Development of web portal for silk cocoon farming information

presented by;
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CONTENTS

Abstract

- Silk cocoon rearing is an essential process in the silk industry, yet many farmers face challenges due to limited access to the information.

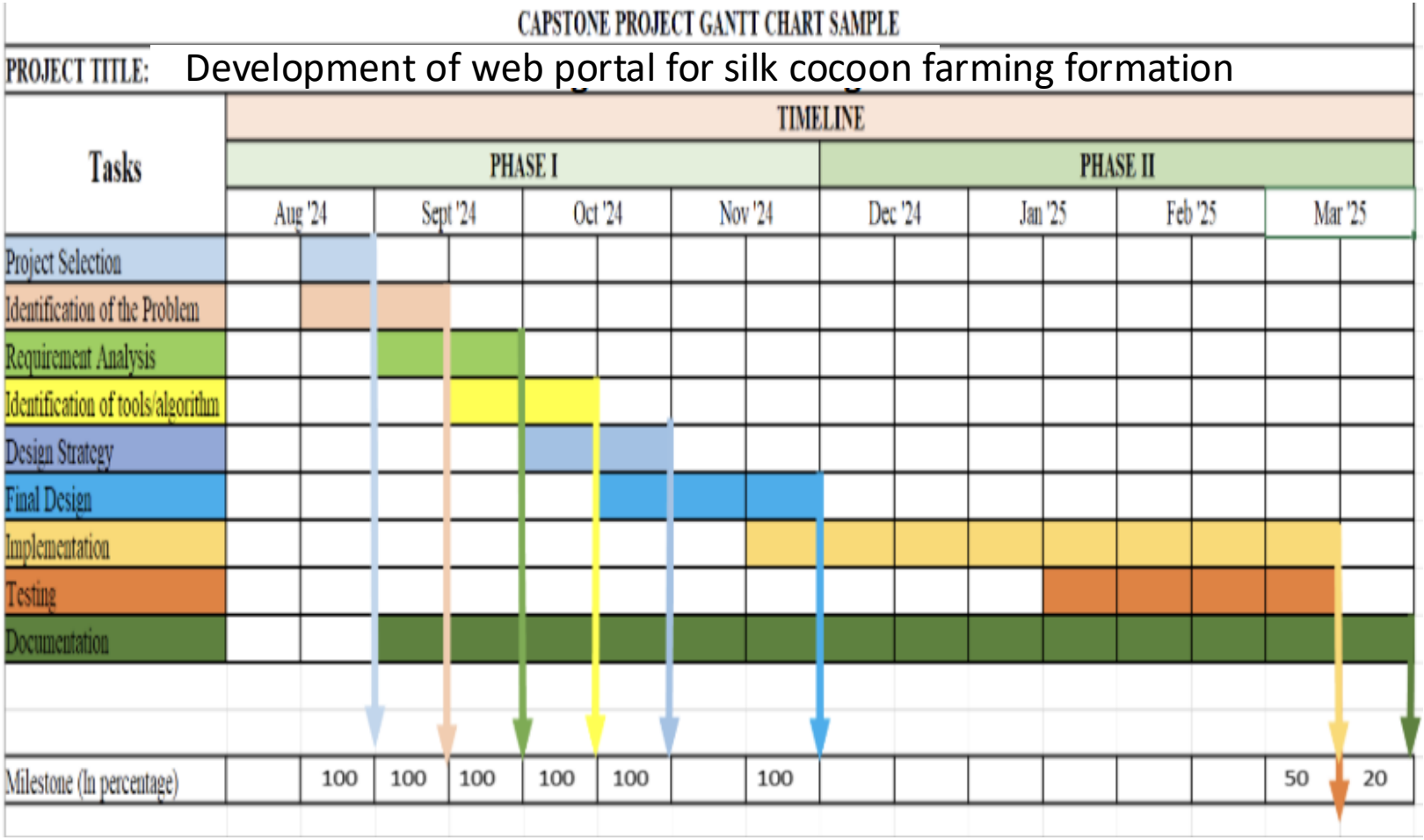
- This project aims to develop a user-friendly website designed specifically for silk cocoon rearing farmers, providing them with up-to-date matter and accurate information to improve their farming practices.

- The website will useful for what are the measures to follow in cocoon rearing techniques, pest and disease control, environmental and market insights.

- Additionally, it will feature sections for weather updates, government schemes, and a community forum where farmers can exchange knowledge and solutions.

