

**MAPPING OF DAIRY CATTLE FARMS DISTRICT OF BOYOLALI USING
WEBGIS**

PUBLICATION ARTICLE



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APPROVAL

Final Project **"MAPPING OF DAIRY CATTLE FARMS DISTRICT OF BOYOLALI USING WEBGIS"** To fulfill the requirement for achieve bachelor degree in Faculty of Communication and Informatics, Muhammadiyah University of Surakarta, has been approved on:

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(Helman Muhammad, S.T.,M.T)

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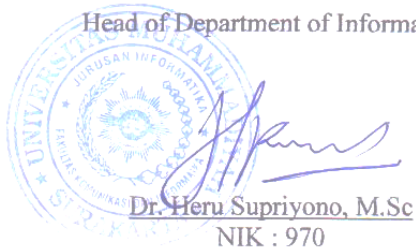


(Helman Muhammad, S.T.,M.T)

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MAPPING OF DAIRY CATTLE FARMS DISTRICT OF BOYOLALI USING WEBGIS

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ABSTRACT

As the development of technology will be able to facilitate the organizations and institutions to improve performance in order to more effectively and efficiently Based on this it will be designed and built a **“GEOGRAPHIC INFORMATION SYSTEM BASED ON WEB FOR MAPPING OF DAIRY CATTLE FARMS DISTRICT OF BOYOLALI”**.

This system is built using waterfall method, with software applications is quantum gis and then the output WebGIS which can display information about dairy cattle Boyolali. WebGIS is built with PHP, while for managing MySQL database in default of xampp

Geographic Information System is able to facilitate the public to obtain information dairy cow milk in Boyolali.

Keyword : GIS, Cattle, quantum gis

INTRODUCTION

Ranch is an activity to breed and cultivate farm animals to get the benefits and results of those activities. The purpose of ranch is to seek for profit with the application of the principal managements on production factors combined optimally (Rasyaf, 1994).

Dairy cattle farm is one type of ranch business which attempts to produce dairy farm milk. Dairy cow is an animal farm which very dominant than any other animal and is having business prospect that must be utilized so that there is no dependence toward imported cattle. Dairy cow milk must be able to be produced maximally because of its nutrient content and

potentially be further processed into other product as value-added.

Boyolali is one of cities that have an opportunity to take advantage of that wealthy source. It is the location is on a plateau near the Merapi Mountain that is very appropriate for dairy farm breeding to obtain the highest milk production of dairy farm milk. Production of dairy farm milk in Boyolali ranges 41588.25 kg / month. Therefore, Boyolali is often called as "City of Milk" as one of the largest of dairy cattle in Central Java.

Boyolali as the City of Milk should be able to utilize the natural potential in order to introduce the mascot of "Sapi" to the audience in accordance to the development of information technology that increasingly advanced. Boyolali's potent that is very beautiful must be recognized by society. Producing areas of dairy cattle is not only known by the Boyolali natives but also can be accessed by the public generally.

Boyolali regency consists of 19 districts, 267 villages with several KUD and this is where the milk production of dairy cattle developed. However, the high quality milk-

producing dairy cow at an affordable price along with the flow distribution of milk to be processed into value-added is not so popular among people and opportunities to cultivate dairy cattle for entrepreneurs to find an appropriate location that. Requirement to obtain information about the dairy town obtained by the public was minimal.

Therefore, it needs a data processing system to present information about dairy cattle Boyolali precisely, accurately and efficiently. Geographical information system is one of tool that can be used to obtain information that supports those needs. Using the Geographical information system, it allow to display following information:

1. Information about the general idea of a dairy, quality, production, age, body weight, feed, pricing, benefits dairy cattle, dairy cow milk content, the potential on the variety of Boyolali's dairy products.
2. Location Boyolali's dairy cattle.
3. Using a web-based geographical information system is expected to provide useful information for people with an elegant look and

ease of access for mapping areas surrounding the dairy farm production and goods Boyolali derivatives

LITERARY REVIEW

Sragen Regency Web-Based Geographical Information Systems of Population Census

It is successfully created a web-based geographical information system of population census in Sragen which is designed using waterfall method to facilitate the public on the population distribution of men, women, sex ratio and population density.

