## Supplementary Table S1. Historical crop rotation before study period for three field areas in the 2004-2005, 2005-2006, 2006-2007 growing seasons.

|  |  |  |
| --- | --- | --- |
| Field area | Season | Crops (summer season/off-season) |
| 2004-2005 | 1999-200 | Maize/Black oat |
| 2000-2001 | Soybean/Maize |
| 2001-2002 | Maize/Black oat |
| 2002-2003 | Soybean/Black oat |
| 2003-2004 | Maize/Black oat and pearl millet |
| 2004-2005 | †Maize, maize + palisade grass and maize + guinea grass/  Palisade grass and guinea grass |
| 2005-2006 | 1999-200 | Maize/Black oat |
| 2000-2001 | Soybean/Maize |
| 2001-2002 | Maize/Black oat |
| 2002-2003 | Soybean/Black oat |
| 2003-2004 | Maize/Black oat and pearl millet |
| 2004-2005 | Soybean/Pearl millet |
| 2005-2006 | ‡Maize, maize + palisade grass and maize + guinea grass  Palisade grass and guinea grass |
| 2006-2007 | 1999-200 | Maize/Black oat |
| 2000-2001 | Soybean/Maize |
| 2001-2002 | Maize/Black oat |
| 2002-2003 | Soybean/Black oat |
| 2003-2004 | Maize/Black oat and pearl millet |
| 2004-2005 | Soybean/Pearl millet |
| 2005-2006 | Soybean/Pear millet |
|  | 2006-2007 | §Maize, maize + palisade grass and maize + guinea grass  Palisade grass and guinea grass |

†First, ‡second and §third years of experiment with intercropping systems.