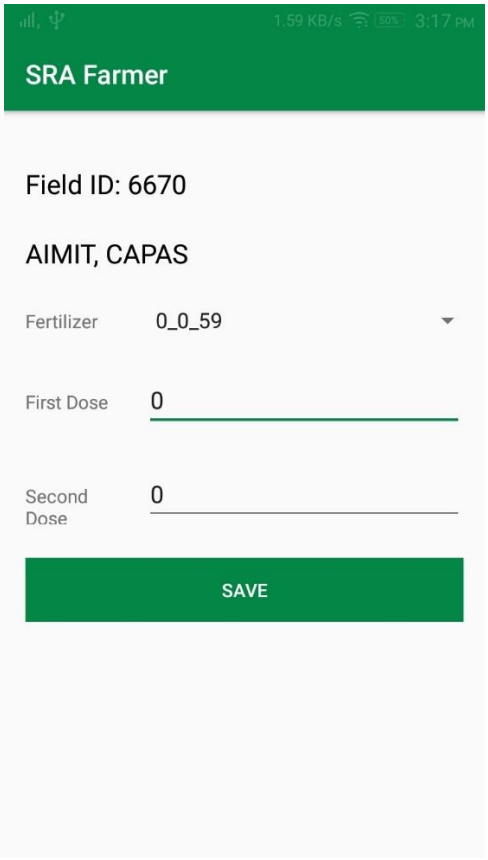


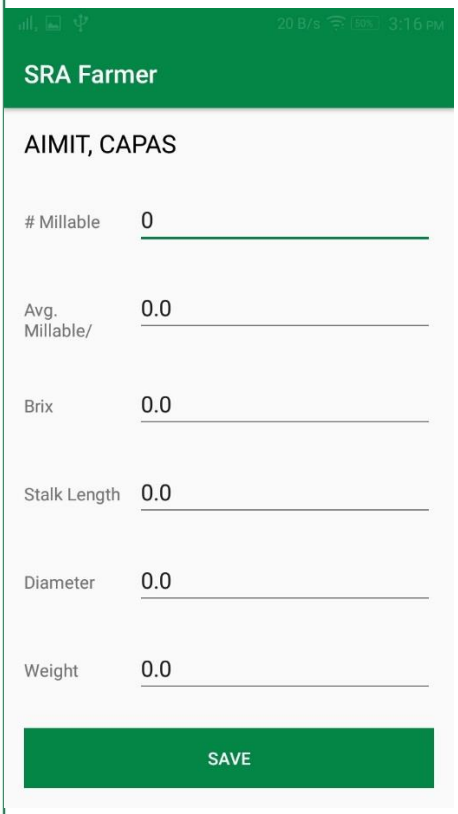
Screen Name : Fields Menu
Description : The page contains the actions available for the fields.
Layout :

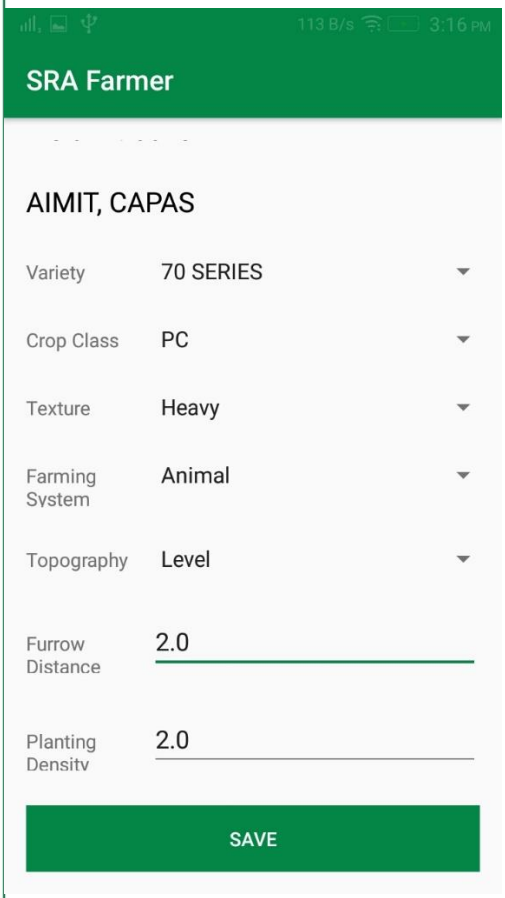


Screen Name : Crop Validation Survey
Description : The page allows the farmer to fill up the CVS.
Layout :

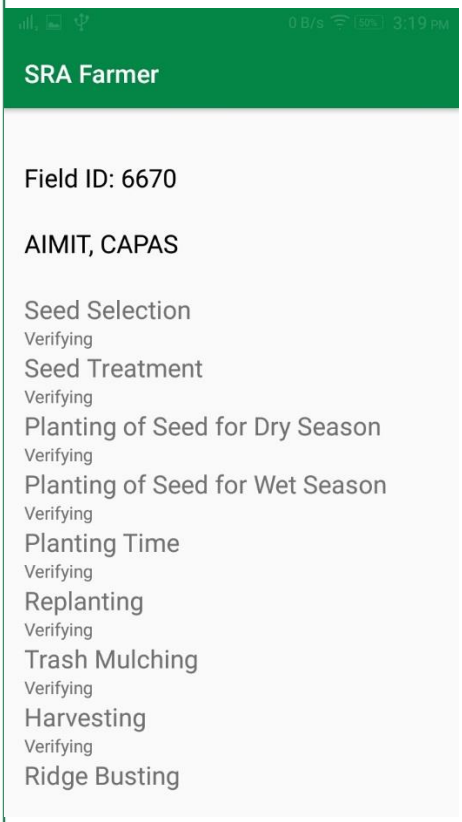

0 B/s 3:19 PM
SRA Farmer
Field ID: 6670
AIMIT, CAPAS
Tiller Count
ADD

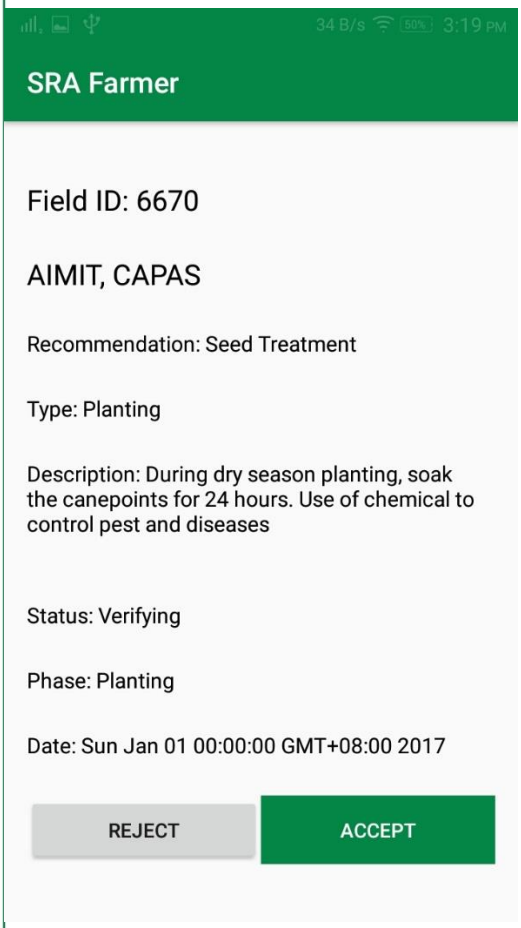

1.59 KB/s 3:17 PM
SRA Farmer
Field ID: 6670
AIMIT, CAPAS
Fertilizer
0_0_59
First Dose
0
Second Dose
0
SAVE


SRA Farmer
AIMIT, CAPAS
Millable
0
Avg. Millable/
0.0
Brix
0.0
Stalk Length
0.0
Diameter
0.0
Weight
0.0
SAVE

