EnergyCalc

User Manual

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This user manual accompanies the EnergyCalc website and database tools. Software programming was undertaken by Bo Zhao.

Contents

1.   Introduction

EnergyCalc consists of an on-line data entry interface that links to a database hosted on a centralised server. EnergyCalc assesses direct on-farm energy use, costs and the greenhouse gas emissions (GHGs) associated with diesel, petrol, LPG and Electricity consumption. EnergyCalc examines energy use across key processes within a production system and can be used to evaluate farming practices such as tillage, spraying, irrigation etc. EnergyCalc collates all the necessary user inputs that will be used for generating assessment(s).

2.   Access, permissions and security

Access to EnergyCalc is controlled via a secure login page from KMSI Portal (Figure 1).

Figure 1: Access to EnergyCalc via KMSI Portal

Once login is successful, user may navigate to EnergyCalc page by clicking EnergyCalc icon. "Logout", "Change Password" and "Change Particular" links will also be displayed in KMSI Portal interface once login is successful. Users may edit their own user details and change their passwords by clicking the respective link (Figure 2).

Logout, Change Password and Change Particular

Figure 2: Change Password section

3.   Navigating the system

3.1 Browser navigation issues

Note that due to the vagaries of some web browsers (i.e. Explorer) using a back arrow key on a page where the cursor is not active within a data entry cell may result in the system going back to the previously viewed page without saving the entered data. Hence, *care is especially required when trying to delete data within a data entry cell by repeated use of the back space key.* Possible strategies to minimise this inconvenience include highlighting the data and using the delete key or placing the cursor at the start of cell and using the delete key.

3.2 Administrative function and Home Page

Upon clicking EnergyCalc icon from KMSI portal, users will be directed to EnergyCalc Home Page. The administrative function bar is located on top of page indicated by 'username' (Figure 3).

Administrative Function bar

Figure 3: Administration Function and Home Page

The administrative function will be disabled if the user is normal user. If the user is manager, the administrative function will be enabled to assist the manager to add new / update user profile under his management. Clicking the link will direct the managers to the page for adding / updating users under their management (Figure 4).

Figure 4: Add/Update user page for Manager

To add new user, select "Select customer" from the drop down menu and proceed to add the user information before clicking "Save Change" button. To edit existing user information, select the user name from drop down menu. Upon selecting, selected user information will be populated to the respective textboxes. Proceed to change the user information before clicking "Save Change" button.

3.3 Data entry

There are three main sections users need to go through in order to create a complete assessment. They are:
  Assessment details section which located at the left hand side of the home page
  Adding crop / product to assessment section which located at the right hand side of the home page.
  Calculation, Practice and Report sections

3.3.1 Assessment

To create a new assessment, simply click on 'New' button, fill in the necessary input details for that new assessment and click on 'Save' button (Figure 5).

Figure 5: Assessment

To edit assessment detail, simply select the assessment from the 'Select Assessment' drop down menu. Assessment details will be populated to the relevant fields and users may start editing the details. Click 'Save' button to save all of the changes.

To delete an assessment, simply select the assessment from the 'Select Assessment' drop down menu and click on 'Delete' button.

3.3.2 Adding crop/product to assessment

To add crop/product to the assessment, simply select a particular assessment, follows by selecting a primary industry from 'Select Primary Industry' drop down menu and after that select a crop/product from 'Select Crop/Product' drop down list. List items for 'Select crop/product' drop down menu will be auto-populated based on the selected industry.

If the crop/product is not available in the 'Select crop/product' drop down menu list, users may add new crop/product to the list by firstly selecting the industry the new crop/product belongs to, follows by typing in the crop/product name and select the unit for that new crop/product and then click on 'Save New Crop/Product' button (Figure 6). This new crop/product will then appear in the 'Select crop/product' list under the selected industry.

Section to add new crop/product under a particular industry

Figure 6: Adding new crop/product section

Users may add crop/product to the selected assessment as many as they wish. Every time the users add a crop/product to the assessment, this selected crop/product will be added to the table that requests further information of the selected crops/products from the users (Figure 7). User may proceed to fill in the necessary crop/product

information. To delete a particular crop/product from the assessment, simply click on 🗑 button.

Figure 7: Selected crop/product table

To begin assessment to a particular crop/product, simply click on the radio button (○) under 'Select' column (Figure 7). Upon clicking the radio button, 'Calculation', 'Practices' and 'Report' sections will be displayed (Figure 8).

