



# WEB SITE FOR THE INTRANET NATIONAL INSTITUTE OF AGRICULTURAL SCIENCES ON THE INTERNET

## Sitio Web para la Intranet del Instituto Nacional de Ciencias Agrícolas en Internet

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**ABSTRACT.** Web site was developed up with the objective of ensuring that other institutions and organizations can have dispose a virtual site of our institute, to share information and make available to external users most updated data allowing them to act more quickly, adequate and effective, such that is reached self-sufficiency in the exchange of knowledge, products and experiences, achieving greater integration of work between agricultural universities and research institutions, producers and others. This *software* gives different options through a single environment, putting available by external users most updated information. We want everyone to have the necessary information at time right without having to rely on others to get. Site can be accessed through any computer with Internet access. Between the results should be highlighted more knowledge and speed of information.

*Key words:* institutes, agricultural products, agricultural sciences, information systems, internet

**RESUMEN.** Se elaboró un sitio Web con el objetivo de garantizar que otras entidades y organizaciones puedan disponer de un sitio virtual del Instituto Nacional de Ciencias Agrícolas (INCA), para compartir la información y poner a disposición de los usuarios externos, datos actualizados que les permita actuar de forma más rápida, adecuada y efectiva, de manera que se logre la autosuficiencia en el intercambio de conocimientos, productos y experiencias, logrando una mayor integración del trabajo entre las instituciones universitarias y entidades agrícolas de investigaciones, productores y otros. El *software* ofrece diferentes opciones a través de un entorno sencillo, poniendo a disposición de los usuarios una información actualizada. Se pretende que cada cual tenga la información necesaria en el momento oportuno, sin que tenga que recurrir a terceros para conseguirla. Se puede acceder al sitio a través de cualquier computadora que tenga acceso a Internet. Entre los resultados se debe destacar un mayor conocimiento y rapidez de la información.

*Palabras clave:* institutos, productos agrícolas, ciencias agrícolas, sistemas de información, internet

## INTRODUCTION

Internet should not only be seen as a technologic tool but as a means that can improve the visibility of the institutions resulting in higher quality rendering and faster than any conventional means. It provides ease of contact, also gives the possibility to contact people all over the World with lower costs than print publications, those provoked changes are manifested immediately, the information is more detailed and there are not restrictions of time or space, allowing including a great amount of information. It is present 24 hours a day throughout the year taking effective advertising high level of convenience and saving money and time (1).

In Internet is published the website of the National Institute of Agricultural Sciences that has access to other organizations and universities interested in this topic (2); it is a space online where people can incorporate application and technologic tools, to accelerate daily processes as details of the international institute event held every 2 years, the thematic networks, workshops, articles of "Cultivos Tropicales" journal, researching topics, postgraduate courses, agricultural products, convocatories for masters and doctorates multimedia production and achievements, that were achieved by the entity that may be interest to researchers, institutions, universities and producers (3). Also it is possible to access to other websites of the institute and the country published in different websites as from other servers (4).

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Intranet has a great importance because with it, not only international visibility achieved by researchers and the institution in general, but this way, the organizational effectiveness is obtained through more effective communication, managing to save resources, greater preparation and participation of new agricultural science professionals, getting work harder, increasing the goal's center and at the same time reducing costs (5). A key profit is the ability to propagate updated information quickly and efficient cost to all users, achieving consistency.

## MATERIALS AND METHODS

### REQUIREMENTS FOR THE OPERATION OF THE SYSTEM: IT'S NECESSARY A COMPUTER WITH INTERNET ACCESS AND AN INSTALLED WEB BROWSER

**Softwares used to its development: PHP, MySql, Joomla.**

To develop the website was used the content management system, (CMS), Joomla in version 3.0.3 directed to security (6, 7), it is a free software, strong, personalized and scalable that favours to organize the creation of documents and other contents in a cooperative form (8, 9).

PHP is a programming language which favours the Server, free and independent of platform .rapid, with a large library of functions and extensive documentation (10), that has speed, stability, security and simplicity as characteristics (11).

A language that favours the Server, it is one that runs on the web Server, just before the web page is sent through Intranet or Internet which can carry out access to databases, network connections an other tasks to create the end webpage that the client will see it, which only receives a webpage with code HTML being compatible with any web browser (12).

MySql was used as database manager, a very well known and widely used due to its simplicity and outstanding function (13, 14). Among its main advantages they stand out which is a free, flexible, fast, efficient and multi-platform software. It is a handler of relational, multithreading and multiusers database, it integrates perfectly with PHP and it is very suitable for Internet applications (15, 16), also it has a graphical interface and it is freely available.

