

Rethinking Glyphosate

A multi-disciplinary seminar series

BEE 7710 (1 credit) with optional second credit hour (BEE 4940)

Open to undergraduate & graduate students

This semester we will hold a research-based multi-disciplinary seminar on reassessing the potential transport and impacts of glyphosate-based herbicides (such as the familiar product, Roundup) and their primary degradation product, AMPA. Due to the development and predominance of transgenic glyphosate-tolerant crops such as corn and soybeans, the use of glyphosate has increased markedly in recent years, and it is now one of the most heavily-used active ingredients. Its direct toxicity is very low, and post-application immobilization and degradation are rapid. However, recent research has found widespread – albeit low-level – detections in the environment in agricultural areas, while others suggest the potential for non-target adverse impact pathways. We look forward to an open discussion from many disciplinary perspectives.

Wednesdays 3:35-4:25 pm

105 Riley-Robb Hall

Planned session topics and speakers

- Overview & approach (January 25)
- Glyphosate & crop protection
- Soil & environmental chemistry of glyphosate - **Murray McBride (S&CS)**
- US environmental presence of glyphosate and adjuvants - **Mike Meyer (Director, USGS Organic Geochemistry Laboratory)**
- Changes in historical use of glyphosate – **Paul Capel (Research Team Leader, USGS Integrated Watershed Studies, NWQAP)**
- Pesticide transport processes - **Tammo Steenhuis (BEE)**
- Case study: Glyphosate in runoff - **Brian Richards, Steve Pacenka (BEE)**
- Connecting crop fields to surface waters - **Rebecca Schneider (NRES)**
- Microbial/metabolic responses to glyphosate - **Ludmilla Aristilde (BEE)**
- Environmental toxicology of glyphosate - **Anthony Hay (Microbiology)**
- Case studies: glyphosate exposure to humans & animals - **Anthony Hay, Jiang Zhou (BEE)**
- Additional session topics to be announced

Optional second credit hour (BEE 4940, class# 18484) Students will conduct literature-based research on a selected related topic and will prepare a final presentation

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