

AgriEnergyConnect

A web-based prototype system for managing agricultural product listings and farmer profiles. This platform enables **farmers** to add and manage their own products, while **employees** can oversee and filter all records.

Overview

AgriEnergyConnect is designed to help agricultural organisations manage relationships with farmers and their products. The system ensures **secure, role-specific access** with a clean, responsive user interface.

-  Built using ASP.NET Core MVC, Entity Framework Core, and SQL Server.

System Features

Farmers

- Register and login securely
- Add new products
- View, edit, or delete **only their own** products

Employees

- Login securely
- Add new **farmer profiles**
- View and manage **all products** and **all farmers**
- Filter product list by:
 - Category
 - Production date range

General

- Secure role-based navigation
- Styled with custom CSS and Bootstrap
- Fully responsive design



User Roles & Access

Role	Features
Farmer	Add/View/Edit/Delete their own products only
Employee	Add farmers, view/filter all products, access all farmer profiles

Role is assigned during user creation in the database or via seed data.



Screenshots & Visual Walkthrough

1. Homepage

The screenshot shows the homepage of the AgriEnergyConnect website. At the top, there is a dark green header bar with the text "AgriEnergyConnect" and navigation links for "Home", "Login", and "Register". Below the header is a large, scenic photograph of a vast agricultural field with rows of young plants stretching into the distance under a clear blue sky. Overlaid on this image is the text "Welcome to the place where natural flavour is born" in a bold, white, sans-serif font. Below this main headline, in a smaller white font, is the text "Discover our products".

2. Login Page

A user can Login in if they have an account created already

The screenshot shows the login interface for AgriEnergyConnect. At the top, there's a dark green header bar with the text "AgriEnergyConnect" and navigation links for "Home", "Login", and "Register". Below the header, the main content area has a light green background. It features a "Login" heading and two input fields: "Username:" and "Password:", separated by a vertical line. To the right of the password field is a "Login" button. Below these fields is a link "Don't have an account? [Register here.](#)". At the bottom of the page is a dark green footer bar containing the copyright notice "© 2025 - AgriEnergyConnect -".

3. Registration Page – Highlight both roles

Users can create accounts and assign roles such as “Employee” or “Farmer” to their usernames and each role dictates what they have access to on the website

The screenshot shows the registration interface for AgriEnergyConnect. At the top, there's a dark green header bar with the text "AgriEnergyConnect" and navigation links for "Home", "Login", and "Register". Below the header, the main content area has a light green background. It features a "Register" heading and three input fields: "Username:" (containing "James"), "Password:" (containing "*****"), and "Role:" (a dropdown menu set to "Farmer"). To the right of the role dropdown is a "Register" button. At the bottom of the page is a dark green footer bar containing the copyright notice "© 2025 - AgriEnergyConnect -".

Register

Username: Password: Role:

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4. Farmer Dashboard – Showing Add Product form

Users signed in as farmers can add their own product to the database and then view only their products and choose to either edit it or delete it.

Welcome, James!

[Add New Product](#)

[View My Products](#)

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Create

Product

Name

Category

ProductionDate

dd ---- yyyy

[Create](#)

[Back to List](#)

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Product List

[+ Add New Product](#)

Name	Category	ProductionDate	User	Actions
Berriess	Fruit	2024-12-02	James	Edit Details Delete

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5. Employee Dashboard – Viewing farmer list

Users signed in as employees can view products that farmers add and filter them according to the product name and date the product was added.

Employee users can also add farmers on their side by selecting their account and ten being able to keep track of their details in the “View all Farmers” section. They can also edit or delete a farmer.

Welcome, Lilly!

Add New Farmer Profile

View All Farmers

View All Products (With Filter)