It is successfully created a web-based Geographical information system of population census in Sragen for relevant agencies using thematic maps.

Geographical Information System of Important Places location In Pekalongan Using ArcView Gis 3.3 2

It is successfully created a geographical information system of important places location in Pekalongan by using PHP and MySQL to make easier for people in accessing location or place in the city of Pekalongan.

Implementation of a Web-Based Geographical Information System of forest spread according to the forest function Classification Forest in Kendal Regency

It is successfully implemented a web-based geographical information system of forest spread according to the forest classification in Kendal Regency that emphasize on the forest maps and including location information.

It is successfully implemented a web-based geographical information of forest spread according to the forest classification in Kendal Regency get information in detail as the reference for related parties, namely forestry agencies and the public in the search for forest sites spread across the Regency of Kendal

Web-based Geographical Information system for Small Industries Mapping in Bantul Regency

It is successfully built an application of web-based geographical information system by integrating general database operations such as query to display information about a small industry in Bantul Regency so that it will easily accessible for public.

It is successfully implemented application of web-based information system which able to present a spatial data that can provide an accurate data needed by those who need information and want to cooperate with the small industry. It is successfully implemented a chart of the development of small industry growth annually based on the quantity of production.

It is successfully implemented a process of calculating distance of an object to another object in the system.

METHOD

Method that be used in this application is SDLC. This application can be used to easier for citizen to get an information about dairy cattle in Boyolali. Research Methodology are observation and analysis needed of society.

RESULT AND ANALYSIS

Result of Methodology

The result of this methodology uses a quisioner with user. The experiment is observe several thing such as :

1. Display of the application
2. Usefull of the application

3. This application is suitable to promote Boyolali as milk's city
4. The whole about the application
5. Information that be displayed is complete
6. Ease of this application
7. Facilities can be added in the application

The result of questioner is showed as following:

Table 1 Result of Quisioner

No	Name	Address	Question						
			1	2	3	4	5	6	7
1	Jiyanto	Musuk	4	4	4	4	1	1	1
2	Sumyani	Cepogo	5	5	4	5	2	1	1
3	Haryana	Cepogo	5	5	5	5	2	1	1
4	Joko Setyo	Cepogo	5	5	5	4	2	1	1
5	Sugeng S	Cepogo	5	5	5	4	2	1	1
6	Juwari	Keposong, Musuk	4	4	5	4	1	1	1
7	Sumadi	KarangKendal, Musuk	4	4	4	4	1	1	1
8	Sri wahyuni	Cepogo	5	5	5	5	2	1	1
9	Marjiyo	Musuk	4	4	4	4	2	1	1
10	Siswa Suwandi	Musuk	4	4	4	4	1	1	1
11	Purwanto	Banyuanyar , Ampel	4	4	4	4	1	1	1
12	Suwando	Ampel	4	5	5	4	1	1	1
13	Gunawan	Boyolali	4	4	4	4	1	1	1

Note

1. Value 1 (Very less)
2. Value 2 (Less)
3. Value 3 (Adequate)

(to question number 1-4)

(to question number 5-7)

Display of this application be able to access to general user such as Home, Download, Print, Guess Book, Profile and get an information about the map of Boyolali that contain dairy cattle Boyolali.



