

E-Farming Portal

Samuthira T,

Electrical and Electronics
Engineering,

Bannari Amman Institute of
Technology,
Sathyamangalam, Erode.

Samuthira.ee19@bitsathy.ac.in

Gunadharshini C,

Electronics and
Instrumentation Engineering,

Bannari Amman Institute of
Technology,
Sathyamangalam, Erode.

gunadharshini.ei19@bitsathy.ac.in

Madhushree S,

Electronics and
Instrumentation Engineering,

Bannari Amman Institute of
Technology,
Sathyamangalam, Erode

madhushree.ei29@bitsathy.ac.in

Abstract—Farming is the Prime Occupation in India, today the people involved in farming belongs to the lower class and is in deep poverty. When it comes to farming, the advanced methods and automated machines that are propelling the world to new heights have lagged behind. Either people are unaware of the advanced facilities or they are unavailable, resulting in poverty. In today's market, farmers are cheated by agents, leading to poverty despite all the hard work and production they put in. Agro-marketing would automate everything, making it easier to find a solution to all problems. E-Farming portal is an online portal or website to order a product through online. It consists of two applications namely, user and the admin application. User can able to buy the products directly without any intermediators from farmers where they can sell their products or goods through online. This site will guide the farmers in all the aspects such as the current market rate of different products, the total sale and the earned profit for the sold products, access to the new farming techniques through E-learning and centralized approach to view different government's agriculture schemes including the compensation schemes for farming. It also helps to provides employment opportunities for rural people.

Keywords: Admin and User Application, Angular, Spring Boot, Spring JDBC, MySQL.

INTRODUCTION

One of the hardest and most difficult vocations on the globe is farming. Not only that, but it also provides a living for many homes, and somehow it affects every industry. As Farming is the Prime Occupation in India, many people involved in farming. Especially today the people involved in farming is in deep poverty. When it comes to farming, the advanced methods and automated machines that are propelling the world to new heights have lagged behind. Either people are unaware of the advanced facilities or they are unavailable, resulting in poverty. Despite the fact, for the past 2 years or in specific corona period, many farmers have faced hardships as a result of restaurant and market shutdown or prohibitions, there is undeniably an increasing demand for fresh items from local sources. Here agro-marketing comes as a result, agricultural marketing would automate everything, making it easier to find a solution to all problems. The economy of the country benefits from it, and there is a significant increase in demand for agrofoods globally. According to one of Research and Markets.com research, the market for agricultural products will reach a value of US\$18.9 billion by 2025. Many people are switching to organic and nutritious foods, yet manufacturers somehow suffered because of middlemen and don't get paid fairly.

I. EXISTING SYSTEM

By referring to various paper, some problems are identified from previous existing system:

- A. In early periods there is no systemized approach for farmers to sell their products thorough online, But currently the farmer goes to nearest shop or to the customer and handover their product to a particular agent.
- B. Information about horticulture for fruits, flowers, and vegetables may be found on a number of websites. However, all of these statistics are text-based and in the English language. It is for this reason that uneducated Indian farmers are unable to utilise these services. Even if the individual wants to, they are reliant on others since they require a laptop or other gadget.
- C. The organisations that now offer agriculture information by SMS and Call include **FFCO Kisan Sanchar Limited (IKSL) and Routers Marker Light (RML)**. However, they charge for the use of their services, and they are inoperable in areas without access to a mobile network. This programme also offers other functions like bank alerts and government notifications.
- D. The current system does not include any learning material or classes to farmers regarding how to use the existing portal for selling products and they haven't include how to register into the sites, sell crops and the exact information about payment transaction.
- E. The farmer cannot sell his or her goods using a computerised system. Currently, a farmer visits the closest market to deliver his goods to a specific agent, agent
- F. To collect the money from the sold goods, instruct the farmer to go to the market at a specified time. The product is sold by the agent to another agency or a dealer for the price of that market. Each agent makes an effort to reduce his commission from that. The farmer has no means of knowing the terms of the contract or the precise price at which their goods was sold.
- G. There is no openness. There is no infrastructure in place to allow farmers to get information about product prices at various markets where they can sell their goods to make significant profits. Farmers frequently aren't even aware of the government's programmes and benefits. Despite all the opportunities knocking on their doors, farmers are unable to take use of them. The current system does not give farmers access to an e-learning platform that would enable them to learn about cutting-edge farming techniques. He therefore does not profit to the fullest extent under the current system.