## RESULTS AND DISCUSSION

As a result of the Intranet website of the National Institute of the Agriculture Sciences it should be emphasized that offers various information about the center, thus allowing a wide interaction among

universities and research institutes of the World in a rapid and dynamic way.

The software is used in universities, agricultural and investigative centers all over the World with the same interests, with the objective to know characteristics and developed tasks in the center, ,scientific events ,courses of post graduate, doctorates and masters also see articles of the "Tropical Crops" journal or documents of our thematic networks, software, products' entity, providing information, through a safe system.

The website for INCA (The National Institute of Agricultural Sciences), presents different options in a simple setting showing information about the institute. Among the advantages people can find, are: in the home page shows on its left side the link to "Cultivos Tropicales" journal, the website "The reasons of Cuba" and "The five heroes ",on the right side appears the main menu with information about the institute, investigation menu and research menu department, below the banner appears the information of postgraduate courses and the link to the site of the thematic network of mycorrhiza (Thematic Network Handling Mycorrhizal Symbiosis in Agrosystems) and the site PIAL (Local Agricultural Innovation Program),besides, access to the International Scientific Congress of the Institute held every 2 years and also to email and jabber.(Figure 1).

The research menu presents knowledge, technologies and technical advances improving the quality of training as student and postgraduate, developing all science sectors by means of the research lines of the institution extensions of varieties obtained with the surface and the localities where they have been expanded and the prizes and recognitions received among which are: Academy and Technological Innovation awards, Minister distinctions, Goldman international and Third world academy prizes to scientist women. In addition a general summary of our researchers' publications, the main results achieved by the institution, among which stand out, the collaborative work where various networkings are integrated to manage information from the scientific and academic community, the experience exchanges between scientists and producers, the promotion of services and products in digital form, in which appear EcoMic, PectiMorf, Azofert, potato, tomato, garden bean, pumpkin, rice, orchids varieties and other ones adapted to tropical and subtropical conditions, all this, work and dedication achievements of agricultural investigators, technicians and workers(Figure 2).

Postgraduate studies are supports to create, learn and apply new knowledge hence representing a tool to a better labour performance.



Figure 1. Intranet home page



Figure 2. Research menu

On menu postgraduate courses show convocatories of courses, details of the master Nutrition in plants and Biofertilizers and thematic research to develop doctorates and postdocs in Edaphology, Nutrition in plant and Biofertilization, Sustainable agricultural production, Vegetal echophysiology (Figure 3).

At present, keeping on the learning academic process by means of masters and doctorates is very important, to remain with quality and an optimal level of overcoming because the link between the postgraduate courses and research is essential. In postgraduate courses, the most desirable curricular alignment is one that makes research the fundamental learning experience whereby it contributes to the center's research activities.

The website offers the possibility to provide access to the latest information, improving the communication and interaction among investigative entities and universities. The access to updated information of the institution is centralized and at the same time, it is useful to organize and access to information competition available in Internet.

On the other hand, it provides opportunities for users to access for both, outside and inside the country, if you have Internet access. Moreover, it benefits the client with timely and relevant information, result of constant updating of the database with which it works at the institution with the convergence of these data, using a single interface even if it comes from different sources.

Furthermore, it also allows for timely and reliable information needed for work and it is certain that the generated information contributes to others within the organization.

The software has an option for analysis of site visits shown only for administrators where daily and monthly visits and are recorded, daily and monthly summaries of visited web pages, IP address and visitor country among other data of interest.

The site receives lot of web visits mainly from researchers who are out of the center for labour issues to access email and instant messenger as well as foreigners from different colleges and countries such as: Mexico, Ecuador, Spain, Venezuela and others, interested in courses, products developed by the institute, besides, it enables the registration to participate in the International Scientific Congress of INCA.

Increasing site visits shows that users have expressed a great attraction for this and they have suggested certain option for enriching it demonstrating the user satisfaction by software.

These results may provide economic profits for the country and the institute for the users' motivation to participate in the congress, courses, masters, doctorates, and the interest in acquiring the research products.



Figure 3. Postgraduate menu

## CONCLUSIONS

The Institute website in Internet is a useful tool for investigators and universities, interested in Agricultural Sciences as it provides accurate information by means of a simple setting, standing out, postgraduate courses, investigations, event convocatories, thematic networks and varieties and products of the center. The website is an effective implement to avoid waste of time, materials and efforts within the institution, serving to generate new collaboration chances, and in this way digitalizing online registrations and access to interesting documents for specialized universities in agricultural researches and studies.

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