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Le Centre de recherches pour le développement international, société publique créée en 1970 par une loi du Parlement canadien, a pour mission d'appuyer des recherches visant à adapter la science et la technologie aux besoins des pays en développement: il concentre son activité dans six secteurs: agriculture, alimentation et nutrition; information; santé; sciences sociales; sciences de la terre et du génie et communications. Le CRDI est financé entièrement par le Parlement canadien, mais c'est un Conseil des gouverneurs international qui en détermine l'orientation et les politiques. Etabli à Ottawa (Canada), il a des bureaux régionaux en Afrique, en Asie, en Amérique latine et au Moyen-Orient.

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This series includes meeting documents, internal reports, and preliminary technical documents that may later form the basis of a formal publication. A Manuscript Report is given a small distribution to a highly specialized audience.

La présente série est réservée aux documents issus de colloques, aux rapports internes et aux documents techniques susceptibles d'être publiés plus tard dans une série de publications plus soignées. D'un tirage restreint, le rapport manuscrit est destiné à un public très spécialisé.

Esta serie incluye ponencias de reuniones, informes internos y documentos técnicos que pueden posteriormente conformar la base de una publicación formal. El informe recibe distribución limitada entre una audiencia altamente especializada.
New Horizons in Agricultural Information Management

Proceedings of an International Symposium,
March 13-16, 1991, Beijing, China

Compiled and Edited by
Gary K. McConne
Sponsored by
International Development Research Centre

Organized by
Scientech Documentation and Information Centre
Chinese Academy of Agricultural Sciences

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Exploitation and Utilization of Sericultural Information Resources in China

GAO Zhicheng        CHEN Xichao

The Sericultural Research Institute
Chinese Academy of Agricultural Sciences
Zhenjiang, CHINA

China, the home of silk, has been a leader in cocoon and silk production since ancient times, and its silk output is a thumb across the world. Silk cloth is also a traditional export of the country. Recently, silk and silk cloth exports have amounted to 90% and more than 40% of the world's total respectively. The largest silk research, education and production system in the world has been set up in our country. At present, it has been widely shared with other countries of silk production and trade to stimulate the development of sericulture throughout the world.

Silk production and the spreading of scientific and technological achievements push forward the development of silk scientific and technological documents. Special sericultural documents handed over to us from past dynasties number at least 50 titles, so both ancient and current documents with sericultural contents can reach 100 titles. In modern times, especially after the founding of our republic, periodicals at the national and local levels have reached more than 30 kinds which are edited by related units. Scientific and technological researchers have written a large amount of scientific and technological theses and have edited and published lots of works by means of reporting on scientific and technological achievements, summing up production experiences, importing new scientific and technological achievements and technical materials, and developing academic exchanges both within the country and abroad, so sericultural documents get richer and richer in the country. The great amount of sericultural scientific and technological information is being transmitted to production, research and education departments through different kinds of media to accelerate the development of sericultural production. When new China was founded in 1949, the output of cocoons was only 30,900 tons. In 1970 and 1977, the output of cocoons and that of silk both respectively sprung to first place across the globe. In 1988, the output of cocoons was up to 394,000 tons, and sericultural production covered more than 1,200 counties in 26 provinces (regions) and cities. Presently, the task which stands in front of us is how to dig out these precious and plentiful document resources to serve sericultural production in our country and other developing countries to meet the needs of international silk trade and to make people's lives more colorful around the world. With the above purpose, we have already indulged ourselves in preparing and constructing a world sericultural document database as quickly as possible. Furthermore, a series of tasks have been accomplished and several main aspects are described as follows:
1. Continuously strengthen the information document foundation and widely develop the collecting and processing of sericultural scientific and technological documents.

As the center of sericultural research and scientific and technological information, the institute has continuously collected and processed sericultural information documents since the 1950s when it was founded. Material exchange relationships and information networks have been set up among more than 200 units of research, education, production and library and information centers in 27 provinces and cities. Nowadays, nearly 100 titles of foreign documents, more than 300 volumes of internal professional documents as well as more than 200 types of meeting materials have been collected by various means. The library with more than 60,000 volumes of books is being replenished and enlarged, so it is getting more and more comprehensive, especially in the respect of professional documents.

All the internal collected documents must be processed and classified in a timely manner so as to be conveniently available to researchers. External materials should be promptly translated, then special subject materials should be edited, published and issued to serve as references for the numerous scientific and technological researchers in research, education and production management.

2. Editing and publishing sericultural scientific and technological books and periodicals in favor of accumulating and propagating sericultural scientific and technological documents.

Since the 1950s, in order to meet the needs of the development for sericultural production and science and technology, the institute has edited and produced 6 titles of sericultural scientific and technological periodicals. Among them, three periodicals are at the national level, which are the academic periodical *Acta Sericologica Sinica* the indexing periodical *Abstracts of Sericulture*, and the translated and reporting periodical *External Agronomy -- Sericulture*. These periodicals have become the main tools which reflect sericultural scientific research achievements and levels in the country, spread advanced techniques and experiences internally and externally and index documents for both at home and abroad. The above periodicals have been welcome and praised by sericultural researchers around the world. At the same time, numerous sericultural scientific and technological researchers have been called together to selectively translate academic works and handbooks. Up to now dozens of external sericultural scientific and technological materials on special subjects have been edited and translated. This has pushed professional document accumulation, advanced the spread of new achievements and techniques, and stimulated the development of sericultural science and technology and production greatly.
3. To prepare for building document database.

First, a sericultural thesaurus will be edited to create favorable conditions in the indexing of documents.

