Sources of information in the fields of animal production and animal health

I. Primary information in English, French and Spanish

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Summary: In primary scientific documentation, publications by different countries devoted to animal production and animal health are extremely varied. Among the publications which are not periodicals, there are books, reference books and reports of conferences and symposia. The periodicals mainly comprise monthly or quarterly journals and reviews.

Whether or not they are periodicals, the main sources of veterinary information are published in English, other sources being in a wide variety of languages.

The authors give a general outline on private and public editorial activity in several countries in English, French and Spanish.


INTRODUCTION

Every kind of activity needs and generates information. It enables individuals to communicate, to make decisions and to act. The life of an organism, defined in the broader sense of something ranging from a living thing to an organization, is dependent upon information. It is a basic fact for every biologist, and hence every veterinarian, that there is a permanent need for information concerning specific activities.

Veterinary medicine became an independent science more than 200 years ago and, as a result, it has its own scientific and technical literature, and its own bibliographical tools.

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The object of this first article is to identify the available sources of information in the fields of animal production and animal health. Before doing so, it is necessary to define the types of information.

There is a basic distinction in all types of documentation between primary and secondary information.

**Primary information**: books, periodicals, statistics or facts providing direct access to information by the end user.

**Secondary information**: abstract journals and data bases solely providing references to the literature. In a second article, ways will be considered of obtaining access to cited documents, with special reference to information aids.

In the primary information we distinguish books, sources of reference, statistical yearbooks and periodicals.

The article cites the most representative editors and publications in English, French and Spanish. However, should the reader notice that some publications are omitted but which would, nevertheless, be useful to the veterinary profession, the authors would appreciate notification.

### BOOKS

In contrast to medical publications, veterinary publications have to cope with the problem of a limited readership. This applies less to English-language publications having a wide international audience than to publications in other languages.

To the purely veterinary readership should be added auxiliary personnel, engineers and technicians in the agricultural and pharmaceutical sectors. This applies particularly to books in French (Mornet and Ruckebusch, 1980b).

Overall there is only a limited number of veterinary books. Some indication of annual changes is provided by the number of documents corresponding to non-periodical publications in the reference file based on Veterinary Bulletin and Index Veterinarius (Table I).

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<td><strong>Publications</strong> in English</td>
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<td><strong>Publications</strong> in French</td>
<td>23</td>
<td>129</td>
<td>126</td>
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* Books, theses, monographs, reports, miscellaneous publications.

The principal publishers of veterinary books in English, French and Spanish are listed in an appendix (p. 747), together with their addresses (this list is not intended to be exhaustive). A distinction can be made, for western countries, between institutional and private publishers.
INSTITUTIONAL PUBLISHERS

The public and paragovernmental sectors are active in the publishing field in France, particularly in animal husbandry and veterinary medicine.

The Institut national de la Recherche agronomique (INRA) puts out various publications as part of several series:

- The series Les Colloques de l’INRA, which commenced in 1981, consists of the proceedings of national or international conferences organized under the patronage or with the participation of INRA. Twelve of the 30 titles are concerned with animal production.
- The series INRA, Actualités scientifiques et agronomiques is published in collaboration with Editions Masson & Co. (e6)*, and 5 of the 12 titles are concerned with animal production.
- The proceedings of Journées du Grenier de Theix are produced by the Centre for zootechnical and veterinary research at Clermont-Ferrand.
- Other publications take the form of investigations, scientific meetings, colloquia, or supplements to serial publications in French or English (such as Annales de Recherches vétérinaires).

The Institut d’Elevage et de Médecine vétérinaire des Pays tropicaux (IEMVT) became a department of the Centre de Coopération internationale en Recherche agronomique (CIRAD) in January 1985. It has published a series of books on animal health and production in the tropics. These books are distributed by the Documentation française (e1). They are among the few collections which are updated regularly, despite a high initial print run. These publications occupy an intermediate level between those of research organizations like INRA and those of the various technical institutes.

The Institut technique de l’Elevage bovin (ITEB), the Institut technique de l’Elevage ovin et caprin (ITOVIC), the Institut technique du Porc (ITP) and the Institut technique de l’Aviculture (ITAV) devote a large part of their activities to the publication of instructional books for farm workers.

Veterinary Services of the Ministry of Agriculture issue Informations techniques for their departmental services and all others involved, which survey the current status of selected topics.

Finally there are various scientific associations, such as the Société française de Buiatrie and the Fondation Marcel Mérieux which publish the proceedings of symposia or conferences on topics of animal pathology.

PRIVATE PUBLISHERS

Point vétérinaire (e7) are the only private publisher in France to publish books confined to veterinary medicine (25 titles) and animal science (15 titles).

The remaining publishers are chiefly concerned with publications concerning human medicine and other scientific disciplines.

* The editors and booksellers cited in the Appendix are indicated in the text by a letter, followed by a number, in brackets.
Editions Vigot (e9) (formerly "Vigot Frères") were the first to publish veterinary books. Their current catalogue contains 55 titles.

Maloine (e5) has 33 veterinary and 28 animal science titles.

Masson (e6) has 10 titles in veterinary medicine.

Expansion scientifique (e3) has 16 titles, 15 of which form the series Les Maladies animales à Virus.

Doin (e2) has 12 titles on animal biology.

