

Adaptation of Veterinary Services in the Management of Pastoralism

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Citation: Bidjeh Kebkiba and BAN-BO Bebanto Antipas (2016) Adaptation of Veterinary Services in the Management of Pastoralism. J Etiol Anim Health 1: 004.

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Abstract

The introduction of food technology and climate change has contributed to the degradation of natural resources in many areas in Africa. For more than 65% of the African population involved in agriculture, pastoralism is one of the practices best suited. Most pastoralists occupy dry land, or non-balanced environments, traditional farming systems of the past have little impact on resources / pastures or the environment. Mobility allows pastors to seek the best pastures and optimize productivity of their herds. It also represents an essential part of their business strategy. But like any system, pastoralism is confronted with health problems, since the support of veterinary services is often faulty. On the basis of capitalized data today shows that pastoralism is a peaceful way of life, full of freedom in which the breeder freely exercise their profession in harmony with the laws of nature. Pastoral farming generates significant revenues, but the distribution of that wealth or investment in pastors is almost nil. Research in the field of pastoralism for better exploitation of the potential of animals and the improvement of living conditions of pastors are rare because not encouraged and not funded. So that pastors do not have enough information about the health status of animals and men. The adaptation of livestock to local conditions is essential for productivity. Such farms are often more resistant to diseases, drought and pests due to their parallel evolution with this type of pressure. Pastors play an important role not only in the movement of goods and ecosystem services in arid, but also is partly responsible for the introduction or development of diseases in areas of the course. Factors facilitating this process appear to be: water points, pasture and travel. Two categories of professional recently took an important part in the partnership with the breeders' organizations: the holders of pharmaceuticals and livestock auxiliaries. They are present in most African countries where they play an important role in basic veterinary treatment, vaccination, drug distribution and reporting of animal diseases. They are often considered non-professionals, difficult to regulate, control and sometimes incompetent in the use of drugs. Although their presence continues to raise certain reservations, they are a reality that public and private veterinarians are required to take into account. As such, the safety link must develop a new vision for disease control and better management of pastoralism. Non mastery of veterinary practices in this segment of the society promotes a distribution of certain diseases. Improving the nomadic herd's health status through a series of measures incorporating both economic and institutional environment of breeders their level of animal health knowledge. This study aims to describe the role of public and private actors in the provision of veterinary services to pastoralists.

Keywords: Pastoralism; Veterinary services; Livestock assistants; Management; Natural resources.

Introduction

In many countries of the world, pastoral systems are based on a close association between humans, domestic animals and natural environments. They historically contribute to meeting the food, economic and cultural rights of their people. Recent developments of societies (globalization and land pressure) and environments (desertification, climate change) have questioned the interest of the living and production systems. However, new global challenges development, the fight against poor tee, ecosystem preservation, development of arid and ecological intensification of agriculture, reposition these systems in the debate on the identification of new ways of development and new production methods [1].

Indeed, pastoralism or extensive use of collective rangelands for livestock is a fashion essential cultural and economic life of 100 to 200 million people worldwide. Extensive pastoral production systems cover about 25% of the land surface. Many pastoralists are present in Africa and also the Middle East, South Asia and East, South America and Europe. In sub-Saharan Africa, about 16% of the population depend on pastoralism, and in some countries, such as Somalia and Mauritania, pastoralists constitute the majority of the population. Pastoralist communities participate significantly to national economies, the achievement of development goals and maintenance of

Chad, it provides significant support to domestic trade and is essential for foreign trade, 54% of exports [4]. The pastoral livestock long neglected or marginalized, is now at the crossroads of public policy of several Sahelian countries trying to improve their land policy to develop a pastoral water Strategy development to redefine the orientations of Livestock [5]. In fact, Mobility allows pastors to seek the best pastures and optimize productivity of their herds. It also represents an essential part of their business strategy. But as any other farming system, pastoralism is confronted with health problems, since the support of veterinary services is often faulty. The objective of this study is to describe the role of public and private actors in the provision of veterinary services to pastoralists.

