

Carbon Neutral Brazilian Beef: a sustainable concept for beef production

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Introduction

Currently the livestock systems in Brazil are under pressure to attend demands for beef. Environmental compliance in the production process is strongly requested. In this context, integrated farming systems are enabling diversified production, with more efficient use of resources and less environmental impacts, besides considering the mitigation of greenhouse gases (GHG) emissions in beef production. The objective of this paper is to introduce a brand concept for sustainable beef production.

Material and Methods

Technological concept: Carbon Neutral Brazilian Beef (CNBeef) is a brand concept which aims to certify meat production having their GHG emissions volumes neutralized within the production system. The presence of trees is required, as on integrated silvopastoral systems (livestock-forest, ILF) or agrosilvopastoral (crop-livestock-forest, ICLF), through established processes parametrized and audited by regulations and representatives from the value chain, along with technical support from Embrapa. *Requirements of Carbon Neutral Brazilian Beef:* (1) adoption of ILF and ICLF systems based on the "Low Carbon Agriculture" National Plan (ABC Plan) and the use of Embrapa guidelines; (2) assessment of the farm production system baseline GHG emissions based on data from the IPCC (2007) and PECUS Network (www.cppse.embrapa.br/redepecus); (3) carbon content estimates for the forest component according to Embrapa recommendations; (4) calculations for GHG neutralization based on PECUS Network; (5) concession of use for the brand concept to partners legally authorized by Embrapa and (6) systems audited by independent auditors linked to companies accredited for public or private agencies.

Results and Conclusions

Fig.1. Carbon Neutral Brazilian Beef seal in English (CNBeef) [A], and in Portuguese (Carne Carbono Neutro, CCN) [B].



The brand concept CNBeef/CCN was developed by Embrapa and it is registered with the National Institute of Industrial Property (INPI) for services and products under the protocols 907078982, 907079156 and 907079270, with versions in Portuguese and English (Fig. 1). It is expected this brand concept to become an important tool to support sustainable beef production systems in Brazil.

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