Knowledge Management & Institutional Framework: Kenyan Veterinary Services

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ABSTRACT:

In this paper we introduce the concept of Knowledge Management as an important ingredient in the delivery of Veterinary Services in Kenya and trace the historical perspectives of the development of the veterinary profession in the country with emphasis on the management of the knowledge asset institutional framework. The paper appraises the existing departmental structures against the policy framework; knowledge and technology transfer initiatives, human resource capacities and deployment. A snapshot of national and international co-operation and partnerships as they relate to socio-economic opportunities and international trade is provided. In conclusion the paper proposes knowledge management strategies and critical success factors for the efficient delivery of veterinary services.

Keywords: *Knowledge management, Veterinary profession, Institutional framework*

Background

Veterinary services were first offered in Kenya (then the East Africa British Protectorate) in 1906. The initial mandate of the veterinary department which operated under the Department of Agriculture was to counter epizootic diseases and to protect the exotic herds that belonged to the British colonial settler farmers, from getting infected with indigenous diseases. The initial personnel consisted of five veterinarians and four deputies that were stationed at Nairobi, Nakuru, Nyahururu, Mombasa they worked closely with the Kenya African Regiment (KAR) and the police. The diseases of interest at the time were Contagious Bovine Pleuropneumonia(CBPP), Rinderpest among other endemic tick borne diseases.

From this infant stage the Department of Veterinary Services grew in geographical, animal species and diseases scopes. Today the Department of Veterinary Services is a well established department with an elaborate organizational structure with over three hundred veterinary surgeons and over a thousand support staff in all parts of the country managing the delivery of veterinary services working in collaboration with other ministries, local and international Non-governmental organizations, other governments and development partners in the achievement of its objectives.

Introduction

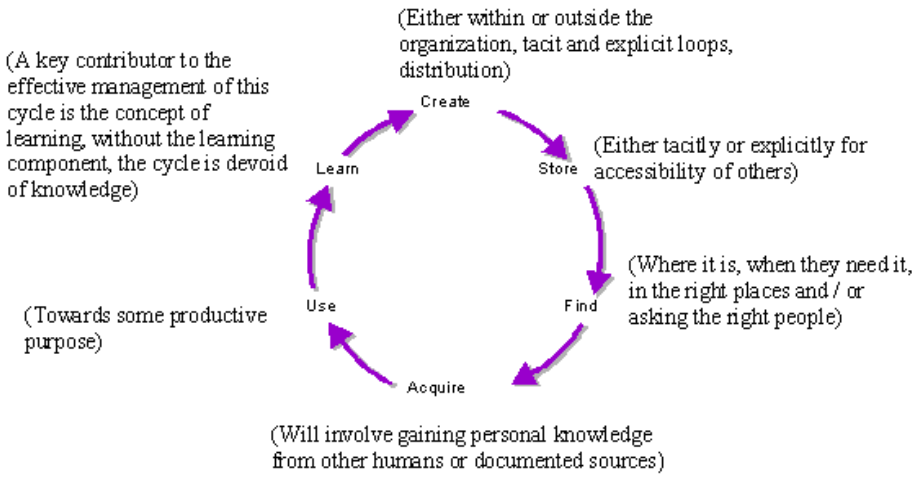
Knowledge is data or information with a further layer of intellectual analysis added, where it is interpreted, meaning attached structured and linked with existing systems of beliefs and bodies of knowledge (Hislop, 2005). Knowledge is a product of human effort (Obtained through education or experience) to digest and gain control of information. Knowledge is therefore a body of information shared by a group of individuals. Simply put, it's the information given meaning and integrated with other contexts of understanding.

Knowledge can be in tacit or explicit forms, tacit knowledge represents knowledge that people posses, but which can't be codified, is largely subjective and difficult to share, while explicit knowledge can be codified, is objective and easy to share. Knowledge both tacit and explicit is embedded in human activities; tasks generate knowledge, must be managed for it to serve its purpose and to grow. Knowledge is at the heart of much of today's global economy, and managing knowledge has become vital to companies (Institutions) success. (Kluge et al, 2001).

Knowledge Management is a concept in which an organization gathers, organizes, shares, and analyzes the knowledge of individuals and groups across the organization in ways that directly improve performance. It is therefore a process through which organizations generate value from their intellectual and knowledge-

based assets. It uses an integrated approach in identifying, capturing, retrieving, sharing/protecting, and evaluating an organization's information assets. Some authors refer to this as the Knowledge life Cycle; this is elaborated in the diagram below.