- The website will helpful for silk farmers in reduce risks, and increase profitability in silk farming.

Gantt Chart


CAPSTONE PROJECT GANTT CHART SAMPLE
PROJECT TITLE: Development of web portal for silk cocoon farming formation
Tasks
TIMELINE
PHASE I
PHASE II
Aug '24
Sept '24
Oct '24
Nov '24
Dec '24
Jan '25
Feb '25
Mar '25
Project Selection
Identification of the Problem
Requirement Analysis
Identification of tools/algorithm
Design Strategy
Final Design
Implementation
Testing
Documentation
Milestone (In percentage)
100
100
100
100
100
100
50
20

Introduction

Definition:

- Silk farming, also called sericulture, involves the cultivation of silkworms for the production of silk threads, a natural protein fiber used in textiles.

Historical Origins:

- Originated in **ancient China** over 5,000 years ago during the Neolithic Age.
- According to legend, silk was discovered by Empress Xi Ling Shi when a cocoon fell into her tea, unraveling into a long, delicate thread.

Global Spread:

- The art and techniques of sericulture gradually spread to Korea, Japan, India, and eventually Europe via the **Silk Road**.
- Today, silk farming is practiced in over 60 countries, with **India** and **China** being the largest producers.

Economic Importance:

- Contributes significantly to the rural economy, particularly in countries like India, where it is an important source of income for small-scale farmers.

Challenges:

- Sericulture faces challenges such as pest outbreaks, fluctuating market prices, and climate sensitivity.
- Governments and research organizations play a vital role in promoting disease management and weather adaptation strategies.

Literature Survey

Table 1: Literature Survey

S. No.	Paper Details	Summary	Techniques/Algorithms Used	Research Gap
1.	Expansion of sericulture in India using geospatial tools and web	The article describes a project that used geospatial tools and web technology to identify potential areas for expanding sericulture (silk production) in India. The outcomes included identifying additional areas suitable for mulberry cultivation and developing a web portal to provide information on potential areas and sericulture for these districts.	• HTML(Hyper Tech Makup Language • CSS(Cascading Style Sheets. • JAVASCRIPT	• UX UI Design • Artificial intelligence • Machine learning • DBMS(Database Management System)

Literature Survey…contd

Table 2: Literature Survey

S. No.	Paper Details	Summary	Techniques/Algorithms Used	Research Gap
2.	A comprehensive view of the web-resources related to sericulture	The survey uses sequencing technologies, bioinformatics tools, and online databases to study silkworms and related organisms in sericulture. Citation analysis evaluates the impact of these resources on research. Additionally, a web portal, "SeriPort," was developed to index these databases for easier access.	• Sequencing • Data Analysis • Machine learning • Phylogenetic analysis	• Limited Integration of Databases • Real-time Data Analysis Tools • Data Science Tools like Data Visualization, Data Processing and Analysis Tools

Literature Survey…contd

Table 3: Literature Survey

S. No.	Paper Details	Summary	Techniques/Algorithms Used	Research Gap
3.	Mapping of potential areas for sericulture development and information dissemination through silks webportal	The paper utilizes geospatial technologies like Remote Sensing (RS) and GIS to map potential areas for expanding sericulture in India. It assesses land suitability based on soil, water, and landscape characteristics. The study also introduces the SILKS geoportal	• Remote Sensing (RS) • Geographical Information System • Universal Soil Loss Equation (USLE)	• Limited Integration of Databases • Lack of Global Accessibility • Real-time Data Analysis Tools • FAO Limitation Criteria

Problem Statement

- Silk farmers face some challenges to get timely and accurate information about proper silk farming practices. This lack of knowledge can cause inefficiencies, lower production, and reduced income.
- The silk farming industry does not have a single platform where farmers can find all the information they need, such as
    1. Cocoon rearing methods,
    2. Market prices
    3. News updates(Govt schemes,others)
    4. Disease prevention tips
    5. Weather updates
- This project aims to create a simple website that gives farmers useful resources and real-time updates to improve their productivity and earnings.

Objectives

- To create an online platform that provides essential information on silk farming, designed to the needs of cocoon rearing farmers.
- To empower farmers with knowledge about various aspects of silk farming, including cocoon rearing techniques, disease management, market trends, and government policies.
- To facilitate knowledge sharing and networking among farmers through online forums and communities.

Requirement Analysis

Requirement Analysis:

- **User Needs**: Farmers require up-to-date information on silk farming processes, disease management, and market trends.

