

Isaac Madsen



BS, Integrated Plan Science (Washington State University)

PhD, Soil Science (Washington State University)

Advisor: William Pan

The NSPIRE IGERT Program is a multidisciplinary student doctoral training program designed to create a new generation of scientists with broad and rigorous training in nitrogen cycling who seamlessly integrate nitrogen cycle science for effective communication with public policy makers.

Nitrogen loss from irrigated cropping systems

Isaac is looking at nitrogen movement through irrigated cropping systems. Irrigated systems can be an important source of nitrogen loss and ground water contamination. He will be looking closely at the effects of cover cropping and reduced tillage in a potato, corn, and wheat rotation on nitrate leaching and retention. He hopes to be able to expand this work to a regional model using GIS to look at the nitrogen budget in eastern Washington. In addition to field and regional scale research Isaac is interested in looking at seedling root dynamics under different moisture and fertility regimes on the plant scale.

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