Figure 1: Knowledge Life Cycle



The objective of knowledge management is to make this cycle more effective as well as more efficient. This implies that knowledge must be made available in forms which are readily accessible (explicit forms). The major challenge is how institutions can systematically exploit all dimensions of knowledge and fully utilize them to improve performance which maybe measured in the forms of revenues, profits and hence realize growth through organizational learning. However many organizations are today drowning in information which is not well managed subsequently starving of knowledge and this underpins the importance of knowledge management. Knowledge is a poorly understood and thus undervalued resource (Burton-Jones, 1999)

In this paper we examine how the department of veterinary services has grown over a century in terms of manpower, institutional capacity and demand for veterinary services; generating substantial information and knowledge on animal health and public health. It puts emphasis on how this knowledge both tacit and explicit has been managed over time. The method of study employed in the development of the paper is basically content analysis of documented reports available at the Central Veterinary Laboratories library in Kabete, and key informant interviews. Additional objective is to identify gaps in knowledge management in the delivery of veterinary services in Kenya and how these gaps would be addressed

Context

The need for veterinary services in the 1900s was necessitated by information that there were endemic diseases among the indigenous stock which would easily be spread to the exotic stock. This information was obtained from observation and through interaction with the Kenyan communities at the time (Mac Owen, 1960). Later on these tentative diagnoses were used to make authentic information and generate a feed back to the colonial administration and the African farmers. For example; the first veterinary pathologist in 1912 observed and reported that: "Disease investigation, initially concentrated upon major epizootics, has led to the gradual building up of a colony wide picture of the diseases of stock."

The above paragraph introduces some principles in knowledge management; namely indigenous knowledge (tacit knowledge), learning through observation, the creation of information, packaging of

information, the dissemination of information and feedback.

The local livestock keeping communities knew how to quantify their herds through local methods of counting, identification using color and size and already a well established data of various animal diseases provided is an evidence of Indigenous knowledge. This knowledge resided in the memories of the indigenous peoples and was therefore highly tacit and was shared through oral communication and field demonstrations during herding of animals. The colonial authorities through observations and interactions with the indigenous people exchanged information on the animal health issues. During this time information that was made explicit was in the form of annual field reports compiled and submitted to the representative of the British Inspectorate based at Nairobi Kabete.

Initial disease targets were Contagious Bovine Pleuropneumonia (CBPP), Rinderpest Endemic Tick-borne diseases. Rinderpest was declared eradicated in May 2009 in Kenya after concerted efforts by the Veterinary Department, the early identification of the disease and the accumulation of literature on the disease maybe attributed to the management of the knowledge relating to this disease.

The other problems identified in the 1900s were the prevalence of tick infestation and the tick borne diseases among the indigenous stock. Measures were immediately put in place by the colonial authorities to carry out regular dipping of cattle. This initial initiative was very successful in controlling ticks and the tick borne diseases and drastically reduced cattle raids that were common following livestock losses, but this brought the challenge of overstocking and subsequent mineral deficiencies (Mac Owen, 1960).

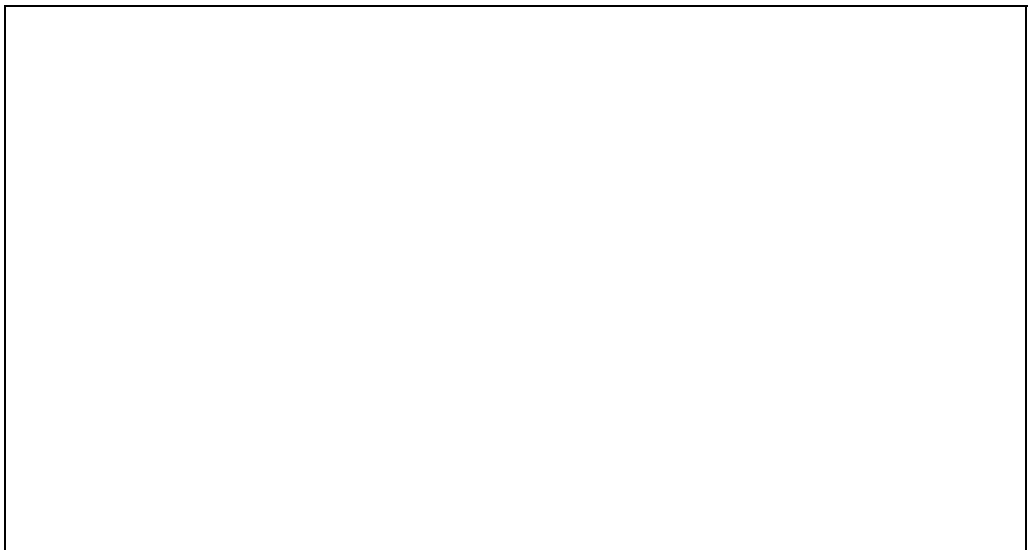
The documentation of these successes and challenges constituted information and knowledge base that formed the foundation of the departmental growth through the accumulation of novel knowledge relevant to the animal health and production sector.

