



Figure 7. Agricultural cropland intensification is mapped by natural ecosystem of origin, where intensification is the transition from noncroplands or single-cropping patterns to double-cropping patterns between 2001 and 2006.

be for several reasons; our remote sensing algorithm is more specifically tuned for crop detection, we use different land-cover datasets to define the forest biomes, and the years included in the study are slightly different. Our analysis confirms that most lands moved into croplands do not revert to pasture or natural vegetation; in fact, as suggested by Rudel et al. (Rudel et al. 2005), croplands show little reversal to natural vegetation at least over the period studied in this region.

We observe high interannual variability in intensification and extensification rates within each biome. Extensification was particularly high between the years 2002 and 2003 and occurred mainly in cerrado areas. The cerrado is favorable for extensification for two reasons. First, it has some of the oldest croplands in the state, and existing croplands serve as nucleation centers for new cropland because infrastructure is already in place and farm equipment is easily moved between fields. Second, it is easier to clear cerrado than it is to clear cerradão or forest,