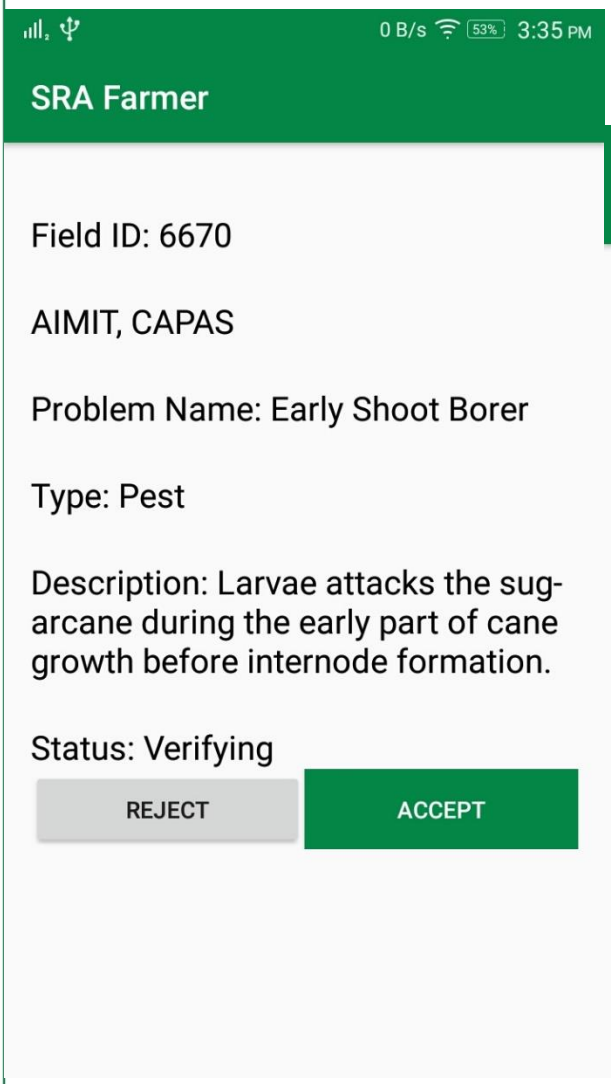


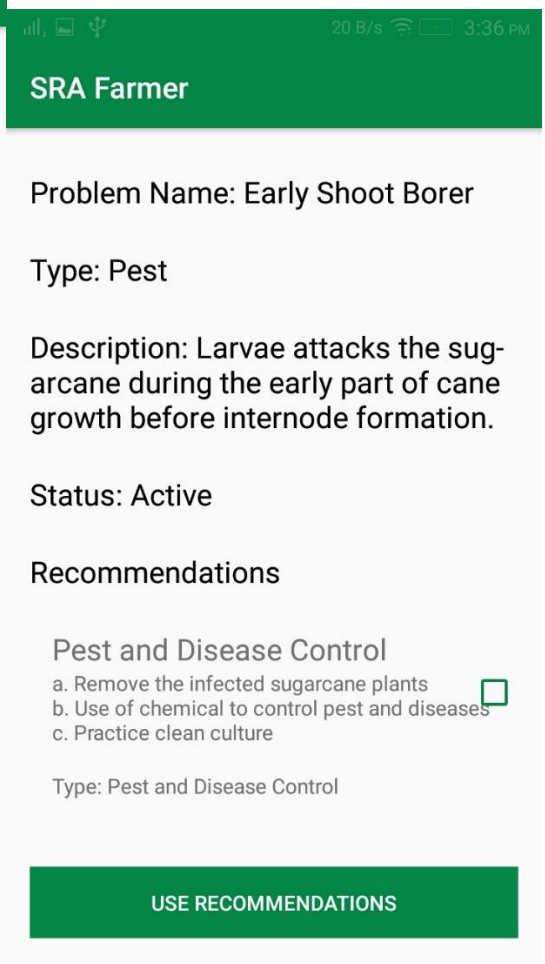
Screen Name : Recommendations List
Description : The page allows the farmer to view all verifying and active recommendations
Layout :


0 B/s
3:19 PM
SRA Farmer
Field ID: 6670
AIMIT, CAPAS
Seed Selection
Verifying
Seed Treatment
Verifying
Planting of Seed for Dry Season
Verifying
Planting of Seed for Wet Season
Verifying
Planting Time
Verifying
Replanting
Verifying
Trash Mulching
Verifying
Harvesting
Verifying
Ridge Busting

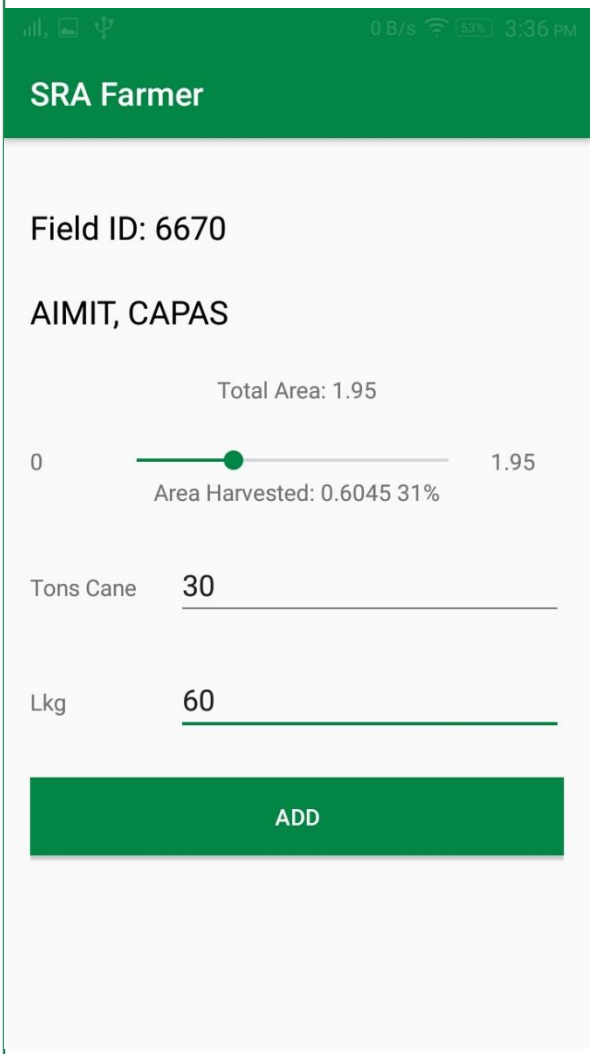


Screen Name : Problem List
Description : The page allows the farmer to view all verifying and active problems
Layout :

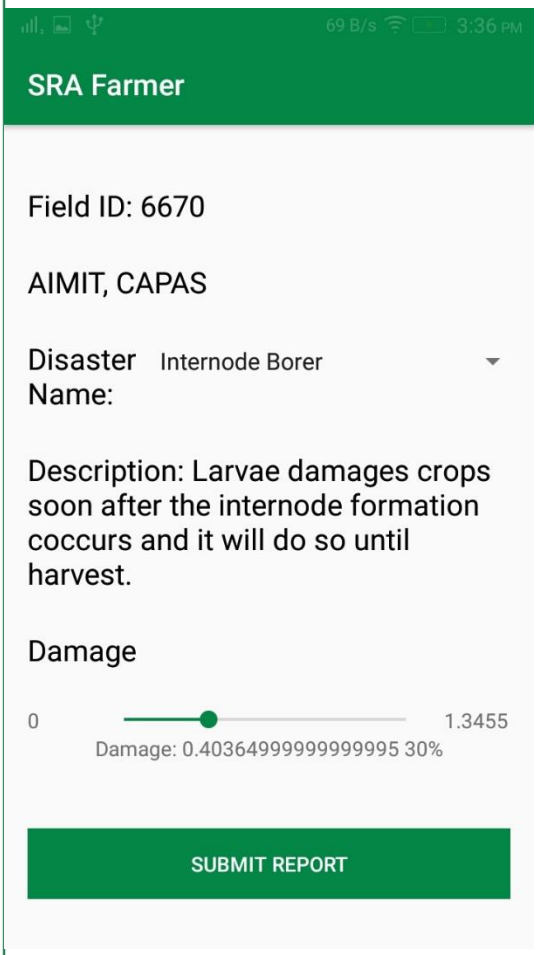




Screen Name : Production
Description : The page allows the farmer to view all verifying and active recommendations
Layout :



Screen Name : Disaster Report/Survey
Description : The page allows the farmer to submit disaster report and survey
Layout :



6.4 Form Specifications

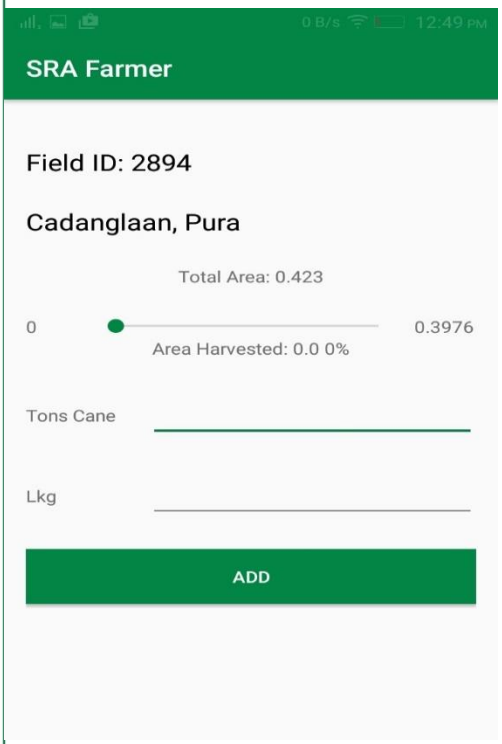
Form Name : Mill Production

Description : This form is for the production of the farmer's in area harvested, tons cane, and lkg.

