SUSTAINABLE AGRICULTURAL DEVELOPMENT IN NIGERIA: EFFECT OF POOR INVESTMENT AND THE CHALLENGES OF AN AGRICULTURAL INFORMATION REPOSITORY

By

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Abstract

The effect of poor investment on the routine responsibilities of acquisition, processing, storage, retrieval and dissemination of current, relevant and documented improved innovations and technologies of an information repository and how this affects the sustainability of agricultural development in Nigeria was examined. Research output and farmers' standard of living were greatly hampered by insufficient or obsolete information. Data gathered revealed government to be the highest investor through it statutory budgetary allocations which is however inconsistent, consequently and significantly affecting institutional structure, acquisition and collection development thereby depleting the existence of current and relevant resources required for advancement. The result of the study revealed that for 10 years, 13% of the total allocation (₦495,444,282.21) was invested on capital project, overhead had 4% (₦184,996,204.00) and 82% (₦3,078,963,566.03) for personnel. The study recommends that investment directly to the information repository will ameliorate problems affecting the repository and empower it to ensure sustainable agriculture through provision of current, consistent and relevant knowledge base resources necessary to facilitate agricultural development.

Keyword: *Agriculture, investment, information repository, budgetary allocation, sustainability*

Introduction

The Library of the Institute for Agricultural Research (IAR), Ahmadu Bello University, Zaria was established with the mandate to contribute literary to the dissemination, acquisition, storage and retrieval of improved agricultural research findings and innovations documented in print, electronic and multimedia (Anonymous, 1984 and Kasa, 2009). This mandate requires huge investment to maintain and sustain the library system in it fit to actualize its mandate of genetically improved crops, animals and technologies to overcome agricultural development challenges identified by dearth of information. The heavy burden necessitated the federal government to decentralize the initial mandate of IAR at inception in 1922, the institute now concentrates its research efforts on the annual crops of the savanna ecological zone from 1975 to date; the other arm for extension and special services components was carved out and granted autonomy to become the Agricultural Extension and Research Liaison Services (NAERLS), and National Animal Production Research Institute (NAPRI), Shika with national responsibility for livestock and pasture research (Yayock, 1987).

Problem Statement

The Institute for Agricultural Research (IAR) thrust from 1975 completely changed to improving income and welfare of arable crop farmers who are mostly small holders, through increased crop production and the reduction of yield losses. Agricultural information repository also called Agricultural library stores all documented evidence of researches findings and farmers' communications to facilitates retrospection for systematic advancement and application. To achieve optimum and sustainability, the library and hitherto agricultural development, poor investment and inconsistent budgetary allocations to the repository is detrimental factor that must be overcome because as it affects directly documentation, generation, production, preservation, accessibility and retrieval research finding on- and off-stations (Yayock, 1984; Kasa, 2009; Tanimu and Ado, 2009). The problems of poor investment and how it affects the roles of the information repository for ten years was undertaken with a view to investigate how improved investment can sustain and maintain the information repository to participate and contribute to agricultural development

through appropriate documentation, access and retrieval in Nigeria.

Research Questions

i. What is the organizational structure of IAR and how is it affected by poor investment?
ii. What is the effect of investment on the acquisition and collection development of the information repository?
iii. Is poor investment detrimental to the mandate and effective service delivery of the information repository?

The Objectives

The broad objective of the study is to examine the activities, achievement of the information repository and how poor investments affects effective dissemination, acquisition and retrieval of documented agricultural information resources in its agricultural sustainability efforts. The specific objectives are to:

i. examine the effect of organizational structure and how it is affected by poor investment;
ii. evaluate the effect of investment on the acquisition and collection development of the information repository; and
iii. find out the detrimental effects of poor investment on agricultural development and depletion of information resources.