- **System Requirements**:
  - A web platform that can be accessed via mobile phones.
  - Integration with weather and market APIs(manual).
  - Multilingual support for different regions.

Identification of tools/technology/algorithms

Frontend development

- HTML, CSS, JavaScript

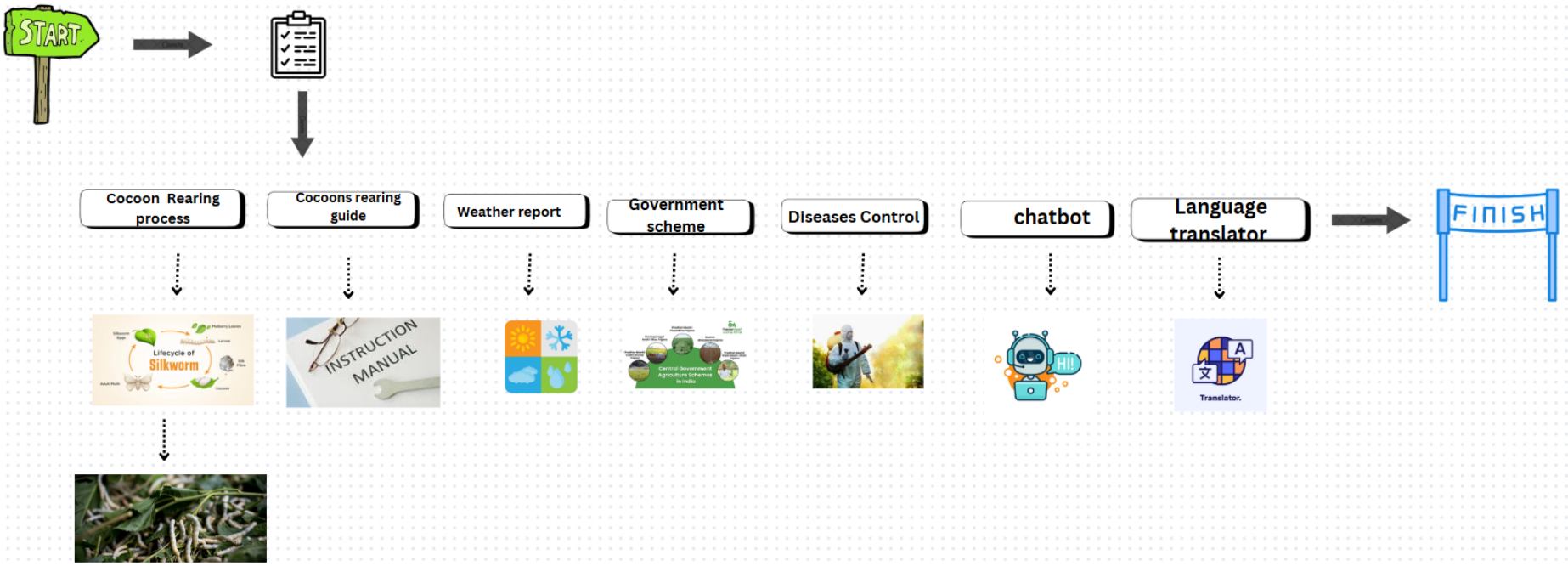
APIs:

- Weather API.
- Silk market price API (if available) or manual updates

Website details

https://ecofriendlysilkfarmportal.on.drv.tw/www.silkfarm.com/mysilkfarm/main.html

Final Design Strategy



Status of Implementation

SILK FARMING PORTAL

Home | Silk Farming Guide | Image Gallery | News & Updates | Weather & Season Info | Market Prices | Discussion Forum

Welcome to the Silk Farming Portal!

Your one-stop solution for all silk farming information and resources. We provide essential tools, insights, and community support to empower silk farmers worldwide.

- Access detailed guides on silk farming techniques and practices.
- Stay updated with the latest news and government schemes for silk farmers.
- Check real-time weather updates and seasonal recommendations.
- Monitor daily market prices for silk cocoons and raw silk.
- Engage with a community of fellow farmers in our discussion forum.
- Get personalized support through our dedicated contact center.

Image Gallery





Status of Implementation

Silk Farming Guide

Silk Farming Process

Silk farming, also known as sericulture, is the cultivation of silkworms to produce silk. It is an intricate process that requires careful planning, monitoring, and execution.

Introduction to Silk Farming

Learn all the essential steps and insights into silk farming.

