



Nature, categories and sources of Grey Literature of potential value in tropical agricultural research

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Abstract

This article highlights the result of an investigation into the nature, categories and sources of grey literature used by researchers and scientists in tropical agriculture. The nature, categories and sources of grey literature was studied by direct examination of typical copies on the shelves of the International Institute of Tropical Agriculture library. Finding showed about 858 types of grey literature including the following: Annual & biennial reports; commissioned study; conference proceedings; confidential reports; consultancy reports; contract reports; experimental reports; feasibility studies; occasional papers; project reports; research bulletins; research highlights; seminar & workshop reports; statistical data (unprocessed); technical communications; technical notes; technical reports; theses and dissertations. At a broad level of categorization, 18.2 percent of the grey literature was technical reports; 27.6 percent were conference proceedings; 24.4 percent were annual reports; 8.2 percent were theses and dissertations; 22 percent represent other types. 770 diverse sources of grey literature were identified, including consultancies, foundations, government departments, international organizations and agencies, research institutes and stations, societies, associations and universities.

Introduction

Communication of agricultural information involves a transfer of information among professional scientists, researchers, extensionists, administrators, and the public at large. Whatever new information, knowledge or technology is generated through research and development effort has to be disseminated to other users. Transfer of agricultural information enable research colleagues and other users to exploit the latest knowledge, identify important problems, avoid unnecessary duplication of previous research, and apply the most appropriate methodologies among other important purposes.

Lancaster and Beecher (Buntrock, 1980) described the uniqueness of agricultural information using four characteristics: it is extremely interdisciplinary, characterized by universalities, has diverse levels of treatment and presentation and has "fugitive" information sources. This later peculiarity: the fugitive nature of agricultural information sources has been attributed to two causes: first, the fact that almost every country in the world produces agricultural information; and secondly, the fact that unlike other subject fields, a

considerable proportion of agricultural information appears in non-conventional formats. Such literature is known by varied terminologies including: fugitive, informal, invisible, not commercially published, unpublished, non-conventional and grey literature. The most widely accepted terminology is "grey literature" (Posnett and Baulkwill, 1982). Grey literature means different things to different people. Weintraub (2000) refers to grey literature as publications issued by government, academia, business and industry, in both print and electronic formats, but not controlled by commercial publishing interests, and where publishing is not the primary business activity of the organization. Lambert, Matthews and Jones as cited by Sen (2008) is of the view that the definition of grey literature needs narrowing for particular context, and such refinement should be "information produced in a specific working context which is, or might be of value outside that context". For the purpose of this article, grey literature shall be taken to mean: "Literature that is produced and issued by diverse non-conventional publication channels and which is therefore difficult for libraries to identify, obtain, and

process" (Osaniyi, 1990). An important aspect of this definition is the use of the term "produce" rather than "publish" which in the case of grey literature is a misnomer.

Grey literature is a means of disseminating information, knowledge, and expertise, providing support for research process and offering information that is not found in more conventional sources. In a world where instantaneous communication has eliminated many of the barriers to information flow, grey literature is gaining greater importance as a source of information. It is an indispensable resource and will undoubtedly continue to serve as a necessary supplement to journal literature well into the future. Auger

(1989) pointed out the advantages of grey literature over other means of dissemination as including quick access, greater flexibility, and the opportunity to go into considerable detail when necessary. Thus, grey literature, covering nearly every aspect of the sciences, serves scholars and lay researchers alike with research summaries, facts, statistics and other data that offer a more comprehensive view of the topic of interest. Such literature is not obtainable through normal booksellers' channels; distribution is not organized; it is produced in limited quantity and it is not subject to rigorous quality control either of content or at the production stage. Much of the information contained in grey literature may never appear in any other form. In cases where there are published versions, useful data and methodology details are often omitted. Therefore the unpublished version and the published work can be equally valuable because they satisfy different scientific requirements. Making similar comment on the value of grey literature, Chillag (1982) maintained that much knowledge and information would never appear in a form other than grey literature and if there was no special effort made by specialized secondary services and documentation centers which could provide copies of wanted grey literature documents, the material would be lost forever. There is, however, the contrary opinion that grey literature has only a passing value and everything worthwhile will eventually appear in published literature. This later argument does not take into consideration the sustained crisis in the information sector in the developing countries. It is widely believed that the proportion of non-conventional agricultural and development literature is highest in developing countries and that it sometimes provide even the only genuine information source or the most valuable. Aina as cited by Sturges (1994) in fact suggest that in Africa as much as 98 percent of development literature can be in grey literature form. This situation is attributed to the extremely limited