Materials and Methods

The study is based on research Imprint. It is doing a synthesis of read journals while highlighting the context of pastoralism, its importance in farming in arid zones, its involvement in the dissemination of emerging animal diseases and animal health services provided to pastoralism.

Results and Discussion

Pastoralism is this peaceful life full of freedom in which breeders freely exercise their profession in harmony with the laws of nature. Thus, the residence of a pastor in one place is not accidental, but reflected depending on the

goods and services of ecosystems collective course. As users of collective course dependent on the supply of many ecosystem services (such as water, food and fodder), pastoralists have a unique knowledge of how to establish and maintain the balance between conservation and sustainable use.

Pastoralism provides a livelihood for tens of millions of people operates in the best arid environments and has many economic and social benefits. However, the policies of African countries tend to favor people sedentarized and marginalize pastoralists while many of they are threatened by drought, fragmentation of pastures, restrictions of mobility and limited access to basic animal and human health services [2]. IN Middle East and Chad, pastoral systems represent 90% and 80% respectively of livestock diversity of dry land [3]. By continuing to manage indigenous livestock, pastoralists maintain not only genetic diversity but also the co naissance Aboriginal health, management and livestock breeding.

Pastoralism is often regarded as an archaic practice, and no future. But this is not the case. This is a highly activity, which requires specialized knowledge and considerable skills. Furthermore, pastoralism contributes significantly to the national economy of many African countries. It represents 44% and 40% of the total value of agricultural production in Mali and Chad respectively; in availability of natural resources (water, grazing). Although pastoralism generates significant incomes, the fact remains that the distribution of that wealth or investment in pastors is almost zero [5]. The farmers receive nothing in terms of service asked (education, human and animal health services, water, etc.). The finding on pastoral environments is a virtual absence of access to services that are essential. And when they exist, they are often inadequate because they are modeled on the sedentary social model.

The pastors are abandoned to their fate facing famine and calamities that decimate bruise them and their animals [6]. The state has no strategy or management of food crises. Often it is improvisation after the damage caused, while strategies and warning systems exist for agrarian and urban communities. In addition, research in the field of pastoralism for better exploitation of the potential of the animals or to improve pastoralists' living conditions is rare because not encouraged and not funded. So that pastors do not have enough information about the health status of animals and men.

Drought, desert encroachment, reducing grazing and poor rains have led pastoralists to develop mobility strategies on longer rays. Pastoralism, by its mobility strategy is thus a strategy of adaptation or risk reduction. In addition, pastoralism for her display throughout the territory, plays an important role in fertilization of agricultural soils and non-agricultural.

Pastoralism is often found in arid, conventionally defined as areas subject to water stress, adaptation of farms to local conditions is essential to productivity. Such farms are often more resistant to diseases, drought and pests due to their parallel evolution with this type of pressure. Thus, although considered to have a limited productive potential, dry lands maintain 46% of global livestock diversity. In the Middle East, 90% of livestock diversity can be attributed to dry land pastoral systems. Pastors play an important role in the movement of goods and ecosystem services in dry land areas. They depend on fodder supplies for feeding their herds and the water cycle in these areas, which lack it. At the same time, their activity involved in the production and stability of ecosystem services. Grazing for example, affects fertility, distribution and diversity of plants and animals scarify seeds in their intestines, and transport them over long distances before they fertilize the soil in which the seeds are deposited. The maintenance of vegetation by grazing contributes to carbon sequestration, reduction of erosion, soil retention and facilitates the water while providing habitat for wildlife. Most pastoral systems are steeped in cultural and indigenous knowledge practices, "cultural services" of high value and often irreplaceable. Pastoralism directly produces a number of goods and services such as meat, milk, fiber, leather, income and means of transport, employment, a savings and insurance system.