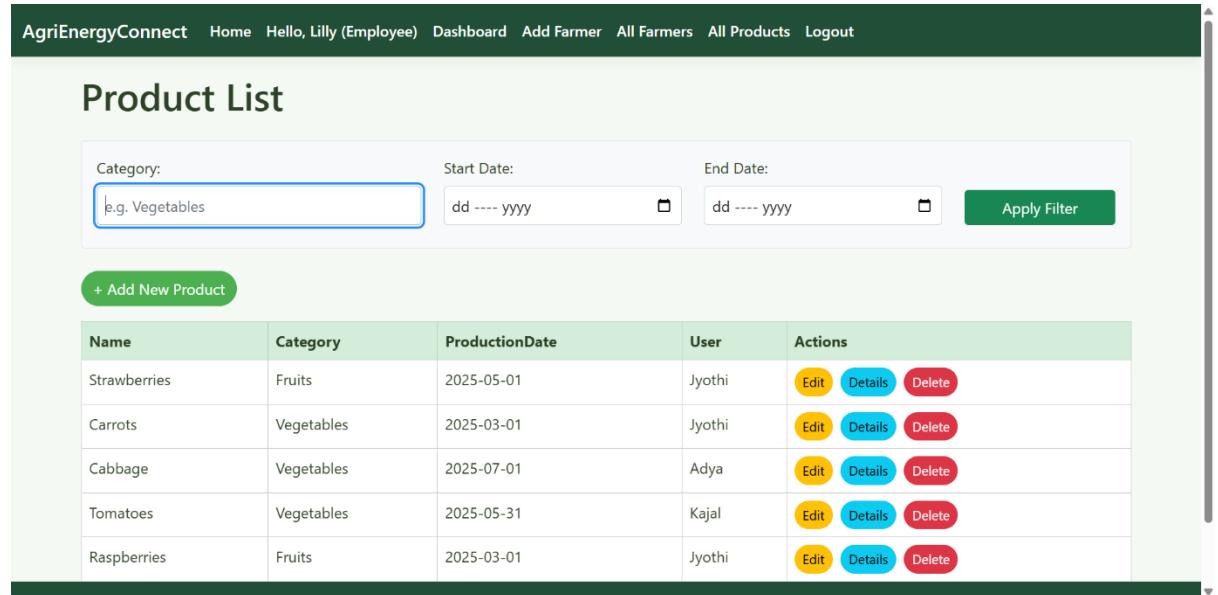
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FullName	Region	ContactNumber	Username	Actions
Jyothi	Durban	1234567890	Jyothi	Edit Details Delete
Kajal	Johannesburg	0987654321	Kajal	Edit Details Delete
Adya	Durban	5678910123	Adya	Edit Details Delete

6. Product Filter – Category and date filtering UI

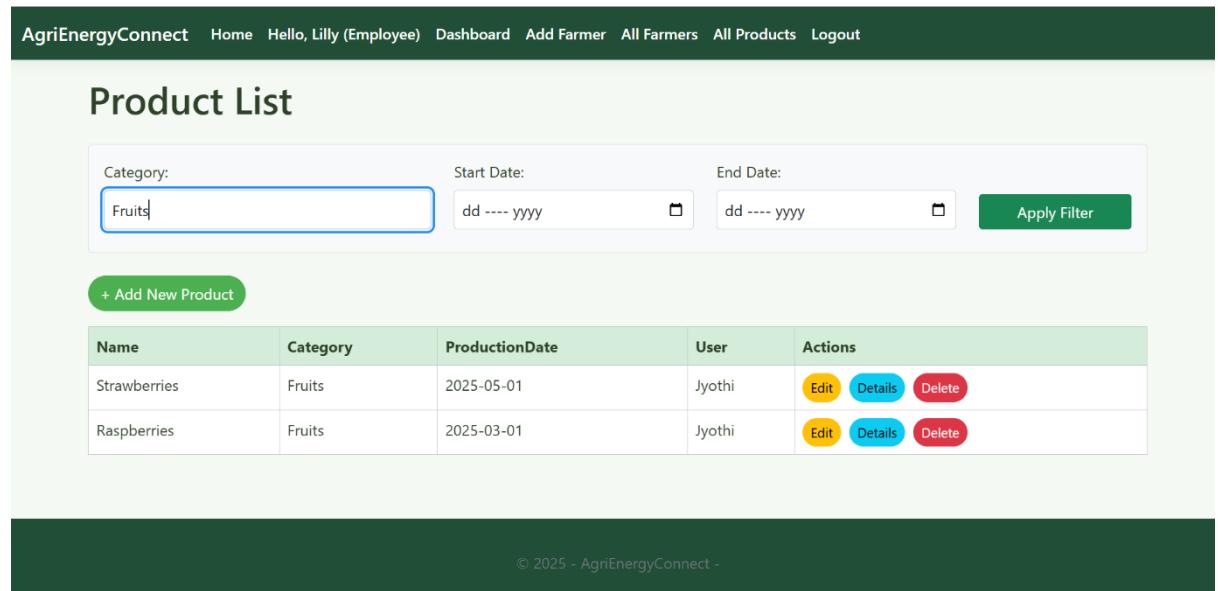
Employees have access to the product filter which allows them to add and filter them according to the product name and date the product was added.

If an employee tries to add a new product, they will be prompted to login in as a farmer.



