

**INTERNET DISTRIBUTION OF FULL-TEXT, STRUCTURED
INFORMATION ON THE SMALL RUMINANT DAIRY SECTOR:
PRESENTATION OF CIRVAL'S INFORMATION SYSTEM**

http://www.cirvall.asso.fr

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Abstract: Remote and not well-organized, small economic sectors usually have difficulty collecting and using information. However, this is a very important factor in dynamic development.

Goat and sheep are good examples of this situation. The International Resource Centre for the Development of Small Ruminant Dairy Sector Information (CIRVAL) aims at organizing the co-operative use of available resources and developing a relationship between operators and organizations. This will create the necessary synergy to disseminate relevant information in this sector.

CIRVAL has undertaken studies on the potential use of new media technologies, especially the Internet. Two methods of communication have been developed:

A **WEB site** which introduces the Centre and current information on the dairy sectors.

A **Specific System** for distributing structured expert information. It contains original, downloadable documents and comments prepared by experts.

Unfortunately many organizations interested in the CIRVAL system, especially in Mediterranean countries, are not yet on-line. For this reason CIRVAL has also developed a **CD-ROM** version of that system.

Keywords: Internet, CD-ROM, small ruminants dairy sectors, information system, sheep, goats, milk products, networking, resource centre.

1 The context of the small ruminant dairy field and CIRVAL's mission

The small ruminant dairy industry is distinct from other dairy sectors: it is a minority sector, as compared to the bovine dairy presence (with less than 4% of world milk production), traditional in its means of production and commercialization (with the exception of particular dairy regions), distributed in small-scale dairy areas of production. Nevertheless, this sector enjoys important advantages (product quality,..) to be valorized for innovating and competing in the world market. The preservation and development of this industry represents an important socio-economic factor for rural areas with a

tendency toward desertification or areas little suited to modern agriculture (mountainous areas, certain sectors of Mediterranean countries,...).

In this context, the distribution of information is a very important factor in the dynamic development of the small ruminant dairy market. The CIRVAL (International Resource Centre for the Development of Small Ruminant Dairy Sector Information) is an organization operating as an interface between different international actors (professionals, scientists, managers, dairy cooperatives,...) concerned with small ruminant dairy sectors and, more precisely, the Mediterranean countries.

This project, validated by numerous expert reports, has gained the interest of the European Association for Animal Production (EAAP), the Food and Agriculture Organization of the United Nations (FAO), the International Centre for Advanced Mediterranean Agronomic Studies (MAICH) and the French National Agronomic Research Institute (INRA).

To fulfill its mission, CIRVAL has developed the following services:

- the creation of a database containing original downloadable documents of interest to the small ruminant dairy industry. This system specifies information on the basis of potential user interests. In addition, comments are prepared by experts in order to underline the importance of each document.
 - the distribution of this information through different media such as the Internet (specific database and Web site) and CD-ROM.
 - the publication of a newsletter and original documents.
 - the organization of a system of monitoring (more precisely, a collective survey of) innovative developments in technology which strongly involves our partners.
 - the institution of an information service to respond to immediate information needs.
- taking part in development projects promoting regional or inter-regional dynamics (European projects).

2 The contribution of new communication technologies to strengthening information distribution

The distribution of scientific and technical information is an important factor in the development and the organization of an agricultural area. New communication technologies play an increasingly important role in this regard. As they become accessible to an ever-greater populace, they are integrated into the corpus of everyday working tools and they participate in the strengthening of interpersonal relations, knowledge transfer and network organization. New information systems based on these technologies encourage the dissemination of knowledge and allow a structured organization, much as the editor of a scientific journal organizes its content, presentation and function in society.

The distribution of electronic information uses two principal, complementary means of transmission (on-line and off-line), both utilized by CIRVAL:

On-line information : Network transmission allows to distribute up-to-date data but require a means of connection, an account with a provider and connection fees.

Off-line information : A CD-ROM can contain more than 600 Mb of data. It allows the user freedom from network and telecommunication constraints. The disadvantage is obviously in the domain of updating data.

2.1 The distinctive characteristics of the information available on the Internet

The Internet network and web sites carry an increasing amount of information on every topic. One problem regularly indicated by information and documentation professionals is that this information is not very well structured. It would require a considerable amount of time to find relevant information on the Web, even if research engines become more and more sophisticated: « It is not the search engine's performance which is in question but its information-retrieval performance » [SOLDATI].

The small ruminant dairy industry is not very well-represented on the Net. But the opportunities offered by electronic publication (lower publication costs, wide distribution, immediate availability,...)

would be very suitable for minority sectors who experience difficulty getting published in high-impact print journals.

2.2 CIRVAL's system

Our information system was designed to fulfill the following functions:

- the collection of useful information for the development of the small ruminant dairy industry (which rarely receives such information).
- the distribution of prepared knowledge to a variety of users (technicians, farmers, researchers, students, managers).
- the unification of partners around a collective tool for interpersonal relations, through remote access to the system.
- revive (through the need to obtain relevant information) exchanges and collective projects devoted to innovation and, most especially, to product design.