capabilities and resources both human and financial, to devote to the production of scientific and technical information in developing countries. Sturges further suggests that development literature globally was 60 percent grey literature, and the proportion was certainly higher in the information output of the poorer regions of the world. Chillag (1982) estimated the quantity worldwide in all subjects at about 100,000 – 200,000 documents a year. In the agricultural discipline, grey literature was estimated at about 20,000 documents a year. Opening the 1st plenary session of the 2nd international conference on grey literature in Washington, D.C., Julia Gelfand defined the web as the "new classical grey literature" (Siegel, 2004). The pervasiveness of grey literature plays a major role in agricultural research as a means of disseminating information, knowledge, and expertise, providing support for research process and offering information that is not found in more conventional sources.

If, therefore the staggering volume of valuable information contained in grey literature is to contribute to improving the progress and well-being of Africa and indeed of developing countries, it is important to devise an efficient means whereby identification, collections, processing, and storage can be systematic and made accessible to potential users.

Nature of Grey Literature

Weintraub (2000) identified grey literature in the biological sciences as including book chapters, taxonomic keys, papers from meetings and symposia, and reports, bulletins distributed by agricultural experiment stations and the cooperative extension services, report on new innovations in agriculture and food research. Another important description of the nature of agricultural grey literature has been made by Wood (1974); Mei, as cited by Baulkwill and Posnett (1978) and for non-conventional scientific literature in general by Holloway (1976). Wood identified characteristic features of grey literature as cheap binding, limited distribution and accessibility, lack of sales organization, speedy publication, presence of detailed research results, and non-coverage by established secondary journals. Mei referred specifically to types of grey literature in agriculture as including economic surveys, feasibility studies, development project reports and enquiries, especially those issued under technical aid to developing countries. He also pointed to the absence of powerful distribution networks and emphasized that distribution is more often related to the power of networks than to a document's value to users. Posnett and Baulkwill (1978) enumerated common characteristics

associated with grey literature. These can be grouped under purpose, frequency, originator or source, format, print run, number of users, channels of distribution, and accessibility. Individually, these characteristics do not constitute non-conventionality but in combination, they determine the place of a document on the non-conventional spectrum.

In general, grey literature often has a distinctive appearance, usually with typed / mimeographed text, poor quality paper and stapled covers. Sizes vary enormously from leaflets of a few pages to bulky volumes. Many types of binding are commonly used, including spiral binding, ring binding, side wire stitching, hard cover binding and soft cover binding.

Categories of Grey Literature

Posnett and Reilly (1986) identified two categories of literature that appear in non-conventional forms as research literature and development literature. They distinguished research literature from development literature in the sense that development literature very seldom reaches a fully published stage in journals or books unless in exceptional circumstances. Also, development literature is sent to limited clientele while extension and research literature is issued in large numbers.

Another dimension for categorizing grey literature has to do with purpose of the publication. In this regard Griffin (1982) identified technical and promotional types of grey literature. Promotional publications are part of public relations' efforts to give information on activities. Organizations are concerned about keeping the scientific community and the public at large aware of their activities, while technical publications formally state results of or progress with research or development activities. Specifically, in agricultural organizations, grey literature can be categorized by source or originator. Usually, information is available from two sources: internally or externally. In all agricultural research organizations, information is either internally generated, that is produced by the organization itself or generated from outside sources. Internally generated information is more reflective of an organization's research activities and interest than that generated externally.

