### **Definition**

Plot : A grid space

Crop Selection Box : current crop being used

### **101: Adding crops**

**MSS:**

1. User clicks on a crop category.

2. System displays the available crops from category.

3. User selects specific crop.

4. System shows selected crop in crop selection box.

5. User selects plot where he wants to cultivate.

5. System updates land space with the type of crop.

**Extensions:**

5a. Land space is already occupied by another crop.

1. System displays a warning box to user, to confirm space replacement.

2. Use-Case ends

1a. User click yes; system replaces the land space with current selected crop

1b. User clicks no

1. Use-Case continues to 5.

### 

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### **102: Removing crops**

**Pre-condition:** The screen must have at least one field, cultivated with crops.

**MSS:**

1. User willselect a plot with the right click, where he wants to remove the crop.

2. System will show right click menu, that will display the option to delete.

3. User clicks on the delete option from the menu.

4. System deletes the crop from the space.

**Extensions:**

1a. The selected plot is an empty plot.

1.user get a pop-up message.

3a. User clicks outside of the right click menu

1. System closes right click menu
2. Use-Case ends.

### **103: Updating fertilizers to crops**

**MSS:**

1. User will click on fertilizer drop down menu.

2. System will display the fertilizer drop down options

3. User will click on one of the fertilizer drop down options.

**4.** System will update the current fertilizer quantity used.

### **104: Updating water resources**

**MSS:**

1. User will click on watering drop down menu.

2. System will display the watering drop down options

3. User will click on one of the watering drop down options.

4.System will update the current watering quantity used.

### **105: Generate report**

**Pre-condition:** The screen must have at least one field, cultivated with crops.

**MSS:**

1. User clicks on the Generate Report Button

2. System opens second windows form, displaying the report.

**Extension:**

2a. System has errors loading the report.

1. System will display notification box describing the error.
2. User clicks ok.
3. System closes the newly created windows form.
4. Use-Case ends

**106: Soil Selection**

1. User clicks on plot.
2. System with display current plot soil type in soil type drop down box.
3. User clicks on soil type drop down box.
4. System Displays soil type options.
5. User selects one of the drop down box options.
6. System sets soil type of selected plot.

### **107: Display statistics**

**Pre-condition:** The screen must have at least one field, cultivated with crops.

**MSS:**

1. User selects a plot

2. System displays statistics for the selected plot in the plot information panel.

**Extensions:**

1. User clicks on an empty field

a) Use case ends

### **108: Simulating growth of crops:**

**Pre-condition:** The screen must have at least one field, cultivated with crops. Start Date and end date are filled.

**MSS:**

1. User clicks start simulation.

2. System changes the start button to stop button.

3. System runs simulation from beginning to end.

**Extension:**

1a. User scrolls on the timeline bar.

1. System actively runs simulation according to the timeline bar position.

3a. User clicks stop button

1. System stops running simulation
2. System changes stop button to start button.

3b. System gets an error

1. System stops running simulation

2.System changes stop button to start button.

3. System displays in a message box the error.

1. User clicks ok
2. Use-Case Ends

**109: Selecting start date and end date**

**MSS:**

1. User selects start date selector.

2. System displays small calendar with possible dates.

3. User selects a start date.

4. System closes small calendar

5. System updates the selected date into the start date field.

6. User selects end date selector.

7. System displays small calendar with possible dates.

8. User selects an end date.

9. System closes small calendar

10. System updates the selected date into the end date field.

11. User selects end date.

**Extensions:**

1a.User selects end date selector.

1. System displays small calendar with possible dates.

2. User selects an end date from the calendar.

3. System closes small calendar

4. System updates the selected date into the end date field.

5. User selects end date.

6. Use-Case continues from 1.

6a. User has already selected an end date.

### **201: Saving Application**

**MSS:**

1. User clicks on file

2. System display file options

3. User selects save

4. System brings up the list from database.

5. System saves data in the database.

**Extension:**

3a. User Selects data to overwrite

1. System will ask user to confirm overwriting file.

a. User confirms

i. System connects to data-base and finds the current instance of the file to overwrite

ii. System deletes the current instance of data located in the database.

iii. Use-Case continues from step 3

b. User cancels overwriting

i. Use-Case ends

### **Loading simulation**

**MSS:**

1. User go to the menu and select load

2. User see a pop-up window from where browse the simulation file, select the file and click on open

3. User see the loaded simulation

**Extensions:**

2.a User click on a different file rather than a simulation file and click open

1: User get a pop-up message about the inappropiate file format

2: Continue from step 2 in MSS.

### **Exit application**

**Pre-condition:** The user has the main form of the RCAEA app open on his PC.

**Trigger:** User will click on the close button of the main form.

**MSS:**

1.System prompts users asking if he wants to quit the application.

2.System closes application.