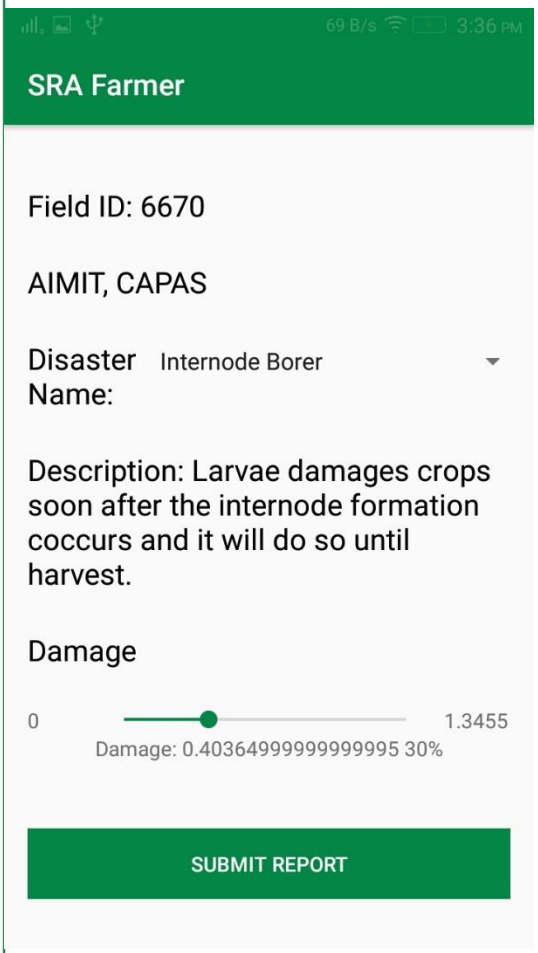
Prepared By : Farmer

Used By : MDO

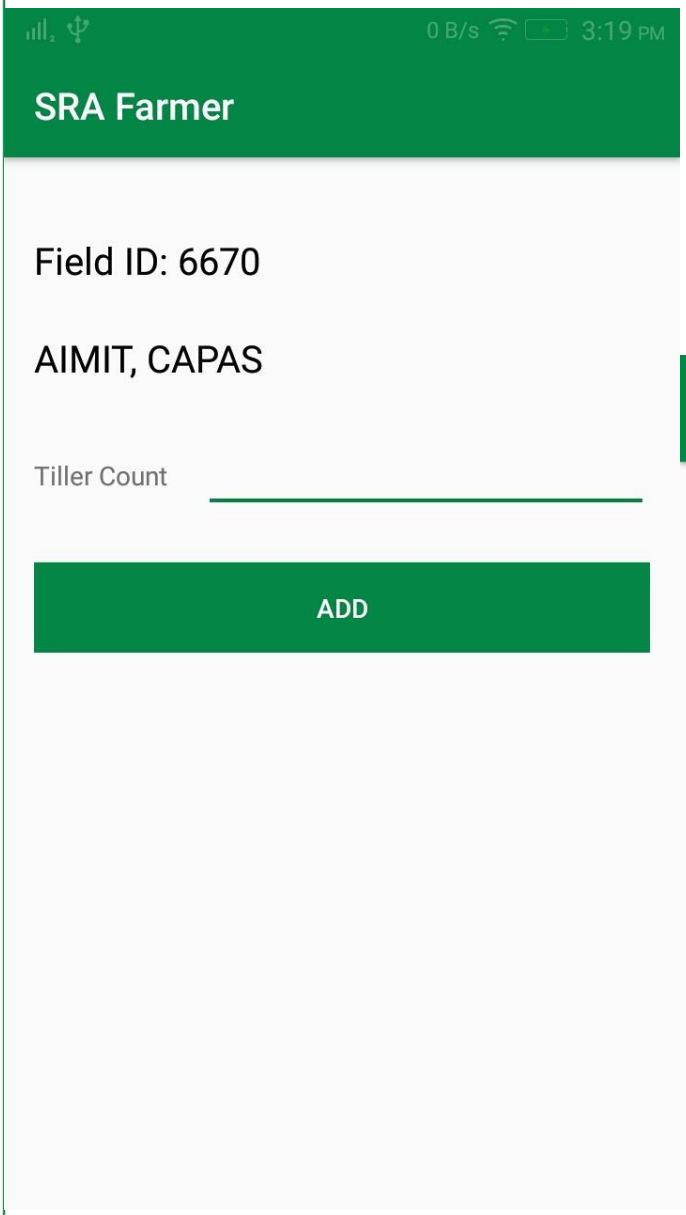
Volume and Frequency: Every week

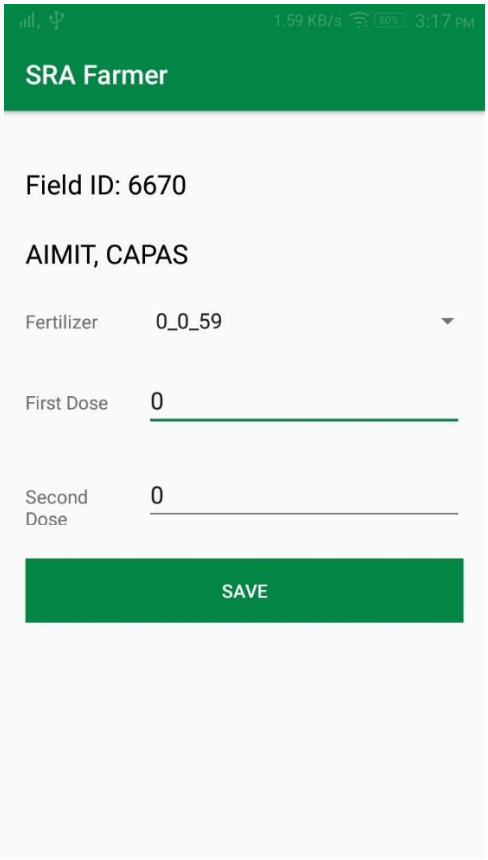


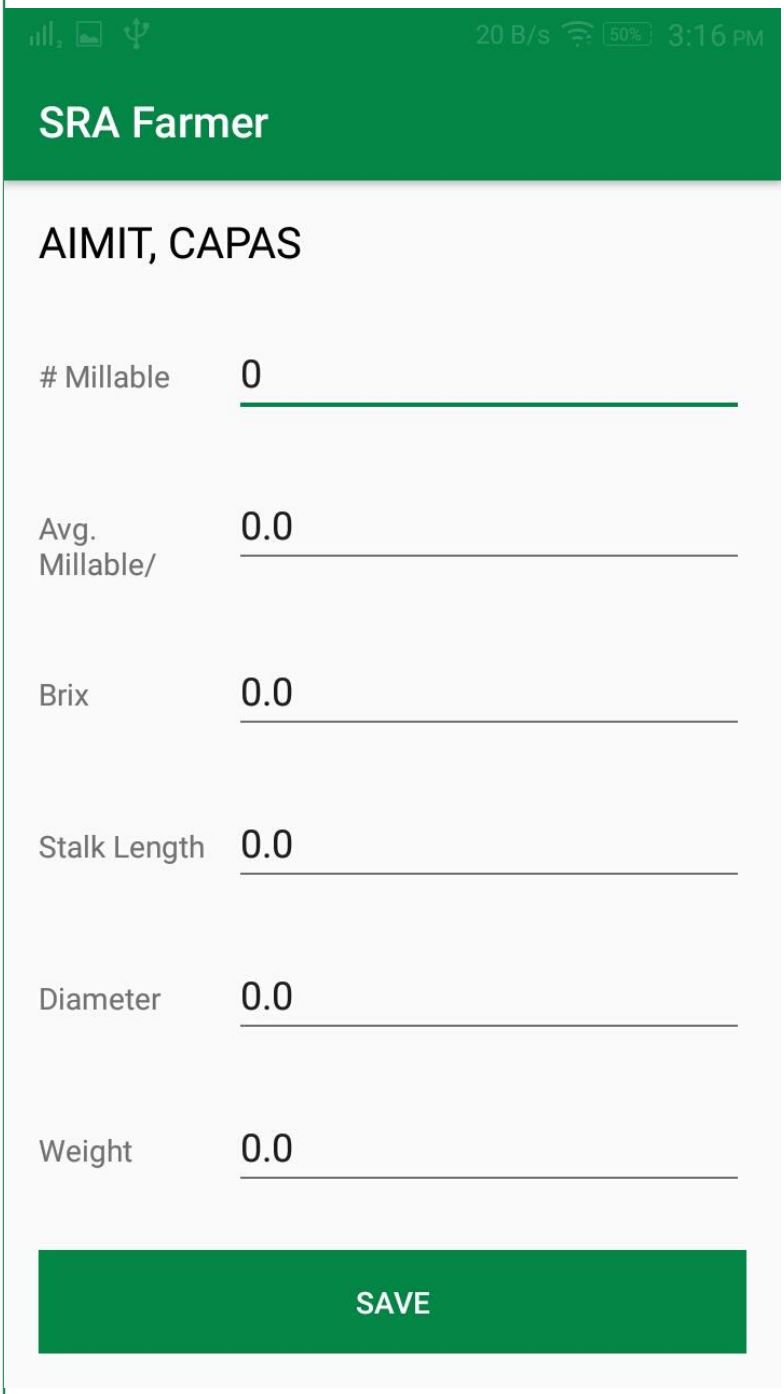
Form Name : Disaster Survey/Report
Description : This form is for entering the damage in terms of area harvested of the farmer after a disaster.
Prepared By : Farmer
Used By : Mill Disrict Officer
Volume and Frequency: Every disaster if damage is present

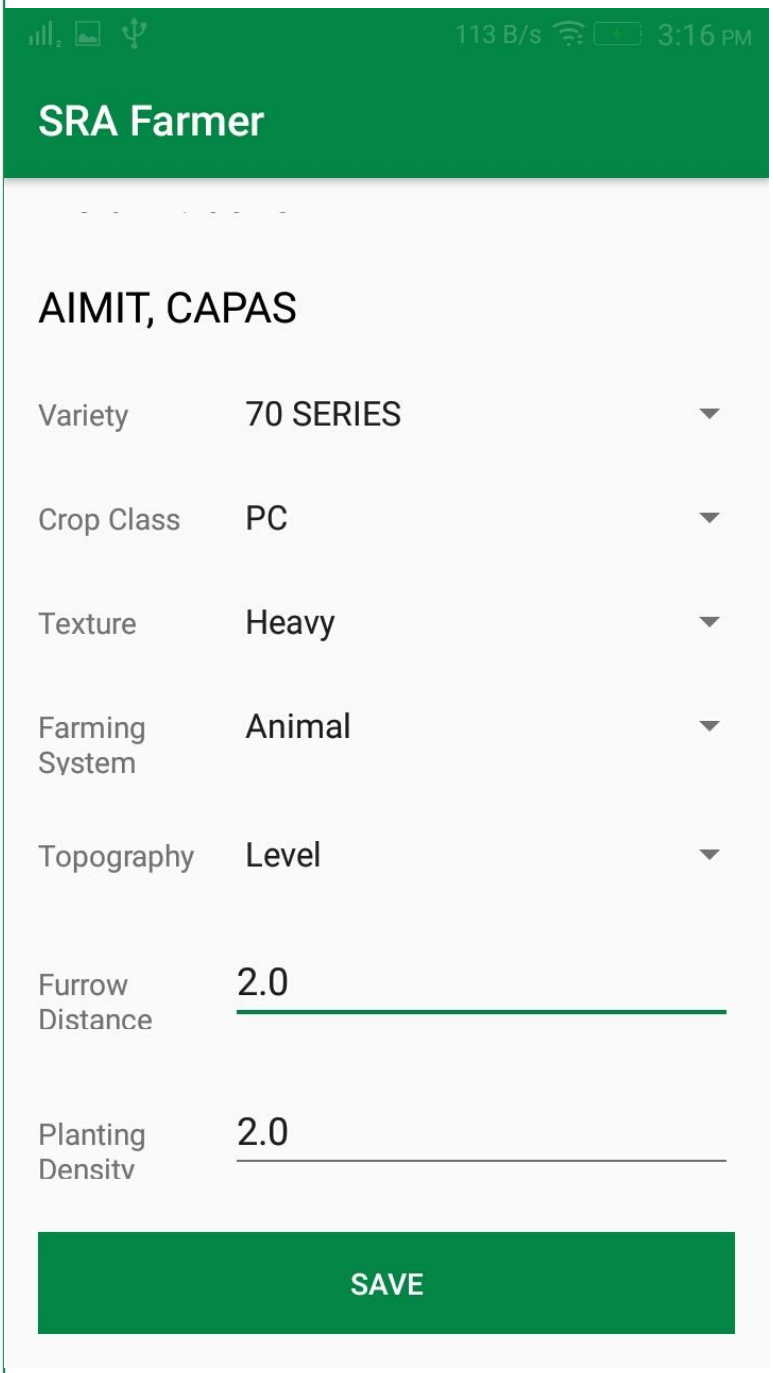


