



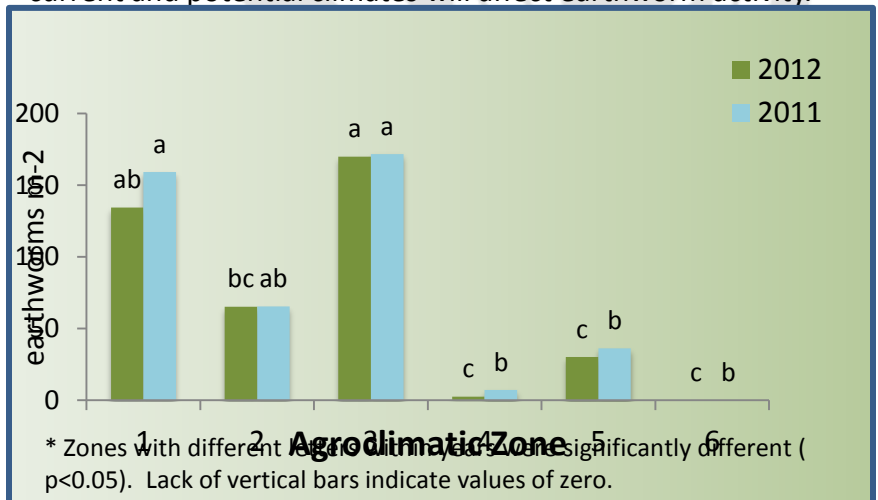
## Earthworms Densities in the AEZ

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Top two pictures:  
Summer intern and Ian Leslie  
digging earthworm samples  
Bottom picture:  
Ying Wu and intern sifting for  
cocoon and earthworms

Earthworms can play an important role in agroecosystems, effecting nutrient cycling, soil physical properties and, sometimes, crop yields. Earthworms also interact with other organisms with largely unmeasured ecosystem impacts. Earthworm activity is sensitive to both soil moisture and temperature and is expected to vary between climatic zones. Earthworms were collected from 40 sites during the springs of 2011 and 2012. Densities varied between and within zones, sites and years. Earthworms were not found in the lowest rainfall zone sampled (less than 310 mm per year), even where irrigation was utilized. Average earthworm densities in 2011 and 2012 were 333 and 113 earthworms m<sup>-2</sup>, respectively. Earthworm populations were dominated by the invasive species, *Aporrectodea trapezoides*, which represented 85% of all adults collected. Directions for continuing research include a better understanding of the factors effecting density/activity, interactions with above and below ground biota and how current and potential climates will affect earthworm activity.



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