Figure 1 Common user display

Each symbol 'cow' contained in the web contains information on the dairy farm in Boyolali district. first clicking 'identify' button as the image below:



Figure 2 identify symbol

To obtain information related to this

WebGIS with his cow image click, it will show information about the area:



Figure 3 dairy cows data information

[illegible]

Figure 4 Detail information of Data

Based On the data of dairy cattle in Boyolali, conclusion it such as :

Table 2 Result of data

N o	Kecamatan	Jumlah_ Peternak	Jumlah_ Produksi	Harga
1	Musuk	251	112.959	3.000
2	Mojosongo	70	166.333	3.500
3	Boyolali	79	16591.5	2000
4	Ampel	56	9528	4.350
5	Cepogo	341	12.96	3.500
6	Selo	57	577	3.500

Admin

Admin for WebGIS are officers of Animal Husbandry and Fisheries of Boyolali. To be able to manage and management, admin must log in advance by entering a username and password. Display login form as shown below:



Figure 5 Login display login

Page Profile

This page will display information about the Disnakan profile of history consisting of Boyolali, Vision-Mission, Auth, Flow Milk and Gallery which will be shown in Figure 6.



Figure 6 Display of Boyolali History Page Print

The page can be used by the user can print the map of boyolali. Next look the display as follows:



Figure 7 Page Print Display

Page Download

The page can be utilized by the user when they want to obtain the map of boyolali which can be downloaded in accordance with the desired resolution maps. The zoom as follows:



Figure 8 Page Download Display

Guest Book Page

Guest Book is page to fill by user as identify that has been call at this WebGIS. The page as follows :



Figure 9 Guest Book Page

Home Map also found a legend that can be used as a description of the symbols in the map of Boyolali. Views legends as in figure 10



Figure 10 Legend Display

Admin page is displayed after the admin login first. Admin page contains the data on the cows that will be managed and has managed by the admin. Admin also can

edit, delete cattle data. The zoom will be seen in the figure 10



Figure 10 Admin Page

Logout menu used after completion admin manage the data. When this menu is clicked will display the main page of the admin, it will be aesthetically like the following.



Figure 11 Logout Display

CONCLUSION

Geographic Information System for Regional Mapping Dairy of Boyolali District have been completed in accordance with the analysis and the goal is to establish a Geographic Information System. This system is already displaying information related to dairy cattle breeding and map of Boyolali district

administration. This system can provide to 6 KUD in Boyolali in data reporting dairy cows Boyolali. And ease of Department of Animal Husbandry and Fisheries officers to manage the data of dairy cows in Boyolali.

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**1.T, M.T DEPARTMENT OF INFORMATICS FACULTY OF COMMUNICATION
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APPROVAL Final Project "MAPPING OF

DAIRY CATTLE FARMS DISTRICT OF BOYOLALI USING WEBGIS" To fulfill the requirement for achieve bachelor degree in Faculty of Communication and Informatics, Muhammadiyah University of Surakarta, has been approved on: Day : Date : Advisor (Helman Muhammad, S.T.,M.T) MAPPING OF DAIRY CATTLE FARMS DISTRICT OF BOYOLALI USING WEBGIS Helman Muhammad,S.T,M.T Elly Listyani Nurmawati Email: Ellylistyanin@gmail.com ABSTRACT As the development of technology will be able to facilitate the organizations and institutions to improve performance in order to more effectively and efficiently Based on this it will be designed and built a "GEOGRAPHIC INFORMATION SYSTEM BASED ON WEB FOR MAPPING OF DAIRY CATTLE FARMS DISTRICT OF BOYOLALI". This system is built using waterfall method, with software applications is quantum gis and then the output WebGIS which can display information about dairy cattle Boyolali. WebGIS is built with PHP, while for managing MySQL database in default of xampp Geographic Information System is able to facilitate the public to obtain information dairy cow milk in Boyolali. Keyword : GIS, Cattle, quantum gis INTRODUCTION Ranch is an activity to breed and cultivate farm animals to get the benefits and results of those activities. The purpose of ranch is to seek for profit with the application of the principal managements on production factors combined optimally (Rasyaf, 1994). Dairy cattle farm is one type of ranch business which attempts to produce dairy farm milk. Dairy cow is an animal farm which very dominant than any other animal and is having business prospect that must be utilized so that there is no dependence toward imported cattle. Dairy cow milk must be able to be produced maximally because of its nutrient content and potentially be



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