**Supplementary Table 2.** Nitrogen management in the 3 field trials (Exp. 2)

|                          | Site 1 | Site 2 | Site 3 |
|--------------------------|--------|--------|--------|
| Humus effect             | 65     | 50     | 30     |
| Previous crop effect     | 20     | 0      | 40     |
| M.O. supply effect       | 12     | 0      | 0      |
| N uptook                 | 10     | 29     | 26     |
| N residue (NO$_3^{-}$/NH$_4^+$) | 33 (25/8) | 35 (33/2) | 42 (34/8) |
| **Total N soil supply (kgN ha$^{-1}$)** | 140 | 114 | 138 |
| Crop needs               | 272    | 304    | 270    |
| N remaining              | 20     | 20     | 20     |
| **Total needs**          | 292    | 324    | 290    |
| N fertilization          | 152    | 210    | 152    |
| Supply 1                 | 61     | 100    | 62     |
| Supply 2                 | 31     | 50     | 30     |
| Supply 3                 | 60     | 60     | 60     |