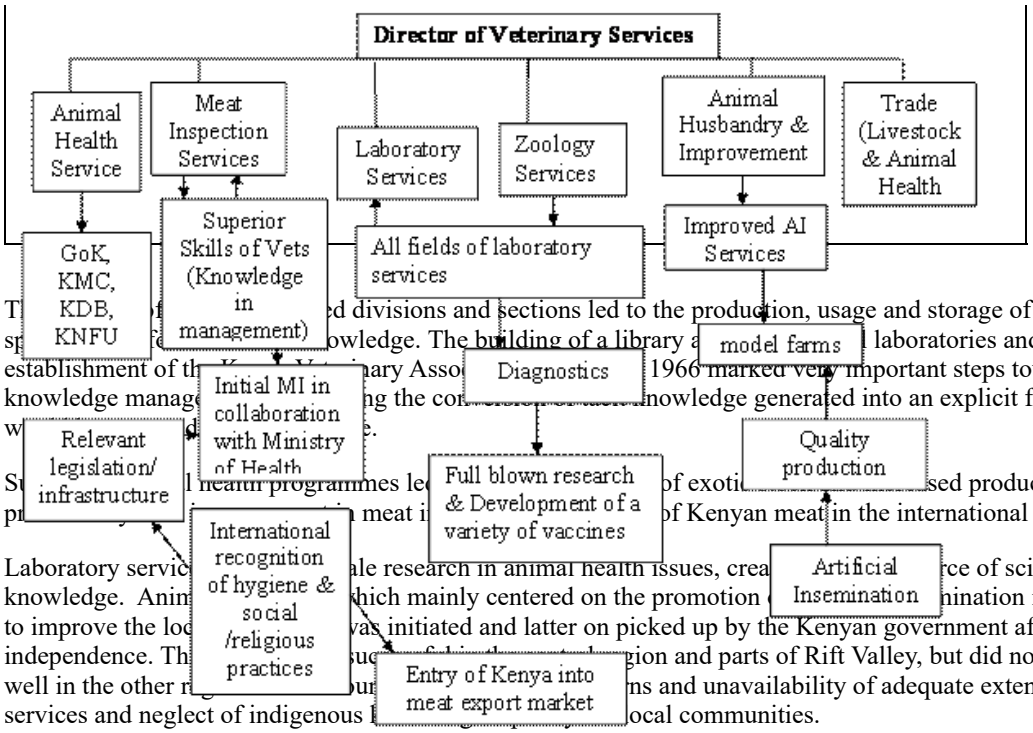
By 1920s substantial information had been generated and shared within the veterinary services realms heightening the demand for veterinary services. By 1937 a fully pledged department of veterinary services was formed, from the department of agriculture to cater for this increased demand for the veterinary services, it was headed by the Director of Veterinary Services. At this time Kenya had degree level trained veterinary surgeons from the Makerere University and the University of Nairobi, who joined the department and were assigned duties based on the specific challenges at hand.

Initially the mandate of DVS included: - Disease control (an activity that further generated knowledge), improve animal production (a direct result of the use of knowledge created and disseminated to farmers through extension services).

The following divisions and sections were created.

Figure 2: Specialized Divisions And Sections Created





T[illegible]d divisions and sections led to the production, usage and storage of sp[illegible]owledge. The building of a library a[illegible] laboratories and the establishment of th[illegible]ary Asso[illegible] 1966 marked very important steps towards knowledge manag[illegible]ng the co[illegible]nowledge generated into an explicit form that w[illegible]e.

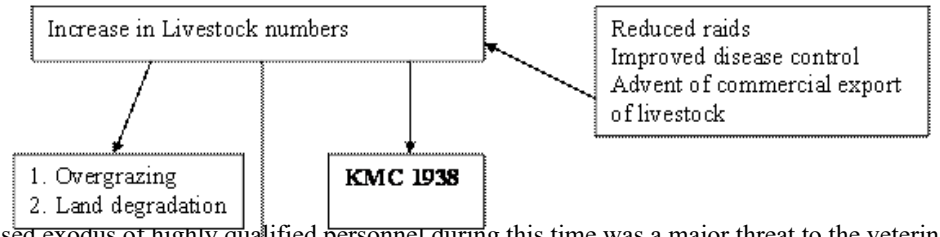
Su[illegible] health programmes le[illegible] of exoti[illegible]sed production and pr[illegible] meat i[illegible]f Kenyan meat in the international market.

Laboratory servic[illegible]ale research in animal health issues, crea[illegible]ce of scientific knowledge. Anim[illegible]hich mainly centered on the promotion [illegible]nination in a bid to improve the loc[illegible]vas initiated and latter on picked up by the Kenyan government after independence. Th[illegible]gion and parts of Rift Valley, but did not pick up well in the other r[illegible]ns and unavailability of adequate extension services and neglect of indigenous [illegible]ocal communities.