Traditional management systems of dry lands in Africa must be adaptative to changes and uncertainty. The knowledge of pastoralists on species, ecosystems and climate are the basis of sustainable land management. Management strategies include seasonal movements, the use of leaves and trees during dry seasons, burning of old pastures and consumption of crop residues [7]. In many pastoral communities of Africa, selection of grazing sites based on scouts that reflect the state of distant pastures and estimate how long the feed and water feed a given number of cattle. In Sudan, for example, cattle do not graze at random, but the best sites while poorer sites are left fallow for regeneration [8].

Animal Health

In most African countries, the pastoral livestock evolves following an extensive system where most of the population is on the move constantly in search of favorable natural conditions. This system is partly responsible for the introduction or development of diseases in the area and by three factors namely: water points, pasture and travel.

Water Points

The animals drink water from different sources during the year, which remain more or less prone to

livestock contamination by microbes. The risk of contamination significantly increases during the rainy season by the consumption of surface water including the beginning and end of the season when animals are concentrated around water points. A high density of animals including urine and feces polluted water already disorders, stagnant conditions for the proliferation of certain parasites. Recognizing this, some breeders do water their animals than with a half-barrel, collecting water themselves not following the edge of the heavily polluted pond.

Pastures

Despite the strengths of pastoralism benefits, it remains faced with many constraints that mimic the development considerably. These are:

- Degradation of natural resources due to the different cyclical droughts in the Sahel region, and strong human and animal pressures;
- Increased competition for available resources, resulting in a malfunction of the traditional links between pastoralists and farmers, causing sometimes deadly recurring clashes;
- Elongation in space and time the duration of transhumance which wastes enough energy and reduces animal performance and disrupts the pastors on the socio-economic level;
- The increased vulnerability of pastoralists who cannot bring solutions to the crises they face.

Reallocations/Movements

Some categories of pastoralists move up to over 400 km each season to search for pastures (great transhumance). Transhumance is the sources of diseases by different aspects. Apart from stress caused by long journeys, animals spend a lot of energy, which weakens their resistance to various attacks. The momentary interruption of transhumance by natural factors such as the crossing oasis and rivers, result gatherings and thus forced proximity of varied origin flocks due to contamination by various pathogens.

Interactions between Public and Private Services in the Field of Veterinary Services

The prevention and control of animal diseases is a global public good, that is to say, benefiting all countries and all future generations [9]. An effective prevention and control of animal diseases based on appropriate legislation and early detection and rapid response mechanisms of these diseases.

This is part of good veterinary governance. It is the responsibility of all governments to establish appropriate public-private alliances to allow better control of animal diseases. Alliances between farmers, public sector veterinarians and private veterinarians are fundamental. These alliances are justified and were effective during the execution of the eradication of rinderpest program (PARC) in Africa that enabled the establishment of epidemiological surveillance systems in over 30 countries. In addition, the establishment of effective measures epidemiological surveillance and control required to comply with regional and international strategy. The practical implementation of these measures is made possible or facilitated by the existence of an epidemiological surveillance system at national level, bringing together farmers and their socio-technical networks, public and private veterinary services, NGOs, the diagnostic laboratories and scientific expertise.

In livestock sector, organizational dynamics has experienced significant changes in from 1988 following the reforms in the conduct of development policies, including the decision to help pet owners to care for costs of health prophylaxis. It was actually generate through the groups producer participation in the revival of livestock, with the ultimate objective support by breeders health care, production and marketing infrastructure, and the management of natural resources The sovereign public sector activities are illustrated through the following devices: a control device and the fight against animal diseases is ensured by organizing campaigns vaccination, epidemiological surveillance and treatment of certain pathologies; inspection device and control system at borders and markets original products Animal also guarantees public health; livestock movement control device for trade; in cotton zone, health defense groups (HDS) are created from 1976 solve the problems of culture oxen hitched in villages and, in Sahelian orpastoral zone, support focused on the organization of breeders Pastoral Interest Groups (GIP).