The following list constitute some of the forms of literature normally considered grey in agricultural libraries: Annual Reports, Conference proceedings (unpublished), Consultancy reports, Feasibility studies, Project reports (preliminary, progress or final), Research bulletins, Research highlight, Seminar and Workshop reports, Statistical data (unprocessed), Technical Communications, Technical reports, Theses and dissertations, and

Unpublished experimental reports. It is important to note that not all titles in these forms are necessarily grey literature. For example, many official publications are commercially available, just as some conference proceedings and technical reports are published as books or periodicals. On the other hand, some annual reports are so well produced and well known within research circles that they are made less obscure and could be mistakenly regarded as conventional publications whereas they are still grey literature. This situation has been attributed to the level of documentation attained in the country of origin or the resources available to the producing organization.

Methodology

From this writer's personal observation and experience with the collection at the International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria, it is clear that a high proportion of the collection consists of informally published literature. IITA is part of a network of non profit, international agriculture research centres currently supported by the Consultative Group on International Agricultural Research (CGIAR). It has a mission to increase the productivity of key food crops and to develop sustainable agricultural systems that can replace bush fallow, or slash and burn cultivation in the humid and sub humid tropics. In pursuance of this mission, the library and documentation centre of IITA is faced with the acute challenge of acquiring, organizing and maintaining a tremendous range of literature pertinent to research and training activities of the institute. The library is said to have the largest tropical African agriculture collection in Africa. For effective identification of grey literature a working definition earlier proposed for a previous study was applied: "Literature that are produced and issued by diverse non-conventional publication channels and which are therefore difficult to identify, obtain and process" (Osaniyi, 1990). This definition was applied in the physical examination of documents on the shelves of the IITA library as well as in the screening of all the scientific publications emanating from IITA as listed in issues of the IITA annual report from 1985 to 2005. The screening was done to find out what categories of grey literature was used in the course of writing journal articles, reviews, conference papers, books, pamphlets, etc as shown in the references cited or bibliographies at the end of each work.

Observations

Following the physical examination of the collection of the IITA library, brief description of observations made on the categories of grey

literature that are valuable in tropical agriculture is given below: **Annual Reports:** Many research organization funded by government and donor agencies prepare annual reports. Also, units of an organization may prepare annual reports for top management. Such reports summarize the work of the unit. Annual reports are very useful documents with some of them covering important information about the organization's work and programme, staff, addresses, and results of research and important current projects not yet formally reported.

Conference Proceedings or Reports: Technical and scientific conferences and seminars are organized primarily to present the current status and a progress report on specific subjects. Conference proceedings contain a mixture of reports of research and development work carried out, or state-of-the-art reports, or policy documents, or reports of discussions at conferences. The content of research development reports may be on various subjects although all bear on the theme of the conference. Some may be preliminary drafts of papers which will later appear in a recognized series.

Technical Reports: These give the results of scientific investigation. They formally state the result of or progress made with some research investigation and, where appropriate, draw conclusions and make recommendations. They are usually more detailed than articles or papers appearing in a journal or presented at a meeting. They are initially submitted to the body for which the work was done. Some are covered by restrictive markings and others are subject to controlled distribution by their originators. Technical reports are usually in numbered series and provide one of the quickest channels for the dissemination of scientific and technical information.

Theses and Dissertations: These present the outcome of supervised research and research result. They are prepared as a condition for the award of higher degree or diploma. They are important sources of original information on new research. The extensive bibliographies usually included are valuable sources of information on related topics..

Committee Reports: These can often be useful sources of information, especially if the committee has been set up to conduct a special investigation. Specialists papers submitted to the committee are sometimes included as annexes to the report. Committee reports usually do not have reference

numbers and will often be identified by the name of the chairman of the committee.

Progress Reports: The most up-to-date information on current work on project may be found here. Not all progress reports will have permanent value because later reports in the series may not confirm all the results presented in earlier progress reports. If there is little new to report on technical matters, a progress report may consist only of financial and personnel details. If a piece of research is discontinued before the final report is prepared, a progress report may be the only information available on the work done on the project.

