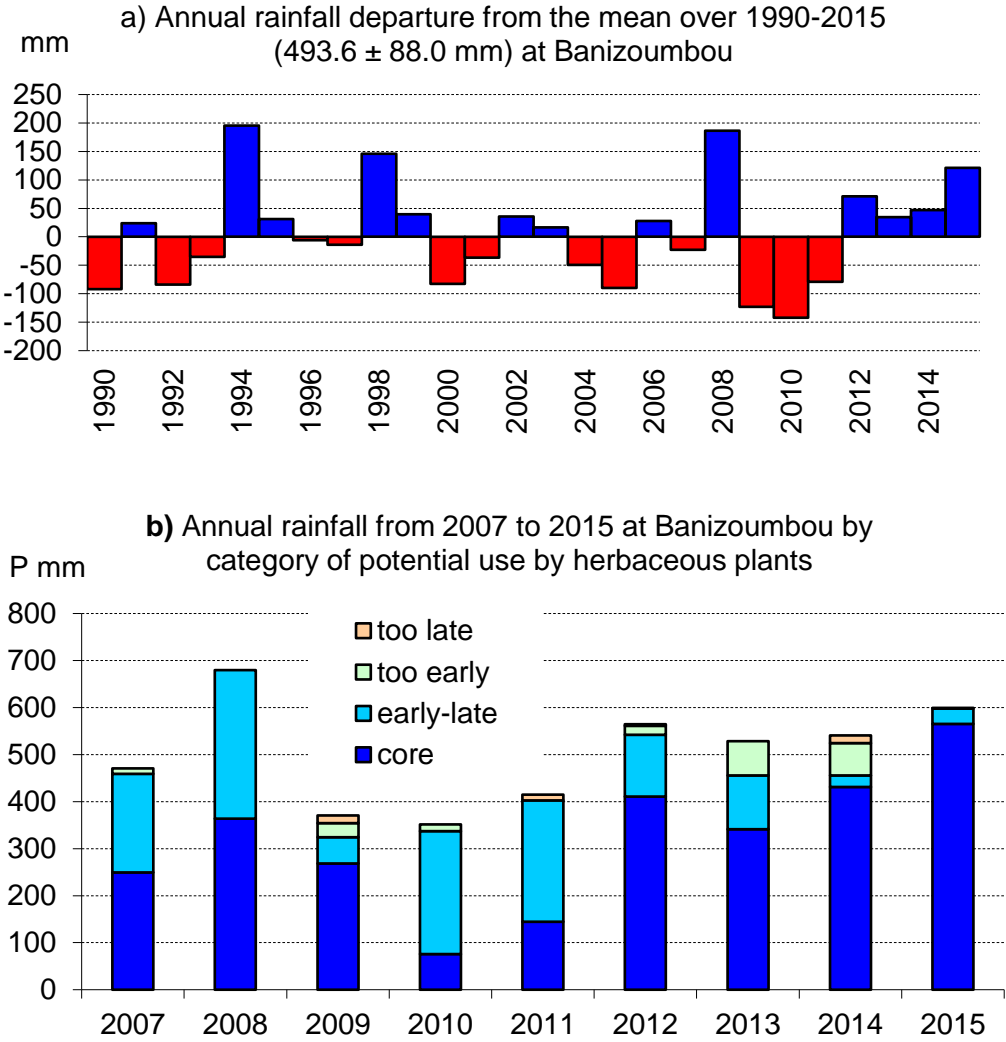
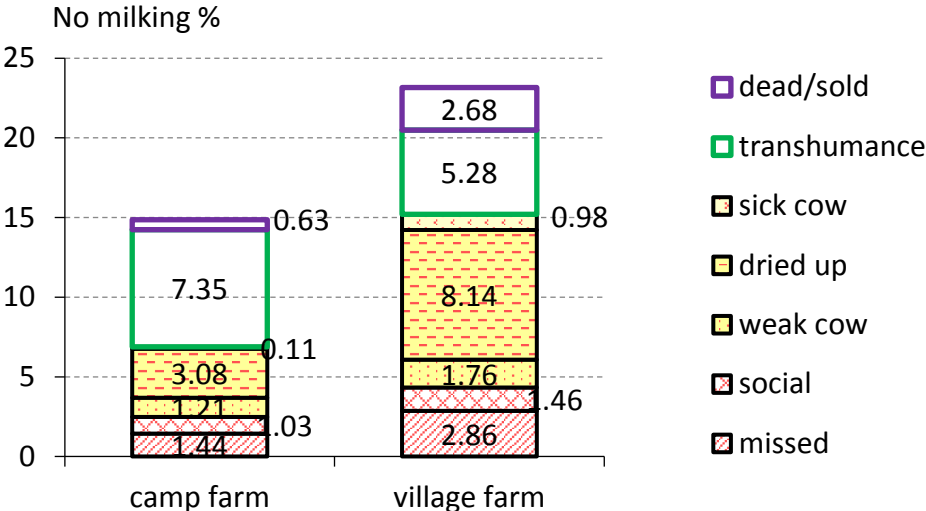


