The future of livestock farming

With great astonishment we – the members and partners of the Coalition of European Lobbies on Eastern African Pastoralism (CELEP) – read the article published on the online page of the Economist on 18 January 2014 entitled "Meat and Greens" on the subject of livestock farming. The author of the article formulates some relevant questions concerning production and consumption of livestock products, referring among other things to the contribution of the livestock sector to global warming. But he appears to have drawn the wrong conclusions. As an informal coalition of organisations involved in pastoralism in Eastern Africa, we disagree with the arguments of the author leading to the presumption that industrial-scale livestock farming always offers clear advantages in terms of efficient use of resources, productivity and emission of greenhouse gases compared to extensive livestock farming systems such as pastoralism.

Pasture and rangelands

A main element that the author overlooked is the significant role of pasture and rangelands. Rangelands cover between 25% and 40% of the land surface. In some countries, such as Kenya, they cover over 85% of the land surface area. These areas are not fit for crop farming: they are too dry or too steep or the soils are too shallow. Immense inputs, especially in terms of water, would be needed to grow crops there and the danger is high that the land becomes saline or a dustbowl. Raising livestock is the most resource-efficient and environmentally friendly way to produce food from such areas, and pastoralists depend on this for their livelihoods. They transform natural pasture and limited water into milk and meat. Unlike livestock keepers in industrial livestock-keeping systems, they do not depend on the massive import of soy and other protein-rich fodder to feed their cattle, nor do they rely on the use of fossil fuels to heat huge stables, causing enormous environmental damage. Therefore, the author is clearly misinformed when arguing that intensive livestock farming is more efficient and causes less environmental damage than small-scale traditional pastoralism. In addition, the author also failed to mention the vital role these pastoralists play in preserving biodiversity and other environmental services. Their livestock include numerous breeds that would now be extinct if all livestock had been kept in factory farms where only the most productive breeds are used to produce milk and meat. For industrial-scale milk production, for example, only one breed dominates worldwide (Holstein-Friesian) and less than 10% of its best sires are used for reproduction, even further narrowing the genetic pool.

Livestock and greenhouse-gas emissions

Another argument brought in the article in favour of industrial-scale livestock farming concerns the contribution of livestock to the emission of greenhouse gases. According to the author, livestock farming accounts for 8–18% of greenhouse-gas emissions worldwide. It is argued that "belching and farting cows", as well as transforming jungle and savannah into pasture, are causing greenhouse-gas emissions. Although part of this argument is true – in Latin America, for example, the rainforest is being cut down to create pasture or soy-producing fields, and this contributes greatly to greenhouse-gas emissions – its conclusion is incomplete, since not all types of livestock farming contribute equally to emitting greenhouse gases. In a pastoralist production system, for instance, cattle move from pasture to pasture to take advantage of available water and high-quality grazing. This mobility

ensures the fertility of the grazing areas, since the cattle transform the grass into manure. This practice assures the carbon-sequestration potential of these soils. Rangelands, covering such a vast area of the world, offer a huge potential for carbon sequestration. Pastoralists are key to maximising this potential through their mobility; in fact, pastoral savannahs sequester more carbon than any other terrestrial ecosystem. Therefore, transforming these pastoral systems into "factory farms" – more or less suggested by the author of the article – would increase the emission of greenhouse gases because less carbon would be sequestered and an entire ecosystem would be lost for producing human food, as it would become agriculturally unproductive. In reality, compared with intensive livestock farming, the pastoralist production system emits less greenhouse gases, mainly because it does not use fossil fuels.

Nevertheless, this form of livestock keeping is not free of methane emission. On the other hand, even without the presence of domestic livestock, methane emission would probably remain stable and not be reduced, because the pasture would either be burnt (whereby CO_2 would be recaptured after burning through the new growth of grass) or eaten by methane-producing termites or ruminant wildlife such as antelopes. A comparison between methane emission without and without domestic livestock would merit study, which has not been done to date. In any case, when analysing the map of global methane emissions, it is immediately obvious that the areas with high methane emissions are not the rangelands.

Exploring other options

There is truly a need to turn things around when it comes to livestock farming, especially "factory farming", but we can no longer neglect the benefits of traditional livestock-keeping practices that are at the same time modern because they adapt to new constraints such as climate change and new marketing possibilities. There is no one-size-fits-all solution to the problems that the livestock sector faces, and considerable attention and funding should be dedicated to researching and improving alternatives that do not necessarily come from industrial practices.

The Coalition of European Lobbies on Eastern African Pastoralism (CELEP) *is an informal advocacy coalition of European organisations, groups and experts working in partnership with pastoralist organisations, groups and experts in Eastern Africa. The members work together to lobby their national governments and EU bodies to explicitly recognise and support pastoralism (and the people that practise pastoralism: pastoralists) in the drylands of Eastern Africa. More info: www.celep.info*