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Development of a web-based GIS system for the information management of Iranian cattle populations

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Abstract

Despite the development of new information technologies, there is no proper platform for the registering, monitoring and managing the information of Iranian animal genetic resources. One of the most efficient and least cost solutions to overcome this challenge is the use of web-based geographic information system (WebGIS). In this project, for the first time in the country, a system was designed and implemented through which the information of the populations of cattles collected from the national project for the monitoring and registration of the indigenous cattle populations in Iran will be registered. This system was implemented with the aim of recording and monitoring the information of the indigenous cattle breeds. The system will help researchers to register the information obtained from the registration and monitoring projects of the indigenous populations, other related projects and research stations in the system in a location-based manner. Since the location-based information in this system is recorded, users can display the system information based on geographic location and use it in decision-making processes. This system is capable of updating and reporting at any time. In order to implement the WebGIS, software combination and programming languages were used. The architecture of the system consists of a database management system, GIS server, base map and graphical user interface. By programming the system and its integration into the network, the WebGIS of domestic cattle breeds was implemented. After the implementation of the system, the collected information will be entered into the system.

Key words: animal genetic resources, indigenous cattle, registration, monitoring, web-based geographic information system