1. Mulberry Cultivation

Mulberry leaves are the primary food source for silkworms. Proper cultivation ensures the best yield:

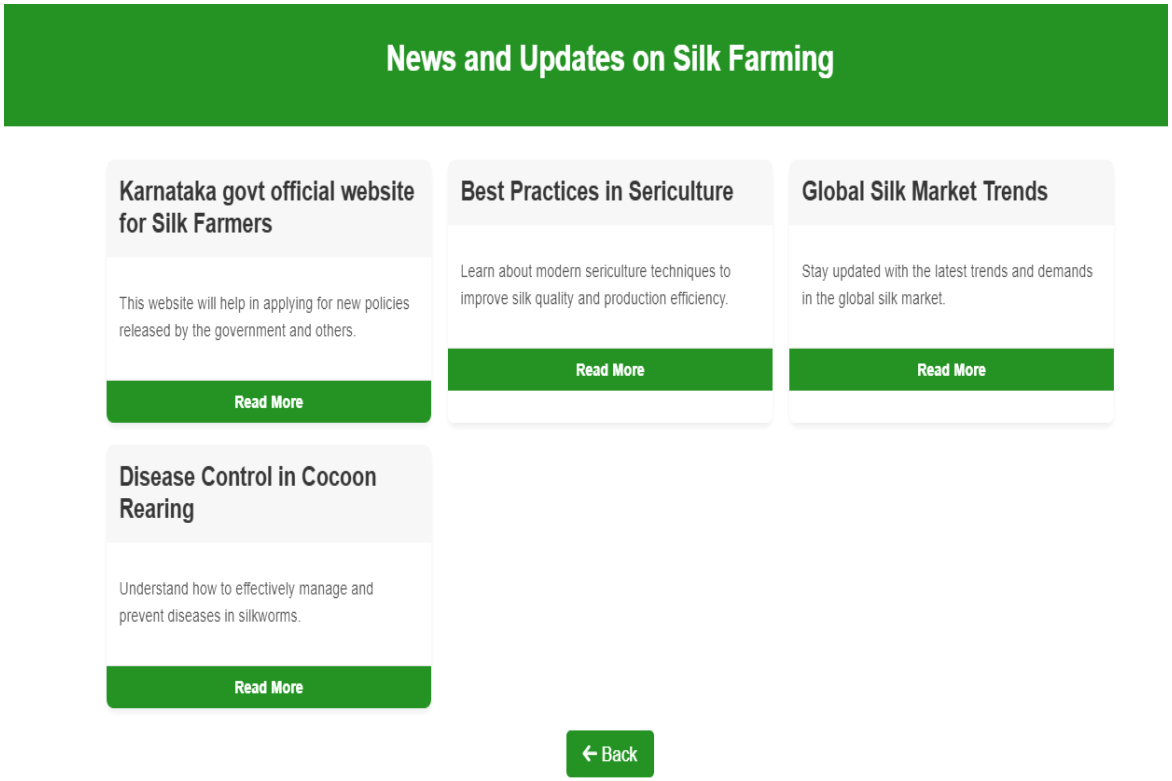
- Choose fertile, well-drained soil with pH 6.2-6.8.
- Plant high-yield, disease-resistant varieties.
- Maintain adequate spacing (e.g., 90cm x 90cm) to optimize growth.
- Regular pruning and irrigation are critical for leaf quality.