II. LITERATURE SURVEY

- **Abhishek Pandey Department of Information Technology, Mumbai University**, has discussed that the major goal of their project is to create a website that will enable Indian village farmers to sell their goods in other cities.
- If some local farmers were interested in using this facility and learning how to use e-farming to sell their products, they could either contact the company's computer professional to schedule classes to teach them the fundamentals of computers and the internet, such as how to open this site, register with it, and sell their products, or they could use the facility themselves if they knew how to use computers.
- On the other hand, local wholesalers can sign up and purchase goods according to their requirements. According on the type of service involved and the data/security requirements of the contracting organization, cloud computing comprises a wide range of services and can be hosted in a variety of ways.
- **Samer D.M, Subramaniya Raman M.K SVCE** has about the horticulture industry, where cell phones can be used to inform farmers about all the different crops they can harvest and the most effective methods for increasing productivity. For Indian farmers, for instance, it can be very helpful as it allows them to quickly access information in a variety of languages. The

program is simple enough for someone who is illiterate to use. Mobile phones are widely used today, and Android is the dominant operating system, accounting for more than 80% of the market, with the majority of its applications available for free download.

- **Navya A M** has discussed that Mobile phones are widely utilized, and Android is the dominant OS (operating system) with a market share of over 80%.
- Agriculturists in the modern world get their news via newspapers, journals, and television. They have made the decision to create a platform for farms that use smartphones, allowing them to access vital real-time data on the prices of fruits and vegetables in each market in Southeast Asia in order to sell their goods at the right prices.

III. OBJECTIVE

- To help the farmers to sell their products directly to the costumers without any agents.
- To increase net profit of the farms.
- To helps to boost agricultural and rural development.
- To provides employment opportunities to the rural people.
- It is a platform for farmers to seek any information related to agriculture.
- To provide information about farming ideas and displays loan opportunities.

IV. PROPOSED WORK

By considering all these drawbacks, we aims to build a project called **E-Farming Portal**, It is an online portal to order a agricultural products through online. With the help of this, Farmer will get all the new ideas to improve their productivity and they can buy and sell their products online. It pave a way for the farmers to sell their product online directly to the customer without any agents.

E-Farming portal is an online portal or website to order a product through online. It consists of two applications namely, user and the admin application.

E-Farming Portal is a spring boot micro service project which have implemented in Angular. Online E-Farming Store Project is a Java & MySQL-based project that helps the farmers use the online portal to sell products.

The Online E-Farming Store Project allows users to directly register in the site and sell/buy the product otherwise, they can directly contact a seller. Customers can check the site and register with it and buy their products in online.

V. E-FARMING PORTAL

E-Farming Portal is the online portal to buy and sell an agricultural product through online. It consists of two applications namely, user and the admin page. User can able to buy the products directly without any intermediators from farmers where they can sell their products or goods through online.

This site will guide the farmers in all aspects such as the current market rate of different products, the total sale and the earned profit for the sold products, access to the new farming techniques through E-learning and centralized approach to view different government's agriculture schemes including the compensation schemes for farming. Apart from selling the products, the portal languages can be changed based on the users and sellers requirements. It consists of audio guidelines in all languages, from that a person can know how to work with the portal and usage of this portal will be recorded. It is accessible by all users and farmers.

It also helps to provides employment opportunities for rural people. Considering the state of loss and unemployment opportunities for formers. There will be application form, With the help of Farmers ID proof they can enroll themselves. If farm or land owners is in the need of farmers can contact or approach them directly. This helps to reduce the unemployment opportunities among farmers. It also paves the way for a person who are in the need of man power or farmers.

