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RESUME - «Lélevage du Dromadaire dans le monde». Les camélidés n'occupent guère une place importante par rapport à l'ensemble du cheptel dans le monde. Pourtant, leur contribution au bien-être des hommes dans les régions où on les trouve est capitale. Il y a quelque 15,5 millions de chameaux à une bosse ou dromadaires dans le monde, dont presque 13 millions se trouvent en Afrique. Pour le reste, la plupart se trouve dans le sub-continent indien.

Le présent travail examine l'importance des dromadaires dans les régions où ils se trouvent, en fonction des facteurs de l'environnement et des facteurs sociaux qui gouvernent leur répartition.
Mots-clés: Dromadaire, cheptel mondial.

SUMMARY - Camelidae do not occupy a very important position in world livestock and nevertheless, their contribution to the well-being of the people in the regions where they are found is capital. There are some 15.5 million camels and dromedaries in the world, of which almost 13 million are found in Africa. Most of the remaining 2.5 million are found in the Indian sub-continent.

The present study examines the importance of dromedaries in their origin regions, according to the environmental and social factors that affect their distribution.
Key words: Dromedary, world livestock.

Distribution and importance

The success of the camel in climates hotter and drier than those which other domestic animals can tolerate is due to its particular physiology. Its ability to withstand torrid heat and extreme desiccation in its environment are of paramount importance in determining its distribution.

The camel's gait enables it to cover long distances with much less effort than other animals and its feet form cushions which spread its weight. The padded feet are in some cases a disadvantage, however, and it is less at home in stony than in sandy deserts and is generally incapable of living for long periods in swampy or permanently wet areas. Some camel types, such as those of the Nile delta of lower Egypt, the delta camels of India and those of the Marsh Arabs in southern Iraq, appear to be exceptions to this general rule.

Although the camel is found throughout the northern arid tropics and subtropics the vast majority of its population is to be found in Africa. The remainder of this sections therefore concentrates on factors governing its distribution and importance in Africa.

Environmental factors

The normal distributional range of the camel is the Arican and Asian tropical and subtropical dry areas as shown in Figure 1. With very few exceptions camels are found in areas where rainfall is low and where it occurs in a relatively short period followed by a long dry season. The dry period is often hot for most of the time and lasts for over eight months of the year.

These are the prevailing conditions in the deserts of northern Africa. The northern and western edges of the dromedary's range are delimited by the Mediterranean Sea and the Atlantic Ocean. The southern limit is also generally related to climate but historic and anthropic factors play a role on this boundary.

Increasing humidity is unfavourable to the camel. In Africa the southern limit of the physical environment favouring the camel over the other domestic species can be found at about 15 °N in West Africa from the Senegal coast through central Mali and the south of Niger. In Chad and the Sudan the southern limit has been put at 13 °N although in recent years the normal range has gradually been pushed southwards. A biotic factor limiting the distribution of the camel in the south is the presence of tsé-tsé and other biting flies.

In eastern Africa the arid conditions prevailing on the Red Sea coast, in the Gulf of Aden and in the hinterland of the Indian Ocean coast as far south as 2 °S are favourable to the camel. This region is entirely to the south of the limit of the camel's supposed normal range yet it supports about 35 per cent of all the world's camels. In certain limited parts of this area, rainfall may be as high as 550 mm per year.

Social factors

Essentially a wide ranging species, the camel is the domestic animal of nomads. It is unusual to find camels in areas where permanent cultivation is practised except where this is based on desert oases. The nomadic owners of the dromedary are obliged to take their camels with them to assure their basic needs of transport, meat and milk. In eastern Africa the gradual spread of the camel to tribes not owning it in ancient times has resulted from a pre-existing nomadic or semi-nomadic way of life. Examples are the Rendille and Samburu, the Suk (who first adopted camels as herd animals in the 1870s) and the Turkana.

It cannot be doubted that the greatest social impact on the recent distribution of the camel was the advent of Islam. As Arabs poured from their heartland to conduct their Holy Wars and spread their gospel they took their camels with them, consolidating its range northwards and eastwards in Asia and westwards along the Mediterranean littoral.

