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AGRO-SMART

A soil based crop advisory platform

INTRODUCTION:

Agriculture is the backbone of India's economy and sustenance. However, in recent years, the practice of farming has seen a steep decline. This has raised serious concerns about food security, price inflation, and rural livelihood. One major reason for this decline is financial hardship—many farmers struggle to meet their basic needs and are unable to repay loans, ultimately forcing them to abandon agriculture.

**AGRO-SMART** aims to tackle this issue by offering farmers personalized guidance on choosing crops that best suit their soil type and climate conditions. This guidance helps farmers increase yields, reduce maintenance costs, and maximize profits. By supporting agricultural productivity and sustainability, AGRO-SMART also contributes to the broader economic stability of the country.

FUNCTIONALITIES:

* Farmers can find best crops for their soil type with some information like
* Required amount for cultivation
* Demand of the crop
* Farmers can also know about crops such as
* Time taken for particular crop to grow
* Suitable season for the crops
* Health benefit of such crops
* People who wish to do home gardening can also learn from this platform

Like

* Required cultivation area
* Best crops for terrace farming
* Essential needs of crops like sunlight, water requirements.
* Minimum cost for terrace farming
* Additionally farmers can check
* Number of people who reported profit or loss for a particular crop.
* Amount of profit or loss they had.

ABSTRACT / DESIGN

HOME PAGE:

The page displays welcoming text and images to introduce users to the platform.

This page also has navigation bar which switches to next page.

* Crop selection
* Crop details
* Terrace farming
* Profit/loss
* Query/contact us
* Admin

CROP SELECTION:

In this page, farmers can see best crops for their soil by selecting their soil type.

Here it gives

* Crops suited for particular soil
* Cost to cultivate them
* Demand for that particular crop

Data is retrieved from the database tables based on user input.

CROP DETAILS:

We use this page to know more about the crops.

Here when farmers search for details about particular crop, it gives

* Time taken for crop to grow
* Approximate height of the crop
* Health benefits of the crop
* Best season for the crop
* Good fertilizer for that crop
* Crop type like vegetable, fruits etc…

Same as crop selection, it fetches information from database then displays it to users.

TERRACE FARMING:

Some people may not have enough space to do agriculture but they really like to do farming.

In this case, it is suggested to do terrace farming where we can grow crops in our terrace itself.

From our platform you can get details like

* Minimum area required to do terrace farming
* Best crop for terrace farming
* Type of soil used for terrace gardening
* Sunlight and water levels

PROFIT/LOSS:

Here farmers can refer whether a particular crop gives more profit or loss.

We have customer table saved in database from which they can refer how many of them get profit and how many of them get loss and amount of profit or loss.

Here customer details are confidential which can be accessed only by admin whereas only the count and amount can be visible to users.

When user gives particular crop they can see count of person who got profit and loss on particular crop and the associated amount.

QUERY / CONTACT US:

In this page, people can ask their doubts related to agriculture or terrace farming.

This query session requires information like

* Name
* Phone number
* Queries /doubts

This page contains our contact information like

* Contact number
* Email ID
* Instagram
* Facebook
* Linkedin

ADMIN PAGE:

This page is completely for admin use where admin can change tables in database like

* Crop selection table
* Crop details table
* Customer details table
* Terrace farming table

Admin can add, delete and update information in table for future requirements of users.

User data privacy is a key priority:

* Personal details are confidential and accessible only to administrators.
* Data encryption and secure authentication protocols are implemented for admin functions.

CONCLUSION:

**AGRO-SMART** stands as a transformative solution for revitalizing agriculture in India. By equipping farmers and gardening enthusiasts with actionable, data-driven insights, it enables them to make informed decisions, improve productivity, and maximize profitability. The platform bridges the gap between traditional knowledge and modern agricultural practices, ensuring the sustainability of farming for generations to come.

Our vision is to support and uplift the agricultural community, strengthen the national economy, and ensure food security for all. AGRO-SMART is not just a platform; it is a commitment to keeping agriculture alive and thriving.