Review of Related Literatures

Harnessing different agricultural information resources through the various research mandates has helped to rationalized thereby making it more focus oriented. This organization is attributable to agro-ecologies and economic viability of agricultural produce. Assigning mandates to the different agricultural research institute in Nigeria became embedded in the organizational structure. Uganneya (2001) blamed organizational structure to affect location and dissemination processes that occur before, and up to the point where the information is passed to the farmers, he posited that the gap is adversely affected by poor investment which also deter the acquisition and collection development because of starvation of funds, over concentration on one out of numerous mandates, especially those facilitated by private organization hampers stepping down the innovations and technologies for farmers' comprehension and researchers' retrospection depleting current and relevant information resource. Idachaba (1996) noted that the inability by the agricultural research system to disseminate information is responsible to our agricultural under development. These inadequacies are commonplace in developing countries. Brader (1998) comparing agricultural development in developed and developing countries opined that only 2% of the agricultural development programme is invested in agricultural research and dissemination of findings in developing countries, given the institutional administration and routine operation 0.5% can be invested to acquisition and collection development. But almost 90% of the research budgets go to staff salaries, whereas, fifty percent (50%) of the budget is committed to operational expenditures in developed countries which takes care of acquisition and collection development. Faulting the organizational structure, he said that, the agricultural development and sustainability agenda in developing countries is almost exclusively focused on meeting the immediate food need problems without continuity and tangible information base.

Poor investment has constituted the taking of short-term measures, degrading further the adequate dissemination of information thereby lowering productivity in the longer term. Organizational structure affects documentation processes and collection development when poorly funded. Russell (1984) revealed that agricultural information sustainability is deterred by scarcity and dearth of documented evidence, and Nzotta (1985) supported this to be responsible for the unnecessary duplications of research and waste of resources. Govert (1991) said the dearth also affected agricultural activities conducted locally and internationally.

Adequate investment help to organize institution's activities and ensuring that the various organs function effective and efficiently, but organization with poor investment are very likely to cut cost on research, visits to farmers fields, gathering and proper documentation of findings with value. Tammaro (2006) posited poor investment to affect the access functionalities of information retrieval which requires capability to navigate, possessing virtual space and functional links. She was optimistic that only organization with the right investment can facilitate access by procuring and integrating with modern technologies with access interface and with users. Obsoleteness may be inferred to be lack of new titles, the instruments utilized for the processing, preserving and conservation of information resources may be out of place. Therefore, the repository organs affected by poor investment render it high incapacitated. For instance, Aina (1983) and John (1998) reported that there was an up thrust of resources used by agricultural sectors when compared to other fields and that agriculture has the most prominent areas of research in Nigeria and the world over. The requisite to agricultural sustainability, poverty eradication and food security hinges on availability of adequate information.

Poor investment hampers increasing knowledge that is required by researchers and farmers alike. Gathegi (1994) proposed that knowledge must improve production of products, it is therefore clear that accessibility to agricultural information has a direct relationship to its functionalities. The Agricultural information repository according to Momoh (1979) is the only library with large evolutionary trends of northern Nigeria agriculture and its food sufficiency.

Research Methodology:

Study Area

The research was conducted in the Agricultural Library of the Institute for Agricultural Research, Ahmadu Bello University, Zaria between 1999 to 2008. Data for the study were drawn from primary and secondary sources. Primary data comprised the library recorded resource materials invested and include donations, exchange, and direct purchase or received as interventions from numerous foundations and institutions within and outside the country. The secondary data sources were government budgetary allocations, institutes budgets for the library development collection, staff development and investment on the acquisition of relevant titles for research.

Research Design

The research adopted the principle of factorial design, investment is the factor considered. Steel and Torrie (1960) posited that factorial design give a set of independent comparisons of a type dependent on the choice of treatment and the factor supplies several treatments. For this study, a 1 x 3 design was adopted. Investment represents the factor and the three objectives the levels.

Results and Discussions:

Effect of Organization Structure and Funding

The Institute (IAR) is inter-disciplinary; it has a joint departmental, Faculty of Agriculture and administers the Department of Agricultural Engineering jointly with the Faculty of Engineering of the University. The institute functions as a teaching and research organ of the university, collaborates with other national and international agricultural research institutes. The close working relationship existing is huge and requires resultant investment to service the information and knowledge base requirements of both the faculty and institute. Table 1 gives the breakdown of investment made to the institute, it reveals an inconsistent allocation and sometimes on a steady decline consequently affecting the execution of its mandates (Yayock, 1987; Tanimu and Ado, 2008).