Maisonneuve & Larose (e4) produces books on animal husbandry in tropical countries as part of the series Techniques agricoles et Productions tropicales.

Presses Universitaires de France (PUF) (e8) has published some books devoted to tropical animal husbandry in the series Techniques vivantes.

It should be noted that not all of the veterinary titles mentioned above are original works or works of French origin. In fact, a considerable part of them consists of translations of books, particularly from English (50% of those from Editions Vigot and 25% of those from Editions du Point vétérinaire). The best catalogue of veterinary publications in French has been produced by the bookseller associated with Editions du Point vétérinaire. This bookseller, La Zoothèque (e10), has a catalogue of 300 titles of books on veterinary medicine and animal science published by the various French publishers (private and institutional) listed above, and also 150 books in English, published abroad.

BRITISH PUBLISHERS

While the institutional publishers provide various books of veterinary interest, private publishers are also very active.

INSTITUTIONAL PUBLISHERS

Her Majesty's Stationery Office (HMSO) (f10) publishes many books on livestock farming (26 titles). It also issues an annual report of the Director of Veterinary Services under the title Animal Health.

Ministry of Agriculture, Fisheries and Food (MAFF) (f15). Some if its publications are issued by HMSO, but others, particularly those of the Agricultural Development and Advisory Service (ADAS), which include reports from the Central Veterinary Laboratory, are published in house. Gray (1983) made a very detailed inventory of books published in English by species and by veterinary speciality (anaesthesia, anatomy, etc.).

Cambridge University Press (f7). This press, and the presses of certain other universities (e.g. Liverpool), publish books on science, including some in the veterinary field.

British veterinary Association (BVA) (f5) list about 15 publications, some of which are confined to regulations in the United Kingdom.

PRIVATE PUBLISHERS

There are numerous private publishing houses, and most of them have branches in other countries to provide an international distribution network.
Baillière Tindall (f1) is the oldest and the most important British publisher of veterinary books. It combined with Saunders (USA) in 1980 to form an international publishing group. This group controls Springhouse Mercury, Praeger Scientific and Iowa State University Press (d3). The catalogue section on veterinary medicine contains 120 titles, 30 of which are translations of books originally published in other languages.

Butterworths (f6) has 32 titles in the section on animal science.

Blackwell’s (f3) has 25 titles in the section on veterinary medicine.

Edward Arnold (f8) has 32 titles under the headings zoology and animal behaviour.

Bowker (f4) has 10 titles under animal husbandry.

Oliver & Boyd (f12) has 14 titles under the heading veterinary medicine. This publishing house is part of the Longman group, which also offers 12 titles concerning animal husbandry.

MTP Press Ltd (f11) recently published the proceedings of a symposia on veterinary pharmacology and toxicology, and on animal physiology.

Pergamon Press (f13) has 7 titles under “Veterinary Science”.

Finally, mention may be made of a British bookshop which specializes in animal and veterinary science, Kimptons Medical Bookshop (f14), which produces a catalogue having nearly 500 titles concerning veterinary medicine in the broadest sense.

NORTH AMERICAN PUBLISHERS

INSTITUTIONAL PUBLISHERS

The United States Department of Agriculture (USDA) is an active publisher in the field of animal health, chiefly through the Agricultural Research Service (ARS) and the Veterinary Services of the Animal and Plant Health Inspection Service (APHIS) (d9). An illustrated manual on the diagnosis of contagious diseases of animals has been produced in English, Spanish and French by the Plum Island Laboratory of ARS.

The Animal Pathology Division, Agriculture Canada, has published an Overview 1984-1985, which is bilingual (English-French), on the organisation, research projects and publications lists of Canadian researchers, but it does not have a regular editorial activity.

Various professional organizations, affiliated to the American Veterinary Medical Association (d10), issue their own publications. Examples are the United States Animal Health Association (proceedings of the annual meeting), the American Association of Veterinary Laboratory Diagnosticians (proceedings and symposia) and the American Association of Bovine Practitioners (annual proceedings).

The presses of American universities are also active publishers, operating in an independent and almost private manner:

- Iowa State University Press (d3), associated with the Holt Saunders group: 20 titles in veterinary medicine.
- Cornell University Press (d2). Its veterinary catalogue, produced by the College of Veterinary Medicine, contains a dozen titles.
PRIVATE PUBLISHERS

W.B. Saunders Company (d5) was founded in 1888, and has specialized in the medical field. Together with the English publisher Baillière Tindall (see above), it is part of the Holt Saunders Group, which issued a catalogue containing 50 veterinary titles in 1985.

Lea & Febiger (d4) has 54 titles under the heading “Veterinary Medicine and Science”.

Academic Press (d1), associated with the group Harcourt-Brace-Jovanovitch Publishers, has published some 50 veterinary books.

Veterinary Medicine Publishing Company (d8) produces large multiple-author handbooks for veterinary practice.

Williams & Wilkins (d6) publish several veterinary publications, mainly two compendia of drugs.

GERMAN PUBLISHERS

INSTITUTIONAL PUBLISHERS

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) (b1) of the Federal Republic of Germany is primarily a governmental body to promote technical cooperation, but it has produced some veterinary and zootechnical publications in English, French and Spanish as well as in German.

