

World congress on CLIMATE CHANGE AND ECOSYSTEM

October 06, 2021 | Webinar

Influence of Carbon fixation on the mitigation of Greenhouse Gas emissions from Livestock activities in Italy and the achievement of Carbon neutrality**Roberto De Vivo¹, Luigi Zicarelli²**¹University of Napoli "Federico II", Italy²Pioneer HI Bred Italia SRL, Italy

Among the greenhouse gas emissions due to livestock activities there is, in addition to rumen methane, that which derives from the fermentation and management of manure from farmed animals. To feed the farmed animals, plants are used that fix carbon and therefore subtract carbon dioxide from the atmosphere. The emissions related to rumen fermentations, those related to manure, management, and spreading of animals of species reared in Italy, as well as manure released by grazing animals were quantified and summed. The emissions due to the respiration of animals were calculated and the carbon dioxide fixed by the main crops of zootechnical interest was calculated and then subtracted from the atmosphere. In addition, the emissions from the cultivation of plant species, attributable to the working of the soil, the production of fertilizers and pesticides, electricity, fuels, and the operation of machines, were also taken into account. The results of this elaboration show that in Italy the CO₂ fixed in the vegetation cultivated to feed animals is about 10% higher than the sum of that emitted by the animals reared and by the entire process that is part of it. It could therefore be argued that the influence of carbon fixation should probably be taken into account to calculate the environmental impact in terms of carbon footprint of agricultural and animal products. In this way, carbon neutrality would be demonstrated, which characterizes the production processes of agricultural products and animal productions unlike other production cycles.

Biography

I graduated at the age of 25 at the University of Naples "Federico II" and then obtained post-graduate specialization at the University of Milan. I am a teacher in a secondary school and I am a zootechnical consultant. I have made two publications, and I have presented studies on the topic of the environmental impact of farms in two conferences, a European conference and a world conference.

robertodevivo@virgilio.it