Table 1: Approved and Budgetary Released to IAR (1999 – 2008)

Year	Capital	Personnel	Overhead	Yearly total
1999	10,400,000.00	101,267,868.03	10,642,488.03	122,310,356.06
2000	24,899,377.00	180,143,755.99	10,624,765.00	215,667,897.99
2001	12,988,109.07	245,584,468.00	11,866,999.98	270,439,577.05
2002	41,704,372.00	294,150,005.01	3,318,942.00	339,173,319.01
2003	4,603,903.08	274,828,980.00	2,528,958.00	281,961,841.08
2004	723,907.56	262,102,326.00	1,024,962.99	263,851,196.55
2005	61,250,257.00	319,398,508.00	1,846,011.98	382,494,776.98
2006	28,875,144.50	459,315,051.00	50,739,156.00	488,190,195.50
2007	21,000,000.00	424,186,289.00	63,071,868.00	508,258,157.00
2008	288,999,212.00	517,986,315.00	71,185,180.00	878,170,707.00
Total	495,444,282.21	3,078,963,566.03	184,996,204.00	3,750,518,024.22

Source: Tanimu and Ado, 2008.

The Table shows investment of ₦267,999,212.00 for capital investment and ₦8,113,312.00 on overhead (2007-2008). Unfortunately, the level of government subvention to IAR has not only been inadequate relative to needs, but affects the institute information repository activities because its requirements are routinely lumped with capital subventions. The overall and drastic cut-back in the capital subvention leaves the information repository with virtually no investment for its activities impeding acquisition, collection development and depletion of information resources.

Effect of Investment on the Acquisition and Collection Development of the Information Repository

Several authors evaluated performance of information repositories the world over (Orr, 1993; Winkworth, 1991and Pearlman, 2002), they all agreed that performance should be based on how well by improving, informing and sustaining the system to achieve the literary desire of patrons. The routine activities of the repository is to acquire, process the acquired into its collections and disseminate. This

routines are affected by inadequate funding, invariably the repository activities. The effect include:

a) Failure to subscription of current and relevant information resources for research and teaching.
b) Incapacitated the utilization of the information retrieval services because of broken down equipments.
c) Halted the library digitization activities and inability to procure modern equipment especially ICT oriented.
d) The procureme[illegible] replacement of worn out bounded resources, shelves, sheaf binders, feature cards and book binds was also affected because they have to be suspended.
e) The library could no longer produce its monthly circular of new arrivals and overdue notices. Registration of new memberships began to constitute problems and finally, it has to suspend membership of patrons employed outside the institute, Faculty of Agriculture and the NAERLS who should not be deprived services of the library.

Table 2 shows the effect of inadequate investment and how it affects the acquisition and collection development of the information repository.

Table 2: Detrimental effect of poor investment on acquisition and collection development.

Year	Gifts/Donation	Purchases
1999	15	3
2000	46	2
2001	49	10
2002	43	12
2003	60	3
2004	59	-
2005	118	15
2006	59	20
2007	127	70
2008	05	129
Total	581	264

Table 2 shows that acquisition which enables collection development was only functional from 2007 when the

repository was allocated funds to acquire 70 new resources. For the ten years under review, information resources came in as a result of donations and gifts which were not necessarily new and relevant in the information repository collections. In 2004, for instance, the library could not afford a single resource affecting patronage.

Effect of Poor Investment on Agricultural Development and Enhancing the Depletion of Information Resources

Factors enhancing the performance of agricultural development have been widely reported. Manyong *et al.* (2005) and Idachaba (2005) further established that access to inputs, high demand for products, better extension services, availability of cheap labour, availability of raw materials, availability of transport facilities, good economic climate, availability of qualitative input, improved farming practices, reduction in input prices, availability of skilled manpower, favourable agroclimatic environment and government patronage; out of these information availability and access is the necessary communication chanel for the utilization and operationability of the factors aimed at farmers and research.

Agricultural development is continuous; this requires an evolving information system that facilitate the addition of relevant information resources of resound quality and quantity to overcome the problems of obsoleteness, depletion and duplications of already existing resources. It is only then can the capacity of the information repository to acquire, process, store and retrieve information can serve so effectively.

Conclusion and Recommendations

The concentrated of information available in the agricultural research institution can only be made relevant when investments are made to facilitate generation, documentation and dissemination of the findings. The institutes also need to be informed of what are obtainable elsewhere to avert duplication of efforts, wastage of resources and time. Adequate funding to information repository can afford them to acquire appropriate equipment and resources to disseminate agricultural research findings to researchers and farmers with information prerequisites

to the thrust of research to sustain agriculture, improve income and welfare of farmers, and eradicate poverty, increase food security, sustainability and sufficiency.

The study recommend that appropriate investment executes the required inter-disciplinary and promotions of all agricultural specialist (farmers, marketers and researchers) by making their responsibilities easier as information are made available and accessible to them to achieve the desire of agricultural development.

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