Table S1. Tests of fixed-effects for site 1 (First experiment) according to the adequacy of the model and adjusted means (± standard error) for the interaction between sampling date and treatment.

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| --- | --- | --- |
| Source | F-value | p-value |
| Intercept  | 175.64 | <0.0001 |
| Sampling date (SD)  | 86.23 | <0.0001 |
| Treatment (T) | 8.9 | <0.0001 |
| SD \* T | 3.01 | <0.0001 |
| Sampling date  | Treatment | Adjusted Mean |
| 22/12/2015 | ammonium nitrate | 213.4 ± 38.3 *a* |
| 16/12/2015 | high urea | 161.2 ± 42.8 *ab* |
| 16/12/2015 | ammonium nitrate | 148.4 ± 42.9 *ab* |
| 10/12/2015 | ammonium nitrate | 140.8 ± 22.7 *ab* |
| 22/12/2015 | high urea | 84.5 ± 30.9 *bc* |
| 04/02/2016 | ammonium nitrate | 76.9 ± 32.4 *bcd* |
| 22/12/2015 | low urea | 75.1 ± 38.2 *bcde* |
| 04/02/2016 | high urea | 73.3 ± 26.2 *bcde* |
| 10/12/2015 | high urea | 62.8 ± 22.7 *bcde* |
| 19/01/2016 | low urea | 55.4 ± 4.0 *bcde* |
| 27/01/2016 | ammonium nitrate | 53.1 ± 19.5 *bcde* |
| 10/12/2015 | low urea | 51.8 ± 22.7 *bcde* |
| 16/12/2015 | low urea | 46.8 ± 42.9 *bcdef* |
| 19/01/2016 | high urea | 45.5 ± 4.0 *cdef* |
| 27/01/2016 | high urea | 44.3 ± 19.5 *cdef* |
| 16/03/2016 | without fertilizer  | 41.4 ± 12.0 *cdef* |
| 27/01/2016 | without fertilizer  | 41.2 ± 24.1 *cdef* |
| 13/10/2015 | without fertilizer  | 39.1 ± 6.9 *cdef* |
| 13/10/2015 | high urea | 39.1 ± 6.9 *cdef* |
| 13/10/2015 | ammonium nitrate | 39.1 ± 6.9 *cdef* |
| 13/10/2015 | low urea | 39.0 ± 6.9 *cdef* |
| 19/01/2016 | ammonium nitrate | 37.1 ± 4.0 *cdef* |
| 04/02/2016 | low urea | 35.6 ± 32.4 *cdef* |
| 27/01/2016 | low urea | 33.0 ± 24.1 *cdef* |
| 16/03/2016 | low urea | 32.8 ± 12.0 *cdef* |
| 16/12/2015 | without fertilizer  | 31.6 ± 34.7 *cdef* |
| 16/03/2016 | high urea | 29.5 ± 12.0 *cdef* |
| 16/03/2016 | ammonium nitrate | 26.2 ± 12.0 *cdef* |
| 10/12/2015 | without fertilizer  | 22.7 ± 18.3 *cdef* |
| 04/02/2016 | without fertilizer  | 21.6 ± 26.2 *cdef* |
| 22/12/2015 | without fertilizer  | 20.9 ± 30.9 *cdef* |
| 25/07/2016 | without fertilizer  | 13.8 ± 5.6 *def* |
| 19/01/2016 | without fertilizer  | 12.8 ± 4.0 *def* |
| 21/04/2016 | low urea | 10.2 ± 5.8 *ef* |
| 21/04/2016 | without fertilizer  | 10.1 ± 5.8 *ef* |
| 25/07/2016 | low urea | 9.9 ± 5.6 *ef* |
| 25/07/2016 | ammonium nitrate | 7.9 ± 5.6 *ef* |
| 15/06/2016 | low urea | 7.0 ± 2.8 *ef* |
| 25/07/2016 | high urea | 6.5 ± 5.6 *ef* |
| 21/04/2016 | high urea | 4.8 ± 5.8 *ef* |
| 15/06/2016 | without fertilizer  | 4.7 ± 2.8 *ef* |
| 15/06/2016 | ammonium nitrate | 2.3 ± 2.8 *ef* |
| 21/04/2016 | ammonium nitrate | 1.6 ± 5.8 *ef* |
| 15/06/2016 | high urea | 0.9 ± 2.8 *ef* |
| 13/11/2015 | low urea | -28.7 ± 3.3 *f* |
| 13/11/2015 | ammonium nitrate | -28.7 ± 3.3 *f* |
| 13/11/2015 | high urea | -28.7 ± 3.3 *f* |
| 13/11/2015 | without fertilizer  | -28.7 ± 3.3 *f* |

Different letters indicate significant differences among mean values for the interaction between treatment and gas sampling date according to ANOVA and Fisher’test at 0.05 level.