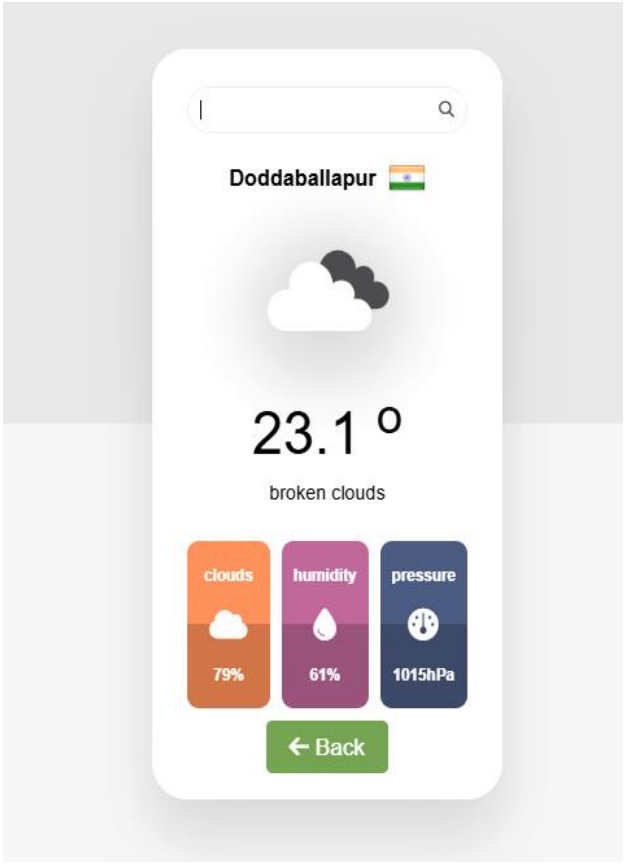
2. Silkworm Rearing

Rearing silkworms involves several crucial steps:

- **Selection of Disease-Free Layings (DFLs):** Always use certified silkworm eggs from trusted sources.
- **Incubation:** Maintain a temperature of 25-27°C with 70-80% humidity to promote uniform hatching.
- **Chawki Rearing:** Feed silkworms tender mulberry leaves during the first two instars (early stages).
- **Late-Age Rearing:** Transition to mature leaves for the final instars, ensuring a clean environment.
- **Mounting:** Provide bamboo trays or mounts for cocoon spinning.