Until the arrival of motorised transport and the monetarisation of certain nomadic economies, the camel remained almost the only burden and personal transport animal in the areas to which is was adapted. The use of the internal combustion engine for transport in African desert areas coindided with the «oil boom» of the 1950s and motor lorries have taken over many of the transport functions previously performed by the camel. Although these developments have considerably affected the transport role of the camel they have had much less effect on its cultural importance. So far, there has been very little reduction of the camel's range due to economic factors. Current numerical trends in the areas affected might lead one to expect that such a reduction could occur in the future.

The increasing cost of motor transport and the increased world demand for meat and milk will exert the opposite effect. It is most probable that these factors will lead to the contiued existence and perhaps an increase in numbers of the camel in those aresas where it is still the most efficient domestic animal for transforming vegetable matter into work, meat and milk.

The camel population in Africa

Present numbers

There are about 13.5 million camels in Africa. Camels account for about 13.0 per cent of the domestic herbivore biomass in the East African region, 5.4 per cent in West Africa and 4.0 per cent in North Africa. In many cases the figures should be regarded as indicative only and some are little more than rough estimates. The camel is distributed, often sparsely, over vast areas and this and the nature of the management system make accurate enumeration difficult.

The dromedary is numerically far superior to the Bactrian camel, and totals almost 90 per cent of the genus *Camelus* in the world today. More than 80 per cent of Arabian camels occur in Africa and East Africa contains about 63 per cent of all Old World Camelidae.

Somalia and Sudan account for 70 per cent of camels in Africa while Ethiopia, Chad and Kenya contain a further 12 per cent. Apart from these countries, Mauritania, Niger and Mali have important populations as do the Magheb countries of Algeria, Morocco and Tunisia.

Density in relation to land and human population

East Africa has a density of 3.7 camels per km^2 of arid zone with Somalia having the greatest density and the highest biomass ratio.

West Africa has a density of 2.4 camels per km^2 of arid zone and within this region Mauritania (except for Western Sahara but for which data are probably even less reliable than for elsewhere) has the greatest density and the highest biomass ratio.

In North Africa Tunisia and Morocco have the greatest density and the highest biomass ratios. Algeria, Egypt and Libya have relatively low densities although Libya has a high biomass ratio.

Importance of the camel in the livestock economy

The relation of camel TLUs (Tropical Livestock Units of 250 kg. liveweight equivalent) to total TLUs per country is shown in Figure 2. These data give an indication of the relative importance of camels in the national livestock economies of African countries.

In East Africa camel TLUs constitute 13.0 per cent of the total domestic herbivore biomass. This percentage reaches 46.6 per cent in Somalia. In West Africa camel TLUs constitute 5.4 per cent of the total. The main countries concerned are Mauritania (25.5 per cent), Chad (11.2 per cent), Niger (8.3 per cent) and Mali (5.5 per cent). In North Africa the percentage of camel TLUs to total TLUs is only 4.0 per cent. Libya and Tunisia have 10.7 and 10.3 per cent respectively of their total domestic herbivore biomass (expressed as TLUs) constituted by camels.

Recent changes in numbers of the camel population

In general there has been a steady increase in camel numbers over the last decade. Where numbers have decreased they have done so for two largely unrelated reasons. In countries in which oil is now the principal commodity and where the nomadic way of life is no longer the major one, there has been a steady decrease in the numbers of camels over recent years. The African country mainly affected is Libya. The second reason for reduction in

numbers is the Sahel drought of the 1970s and 1980s, although losses of camels compared to other classes of domestic stock have been minimal.

The reduction in certain countries should not to be considered as net losses to the African camel population. Nomads from Mauritania crossed the border of Senegal with their animals in 1982 and 1983 following three years of severe drought. The same phenomenon was reported from Mali to Burkina Faso and from Niger and Chad to Cameroon, the Central African Republic and Nigeria during the same period. It may be some years, until the statistical services have caught up with the rapid changes in distribution, before the true numerical trends in the whole of Africa can be accurately determined.