Supplementary Material I



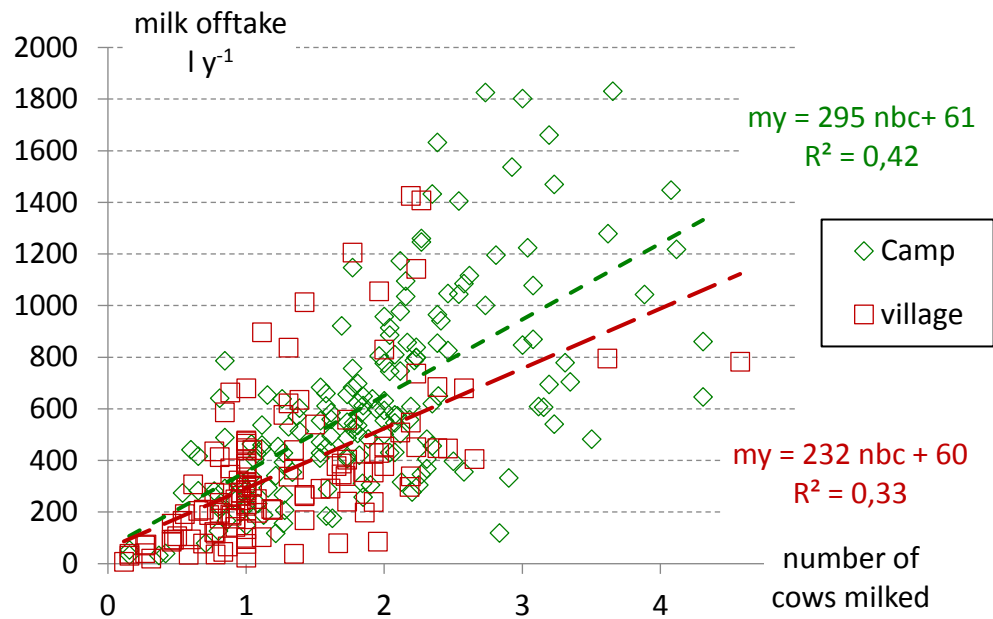
Rainfall in the study site during the survey (rainy seasons 2011-2012) set in their context. a) Annual rainfall departure (in mm) to the mean established from 1990 to 2014 in Banizoumbou (Dantiandou district, Niger). b) Annual rainfall from 2007 to 2015 with annual distribution in category of rain use by annual herbaceous: core rains (unlimited use), early and late rains (constraint use), too early (wasted false start), too late (wasted, after wilting). (Source AMMA-CATCH data base).

Supplementary Material II



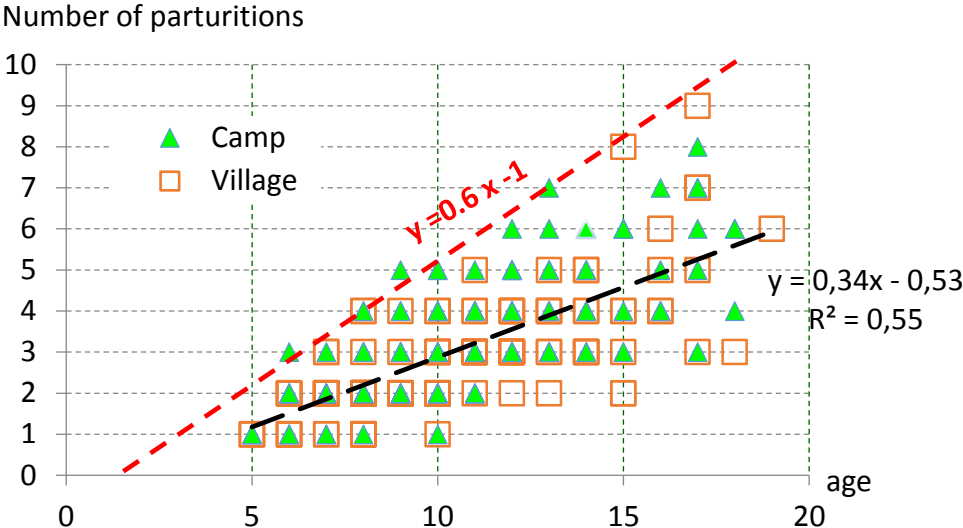
Annual frequency for no milking data: cows dead or sold, herd away in transhumance, cows sick, cows dried up, cows weak, social reasons and misses.

