

Supplementary Material

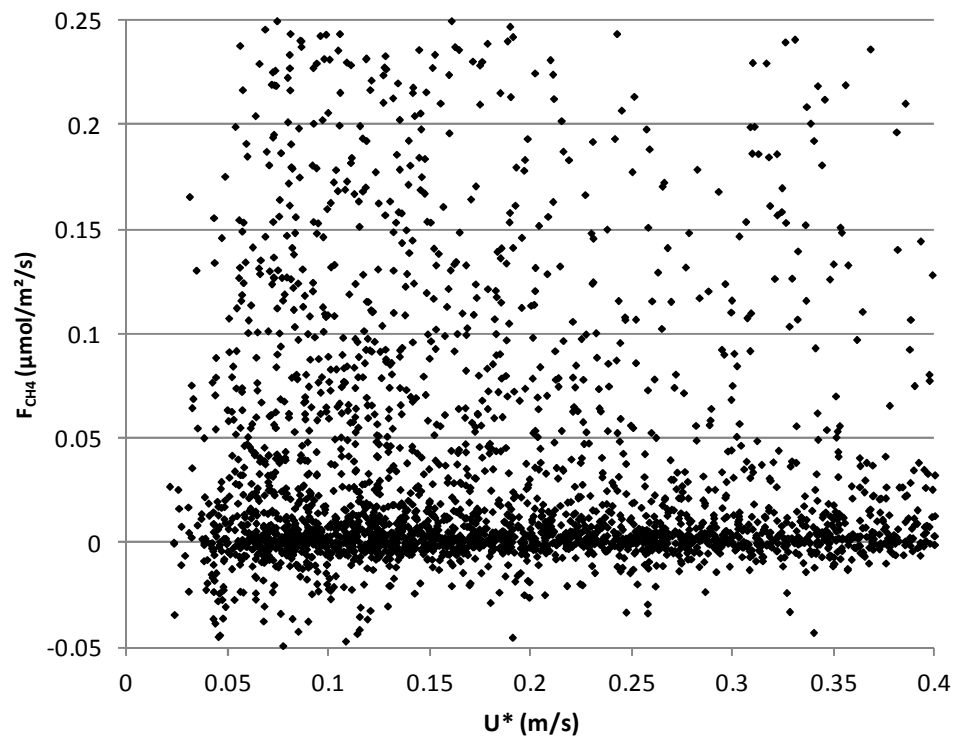


Figure S1. Effect of low night time turbulences, u^* versus CH_4 fluxes for net radiation < 20 W m^{-2} , showing a drop in flux magnitude below of u^* of 0.06 m/s. Data are binned over u^* classes of 0.02 m/s.

