



**Figure S3.** Relative abundances of *Archaea* (A), *Thaumarchaeota* (B), *Nitrospirae* (C) and *Nitrosomonadales* (D) at 0-20 and 20-90 cm depths under different long term fertilizer treatments. Values at 20-90 cm depths are weighted means. CK: no fertilizer; CF: NPK fertilizer; CFM: NPK fertilizer combined with farmyard manure. Error bars represent the standard error of the mean.