Status of Implementation





Status of Implementation

Present Market Prices of Silk

Raw Silk

Current Price: **₹4,200/kg**
Last Updated: 2024-12-30

Mulberry Silk

Current Price: **₹3,800/kg**
Last Updated: 2024-12-30

Tasar Silk

Current Price: **₹2,500/kg**
Last Updated: 2024-12-29

Eri Silk

Current Price: **₹1,900/kg**
Last Updated: 2024-12-28

Muga Silk

Current Price: **₹7,000/kg**
Last Updated: 2024-12-30

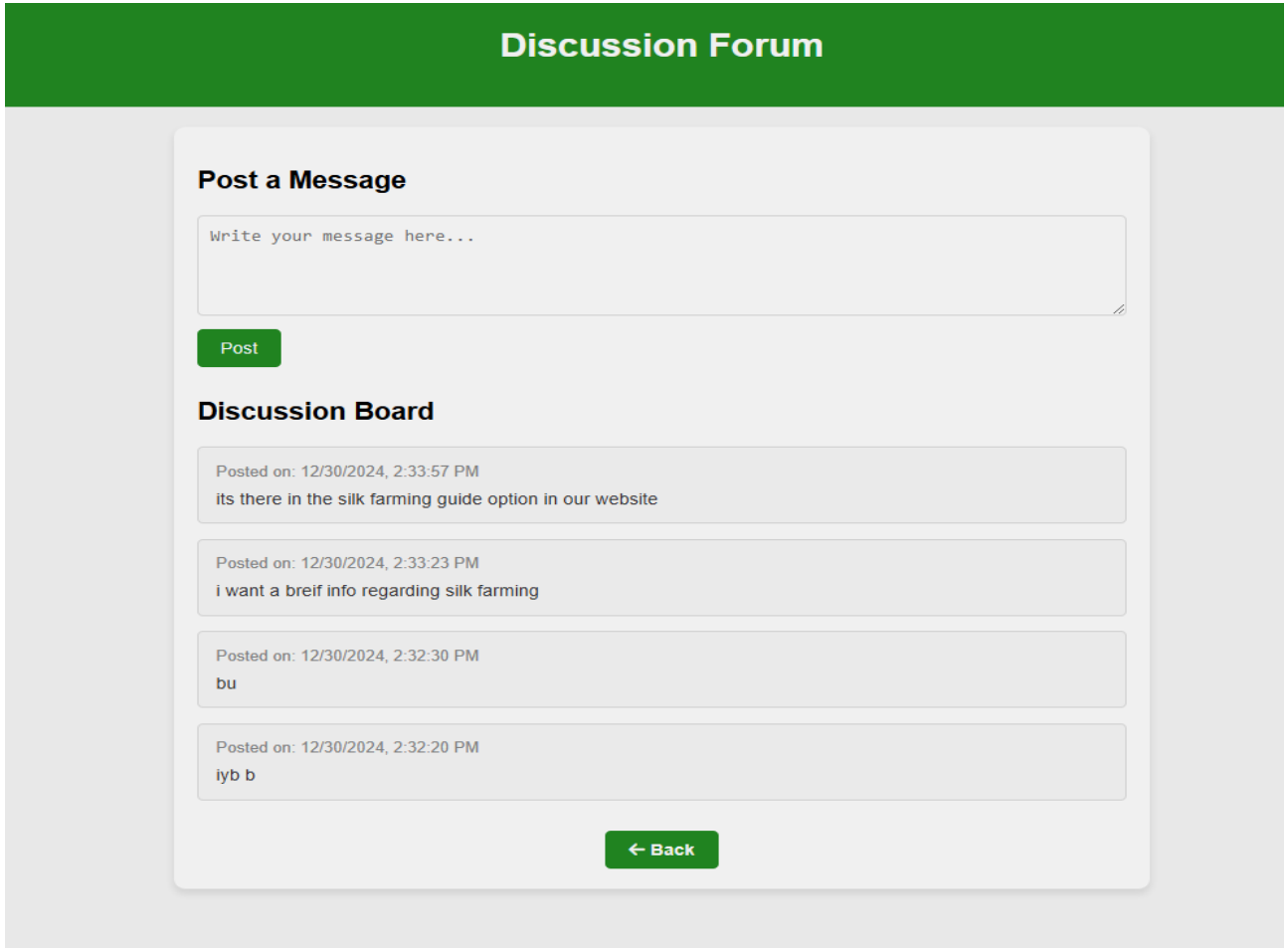
About the Silk Farming Industry