VI. SOFTWARE REQUIREMENTS

Operating System	Windows, Mac, Linux
User Interface	HTML, CSS
Client-Side Scripting	Angular – TypeScript (JavaScript)
Prog Language	Java
Web Applications	JDBC
IDE/Workbench	Visual Studio Code
Database Connectivity	MySQL

- Angular is a TypeScript-based, open-source JavaScript framework.
- HTML – Just like conventional HTML, an Angular HTML template generates a view, or user interface, in the browser, but with a lot more functionality.
- Standard CSS is used to style Angular apps.
- TypeScript is the main language for creating Angular applications. A superset of JavaScript exists in it.
- An example of a database management system is MySQL.
- Java is a popular object-oriented programming language and software environment that is installed on billions of devices.
- Spring boot is a free, java-based framework that may be used to build small services. It is a standalone application that operates independently.

VII. METHODOLOGY

Angular is used as a frontend and Java Spring Boot is used as a backend. And for the database connectivity we have used MySQL. In Visual Studio Code, Setup an environment of Angular

and Spring boot in your system. And install maven and MySQL. With the help of following commands “ng new E-Farming Portal” create a project and create the required components by adding comments in terminal “ng g c component_name”. Finally start building the code. Add service.ts for visualizing the result. Here we have used HTML and CSS for styling purposes. And we have used typescript for client-side scripting.



This is the overall working principal of E-Farming portal. The user logging in to the portal the products will be listed and with the help of search engine they can find the required product and add their groceries to the cart. Once the payment is processed the order will be placed and the order details will be forwarded to the admin. The admin or farmer receives the order details and payment details. Within a given time the order will be dispatched to the Customers. It provides the direct communication between Customers and Farmers without any mediator.

Admin Page:



Admin Page is only for Farmers. Farmers can register with the help of their Farmer ID cards. Once their complete details been verified. The confirmation alert will be forwarded to the farmers and they can start to upload their products and description.

User Page:

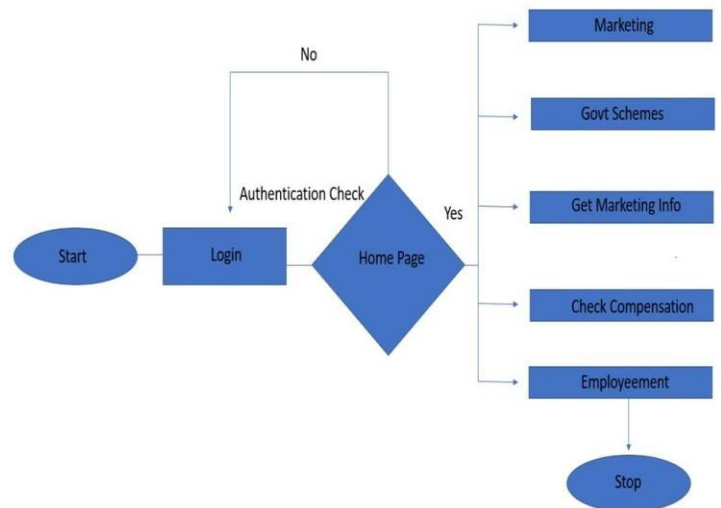


VIII.APPLICATION

This Portal consists of 4 main pages namely User page and Admin page.

Both User and Admin page requires Login Credentials. Once they completed the registration process they can continue sell or buy their products by logging in the portal. This portal has a two-step authentication to Login for security purposes. By providing two-step verification it was very secure to use or in other words it is a secure website to sell or buy products.

Home Page also provides the features of Marketing, Government Schemes, Get Marketing Information, Check Compensation and Job Opportunities.



Marketing: It helps to learn the marketing strategies. Pricing, billing, and the transfer of funds are all part of marketing. The farmer will be able to see the price at which his product was sold through pricing. Billing after receiving a request for a bill from a farmer, will generate the bill. The newly created bill will appear on the page. The overall bill amount, agent commission, transportation fare, and other expenses are all included in the bill. For future reference, the farmer can download or print the bill. The invoice amount may be transmitted by money transfer to the farmer's account, and the farmer can verify if the transfer was successful or not. If one wants to use this feature, they must log in.