State-of-the-Art Reviews: These are essentially summaries of the state of knowledge on a topic and are usually written on subjects which are at the time undergoing rapid development. They can simply be a commentary on a subject with a number of relevant references which are at the time undergoing rapid development. These reports are most sought after by researchers taking on new projects. They can simply be a commentary on a subject with a number of relevant references which has come to the notice of the compiler. They give valuable introduction to recent literature on the subject and probably indicate the directions in which new advances are likely to be made.

Sources of Grey Literature

The source of grey literature is an important guide to its conventionality, i.e., it commonly indicates whether the material is easily obtainable or not. By the very nature of grey literature, the sources are numerous. Within agriculture, international organizations and agencies, research institutes and stations, government departments, universities, foundations, professional societies and associations, consultancies are the major sources of grey literature. Osaniyi (1990) identified 770 sources of grey literature in a study at the International Institute of Tropical Agriculture library, which is believed to contain the largest agricultural collection in sub-Saharan Africa. Of these sources (table I), 48 (or 6.2 percent) are international organizations. These include United Nation agencies, e.g. Food and Agricultural Organisations: United Nations Development Programme; United Nations International Cultural and Educational Fund: and the World Bank. Also included in this category are development agencies such as the Canadian International Development and Research Centre and regional organizations such as the Organization of African Unity. Research institutes and stations constitute 455 (or 59.2 percent) of the sources. The term research

institutes as used include national research institutes and stations as well as the international research centers such as those under the aegis of the Consultative Group on International Agricultural Research. A further 130 (or 17.1 percent) are universities. Government departments and agencies constitute 82 (or 10.6 percent), while the remaining 55 (or 6.9 percent) were professional associations, societies, and foundations.

Problems of Identifying and Collecting Grey Literature

The inaccessibility of grey literature is notorious and is one of its significant characteristics. The degree to which documents are publicized by their producers or signaled by information documentation services determines the extent to which the title becomes known. The situation is much more deplorable in Africa due to the existing poor state of bibliographic control and the publishing industry. Access to many important grey literature documents is still a major problem in Africa in spite of the efforts of the International Information System for the Agricultural Science and Technology (AGRIS). The AGRIS coordinating centre (The Food and Agricultural Organization, FAO, Rome) has formally approached the governments of many countries and multinational organizations to establish ways and means of ensuring the acquisition, processing and dissemination of non-conventional literature with other publications. AGRIS receives input from national centres in countries that have agreed to cooperate in the programme. These centres assume responsibility for identifying those documents produced in their own country for input into the system. This objective cannot be fully achieved in Africa because of inefficient methods of locating grey literature by national processing centres. The problem of the national processing centres is compounded by ineffective legal deposit laws. Problems do arise in obtaining copies of grey literature from security restrictions also and from the limited number of copies issued since the material might be intended for only a few readers. Balakins as cited by Sturges (1994) also found that officials deliberately hoard grey literature because they hoped to derive financial advantage from its release to enquirers. With the advent of the World Wide Web in the last decade, more and more shifted from print media to forms of electronic distribution. The ease of acquiring access to web documents easily outstrips that of acquiring other grey literature. This may, in part, account for the enthusiasm towards the practice of cataloguing the web.

Conclusion & Recommendations

The greatest challenge involved with grey literature are the process of identification and acquisition, since there is limited indexing and availability is usually marred with uncertainty. Added to this is the absence of editorial control, raising questions about authenticity and reliability. Despite these considerations, sourcing for grey literature remains an issue that academic and research libraries must contend with.