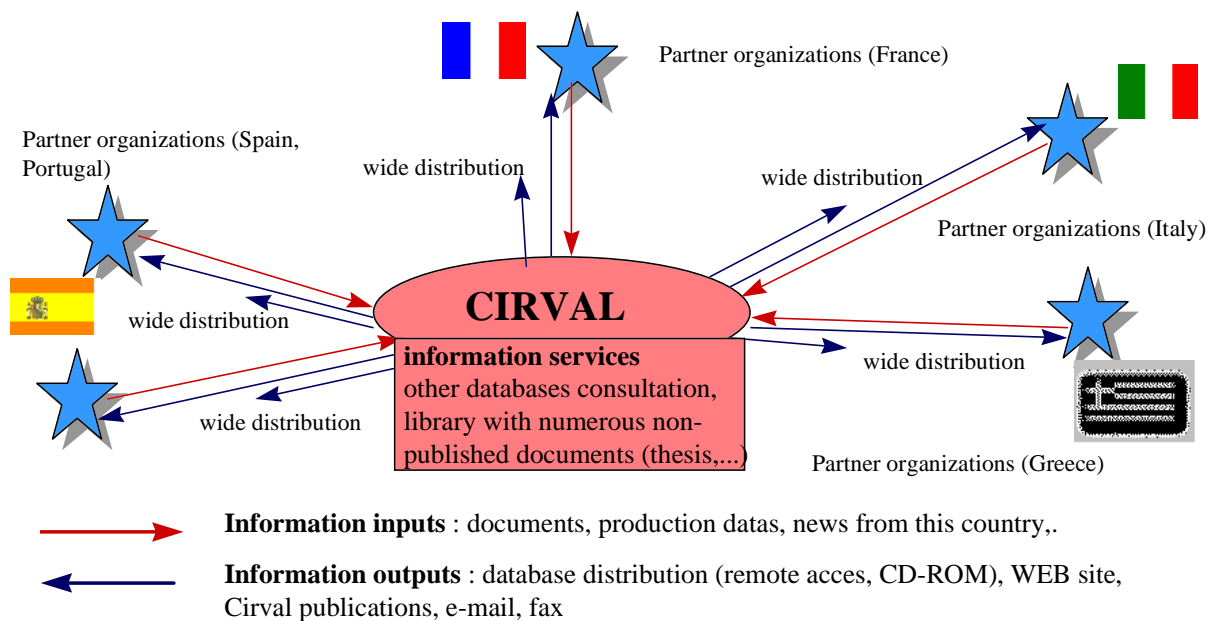


Figure 1. CIRVAL's information system: resourcing and distribution.

Cirval's database allows conventional information systems retrieval (keywords, boolean queries, history consultation,...), as well as **full-text inquiry**.

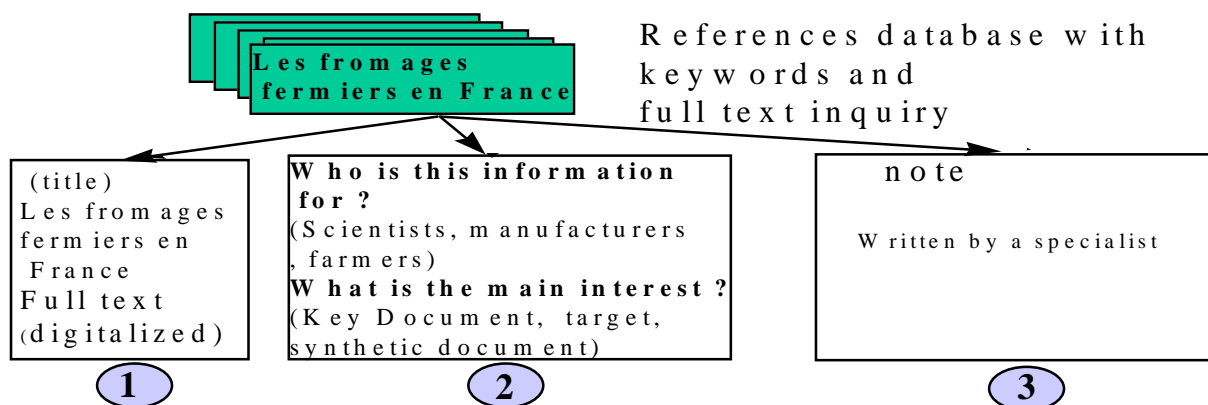


Figure 2: The development of information throughout the system.

- ① - It contains digitized original documents which can be viewed on-screen or downloaded.
- ② - Two fields permit the user to search for the desired information:
The **Public** field contains the following values : Technicians, Managers, Students, Researchers, Farmers, etc..
The **Assessment** Field contains : Key Document, Target Document, Synthetic Document
- ③ - Notes are prepared by experts in order to summarize and underline the importance of the document.

3 Usefulness and Results

The system has been operational and remote-accessible in France since January 1997, and will also be available very soon in Italy. The CD-ROM version should be distributed to about thirty organizations. The database presently contains about 5,000 references, 1,400 digitized documents and one hundred notes. Versions progressively translated into other languages will allow distribution to non-French-speaking users.

The distribution of digitized documents through the Internet requires a transmission speed of at least 64 Kb/s. Corsica, where CIRVAL is located, has an regional network (RETECOR) with a potential transmission speed of 2 Mb/s at its disposal. Nevertheless most partner organizations affiliated with CIRVAL don't have this infrastructure at their disposal (these are small professional and scientific organizations, mostly located in southern Europe, near the production areas and thus often isolated from the national and international network structures) and the distribution of our system is greatly reduced. For this reason, we have developed a version of the system in CD-ROM format.

This system distributes very useful, expert information coming from various origins. It also permits a dynamic of exchange to be established between its users, who actively participate in its enrichment and contribute to the development of a true information culture, a collective information resource (which, at present, is not as developed as in English-speaking countries), and strengthen the network of human relationships. "What makes a network strong is when each of its points of connection are supported by the others" [Callon]. This system is also used in the production and distribution of CIRVAL's scientific work: the collection of the production and technico-economic data of farming systems, the synthesis of data linked to innovations in cheesemaking.

4 References

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