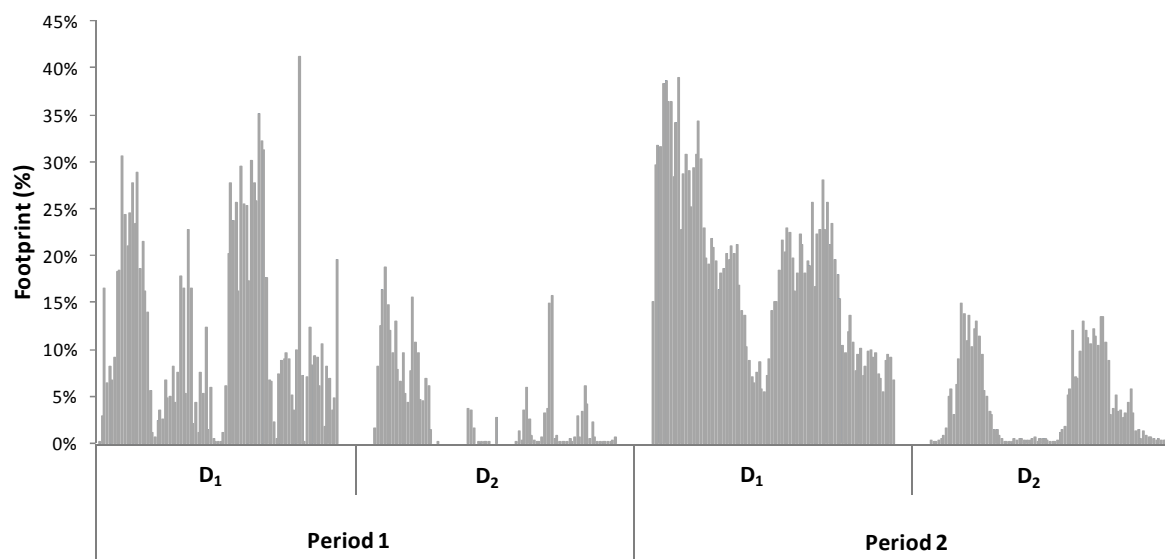


Figure S2. Contribution (%) of fenced heifers (i.e. SF₆ experiment) to the measured CH₄ flux at distance (D₁, 10-30 m and D₂, 30-50 m) and during period (P1 and P2). Major contribution was observed when paddock was closed to the EC setup varying from 1% to 42% while minor contribution was registered at the distance D₂ varying from 1% to 18%.

Table S3. Daytime and night time herd position during experimental period for herd (equipped with SF6-tracer) confined in enclosures at 10 meters (D1) and 30 meters (D2) distance from the CH₄ analyzer, respectively

Day	Period	10-30m	30-50m
1	Day	East	-
	Night	East	-
2	Day	East	-
	Night	East	-
3	Day	-	South
	Night	-	South
4	Day	-	North
	Night	-	North
5	Day	North	-
	Night	North	-
6	Day	North	-
	Night	North	-
7	Day	-	North
	Night	-	North
8	Day	-	North
	Night	-	North