As first step toward increased attempt to collect, catalogue and house grey literature this writer is in support of developing strategies to capture that which is produced locally by each institution as suggested by Siegel (2004). That library within each institution should capture as much of this locally produced scholarly literature as possible. This can be done by assigning liaison officer / staff to the probable centers or units which produces grey literature on campus. It will be the responsibility of the liaison officer or staff to maintain awareness of any report or other types produced by those units and to collect them, regardless of format. Once this kind of house keeping is in order, a library is then positioned to consider a more broad based community / regional grey literature collection. The collection of locally produced grey literature should be given more emphasis due to their relevance as suggested by Osaniyi (1990) who found that locally produced grey literature are used more. In addition, libraries ought to embark on diligent collecting effort through direct contact with other institutions and individuals who can provide copies of grey literature produced externally. This can be done by soliciting for them as gifts. In response to request for grey literature as gift, producers are always interested in knowing the relevance of such literature and how it would be used by the requesting institution. Where acquisition is by exchange, the requesting institution should be willing to give its valuable publication in exchange for the literature requested.

As part of strategies to foster sustainable development in tropical Africa, there is urgent need to develop a forum for exchanging knowledge and experience among concerned researchers, and professionals in the information services area. This is because the consequences of the emerging grey literature scenario are much the same for information centres or libraries and for the users. Through such forum technical and methodological cooperation shall be established on the production, preservation and dissemination of grey literature in the region. With a rising awareness of its importance, initiatives can also be taken at the level of institutions, universities and even government to make grey literature more visible and accessible.

An example of such initiative is the development of a database of grey literature or specialized bibliography at every producing institution/government agency. Finally, librarians

must be more actively involved in e-content creation of grey resources and hosting them on institutional repositories for open access.

Table I: **Categorization of Sources of Grey Literature Used:**

International Organizations & Agencies	Research Institutes (National & International)	Universities	Govt. Depts. & Agencies	Others
6	116	39	31	192
9	91	33	37	170
13	93	30	18	154
20	155	30	49	254
48	455	132	135	770

References

Baulkwill, W.J. and Posnett, N.W. (1978). The non-conventional literature of tropical agricultural resource assessment and development: its nature, sources, quantity, value and accessibility. In: *Scientific*

information transfer: the editor's role. Proceedings of the First International Conference of Scientific Editors, April 24-29, 1977, Jerusalem. M. Balaban (ed.). Dordrecht, D. Reidel Publishing Company pp. 502-521.

Buntrock, Herbert (1980). General Conclusions on the VIth World Congress, International Association of Agricultural Librarians and Documentalists. *IAALD Quarterly Bulletin*, 25(1): 13

Chillag, J. (1982). Non-conventional literature in agriculture – an overview. *IAALD Quarterly Bulletin*, 27(1): 13

Griffin, J. (1982). Industrial Organisations as producers and users of non-conventional literature. *IAALD Quarterly Bulletin*, 27(1): 18-33

Holloway, A.H. (1976). *Information work with unpublished reports.* London, Andre Deutsch, 302p.

Osaniyi O. O. (1990). *Grey Literature in IITA library: nature, organization and use.* MLS Dissertation, University of Ibadan, Nigeria, 71p

Posnett, N.W.: Baulkwill, N.J (1982). Working with non-conventional literature. *Journal of Information Science*, 5(4): 121-130

Posnett, N.W. and Reilly, P.M... (1986). Non-conventional literature in tropical agriculture and national agricultural bibliography: an assessment. *IAALD Quarterly Bulletin*, 3(10):27-33

Sen, B. (2008). Grey literature for development: some case studies http://opensigle.inist.fr/bitstream/10068/697886/2/GL9%2c_Sen%2c_2008%2c_Conference_Prprint.pdf Accessed on 18 February 2009

Siegel, G.E. (2004). Capturing academic grey literature – starting at home. http://opensigle.inist.fr/bitstream/10068/697886/2/GL5%2c_Siegel%2c_2004%2c_Conference_Preprint.pdf Accessed on 18 February 2008

Sturges, P. (1994). Using grey literature in informal information services in Africa. *Journal of Documentation*, 50(40): 273-290

Weintraub, I. (2001). The role of grey literature in the sciences <http://library.brooklyn.cunny.edu/access/greyliter.htm>. Accessed on 18 February 2009

Wood, D.N. (1974). *Access to primary documents in the field of agriculture, food and related subjects.* FAO/AGRIS 16. FAO, Rome.35p.