### Supplementary Material III



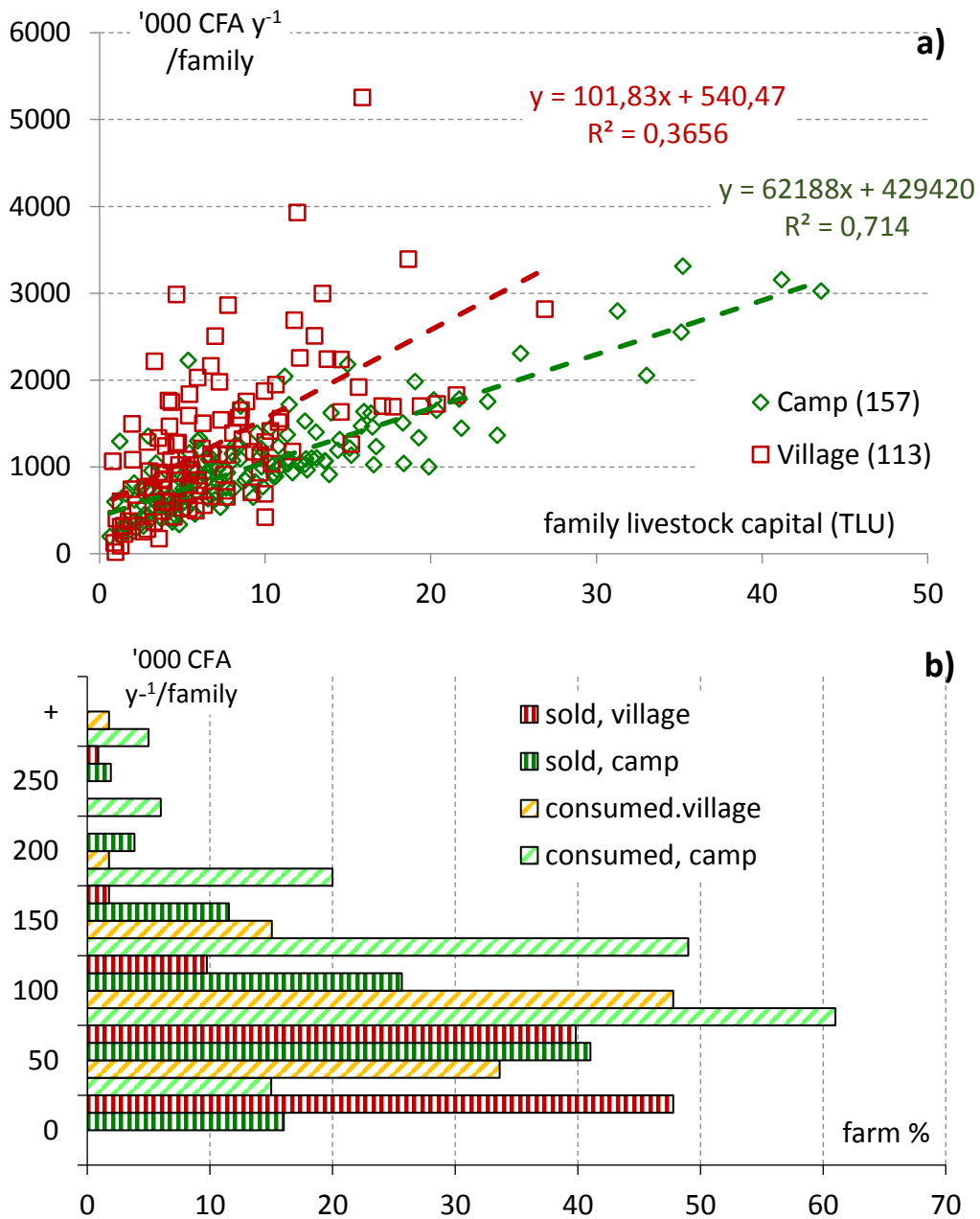
Regression of the annual milk offtake per farm and the annual mean of the number of cows milked daily.

Supplementary Material IV



Linear adjustment of the number of parturitions with the cow age (years) for 334 cows (193 from camp herds and 141 cows from village herds). The top envelope (red line) indicates the optimum adjustment in the cow conditions.

Supplementary Material V



Farm income of 156 camp farms and 112 village farms of the Dantiandou district (Niger): a) Aggregated annual family incomes from crop and livestock and off-farm activities including emigration remittances regressed with the familial livestock capital in tropical livestock units. b) Farm distribution in classes of monetary value of consumed or sold dairy products (fresh and sour milk, butter) over a year cycle.