Crop Yield Calculator - User Guide

Overview

The Crop Yield Calculator is a user-friendly tool designed to help users estimate the yield and profit for different crops based on selected intercropping methods, area size, soil grade, and other factors. It uses a graphical user interface (GUI) to make these calculations accessible and easy to understand.

Running the Application

1. Save the Python code into a '.py' file, for example: '**crop_yield_calculator.py'**.

2. It is preferable to use an IDE like **Spyder** to run the Python code, as everything is conveniently bundled into one file.

3. **Run** the script to launch the Crop Yield Calculator GUI.

Using the Application

1. **Intercropping Method**: Select an intercropping method (Row, Trap, or Guard) from the dropdown list.

2. **Primary Crop**: Choose a primary crop from the available options based on the selected intercropping method.

3. **Area (ha):** Enter the area in hectares for which you want to calculate the yield and profit.

4. **Soil Grade**: Select the soil quality grade (Grade 1 to Grade 5) for the land.

5. Click the **Calculate Yield and Profit button** to view the yield and profit calculations.

Output

- The application will display two graphs:

  1. **Yield Graph:** Displays the estimated yield per hectare over a period of 5 years.

  2. **Profit Graph**: Shows the estimated profit over the same 5-year period, combining both primary and secondary crop revenues.

Notes

- The soil quality, weather conditions, pesticide factors, and intercropping costs vary each year and are used in the calculation to provide a more realistic estimate.

- The calculator also estimates the contribution of a secondary crop where applicable.

Troubleshooting

- Ensure all input fields are filled in before clicking the Calculate Yield and Profit button.

- If an error message appears, check that the area value is correctly entered and that all dropdown selections are made.