The Deutsche Veterinärmedizinische Gesellschaft (FRG) (b2) produce proceedings of conferences organized by the Association.

The veterinary Schools of Berlin, Hannover, Giessen and Munich produce occasional monographs, as well as large numbers of theses.

PRIVATE PUBLISHERS

Verlag Paul Parey (FRG) (b4) has links with the W.B. Saunders Company (USA) (d5). Its large catalogue contains 20 titles in English under the headings “Animal Husbandry” and “Veterinary Medicine”.

Springer Verlag (FRG) (b5). This science editor publishes many books in English as well as German including proceedings of Symposia such as Rabies in the Tropics (1985). It is active in the biological sciences, rather than veterinary medicine.

Ferdinand Enke Verlag (FRG) (b3) produces many textbooks for students of veterinary medicine.

Fischer Verlag (GDR) (a1) is the principal East German publisher in medicine and biology, and lists 14 titles in the catalogue section on veterinary medicine (all in German).

DUTCH PUBLISHERS

Two private publishers are very important in the veterinary field:

• Elsevier Science Publishers (h1) produce a number of veterinary periodicals and also 35 books on animal science and veterinary medicine.

• Martinus Nijhoff Publishers (h2) have 30 titles in their catalogue under the heading “Veterinary Medicine and Animal Science”.

Karger (ii) publishes some books and proceedings on veterinary medicine, mainly in the series *Developments in Biological Standardization*.

**PUBLISHERS OF THE EAST EUROPEAN COUNTRIES (OTHER THAN GDR)**

In general, the governments of East European countries encourage the publication of books on science, and this is done through ministries of agriculture and health, and through the various Academies of Science (including some Academies of Agricultural Science).

**PUBLISHERS IN SPANISH**

During the past few years, Spanish and Latin American publishers have made a tremendous effort in the veterinary field even if many of the titles come from publications initially written in English or in French.

**INSTITUTIONAL PUBLISHERS**

In 1983, the *Instituto nacional de Investigaciones agrarias (INIA)* (j1) in Spain listed 36 publications written by its researchers from 1971 to 1981 in the fields of "Hygiene and animal health". The catalogue of publications from 1982-1985 is in the process of being prepared.

The *Ministerio de Agricultura, Pesca y Alimentación* (j2) in Spain regularly publishes documents of veterinary and zoo-technical interest under the agronomic heading of *Hojas Divulgadoras*. In the 1985 catalogue, its Publication Department lists 24 books on animal production and 11 on animal pathology. In the *Boletín Informativo de la Biblioteca Central (Nº 30)*, June 1985, approximately 100 books received in Spanish are cited, with regard to animal health and production.

*Libraries of veterinary Faculties in Buenos Aires and Mexico City* have published catalogues of all the veterinary publications available in Spanish (J.P. Jetté, personal communication).

**PRIVATE PUBLISHERS**

Amongst the many publishers of veterinary publications in Spain and the Latin American countries, we can cite:

— In Spain:

  *Acribia, S.A.* (j3) in Saragossa;
  *De Vecchi, S.A.* (j4) in Barcelona;
  *Editoriales Científico-Médico Dossat* (j5) in Madrid;
  *Mundi-Prensa Libros* (j6) in Madrid.

— In Latin America:

  *Alamex, S.A. (Trillas-Limusa)* in Mexico City (Mexico);
  *El Ateneo, S.A.* in Buenos Aires (Argentina);
  *Editorial Hemisferio Sur* in Buenos Aires (Argentina).
BOOKSELLERS

Several booksellers publish catalogues of publications in Spanish on animal production and veterinary medicine, reflecting the dynamism of publishers and the demands of the Spanish reading population. In this connection, two Spanish publishers deserve mention:

- **Librería Agrícola** (j7): 850 titles in the “Catálogo de Veterinaria 1985-86”.
- **Librería Nicolás Moya** (j8): approximately 800 titles under the heading “Veterinaria” and “Ganadera” in its 1985 catalogue.

INTERNATIONAL ORGANIZATIONS

Each organization has a publishing service which issues catalogues, often in several languages. The proportion of publications on veterinary medicine varies considerably between organizations.

- **OIE** (k2): all its publications are devoted to veterinary medicine. Three catalogues (English, French, Spanish) published in 1985 each contain some 16 titles (books, technical series, conference proceedings).
- **FAO** (k3): the catalogue published in 1984 contains 39 titles under the heading “Animal Health and Production”, 13 of which are of veterinary interest. Many of these publications are issued in more than one language (English, French, Spanish).
- **WHO** (k4): the catalogues for 1947-1980 and 1981-1984 have a section on zoonoses and veterinary public health which contains 19 titles, many of which are available in more than one language (English, French, Spanish).
- **Panamerican Health Organization** (k5) has published some veterinary books, particularly concerning foot and mouth disease and zoonoses (in English and Spanish), namely that of Acha and Szyfres (1980) of which the revised Spanish edition will be published in 1986.
- **Commission of the European Communities** (k1) has a heading “Animal Husbandry - Animal Products” in its 1984 catalogue, containing 6 monographs or reports of veterinary interest, available in one or more languages.
- **CAB International** (k6) publishes technical communications concerning animal production. The former Review Series of the Commonwealth Bureau of Animal Health is now defunct.
- **IICA** (k8) publishes the series Animal Health and Salud Animal (in English and Spanish).
- **ILCA** (k9): the publications concern breeding in African countries rather than animal health. They are indexed in different series: Working Documents, System Studies, Research Reports. All the available documents are periodically reported in the Accession Bulletin and the Catalogue of microfilmed documents.

