**Tab****le S5** Settings of the meteorological variables, soil properties and management practices as model inputs for the sensitivity analysis of ammonia volatilization from upland and paddy rice filed cases.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Items | Upland case (U37) a | | | Paddy rice filed case (P4) a | | |
|  | Baseline | Lower bounds | Upper bounds | Baseline | Lower bounds | Upper bounds |
| Meteorological variables | *T*air (°C) b | 30.5 | 27.5/28.5/29.5 | 31.5/32.5/33.5 | 25.0 | 22.0/23.0/24.0 | 26.0/27.0/28.0 |
| *P* (cm) b | 4.0 | 2.8/3.2/3.6 | 4.4/4.8/5.2 | 6.5 | 4.6/5.2/5.9 | 7.2/7.8/8.5 |
| *W* (m s–1) b | 1.5 | 1.1/1.2/1.4 | 1.7/1.8/2.0 | 1.9 | 1.3/1.5/1.7 | 2.1/2.3/2.5 |
| *R* (W m–2) b | 303 | 212/242/273 | 333/364/394 | 264 | 185/211/238 | 291/317/343 |
| Soil properties | Clay (%) | 15.3 | 10.7/12.2/13.8 | 16.8/18.4/19.9 | 20.6 | 14.4/16.5/18.5 | 22.7/24.7/26.8 |
| pH | 8.2 | 7.3/7.6/7.9 | 8.5/8.8/8.9 | 7.1 | 6.2/6.5/6.8 | 7.4/7.8/8.1 |
| SOC (g C kg–1) b | 8.5 | 6.0/6.8/7.7 | 9.4/10.2/11.1 | 25.5 | 17.9/20.4/23.0 | 28.1/30.6/33.2 |
| BD (g cm–3) b | 1.32 | 1.17/1.22/1.27 | 1.37/1.42/1.47 | 1.04 | 0.89/0.94/0.99 | 1.09/1.14/1.19 |
| Field management practices | Irrigation amount (cm) | 0 | − | 0.2/0.5/5 | − | − | − |
| Floodwater depth (cm) | − | − | − | 4 | 2.8/3.2/3.6 | 4.4/4.8/5.2 |
| N type | Urea | − | ABC b/Other | Urea | − | ABC b /Other |
| N dose (kg N ha–1) | 148.3 | 104/119/133 | 163/178/193 | 81 | 57/65/73 | 89/97/105 |
| N depth (cm) | 0 | − | 5/10/15 | 0 | − | 5/10/15 |

a The definitions of the case code U37 and P4 are referred to Table 2 and Table S6, respectively.

b *T*air and *W* are 3-hourly averages of air temperature and wind speed during measurement periods of ammonia volatilization, respectively. *P* and *R* are 3-hourly totals of precipitation and solar radiation during measurement periods of ammonia volatilization, respectively. SOC and BD are the abbreviations of soil organic carbon content and bulk density, respectively. ABC is the abbreviation of ammonium bicarbonate. Other stands for the ammonium-based nitrogen (N) fertilizers excluding ABC.