The Sericultural Research Institute joined with other institutes of scientific and technological information and other related units in China to design and create a *Chinese Thesaurus* during 1975-1978. Sericultural scientific and technological phrases and terms were gathered and edited, optimally chosen and standardized, and this became an integral part of the *Chinese Thesaurus*. On this basis, the provisional manuscript of a *Sericultural Thesaurus* had been compiled to lay a foundation for indexing.

Subsequently, a large number of sericultural scientific and technological researchers were gathered to take part in the processing of documents by editing abstract periodicals.

*Abstracts of Sericulture* is one of the sericultural indexing periodicals that are published by the national general plan in China, and it is an important result of our work. Sericultural science has many branches so its documents are plentiful. Annually thousands of reports on sericultural science and technology appear in hundreds of media forms such as books, magazines, research reports, meeting records, special periodicals and bulletins, etc. *Abstracts of Sericulture* meets the needs of numerous scientific and technological members by collecting and processing these documents and technological information. At the same time it is also part of our preparation to build up a computer document database as planned. In the past ten years, we have been able to do a lot of work on processing documents under adverse circumstances of reduced strength, shorter time frames and poorer conditions, because many sericultural scientific and technological members feel compelled to expend their energy to compile document abstracts by combining them with editing and publishing abstract periodicals. Meanwhile, the main manual document indexing warehouse which stores both domestic and foreign documents from 1980 to 1989 has been established by taking advantage of the good conditions for publishing abstract periodicals, and sorting documents by document contents, resources of original documents (documents name) and countries of publication of the documents. Up to now, more than 7,000 volumes of documents abstracts have been stored, and a system of information document indexing has been set up to form the basis for building up the warehouse.

4. Widely develop cooperative research to lay the foundation for making indexing tools more perfect and to serve users effectively.

Under the new conditions of rapid scientific development and dramatic rising amount of documents, the main wishes of a vast number of scientific and technological researchers are to get required information thoroughly and accurately in a short time.
For this reason, we have started to edit and publish Bibliography of Classification Index of World’s Sericultural Documents, which is presided over by the Sericultural Institute, CAAS, in cooperation with the following units: Guangdong Academy of Agricultural Sciences; Suzhou Sericultural Training School; Sericultural Department, Zhejiang Agricultural University; The Sericultural Institute in Zhejiang Agricultural Academy of Sciences, etc. The contents are divided into two parts: internal documents and external ones.

First of all, the title catalogue is made from sericultural professional scientific and technological documents in China in the 1980s, and a Catalogue of Sericultural Scientific and Technological Materials in China has been drawn up. At present, 13 volumes (containing more than 1,000 entries) have been edited and published to serve the related sericultural units throughout the country. The catalogue can be used as a measure to help scientific researchers indexing modern documents manually, also, it can be regarded as an indexing tool to aid in the work of document processing in the future. Next, in order to provide services of information retrieval in sericultural circles and to lay a foundation for building up a computer information retrieval system, it is necessary for us to edit annual volumes of title catalogues from the 1930s to the 1960s. (In the 1930s cocoon output reached its maximum in our country.)

Second, the collection of external documents comes from the chief silkworm and cocoon production countries which include countries in Asia, Europe and America from 1950 to 1985. At present, document collecting is almost finished. A Japanese document title catalogue of about 30,000 entries has been collected, and more than 15,000 entries on cards have been translated. Meanwhile, for the Europe and America document title catalogue more than 6,900 entries have been included, and in 1987, they were edited and published in the form of initial articles, and issued to the related sericultural units scattered across the country. Furthermore, it will come out in a Chinese-English bilingual edition to serve sericultural scientific and technological researchers in document searching throughout the world.

The completion of the programme will provide an integral sericultural scientific document searching tool to society, although its speed is slower than that of computers, it is based on scientific data. It is suitable to give advice to consumers in different geographical areas and to meet the particular needs of individuals. At the same time, the information provided by the programme holds a far-reaching value because not only does it become a useful retrieval tool in different research fields, but also gives a service to sericultural researchers in all production countries, especially developing ones.

Experience has shown us that Bibliography of Sericultural Scientific and Technological Materials in China has had a great effect in the editing of the book Sericulture in China and the classification index for volumes 1 to 50 of The Journal of Sericultural Science of Japan is being warmly welcomed by numerous scientific and technological researchers. Researchers reflect that not only does it provide reference for sericultural scientific research design, but helps to avoid unnecessary repetition. They agree that scholars
make a great contribution to serving vast numbers of sericultural workers. The index positively shows us our goal to meet the needs of consumers, thus we can create works of great value to our society.

5. To set up a national scientific and technological information network on sericulture to systemize countries sericultural scientific and technological information documents.

In order to let information better serve science and technology, production and education, as well as decision-making, overcoming key problems and selecting projects, it is imperative to gradually break through the situation where some professional departments always work independently, strengthen continuously the lateral relationships to give play to the superiority of cooperation, and initiate the new goal for professional information entirety and systemization. That is: to form the country’s cooperative network and to establish an information system by paying attention to the whole to effectively serve the development of sericultural information services, research and production. Not only can it serve current needs, it can push information science forward, and clear the way to higher quality and efficiency.

To further this purpose, we have prepared to construct our country’s sericultural scientific and technological information network. Its main task can be described as follows: We can grasp China’s trends in the development of sericultural research and production by information exchange among member units. At the same time, we must summarize our progressive experiences and be aware of existing problems, then organize the relative scientific and technological information to be aimed at serving the needs of the related department so as to push forward the professional development of science and technology as well as production. Meanwhile, with the purpose of providing comprehensive information service, it is very important for us to give full play to cooperation and to jointly finish projects of information investigation and research in order to solve the problems which can not be settled by a single department.