SPECIAL FEATURES OF VETERINARY PUBLICATIONS

There are differences in the way books are produced in English-speaking countries compared with France. Multiple authorship is much commoner in the USA and Great Britain. The authors of such works are known as contributors, and their tasks are defined and coordinated by a scientific editor, who assumes responsibility for the book as a whole. This method makes it easy to bring together different experts (Mornet & Ruckebusch, 1980a).
The publication of veterinary books is, to some extent, undertaken by specialized publishing houses. Gray (1981), in *Information Sources in Agriculture and Food Science*, assembled the principal English-language books on veterinary science, while Lean and Campling (1981) did the same for animal production. The books are classified by species of animal and by the various fundamental or applied sciences. Gray’s list contains 184 books on all aspects of veterinary science. The most frequently cited publishers were as follows:

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<td>Baillière Tindall</td>
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<td>Academic Press</td>
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<td>Lea &amp; Febiger</td>
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<td>National Academy of Science</td>
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<td>Oliver &amp; Boyd</td>
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<td>HMSO</td>
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<td>Iowa State University Press</td>
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<td>Saunders</td>
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About half of the publishers are able to market their books through an international network. Such a network may be created by regrouping of publishers (e.g. Holt-Saunders) in Europe and in the USA, or by having branch offices in other countries. An example of the latter is Butterworths, with branches in London, Boston, Sydney, Wellington, Durban and Toronto.

**REFERENCE BOOKS**

In addition to the textbooks (discussed above) and serials, the primary information also contains various types of reference works, as follows: practical manuals, encyclopaedias, dictionaries and thesauri, statistical yearbooks and pharmacopoeias.

**PRACTICAL MANUALS**

The manual used most widely is *The Merck Veterinary Manual*, first published in 1955 and now in its 5th edition (1979). It is also available in Spanish (2nd edition, 1981). This contains valuable information for the veterinarian on the diagnosis and treatment of diseases of domestic animals, with separate sections on poultry, food animals and pets. A detailed index provides access to the text. Although less detailed, the French equivalent, *Vade-mecum du Vétérinaire* (Vigot, 14th edition, 1978), is of great use to the veterinary profession; it has been translated into Spanish (3rd edition, 1977). This publication started at the beginning of this century as a formulary of drugs, but the latest edition deals with diseases, therapy and legislation of relevance to the practising veterinarian. The scope of this book is currently under complete revision, and the 15th edition will appear in the spring of 1986.

The *Vademecum de Veterinaria* in Spanish of Garsi (1982) has the same goal. A more important and updated version 1985-1986 is currently in press.

**ENCYCLOPAEDIAS**

Two veterinary encyclopaedias have appeared in the English language:

- *International Encyclopaedia of Veterinary Medicine* in 5 volumes, edited by Sir Thomas Dalling and published in Scotland in 1966;
DICTIONARIES AND THESAURUS

There are numerous dictionaries of medicine and its specialities, but this is not the case in veterinary medicine of which we cite the following:

- in English: *Black's Veterinary Dictionary*, edited by G.P. West, 13th edition, 1979, 867 pages (f2);

An attempt to standardize the nomenclature of names of diseases and veterinary terms was made by the United States Department of Health in 1966 by means of *Standard Nomenclature of Veterinary Diseases and Operations* (Priester et al., 1966), but this has not been implemented much. Its objective was to facilitate the recording and collection of epidemiological information for the case records of veterinary clinics, particularly in the veterinary colleges (Peters, 1967; Tjalma et al., 1964).

In 1984 the American Veterinary Medical Association published a microglossary called Snovet, a systematic English nomenclature accompanied by code numbers, derived from its medical equivalent Snomed.

In addition, the United States Department of Agriculture published an animal disease thesaurus of some 4000 terms, and it is updated regularly. The purpose of this thesaurus is to facilitate retrieval from the data bank of the Animal and Plant Health Inspection Service at Hyattsville, Maryland.

The creation of a Veterinary Multilingual Thesaurus was envisaged by the Commission of the European Communities in 1973, and was undertaken by a round-table group of European experts for veterinary documentation and information. The thesaurus, comprising about 5000 terms, appeared in 1979 in four monolingual volumes (English, French, German, Italian) with a quadrilingual index. The terms present in this thesaurus have been adopted and revised by the Commonwealth Bureau of Animal Health in the form of a Controlled Vocabulary (Weybridge, 1985). These terms are used for indexing the literature in Index Veterinarius and Veterinary Bulletin.

A multilingual Thesaurus of Agricultural Terminology (Agrovoc), giving the main veterinary terminology used, was published by the FAO in collaboration with the European Commission in 1982, and is currently undergoing revision. It is published in five monolingual versions (German, English, Spanish, French, Italian) with two trilingual indexes (English, French, Spanish).