The adaptation of animal health services to pastoralism was initiated during the phase of implementing of the PARC program. Concerning the public sector, nearly all animal concentration areas are equipped with veterinary stations. But the farmer moves away more and more of these sites in recent years following the introduction of a national policy advocating the withdrawal of the state and the gradual assumption by breeders from all health expenses, has, few farmers drive their sick animals to veterinary stations. In Chad, until 1991, health coverage was exclusively within the competence of public service. At that time, the privatization of the veterinary profession primer was initiated by installing technicians of public services benefiting from a layoff. But since 1993, private veterinarians began to settle in different sectors through the provision of health mandate to carry out vaccination against rinderpest. Most of their activities were then represented by collective vaccination campaigns. The cessation of compulsory vaccinations resulted in the suspension of their

health mandate and this is certainly the major reason for failure in their companies and led them to seek their reinstatement in the civil service. The privatization of the sale of medicines has seen the creation of some buying groups. Two other occupational groups recently took an important part in the partnership with the breeders' organizations, particularly with the breeding auxiliaries. It is authorized sellers of veterinary drugs and private veterinarians. These occur more and more frequently in the technical training of Livestock Auxiliaries. As for the private sector contribution in the framework of veterinary services to pastoralists, the idea is to identify a person (chosen by his peers) in the farmer group and trained on the basic animal health (recognition of clinical signs of diseases, the mastery of primary care: Injection procedures of animals medicine and treatments). This training is provided by a private veterinarian installed in transhumance zone. To solve the problem of supply of nomadic pastoralists in veterinary products, it was established a veterinary pharmacy in each nomadic group. The group purchased veterinary inputs directly with manufacturers through a livestock project installed in the area and sells them at a price increased by 10% to farmers pastors (10% are in fact working capital for the new order). Treatment of sick animals is provided by an auxiliary livestock formed the basis of animal health. Auxiliaries are present in most African countries where they play an important role in Basic Veterinary treatments, ex.: vaccination, drug distribution and reporting of animal diseases. They are often considered non-professionals, difficult to regulate, to control and sometimes incompetent in the use of drugs. Although their presence continues to raise certain reservations, they are a reality that public and private veterinarians are required to take into account. As such, this safety link must develop a new vision for disease control and better management of pastoralism. The Auxiliary livestock deserve care and a consequent follow-up. In a few days of training or weeks, performed by veterinarians working for the public, private or NGO they employers Doctors (Dr.choucou) "and must provide benefits to pastoralist communities from which they come. Unfortunately, the training programs are not always aligned, and auxiliaries are not tracked on the scale of a country. The non-mastery veterinary practices in this segment of the society favor resistance, persistence, re- appearance and distribution of certain diseases [10]. Moreover, there are few tools to maintain with the auxiliary knowledge.

Conclusion

Pastoralism is an ownership husbandry practices related to climate change by the pastoral community. Dynamic adaptation of pastoral policies will have to promote better management of the farming system and disease control. The policy of privatization of veterinary services in Africa expected to meet the pastoral issues and challenges started around the year 1988 has not experienced the expected results in some countries.

The country mentioned here such as Chad, where private veterinarians have applied to reinstatement in the civil service, since their core activities formerly based on vaccination against rinderpest, stopped with the cessation of vaccination against this disease. The livestock assistants trained spilled on the ground and have replaced veterinarians because it lacked followed by official veterinary authorities.

Also, the privatization was the sale of drugs has seen the creation of some buying groups. Thus, for these

other occupational categories are recently an important part in the partnership with the breeders' organizations, particularly with the breeding auxiliaries. It is authorized sellers of veterinary drugs and private veterinarians.

Improving the nomadic herds health status through series of measures incorporating both economic and institutional environment of the breeders that their level of animal health knowledge.

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