

BEEF CARBON: Demonstration actions to mitigate the carbon footprint of beef production in France, Ireland, Italy and Spain.

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In Italy, agriculture accounts for 7% of two greenhouse gas (CH₄ and N₂O) emissions and beef production is considered one of the most contributors of GHG, included also CO₂ emitted in on- and off-farm feed production. Public concern on this economic sector has imposed to study mitigation strategies and to demonstrate that reduction of GHG emission in beef sector is possible.

The EU has founded the "BEEF CARBON ACTION PLAN" project, which aims to reduce the carbon footprint of beef production by 15% (119 000 tons CO₂ eq) over the next 10 years in four European countries.

The "LIFE BEEF CARBON" (*Demonstration actions to mitigate the carbon footprint of beef production in France, Ireland, Italy and Spain*) project has the purpose to promote innovative livestock farming systems, ensuring the technical, economic, environmental and social sustainability of beef farms.

The project, coordinated by the French Institut de l'Elevage (IDELE), has 26 beneficiaries and involves about 2000 demonstrative farms, corresponding to six different production systems: 1) calf to weaning system producing weaners (9-10 months old) or 2) bulls/heifers (18 months old) and culled suckler cows; 3) fattening system producing young bulls and heifers (18 months old) or 4) beef steers (over 30 months old), 5) heifers (over 28 months old) and 6) dairy system producing culled dairy cows.

About 170 innovative farms will be identified where GHG mitigation strategies will be applied and their effect on GHG emissions will be evaluated. These strategies will refer to animal, soil, waste management and energy consumption.

The functional unit will be 1 kg of live weight gain and the environmental categories are: global warming, eutrophication, acidification, water consumption and the contribution of beef farms to the rural landscape in 100 demonstrative beef farms (production system 1, 2 and 3) located in Piemonte and Veneto. In 20 innovative farms the effect of the mitigation strategies for carbon footprint reductions and their economic feasibility will be evaluated. The activity will be carried out in collaboration with ASPROCARNE, UNIVARVE and CRPA of Reggio Emilia.

To evaluate the environmental impact of these farms, "Calcul des AUTOMATISE Performances Environnementales en Elevage de Ruminants" (Niveau 1 and 2) developed at the IDELE will be used.

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