More recently the Commonwealth Agricultural Bureaux produced a thesaurus (1983), and the revision currently in progress is aimed at better aligning it with Agrovoc and other international authorities.
Among other dictionaries which specialize in terms concerning animal production are the following:

- **International Poultry Dictionary**, in five languages (German, English, Spanish, French, Italian), by Brunoli (1967), 300 pages.
- **Dictionnaire des Aliments pour les Animaux**, in four languages (German, English, French, Italian), by Piccioni (1970), 819 pages.
- **Dictionary of Dairy Terminology**, in four languages (English, French, German, Spanish), by the International Dairy Federation (1983), published by Elsevier (h1), 328 pages.
- **Ichthyology. Bulletin of Terminology** (English and French), by the Ministry of Supplies and Services, Canada (1978) (c1), 352 pages.
- **Multilingual Dictionary of Fish and Fish Products** (in 16 languages), prepared by the OECD, 2nd edition (1978), 550 pages.

The European Association for Animal Production is currently preparing a **Dictionary of Animal Production Terminology** with 10,000 terms in five languages to be published by Elsevier in 1986.

Finally there are two agricultural dictionaries which contain terms relating to animal husbandry and veterinary medicine in Arabic and English or French:

- **Chihabi's Dictionary of Agricultural and Allied Terminology** (English-Arabic), by A. Sh. Al-Khatib, 907 pp.

These dictionaries are almost all available in France at the **Maison du Dictionnaire** (e12).

**STATISTICAL YEARBOOKS**

In each country the Ministry of Agriculture (or Health) publishes information concerning the number of cases or outbreaks of notifiable, contagious diseases. These national statistical documents are usually presented in the form of monthly bulletins which list the notifiable diseases of animals and new outbreaks declared in the country. These diseases are generally the most contagious and the most important for their impact on the national economy and international trade.

On the regional scale, three organizations publish monthly newsletters on the health situation:

- for Africa: **Animal Health Statistics** issued by **OAU/IBAR** (k7) (in English and French);
• for the Americas: *Epidemiological Report on Foot and Mouth Disease and Vesicular Stomatitis* from the **Panamerican Foot and Mouth Disease Center** (k5) in English and Spanish, and the **Foreign Animal Disease Report** of **APHIS/USDA** in English only (d9).

On the international scale, the **Office International des Epizooties (OIE)** (k2) publishes a monthly trilingual *Bulletin* (French, English, Spanish) derived from all the documents and statistics furnished by member countries and regional organisations, as well as other sources of information (telex messages, monthly reports of the World Reference Laboratory for Foot and Mouth Disease at Pirbright, UK).

All of this statistical data is regrouped in the annual, trilingual **OIE Statistics** (French, English, Spanish). This document reviews new outbreaks of animal disease in the 109 member countries of the OIE and, when relevant, the date of their eradication. This organization also publishes a document in three monolingual versions (French, English, Spanish), each year of which the English version is entitled *Zoo-sanitary Situation in Member Countries*. This contains quantitative and qualitative information concerning 95 diseases of animals (prevalence, number of outbreaks and methods of prophylaxis) in about 80 countries.

The **Animal Health Yearbook** produced by the **FAO** (k3) in collaboration with the OIE and WHO summarizes qualitative information for 172 countries or territories, comparable to the last-mentioned publication of the OIE, but relating to 109 diseases. It also provides statistics for the number of veterinarians and auxiliary personnel in each country.

The livestock population of each country, cited in the above publication, is presented in greater detail in the **FAO Production Yearbook** (k3) in three languages (English, French, Spanish). It also contains statistics covering many years for food production in each country.

### PHARMACOPOEIAS

The **National Commission for the French Pharmacopoeia** regularly publishes the *Pharmacopée française* (e11), the 10th edition of which, published in 1982, already comprises 1120 pages and a first supplement. This provides information on the preparation and testing of certain biological products for veterinary use.

Similarly, the **British Pharmacopoeia Commission** has just published the second edition of the **British Pharmacopoeia (Veterinary)** in 1985, the first edition having appeared in 1977 (f9).

In parallel with the national pharmacopoeias, the **European Pharmacopoeia** (e11) occupies a place as a source of reference which is increasing in importance. It is produced under the guidance of the Council of Europe by the **Commission of the European Pharmacopoeia**, and the second edition was produced in two stages, the first in 1980 and the second in 1983. It includes instructions for the preparation and testing of vaccines and of chemical molecules for veterinary use.

The **World Health Organization** has published the third edition of the **International Pharmacopoeia** (k4) in two volumes:


**PROCEEDINGS OF CONFERENCES AND SYMPOSIA**

Whether national or international, scientific and technical associations, specialised in different veterinary disciplines, periodically organise seminars, conferences and/or symposia. Proceedings of these different meetings are subsequently published.

Their edition is, in fact, carried out by the associations themselves, their subsidiary or local secretariat (in the case of international associations), government or privately owned publishing companies. The great difference in methods of publication and distribution does not make it possible to have an overall picture of proceedings of veterinary interest.

Nevertheless, some private publishers have created series of proceedings thus rendering their classification and access easier, e.g.:

- *Current Topics in Veterinary Medicine and Animal Science*, by Martinus Nijhoff Publishers (h2) for the EEC.
- *Development in Biological Standardization*, by S. Karger (i1) for the International Association of Biological Standardization.

Other proceedings of seminars and conferences are published wholly or in part in the form of a chapter in a book or as articles in periodicals.