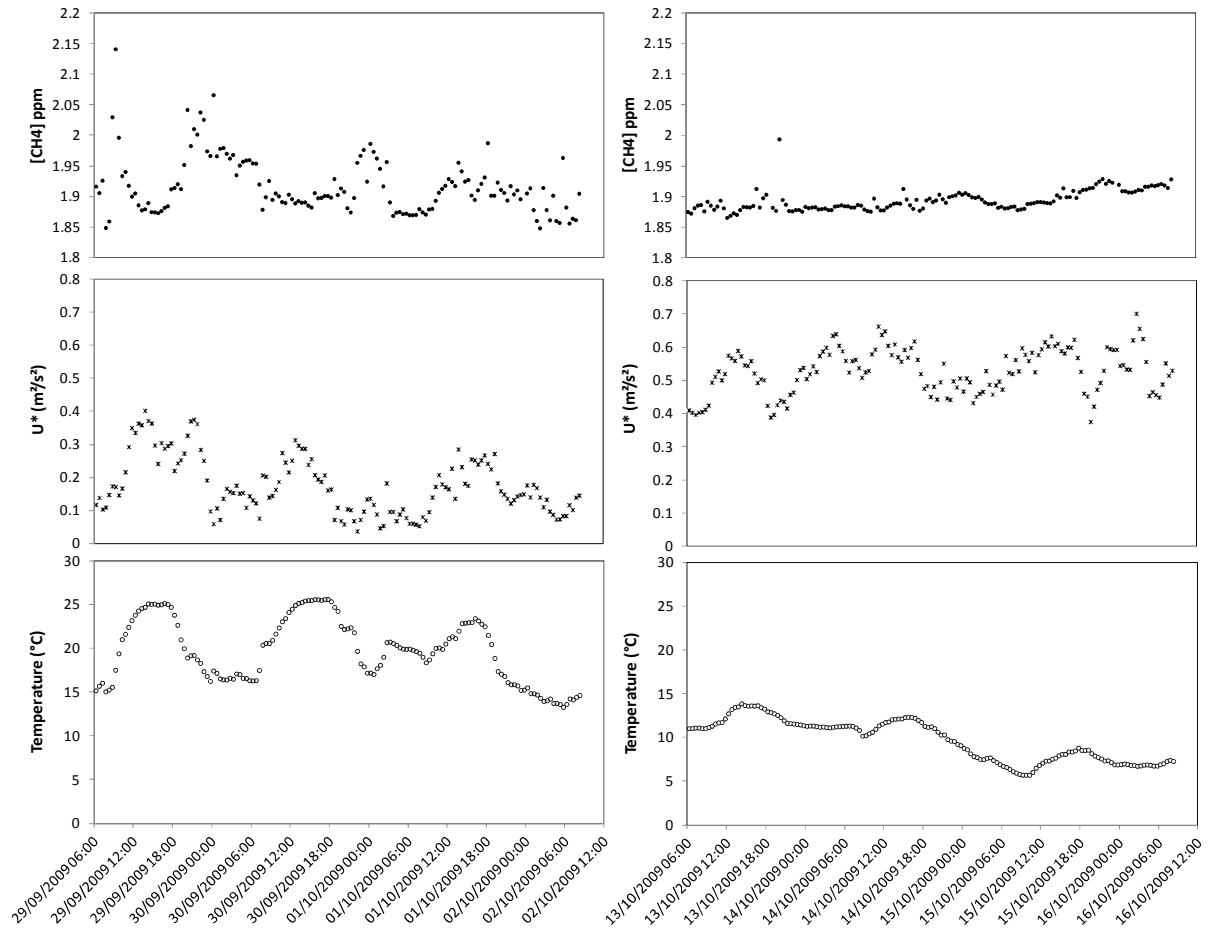


Figure S4. CH₄ concentration and meteorological conditions dynamics over the 2 periods of SF₆ experiment. First period (from 29 September 2009 to 2 October 2009) is presented on the left side, and the second period (from 13 October 2009 to 16 October 2009) on the right side.

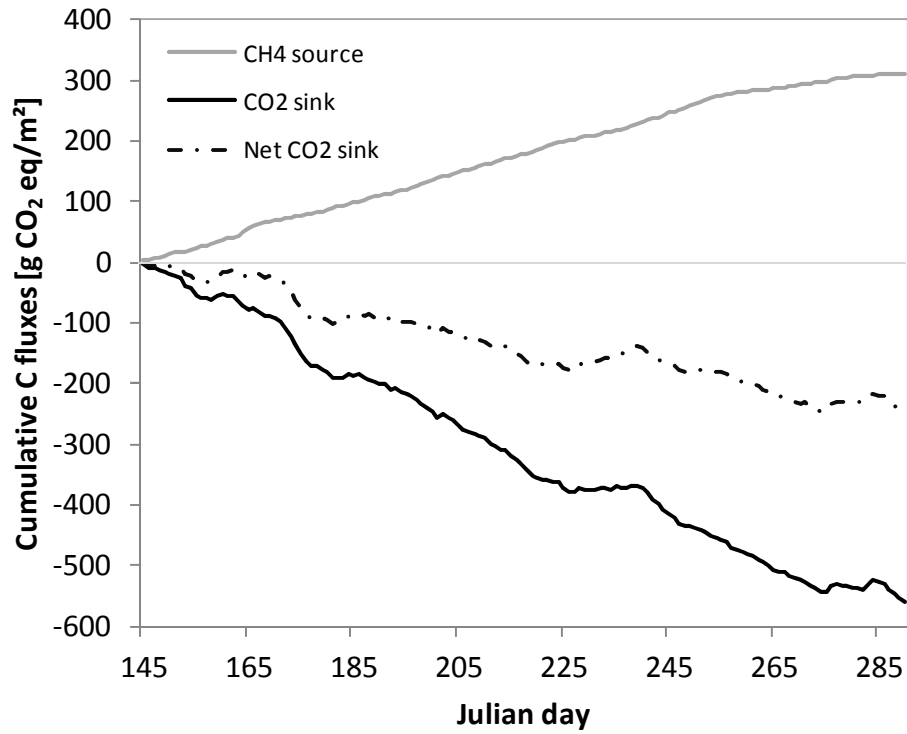


Figure S4. Cumulative CO₂ and CH₄ flux (expressed as g CO₂ equivalents m⁻²) values over the measured grazed period [of the year 2010](#). Positive values denote the loss from the system and negative values denote uptake.