Government Schemes: It contains a list of all government initiatives relevant to a given service or industry, and applicants can use it in the same manner they would for remuneration.

Market Information: Farmers have access to local market information. This will include selling prices for various products, the current turnover, and product-specific information like quantity, grading, selling price, etc. It will include daily commodity- and market-specific reports, commodity-specific pricing during the previous week, community transactions below MSPs (maximum sale prices), and date-specific prices for a certain community. A farmer might also look for a certain commodity in a particular market at a given time.

Compensation: It includes the benefits the government offers to farmers who are the victims of several natural disasters like flooding, drought, etc. They can submit an application and monitor the progress of their application.

Job Opportunities: It also helps to provides employment opportunities for rural people. Considering the state of loss and unemployment opportunities for farmers. There will be application form, With the help of Farmers ID proof they can enroll themselves. If farm or land owners is in the need of farmers can contact or approach them directly. This helps to reduce the unemployment opportunities among farmers. It also paves the way for a person who are in the need of man power or farmers.

IX. CONCLUSION

In this project we are going to do the E farming web page, in this we use the Angular and spring boot for framework purpose and we use the MYSQL to store the data of client and farmers and their histories of process on the webpage. in this, farmers and public are directly interconnected with each other's.

X. REFERENCE

1. Armstrong, L., & Diepeveen, D. (2018). Developing an information-driven ICT framework for Agriculture.
2. Asenso-Okyere, K., & Mekonnen, D. A. (2012). The importance of ICTs in the provision of information for improving agricultural productivity and rural incomes in Africa. (UNDP Working Paper No. 051). Addis Ababa, Ethiopia. <http://www.ifpri.org/publication/importance-icts-provision-informationimproving-agricultural-productivity-and-rural> Retrieved 20/7/2017
3. Benard, R., & Dulle, F. W. (2017). Application of ICT tools in communicating information and knowledge to artisanal fishermen communities in Zanzibar.
4. Bendre, M. R., Thool, R. C., & Thool, V. R. (2015). Big data in precision agriculture: Weather forecasting for future farming. In Next Generation Computing Technologies (NGCT), 2015 1st International Conference on (pp. 744-750).
5. Cooper, P. J. M., Dimes, J., Rao, K. P. C., Shapiro, B., Shiferaw, B., & Twomlow, S. (2008). Coping better with current climatic variability in the rain-fed farming systems of sub-Saharan Africa: An essential first step in adapting to future climate change. *Agriculture, Ecosystems & Environment*, 126(1-2), 24-35.
6. Donohoe, H., Stollefson, M., and Tennant, B. (2012): Advantages and limitations of the e-Delphi technique: Implications for health education researchers. *American Journal of Health Education*, 43(1), 38–46.
7. FAO. (2019). Information and communication technology (ICT) in agriculture: A report to the G20 agricultural deputies.
8. Foucault, M. (1977) *Power/Knowledge, Power/Knowledge: Selected Interviews and Other Writings 1972-1977*. Edited by C. GORDON. New York: Pantheon Books.
9. Heeks, R., Gao, P. and Ospina, A. (2010) 'Delivering Coherent ICT Policies in Developing Countries', *eDevelopment Briefing No 14*, (14), pp. 1–4.
10. Gakuru, M., winters, K., & Stepman, F. (2015). Inventory of innovative farmer advisory services using ICTs. Forum for Agricultural Research in Africa (FARA), Accra, GH.
11. GSMA (2015) Case study: Orange Senekela, Mali. DOI: 10.1016/S1360-8592(98)80013-2.
12. Kanui, T. I., Kauti, M. K., & Mwobobia, R. M. (2016). The Status of Livestock Livelihood Support System in the South Eastern Dry lands of Kitui and Makueni Counties, Kenya. *Int. J. Livest. Res*, 6(4), 73-82.