Form Name : Crop Validation Survey
Description : This form allows the farmer to enter the farm details.
Prepared By : Farmer
Used By : Mill District Officer
Frequency: Quarterly or as needed


0 B/s
3:19 PM
SRA Farmer
Field ID: 6670
AIMIT, CAPAS
Tiller Count
ADD

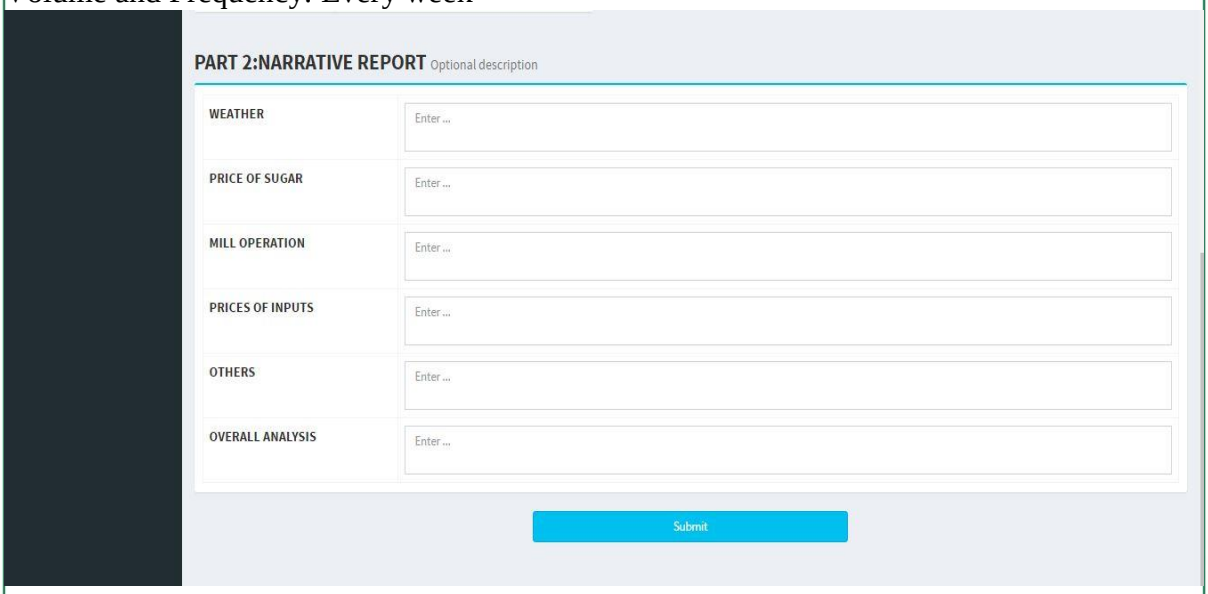

1.59 KB/s
3:17 PM
SRA Farmer
Field ID: 6670
AIMIT, CAPAS
Fertilizer
0_0_59
First Dose
0
Second Dose
0
SAVE


20 B/s
50%
3:16 PM
SRA Farmer
AIMIT, CAPAS
Millable
0
Avg. Millable/
0.0
Brix
0.0
Stalk Length
0.0
Diameter
0.0
Weight
0.0
SAVE