Silk farming, also known as sericulture, is a highly lucrative industry. The process involves rearing silkworms to produce raw silk. Factors such as quality, production techniques, and global demand influence silk prices.

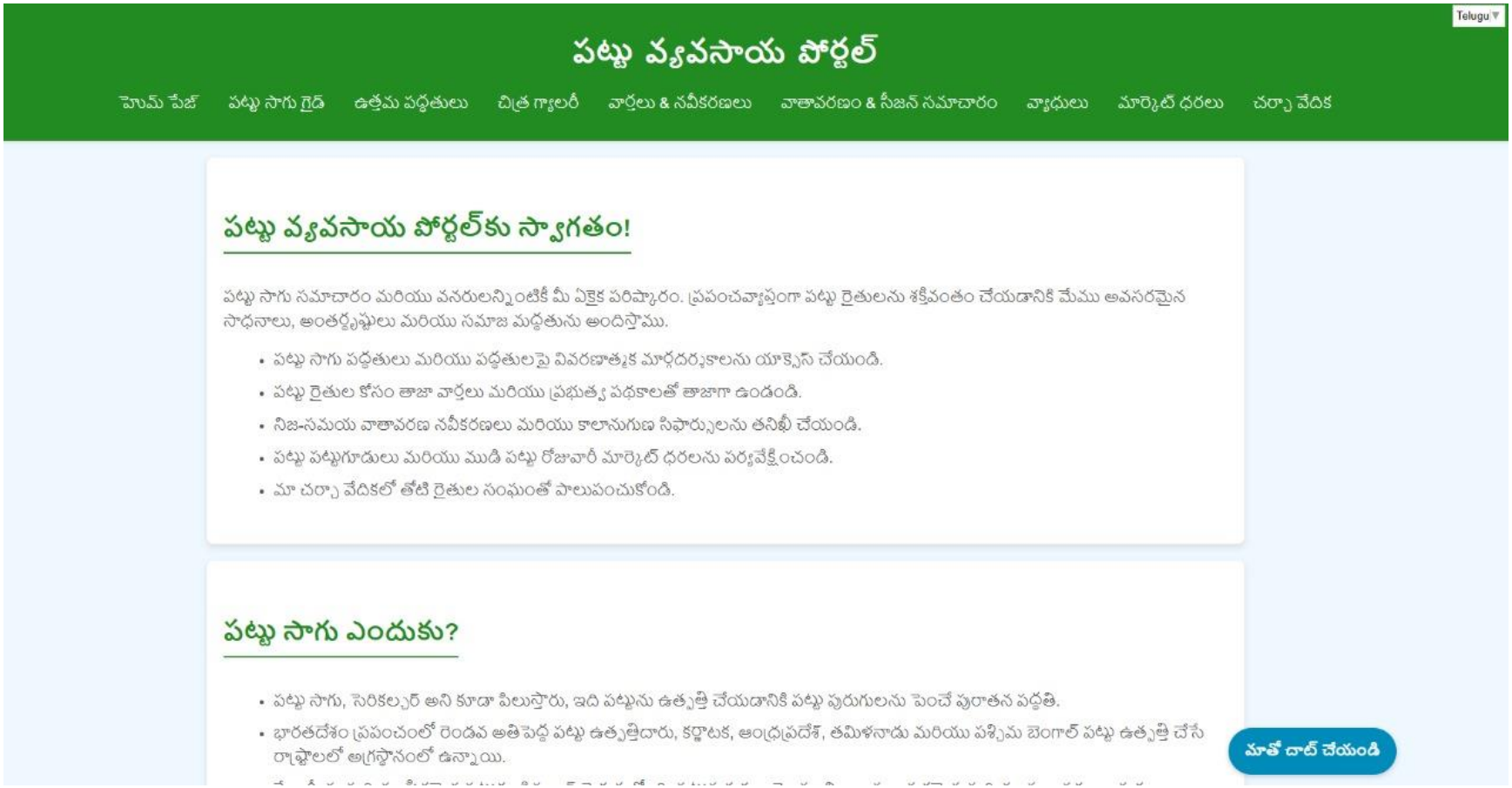
This webpage provides up-to-date market prices for silk, buying and selling opportunities, and information about the silk industry, including government schemes, disease control, and best practices for rearing silkworms.

