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Arthropod assemblage responses to agricultural land use intensification.

Agricultural expansion and intensification is a major threat to biodiversity globally, yet agricultural landscapes often support complex and dynamic biological communities within a diverse array of land uses. To examine the relative biodiversity value of land uses ranging from low to high intensification, we compared arthropod abundance, richness and community composition among sites in cropland, pasture and woodland on nine southern Queensland properties. Overall abundance of arthropods was significantly greater at cropping/pasture interfaces than in woodland or cropping sites, but order level richness did not differ between land uses. Some taxa displayed different responses to land use type, with mites more abundant in woodland than cropland, and collembola displaying greater abundance in pasture. Ant morphospecies richness was significantly greater in woodland than more intensive land uses, although total abundance was highest in pasture. Abundance of opportunistic ant taxa increased with land use intensity. The introduced species *Pheidole megacephala* was significantly more abundant in pasture than other land use types.

From these results, it appears that even small and degraded woodland remnants such as those studied appear to play an important role in maintaining arthropod diversity in agricultural landscapes.