The screenshot shows the 'Product List' page with a header bar containing links for AgriEnergyConnect, Home, Hello, Lilly (Employee), Dashboard, Add Farmer, All Farmers, All Products, and Logout. Below the header is a search/filter section with fields for Category (with placeholder 'e.g. Vegetables'), Start Date, and End Date, followed by an 'Apply Filter' button. A green button labeled '+ Add New Product' is visible. The main content area displays a table with columns: Name, Category, ProductionDate, User, and Actions. The table contains five rows of data: Strawberries (Fruits, 2025-05-01, Jyothi, Edit, Details, Delete), Carrots (Vegetables, 2025-03-01, Jyothi, Edit, Details, Delete), Cabbage (Vegetables, 2025-07-01, Adya, Edit, Details, Delete), Tomatoes (Vegetables, 2025-05-31, Kajal, Edit, Details, Delete), and Raspberries (Fruits, 2025-03-01, Jyothi, Edit, Details, Delete).

Name	Category	ProductionDate	User	Actions
Strawberries	Fruits	2025-05-01	Jyothi	<button>Edit</button> <button>Details</button> <button>Delete</button>
Carrots	Vegetables	2025-03-01	Jyothi	<button>Edit</button> <button>Details</button> <button>Delete</button>
Cabbage	Vegetables	2025-07-01	Adya	<button>Edit</button> <button>Details</button> <button>Delete</button>
Tomatoes	Vegetables	2025-05-31	Kajal	<button>Edit</button> <button>Details</button> <button>Delete</button>
Raspberries	Fruits	2025-03-01	Jyothi	<button>Edit</button> <button>Details</button> <button>Delete</button>



The screenshot shows the 'Product List' page with a header bar containing links for AgriEnergyConnect, Home, Hello, Lilly (Employee), Dashboard, Add Farmer, All Farmers, All Products, and Logout. Below the header is a search/filter section with a Category field set to 'Fruits' (placeholder 'e.g. Vegetables') and date fields for Start Date and End Date, followed by an 'Apply Filter' button. A green button labeled '+ Add New Product' is visible. The main content area displays a table with columns: Name, Category, ProductionDate, User, and Actions. The table contains two rows of data: Strawberries (Fruits, 2025-05-01, Jyothi, Edit, Details, Delete) and Raspberries (Fruits, 2025-03-01, Jyothi, Edit, Details, Delete).

Name	Category	ProductionDate	User	Actions
Strawberries	Fruits	2025-05-01	Jyothi	<button>Edit</button> <button>Details</button> <button>Delete</button>
Raspberries	Fruits	2025-03-01	Jyothi	<button>Edit</button> <button>Details</button> <button>Delete</button>

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Installation & Setup Instructions

Requirements

- Visual Studio 2022 or later
- .NET 8.0 SDK
- SQL Server Express or LocalDB

Step-by-Step Setup

1. **Clone or extract** the project ZIP folder:

- Copy the below into cmd

```
"Git clone https://github.com/paayalrakesh/AgriEnergyConnect.git"
```

- Open the "AgriEnergyConnect.sln" file in the folder

2. **Configure the database connection string** in appsettings.json:

```
"ConnectionStrings": {  
    "DefaultConnection":  
        "Server=(localdb)\\mssqllocaldb;Database=AgriEnergyDB;Trusted_Connection=True;"  
}
```

3. **Install required NuGet dependencies:**

- Microsoft.EntityFrameworkCore.SqlServer
- Microsoft.AspNetCore.Session
- Microsoft.AspNetCore.Mvc.Razor.RuntimeCompilation

4. **Apply Migrations and Seed Data:**

```
PM> Add-Migration InitialCreate
```

```
PM> Update-Database
```

Running the Application

1. Press **F5** or click **Start** in Visual Studio.
2. The site will launch at <https://localhost:xxxx> or <http://localhost:xxxx>.

3. Use the following test credentials:

Role	Username	Password
Farmer	James	HarryP
Employee	Lilly	Harry

4. Use the dashboard to navigate role-specific options.

Database & Seeding

- Database is relational and managed using **Entity Framework Core**
- Seed data includes:
 - 2 Roles: Farmer, Employee
 - Sample users for both roles
 - Optional: You can use the login and registration pages to add more users.

Known Issues

- No password hashing (prototype-level security only)
- Role changes must be done manually in DB

Developer Notes

- No video submission; this README serves as the full installation and demonstration guide
- Styling uses earthy tones to match agricultural theme

Last Updated: May 2025

Made with ❤️ for improving agricultural efficiency.