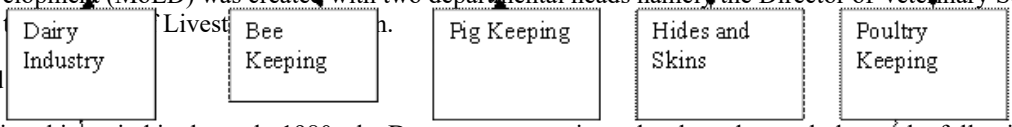
To expand its knowledge base in the animal health industry, Kenya Sought international affiliations with international bodies like FAO, OIE, WHO, WTO. This greatly expanded the knowledge base on issues relevant to veterinary services and as far as access to international markets was concerned and including knowledge on diseases that affect national and international trade.

The diagram below elaborates the relationship between a number of outcomes from identified activities and interventions in the evolving livestock industry including livestock production and international collaboration in manpower development/training and trade that emerged.

Figure 3: Emergent Institutional Structures: Strengthening Trade In Livestock & Products



Increased exodus of highly qualified personnel during this time was a major threat to the veterinary services institutional knowledge/Institutional memory. Between 1963 -75 there was an increase in personnel training to meet the demand including a fully functional Faculty of Veterinary Medicine (FVM). However the domination of the department by agriculture personnel and the resulting personnel clash became a major stumbling block. As a result of these existing conflicts, in 1982 first Ministry of Livestock Development (MoLD) was created with two departmental heads namely the Director of Veterinary Services and t Livest n.



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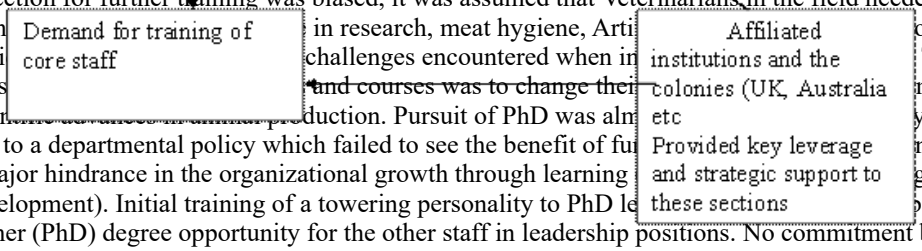
During this period in the early 1980s the Department experienced a slowed growth due to the following reasons.



Selection for further training was biased, it was assumed that Veterinarians in the field needed no further train in research, meat hygiene, Arti ory and meat hygi challenges encountered when in The purpose of the s and courses was to change thei modern scien duction. Pursuit of PhD was alm y not allowed, due to a departmental policy which failed to see the benefit of fu nnel. This was a major hindrance in the organizational growth through learning ge development). Initial training of a towering personality to PhD le pling block for higher (PhD) degree opportunity for the other staff in leadership positions. No commitment by the department to recognition of specialization in deployment of officers demoralized workers. The general practice was not to recognize higher training at degree level (MSc. and PhD) in the deployment of officers to respective sections.

Current Status

Currently the department has the following divisions:- Artificial insemination division, Disease control division, Laboratory services, Project Monitoring Support unit, Administration Division, Training division, Inspectorate Division, Veterinary Public Health Division, Pest and Vector control Division, Extension division.

All animal health research activities of the department were transferred to Kenya Agricultural Research Institute (KARI), which is an autonomous parastatal. The laboratory services were retained in the department under the laboratory division and carries out investigations and diagnostics and limited publications research. The division has six regional satellite laboratory facilities throughout the country and are under the direct control of the DVS

The Veterinary Public Health division previously concentrated on meat inspection but has currently been expanded to cover quality assurance and food safety of all animal derived products and address the theme – one world one health

The division of administration and support unit is composed of non-technical personnel but is very vital for the operations of the department. The division of extension is a newly created division as a result of the realization of the importance of knowledge management. The division handles all the communication activities of the department and also handles animal welfare issues. However the concept of knowledge management needs further emphasis and focus.

Recommendations

The paper recommends the following measures in regard to knowledge management to the department of veterinary services. There is need for strengthening of a two-way flow of information within veterinary services department and between related institutions and organizations. Effective organizational relations/Public Relations in administration, this may be done through the institutionalization of such a division in the organizations framework.

There is need to espouse and implement innovative strategies/address acquisition, adoption of science and technology, by facilitating the creation of an enabling environment that will allow the staff to share knowledge and to experiment. Staff training on Knowledge Management and communication and the dynamics of the veterinary service provision including indigenous knowledge in local communities must be exploited in the implementation of various animal husbandry practices to ensure sustainability of the projects.

The department should strive to convert human capital (Tacit Knowledge) into structural capital (Explicit) to ensure that relevant information is made available to the users of such information in intergenerational arrangement.

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