← Back

Status of Implementation



Status of Implementation



Status of Implementation

Testing

1. Presentation Checks

- ❑ Slide titles are clear
- ❑ Consistent font and formatting.
- ❑ Readable background and text contrast..

2. Content Accuracy

- ❑ Objectives align with the project goals.
- ❑ Requirement analysis and tools are relevant.
- ❑ Conclusion summarizes key points.

3. Formatting & Visuals

- ❑ Clear images, diagrams, and tables.
- ❑ No overcrowding of content.

4. Technical Testing

- ❑ Hyperlinks (if any) work correctly.
- ❑ Charts and diagrams are labeled.
- ❑ Gantt chart correctly represents timeline.

5. Final Review

- ❑ References checked.
- ❑ Implementation details verified.
- ❑ Conclusion connects to objectives.

Result

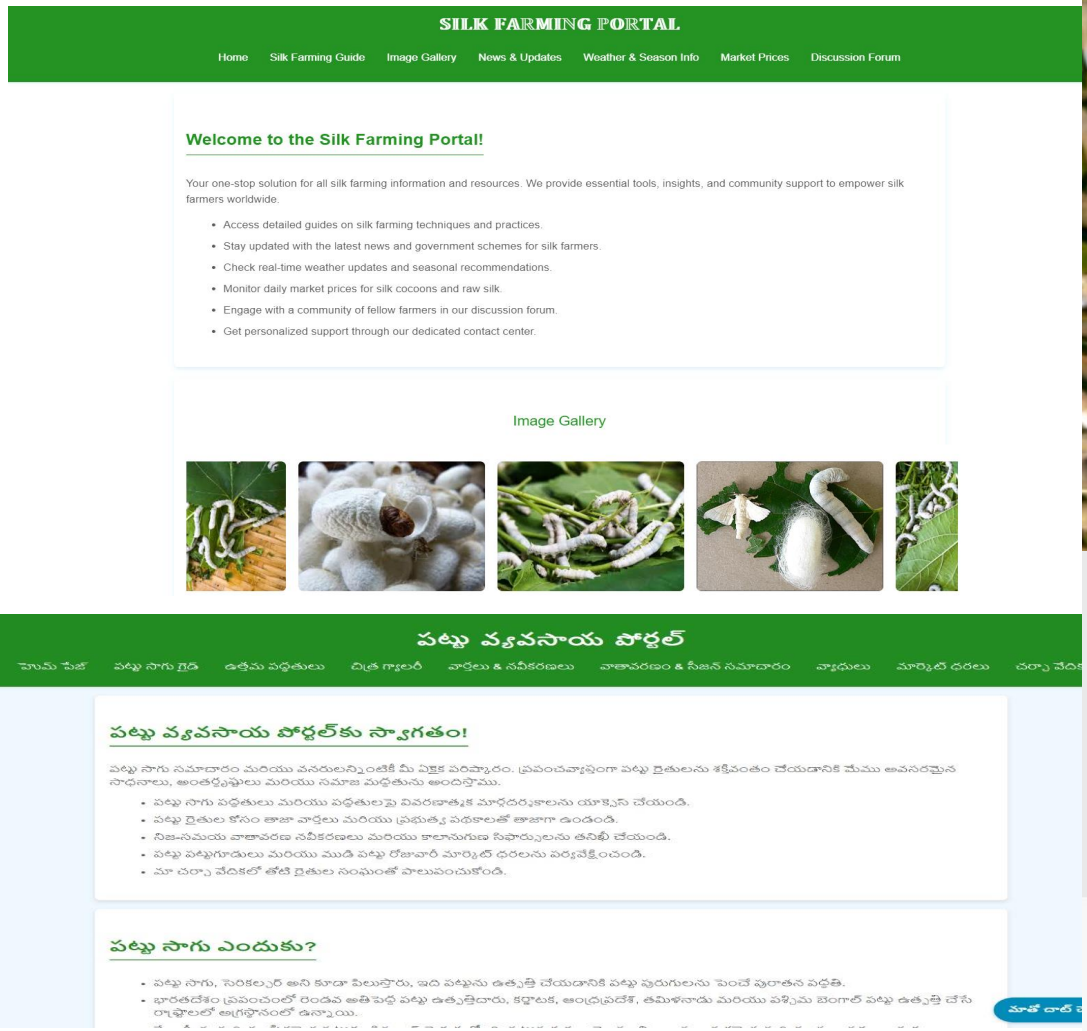

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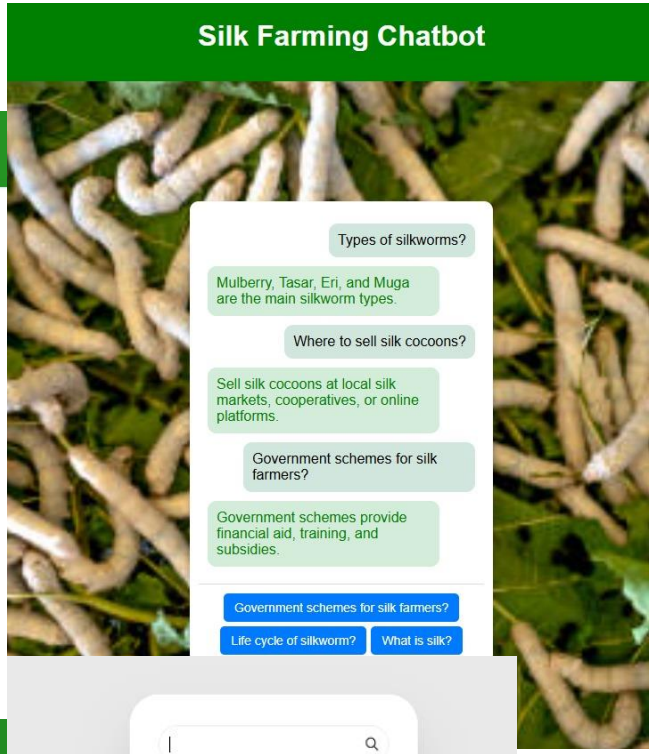
Image Gallery
పట్టు వ్యవసాయ పోర్టల్
పట్టు వ్యవసాయ పోర్టల్‌కు స్వాగతం!
పట్టు సాగు ఎందుకు?


Silk Farming Chatbot
Types of silkworms?
Mulberry, Tasar, Eri, and Muga are the main silkworm types.
Where to sell silk cocoons?
Sell silk cocoons at local silk markets, cooperatives, or online platforms.
Government schemes for silk farmers?
Government schemes provide financial aid, training, and subsidies.
Government schemes for silk farmers?
Life cycle of silkworm?
What is silk?


Doddaballapur
23.1 °
broken clouds
clouds
79%
humidity
61%
pressure
1015hPa
← Back

Conclusion

Creating a website for silk cocoon farmers will help modernize the silk farming industry. This platform will provide farmers with important information like the best ways to raise silkworms, control pests, manage the environment, and understand market trends. By using the website, farmers will be able to produce better yields, reduce risks, and increase profits.

In the long run, this website will help farmers, especially those who have had limited access to information before. It will improve their ability to compete in the industry and ensure that silk farming remains successful and sustainable in the future.

Program Outcomes (POs)

- **Better Knowledge** – Farmers access key silk farming insights.
- **Higher Productivity** – Improved techniques boost yield.
- **Real-time Updates** – Market & weather info aids decisions.
- **Farmer Networking** – Knowledge sharing through forums.
- **Tech Adoption** – Promotes digital tools in farming.
- **Increased Profitability** – Reduces risks, boosts income.

PO's Attainment:

Title of the Project: Development of web portal for silk cocoon farming information														
Program Outcomes												Program Specific Outcomes		
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3

Note: Guide need to tick (√) corresponding PO's and PSO's with respect to the project.

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