**PERIODICAL PUBLICATIONS**

**GENERAL EVOLUTION**

Periodicals constitute the principal source of scientific information in the veterinary field, besides books, the proceedings of conferences and symposia, theses and reports of meetings and committees (Yong-Ja Cho, 1977). The importance of periodicals as a source of information can be monitored regularly by the technique of citation analysis (Garfield, 1974).

Applied to veterinary science, this method shows that 82% of the information utilized between 1970 and 1974 came from periodicals (Yong-Ja Cho, 1977). Among the 743 periodical titles cited, 70 (or 9.4%) accounted for 66% of the citations. This demonstrates the importance of a limited number of journals, and the wide range of other veterinary journals which would have to be cited for exhaustive coverage. A graphical representation of this phenomenon has been derived from the response of five bibliographical retrieval systems to 30 questions (Brodauf et al., 1977, 1978) (Fig. 1).

The technique of citation analysis provides information on the periodicals fundamental to a given scientific field by examining the references cited, and the articles which cite them. Such a bibliographical tool has been developed by the Institute for Scientific Information (ISI) (d7) from the Science Citation Index. The latter analyses 76 basic veterinary journals (Garfield, 1982).
The five veterinary journals cited most often (51% of the total) were:

- *Journal of Animal Science* (USA)
- *American Journal of Veterinary Research* (USA)
- *Veterinary Record* (UK)
- *Journal of the American Veterinary Medical Association* (USA)

By the same technique, the obsolescence of an article can be traced by means of the number of times it is cited. Such obsolescence can be measured in terms of half-life, which ranges from 6.1 years (Yong-Ja Cho, 1977) to 7.5 years (Houston, 1983).

Three principal lists of veterinary periodicals are:

- *Periodika der Veterinärmedizin und ihrer Grenzgebiete* (Dokumentationstelle für Veterinärmedizin, Freie Universität Berlin, 1971) which lists 2051 titles of periodicals.

- *Veterinary serials: a union list* (2nd edition, 1985) produced by the Veterinary Medical Libraries Section of the Medical Library Association (USA).
• "List of serials scanned" which used to be published annually in *Veterinary Bulletin* (January issue), and which indicated the periodicals available in the library of the Central Veterinary Laboratory, Weybridge, UK. The evolution of this list showed a constant increase up to the final edition of 1984 (Fig. 2).

![Graph showing the evolution of the number of periodicals quoted in *Index Veterinarius* and articles analysed in the *Veterinary Bulletin*](image)

**FIG. 2**

Evolution in the annual number of periodicals quoted in *Index Veterinarius* and articles analysed in the *Veterinary Bulletin*.

This list has been replaced to some extent by *CAB Serials Checklist* of 1983, which covers all units of the organization.

By using the *Veterinary Bulletin* list and the lists provided by *Ulrich's International Periodical Directory* and by Houston (1983), it is possible to depict graphically the evolution of the number of veterinary periodicals from 1850 to the present (Fig. 3).

**REVIEW ARTICLES**

This category comprises publications, mostly published annually, which review recent progress in selected subjects. The best known is *Advances in Veterinary Science and Comparative Medicine*, published by Academic Press (d1) in the USA. There are other publications in the fundamental sciences, such as *Annual Review of Microbiology* (Annual Review Inc.) and *Critical Reviews* of CRC Press Inc.

Review articles also appear in the traditional British periodicals such as *Veterinary Record* (f5) and *British Veterinary Journal*, as well as abstract journals like *Veterinary Bulletin* and *Pig News and Information* (k6).
En France, there is an increasing trend to publish reviews, notably in the special numbers of *Recueil de Médecine vétérinaire*.

**ENGLISH-LANGUAGE PERIODICALS**

The principal veterinary periodicals can be classified according to the type of audience they are aimed at:

- **General periodicals**, the most widely distributed being *Veterinary Record* (Great Britain) and *Journal of the American Veterinary Medical Association* (USA).

- **Research periodicals**, such as *American Journal of Veterinary Research* (USA), *Canadian Journal of Comparative Medicine* (Canada), *Research in Veterinary Science* (Great Britain), *Veterinary Science Communications* (Netherlands), and *Acta Veterinaria Scandinavica* (Denmark, Norway, Sweden and Finland). These periodicals are generally published sponsored by national or international research organizations.

- **Species-orientated periodicals**, such as *Avian Diseases*, *Equine Veterinary Journal*, *Journal of Fish Diseases*, etc.
- Periodicals for specific disciplines. Table II shows the principal specialist periodicals which publish articles of veterinary interest in the fields of microbiology, immunology, parasitology, tropical medicine, preventive medicine and epidemiology.