3.3.3 Calculation, Practices and Report

Users may proceed to fill in the necessary data under 'Calculation' section to accommodate the assessment (Figure 8). After all of the information has been filled in, users may proceed to click on 💾 button to view the assessment result under 'Practices' section. Users may choose to add as many practices as they wish by repeating the same process (filling in fresh new data under 'Calculation' section and click on 💾 button after completed).

Note that this tool also provides calculator function to assist users with some calculation. To use this service, simply click on 🖩 button found under the 'Calculation' section.

Figure 8: Calculation, Practices and Report section

To edit a particular practice, simply click on ✏ button under 'Practice Section'. The information of that selected row will be re-populated in the 'Calculation' section.
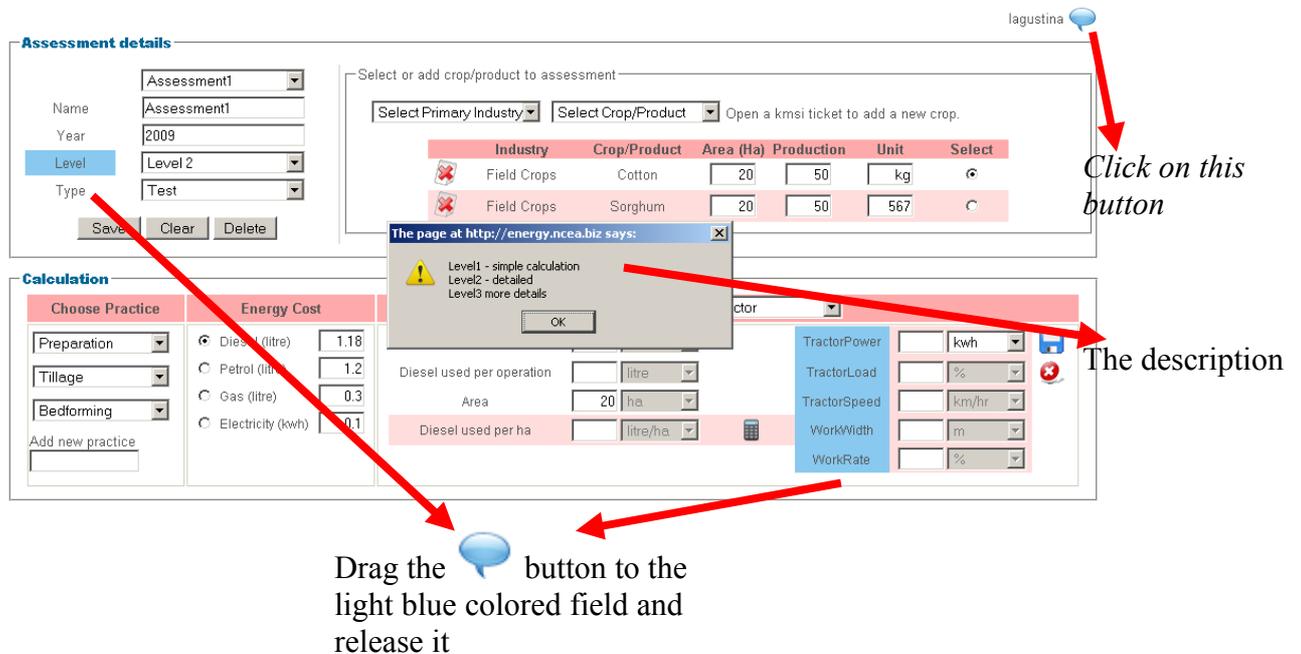
Users may then proceed to update the values under the 'Calculation' section and click on ![save] button after completed or ![cancel] button to cancel the edit.

To delete a particular practice from the assessment, simply click on ![delete] button.

Report can be generated from 'Report' section after completing the assessment. Report can be constrained by searching for specific responses within multiple categories.

Additional Information

User may need some additional information/description pertaining to some of the data entry field i.e. Level, TractorPower, TractorLoad, etc. To display the description of the field, simply click on the ![icon] button located at the administrative bar, drag it to the field that has the color of light blue as the background color and release it. Upon releasing the mouse, a pop up information will be shown (Figure 9).

Figure 9: Additional Information

## 4.	Further Assistance

Your input and suggestions for improving this tool are welcome as the NCEA is constantly looking for ways to improve our products.   If you have suggestions for additional features or are experiencing difficulties accessing or operating this tool, please contact:

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