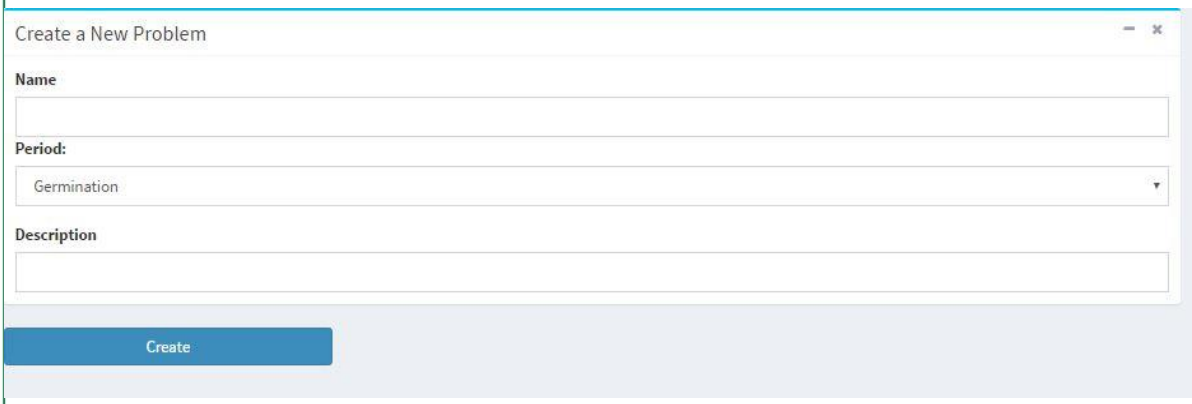


Form Name : Crop Assessment

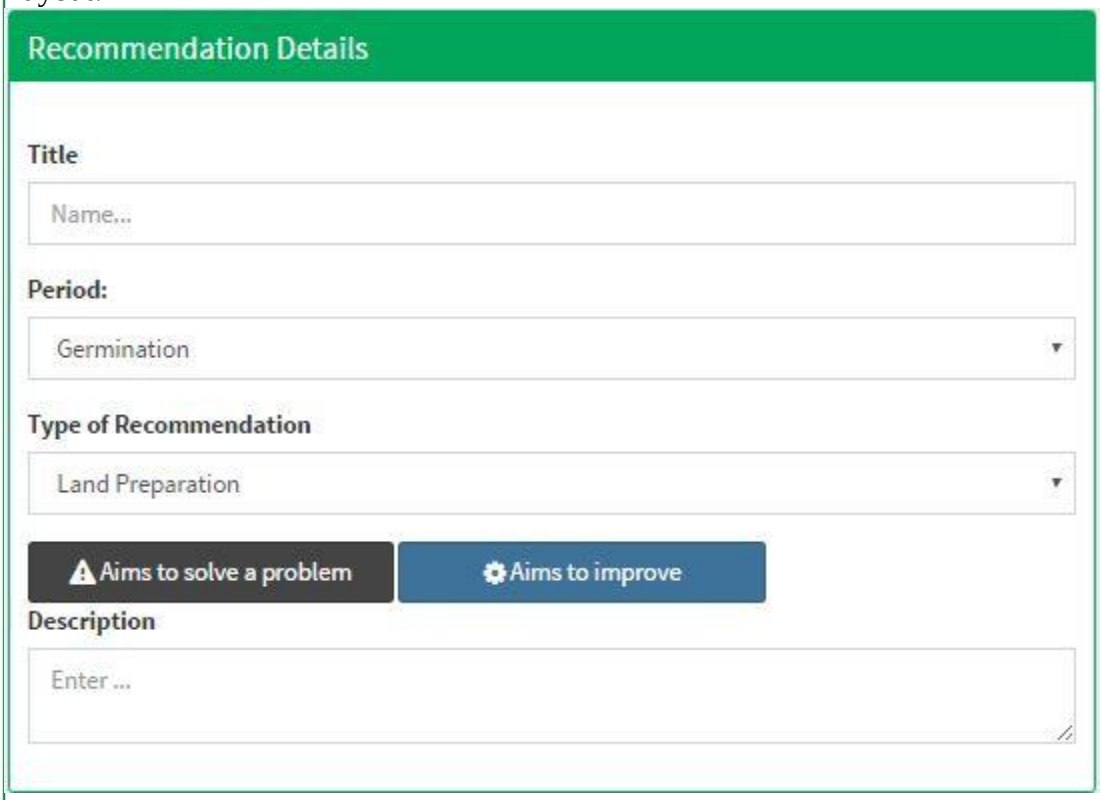
Description : This form the narrative for the crop assessment report. This is to input the MDO's analysis for the week based on the weekly production and other external factors.
Prepared By : Mill District Officer
Used By : Board Member
Volume and Frequency: Every week



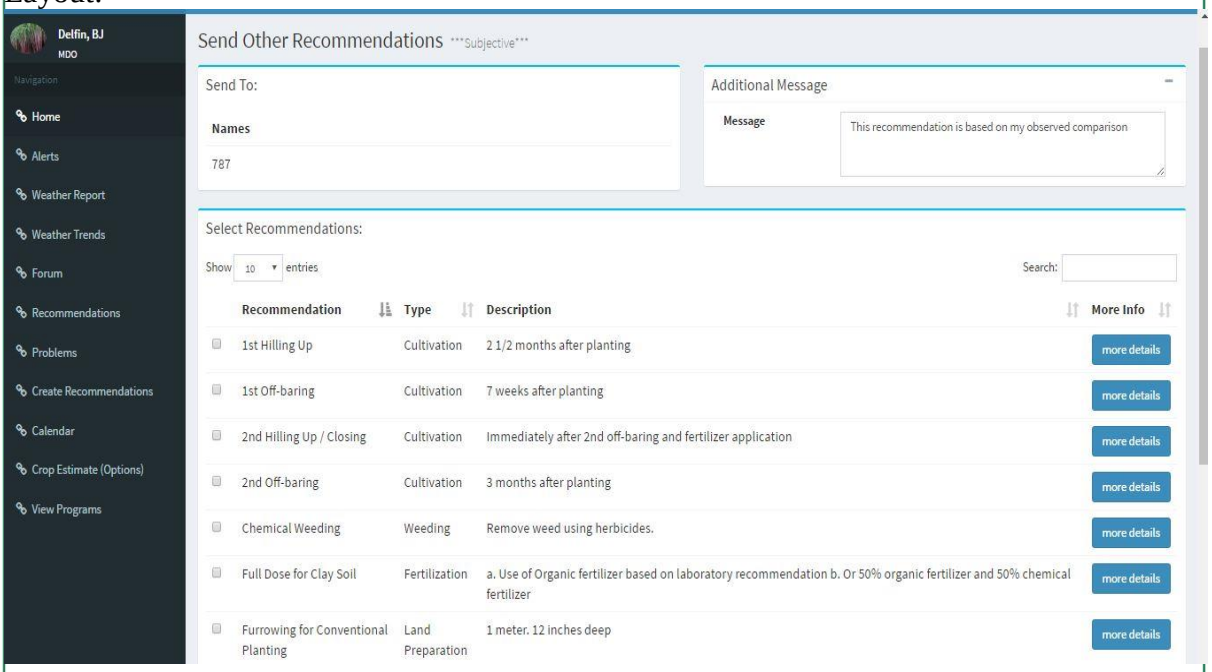
Form Name : Create New Problem
Description : This form contains the details for the creation of a new problem as well as which phase it is occurring.
Prepared By : Mill District Officer
Used By : Farmer
Volume and Frequency: Every time a post is rejected and when the MDO confirms the post as a problem.
Layout:



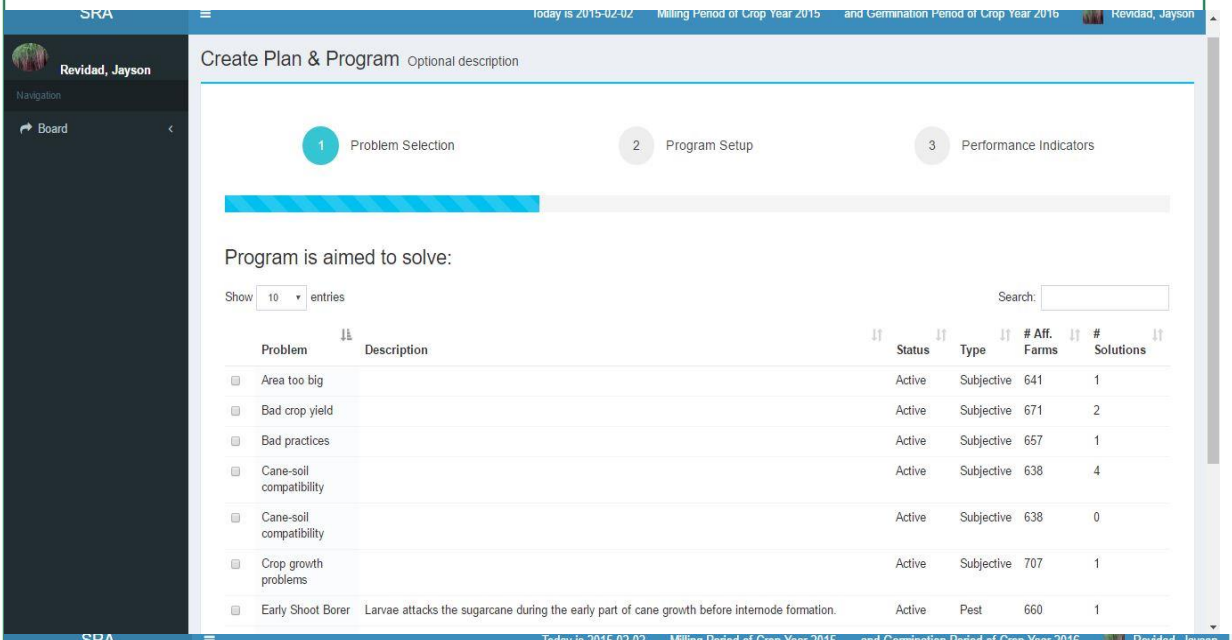
Form Name : Create New Recommendation
Description : This form contains the details of the recommendation
Prepared By : Mill District Officer
Used By : Farmer
Volume and Frequency: Every time a post is rejected and the MDO confirms that a new recommendation is to created.
Layout:

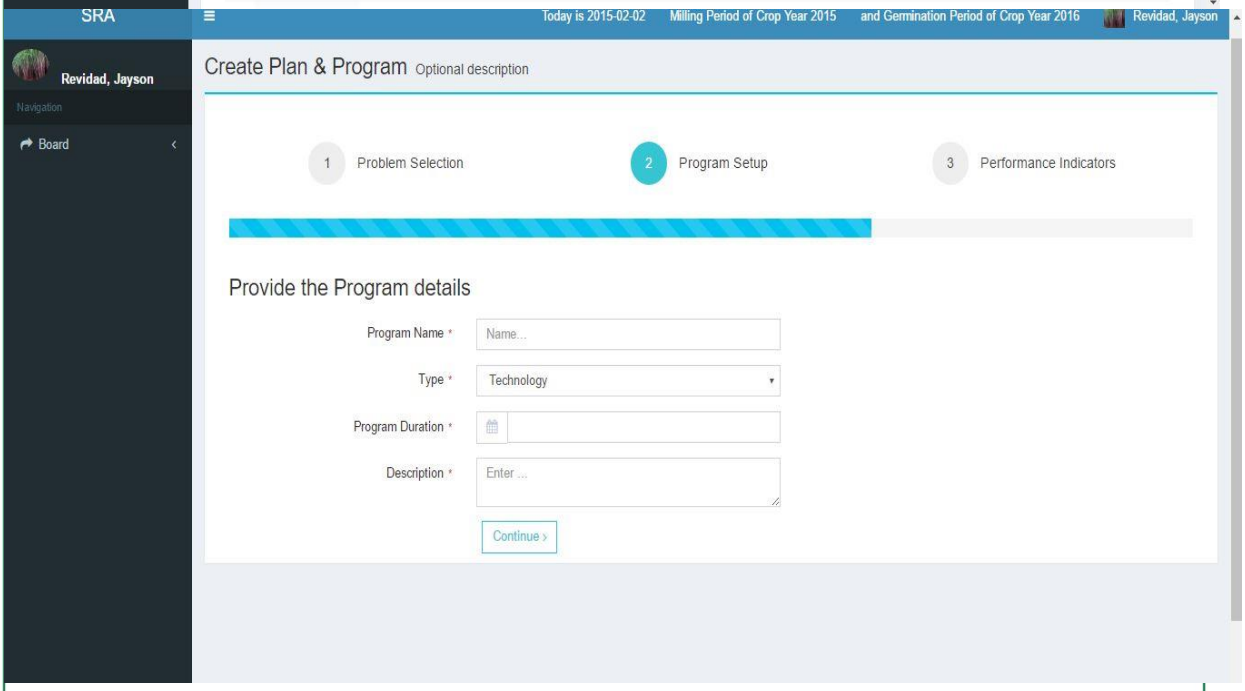


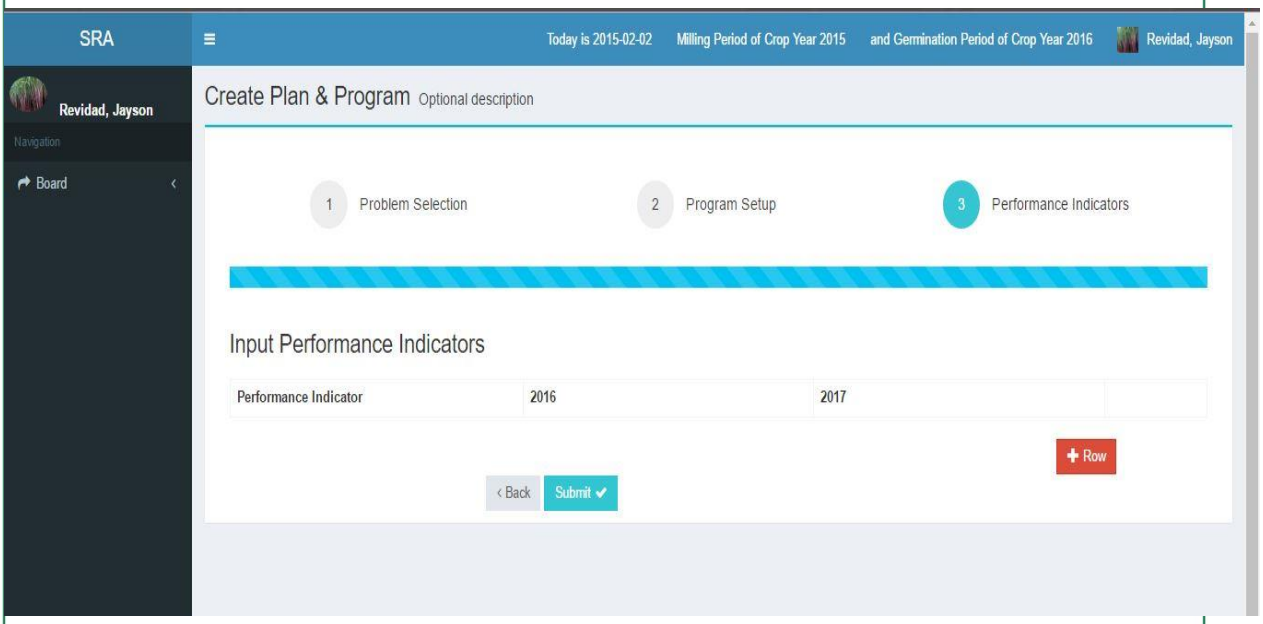
Form Name : Send Other Recommendation
Description : This form contains the details of the recommendation
Prepared By : Mill District Officer
Used By : Farmer
Volume and Frequency: Every time the MDO decides to send other recommendations in his selected farms
Layout:



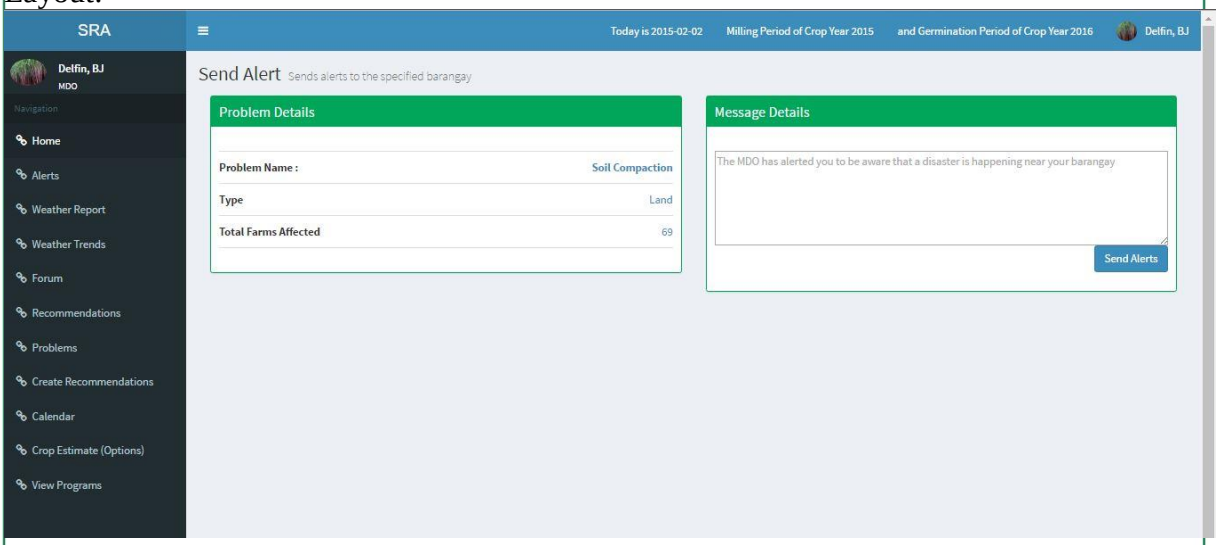
Form Name : Create New Program
Description : This form contains the details for the creation of a new program
Prepared By : Board Members
Used By : Farmer, Board Members, MDO
Layout:


SRA
Today is 2015-02-02
Milling Period of Crop Year 2015
and Germination Period of Crop Year 2016
Revidad, Jayson
Navigation
Board
Create Plan & Program Optional description
1 Problem Selection
2 Program Setup
3 Performance Indicators
Program is aimed to solve:
Show 10 entries
Search:
Problem
Description
Status
Type
Aff. Farms
Solutions
Area too big
Active
Subjective
641
1
Bad crop yield
Active
Subjective
671
2
Bad practices
Active
Subjective
657
1
Cane-soil compatibility
Active
Subjective
638
4
Cane-soil compatibility
Active
Subjective
638
0
Crop growth problems
Active
Subjective
707
1
Early Shoot Borer
Larvae attacks the sugarcane during the early part of cane growth before internode formation.
Active
Pest
660
1


SRA
Today is 2015-02-02
Milling Period of Crop Year 2015
and Germination Period of Crop Year 2016
Revidad, Jayson
Navigation
Board
Create Plan & Program Optional description
1 Problem Selection
2 Program Setup
3 Performance Indicators
Provide the Program details
Program Name *
Name...
Type *
Technology
Program Duration *
Description *
Enter ...
Continue ›



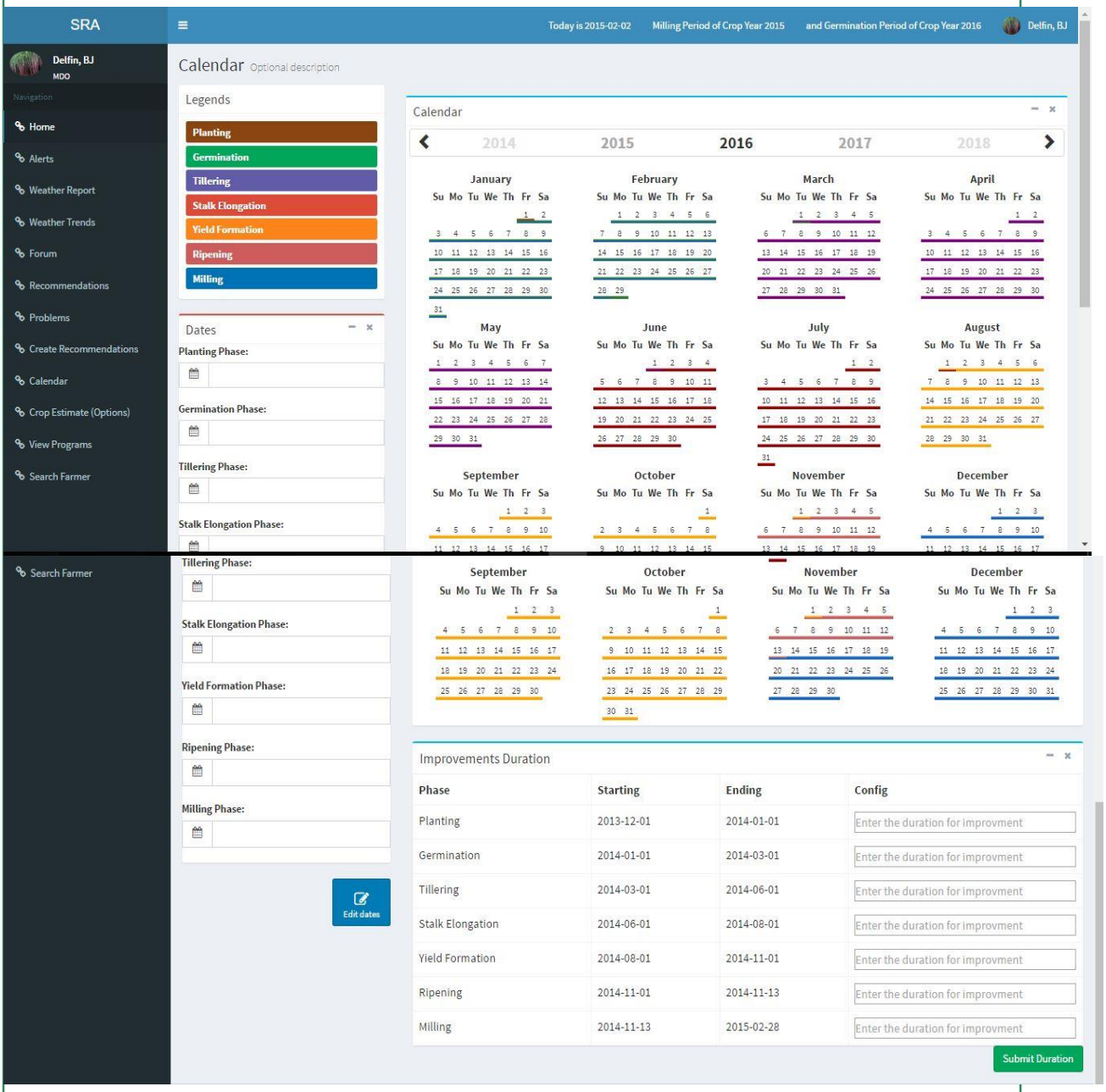
Form Name : Send Alerts
Description : This form contains the details of the alert message
Prepared By : Mill District Officer
Used By : Farmer
Volume and Frequency: Every time there are upcoming disasters such as typhoons.
Layout:



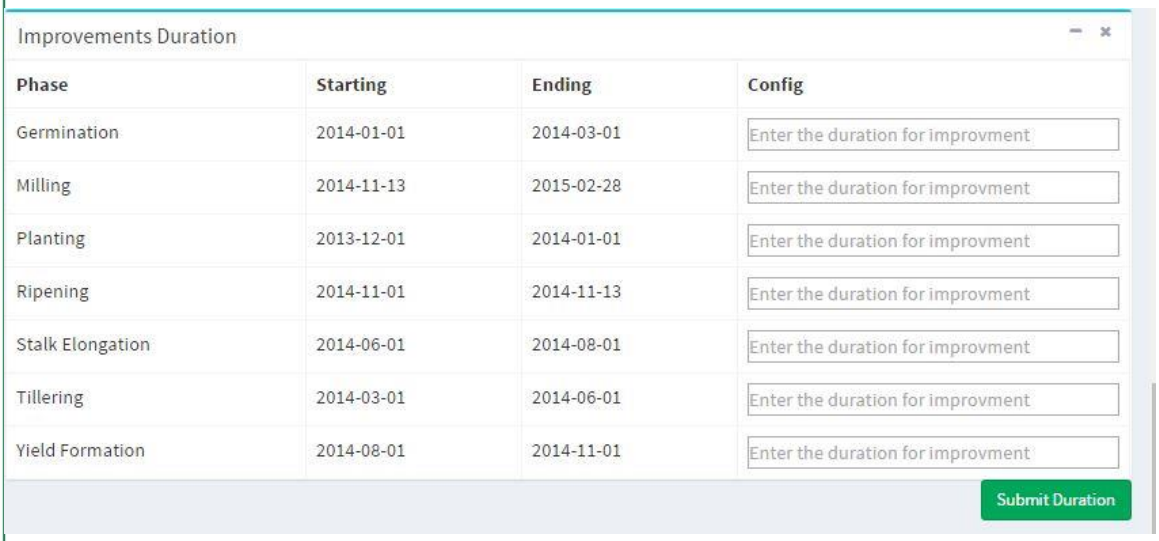
Form Name : Generate Forecast

Description : This form contains the inputs for generating a crop estimate
Prepared By : Mill District Officer and Board Member
Used By : Board Member
Volume and Frequency: Every after milling phase
Layout:

Form Name : Edit crop phases
Description : This form contains dates to be configured in each phase
Prepared By : Mill District Officer
Used By : Farmer
Volume and Frequency: Every crop year
Layout:



Form Name : Edit Duration
Description : This form contains the setting of duration
Prepared By : Mill District Officer
Used By : Farmer
Layout:



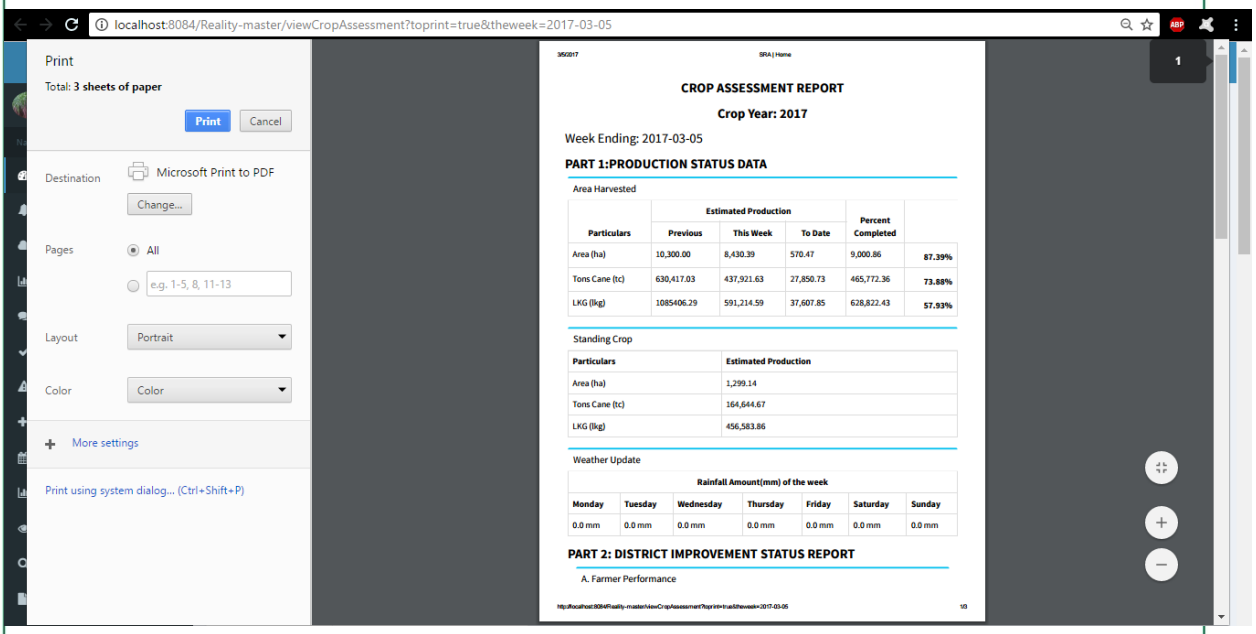
Improvements Duration

Phase	Starting	Ending	Config
Germination	2014-01-01	2014-03-01	Enter the duration for improvment
Milling	2014-11-13	2015-02-28	Enter the duration for improvment
Planting	2013-12-01	2014-01-01	Enter the duration for improvment
Ripening	2014-11-01	2014-11-13	Enter the duration for improvment
Stalk Elongation	2014-06-01	2014-08-01	Enter the duration for improvment
Tillering	2014-03-01	2014-06-01	Enter the duration for improvment
Yield Formation	2014-08-01	2014-11-01	Enter the duration for improvment

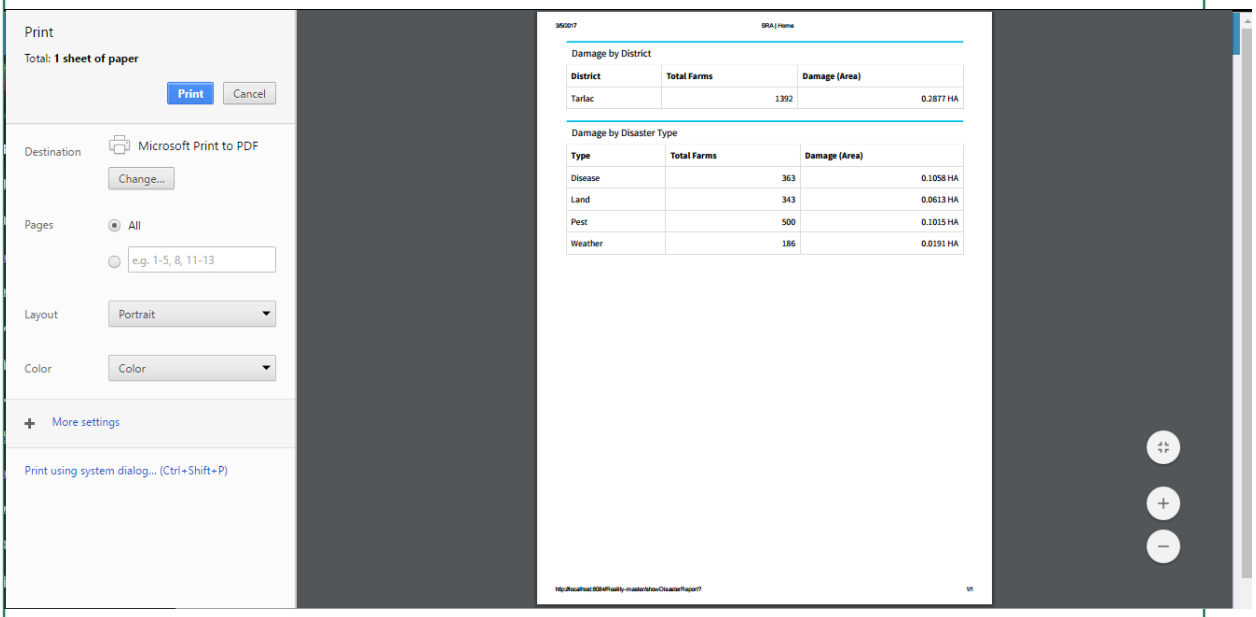
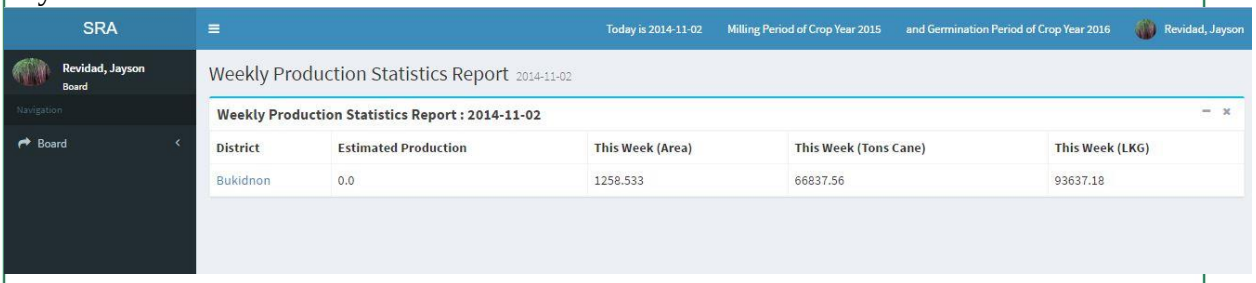
Submit Duration

6.5 Report Specification

Report Name : Crop Assessment Report
Description : This Report contains the weekly production of the district and the overall analysis of the MDO.
Prepared By : Mill District Officer
Used By : Board Member
Volume and Frequency : Every Week
Layout :



Report Name : Damage Report
Description : This Report contains the damaged area from the reported disaster by the farmer
Prepared By : Farmer
Used By : Mill District Officer
Volume and Frequency : Every disaster occurrence
Layout :



Report Name : Weekly Statistics Report
Description : This Report contains the weekly production of each district
Prepared By: Board Member
Used By : Board Member
Volume and Frequency : Every week
Layout :