**Table II**

Principal specialist periodicals of veterinary interest, classified by subject

<table>
<thead>
<tr>
<th>Subject</th>
<th>Title</th>
<th>Country of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Microbiology</strong></td>
<td><em>Acta Virologica</em></td>
<td>Czechoslovakia</td>
</tr>
<tr>
<td></td>
<td><em>Annales de Virologie</em></td>
<td>France</td>
</tr>
<tr>
<td></td>
<td><em>Archives of Virology</em></td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td><em>Comparative Immunology, Microbiology and Infectious Diseases</em></td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td><em>Journal of Applied Bacteriology</em></td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td><em>Journal of Bacteriology</em></td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td><em>Journal of Biological Standardization</em></td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td><em>Journal of Infectious Diseases</em></td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td><em>Journal of Virological Methods</em></td>
<td>Netherlands</td>
</tr>
<tr>
<td></td>
<td><em>Reviews of Infectious Diseases</em></td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td><em>Revista Latinoamericana de Microbiología</em></td>
<td>Mexico</td>
</tr>
<tr>
<td></td>
<td><em>Veterinary Microbiology</em></td>
<td>Netherlands</td>
</tr>
<tr>
<td></td>
<td><em>Zentrablatt für Bakteriologie, Mikrobiologie und Hygiene</em></td>
<td></td>
</tr>
</tbody>
</table>

| **Parasitology** | *Annales de Parasitologie Humaine et Comparée*               | France                     |
|                  | *Journal of Parasitology*                                   | USA                        |
|                  | *Parasitology*                                              | UK                         |
|                  | *Veterinary Parasitology*                                   | Netherlands                |

| **Immunology**   | *Annales de l'Institut Pasteur*                             | France                     |
|                  | *Clinical and Experimental Immunology*                     | UK                         |
|                  | *Developmental and Comparative Immunology*                 | UK                         |
|                  | *Immunology Letters*                                       | Netherlands                |
|                  | *Infection and Immunity*                                   | USA                        |
|                  | *International Archives of Allergy and Applied Immunology* | Switzerland                |
|                  | *Journal of Immunological Methods*                         | Netherlands                |
|                  | *Veterinary Immunology and Immunopathology*                | Netherlands                |

| **Tropical medicine** | *Annales de la Société Belge de Médecine Tropicale* | Belgium                   |
|                       | *Revue d'Élevage et de Médecine Vétérinaire des Pays Tropicaux* | France |
FRENCH-LANGUAGE PERIODICALS

The Medical Library Association (1977) recommended subscription to the following:

- Revue de Médecine vétérinaire (France),
- Bulletin de l’Office International des Epizooties,
- Recueil de Médecine vétérinaire (France),
- Bulletin de l’Académie vétérinaire de France (France).

It should be pointed out that French veterinary periodicals are not often cited and are not often abstracted. As mentioned above, the ISI (d7) included only 3 French-language titles in its list of 76 basic veterinary periodicals.

According to an investigation carried out by Jetté (1979) on the citation of articles in French in Veterinary Bulletin and Index Veterinarius during 1977, ten French-language journals are the most often abstracted (Table III).

However, the following remarks are pertinent:
- The OIE Bulletin has given epizootiological information since 1982 and is published parallel to the OIE Revue scientifique et technique. The former Bulletin was not strictly a French-language periodical because it also contained articles in English and Spanish.
- Periodicals published outside France often carry articles in French.
- French periodicals publish some articles in English, particularly those devoted to research such as Annales de Médecine vétérinaire and Revue d’Elevage et de Médecine vétérinaire des Pays tropicaux.

A computerized search on the names of periodicals contained in the file “CAB Abstracts” for the period from 1980 to 1983 is shown in Table IV.

PERIODICALS IN SPANISH

The editorial activity of Spanish speaking countries is, in general, more oriented towards animal production than to animal health. Nevertheless, the main journals concerning these sectors are regularly cited in the subfiles of CAB (k6).
**TABLE III**  
Frequency of citation of French-language periodicals in *Index Veterinarius (IV)*, and abstracted in *Veterinary Bulletin (VB)* after Jetté (1979)

<table>
<thead>
<tr>
<th>Order</th>
<th>Title of periodical</th>
<th>No. of articles listed in IV</th>
<th>No. of articles abstracted in VB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Bulletin de l'OIE</em></td>
<td>86</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td><em>Revue de Médecine vétérinaire</em></td>
<td>83</td>
<td>34</td>
</tr>
<tr>
<td>3</td>
<td><em>Recueil de Médecine vétérinaire</em></td>
<td>80</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td><em>Animal de Compagnie</em>**</td>
<td>41</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td><em>Annales de Médecine vétérinaire</em></td>
<td>40</td>
<td>17</td>
</tr>
<tr>
<td>6</td>
<td><em>Bulletin de la Société vétérinaire Prat. France</em></td>
<td>40</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td><em>Comptes Rendus de l'Académie des Sciences</em></td>
<td>31</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td><em>Bulletin de l'Académie vétérinaire de France</em></td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>9</td>
<td><em>Revue de l'Elevage et de Médecine vétérinaire des Pays tropicaux</em></td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>10</td>
<td><em>Bulletin de la Société vétérinaire et de Médecine comparée de Lyon</em>***</td>
<td>20</td>
<td>7</td>
</tr>
</tbody>
</table>

* Since 1982 the *OIE Bulletin* has become a monthly, trilingual publication containing, essentially, the statistics for new outbreaks of contagious diseases of animals and their epidemiology, while the *Revue scientifique et technique*, also trilingual, appears quarterly and is devoted to review articles and original articles.  
** Now known as *Pratique médicale & chirurgicale de l'Animal de Compagnie*.  
*** Now known as *Sciences vétérinaires et Médecine comparée*.  

**TABLE IV**  
Number of citations of articles appearing in five French periodicals, in the CAB Abstracts data base between 1980 and 1983

<table>
<thead>
<tr>
<th>Periodical</th>
<th>Subfiles</th>
<th><em>Veterinary Bulletin</em> + <em>Index Veterinarius</em></th>
<th>All subfiles of CAB*</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Recueil de Médecine vétérinaire</em></td>
<td>352</td>
<td>1318</td>
<td></td>
</tr>
<tr>
<td><em>Revue de Médecine vétérinaire</em></td>
<td>265</td>
<td>817</td>
<td></td>
</tr>
<tr>
<td><em>Annales de Recherche vétérinaire</em></td>
<td>217</td>
<td>1058</td>
<td></td>
</tr>
<tr>
<td><em>Revue de l'Elevage et de Médecine vétérinaire des Pays tropicaux</em></td>
<td>140</td>
<td>817</td>
<td></td>
</tr>
<tr>
<td><em>Bulletin de l'Académie vétérinaire de France</em></td>
<td>117</td>
<td>576</td>
<td></td>
</tr>
</tbody>
</table>

Note that up to 1984 there was some duplication of entries between different subfiles of CAB Abstracts, and this may be reflected in the figures in the right-hand column.
By way of information, 21,729 articles in Spanish were analysed in these subfiles from 1980 to November 1985. This number could be compared to the 602,662 references in English, 61,425 in Russian, 54,479 in German and 39,261 in French (R. Mack, personal communication).

In the Spanish speaking countries, the main veterinary publications are edited in the frame of university or scientific institutions and professional associations:

**Argentina:** *Analecta veterinaria* (La Plata)  
*Gaceta veterinaria* (Buenos Aires)  
*Revista de Medicina veterinaria* (Buenos Aires)  
*Veterinaria Argentina* (Buenos Aires)

**Colombia:** *Revista del Instituto colombiano agropecuario* (Bogota)

**Costa Rica:** *Ciencias veterinarias* (Heredia)

**Cuba:** *Revista Cubana de Ciencias veterinarias* (La Havane)  
*Revista de Salud animal* (La Havane)

**Spain:** *Anales de la Facultad de Veterinaria* (León)  
*Anales del Instituto nacional de Investigaciones Agrarias, Series: Ganadera* (Madrid)  
*Hygia Pecoris* (Madrid)  
*Medicina veterinaria* (Barcelona)

**Equador:** *Veterinaria ecuatoriana* (Quito)

**Mexico:** *Veterinaria* (Mexico)

**Paraguay:** *Veterinaria* (Asunción)

**Uruguay:** *Veterinaria* (Montevideo)

**Venezuela:** *Revista de la Facultad de Ciencias veterinarias* (Maracay)

Whilst periodicals in Spanish consecrated to animal production in general or to a particular species are numerous, there are hardly any specialist journals in the strictly veterinary disciplines. Nevertheless, as in other languages, some specialist journals contain articles of veterinary interest, such as:

- *Archivas de Anatomía y embriología* (Madrid, Spain)  
- *Revista ibérica de Parasitología* (Grenada, Spain)  
- *Revista latinoamericana de Microbiología* (Mexico City, Mexico).

**PERIODICALS OF INTERNATIONAL ORGANISATIONS**

The different periodicals of international organisations can be distinguished by their editorial form, the rate of publication and their linguistic expression.

As previously indicated, the OIE (k2) publishes the monthly *Bulletin* in three languages (English, French, Spanish) and the *OIE Scientific and Technical Review*, published quarterly, comprising original articles, normally in one language, as well as reviews and reports of meetings and conferences, in two or three languages.

The FAO (k3) also publishes a quarterly review in English, the *World Animal Health Review*, which contains articles on animal health and production. It also exists in French and Spanish.

The WHO (k4) covers questions on public veterinary health in a popular review entitled *World Health Forum*, which is available in six languages. Its main scientific
publication is the *Bulletin of the World Health Organisation* in which articles are published in English or French. The *International Digest of Health Legislation*, with its English and French editions, is the only periodical devoted to sanitary legislation texts of international interest. It is also fitting to mention the quarterly *Bulletin of the Pan American Health Organisation*, distributed in English and Spanish editions.

In Africa, ILCA (k9) also publishes two quarterly periodicals, the *ILCA Bulletin* and *ILCA Newsletter*, as well as the fortnightly *Liaison Office Information*. Finally, the OUA/IBAR produces the quarterly *Bulletin of Animal Health and Production in Africa*, which contains original scientific articles in English and French.

**CONCLUSION**

The publication of books and periodicals in the veterinary field is, for the main part, in English. This can be explained by the significant number of potential readers throughout the world. This situation has not escaped the attention of some editors in European non-English-speaking countries (the Federal Republic of Germany, the Netherlands, Switzerland) who have greatly developed production in the English language for distribution world-wide. Whilst periodicals and books in languages other than English are less numerous, analysis of several bibliographic indexing systems shows that they hold a considerable place among the documents listed and quoted in the international scientific community. This illustrates the necessity for linguistic plurality.

Two phenomena intervene in counterpoint in what could appear to be a linguistic barrier:

- The importance of translations, which are considerable, in all the (mostly private) editors' catalogues.
- The emergence of a practice of co-publication by scientific organisations which ensures, by different methods, the availability of a publication in several languages.

The practice of associating several scientific groups indisputably enables a better diffusion of scientific and technical information in this sector.

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