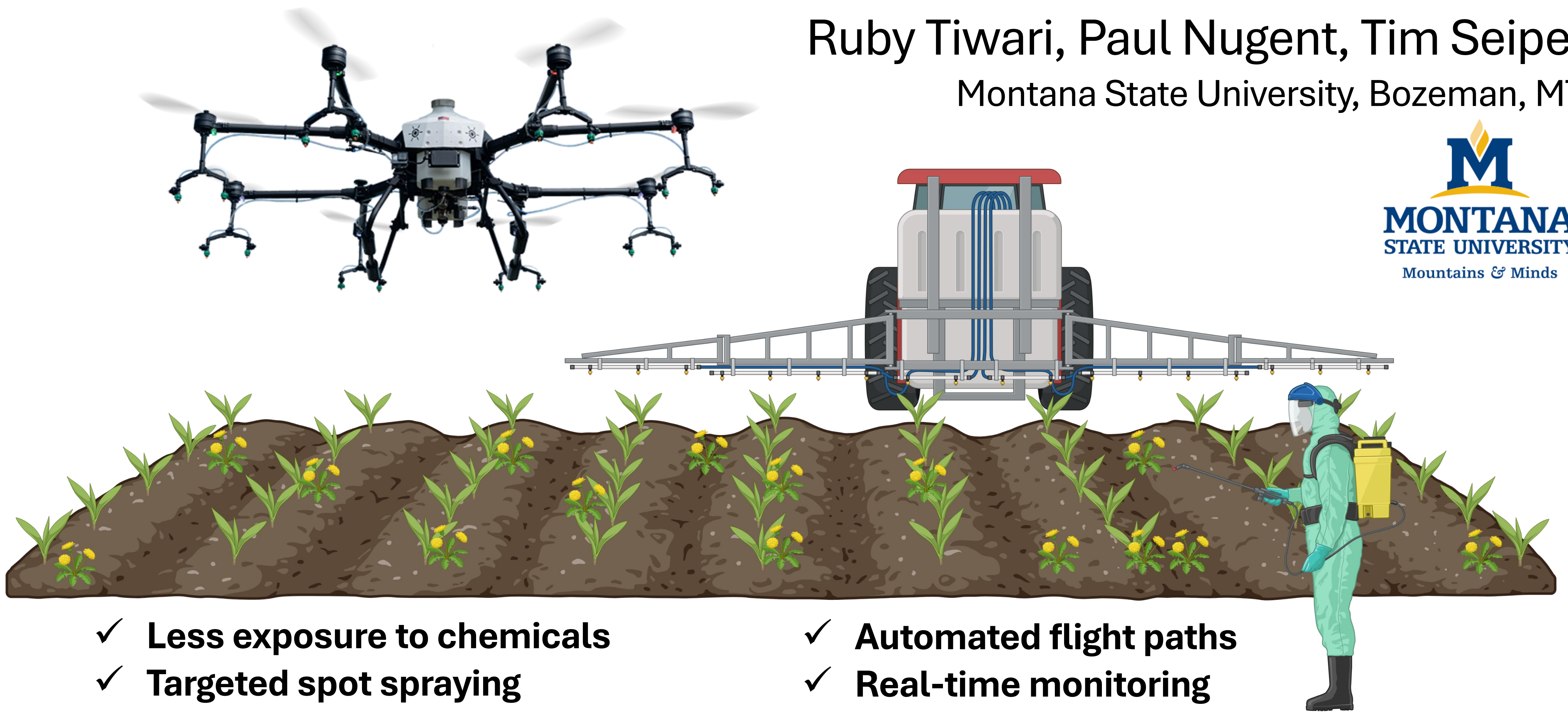


# Weed Management Research Using Spray Drones

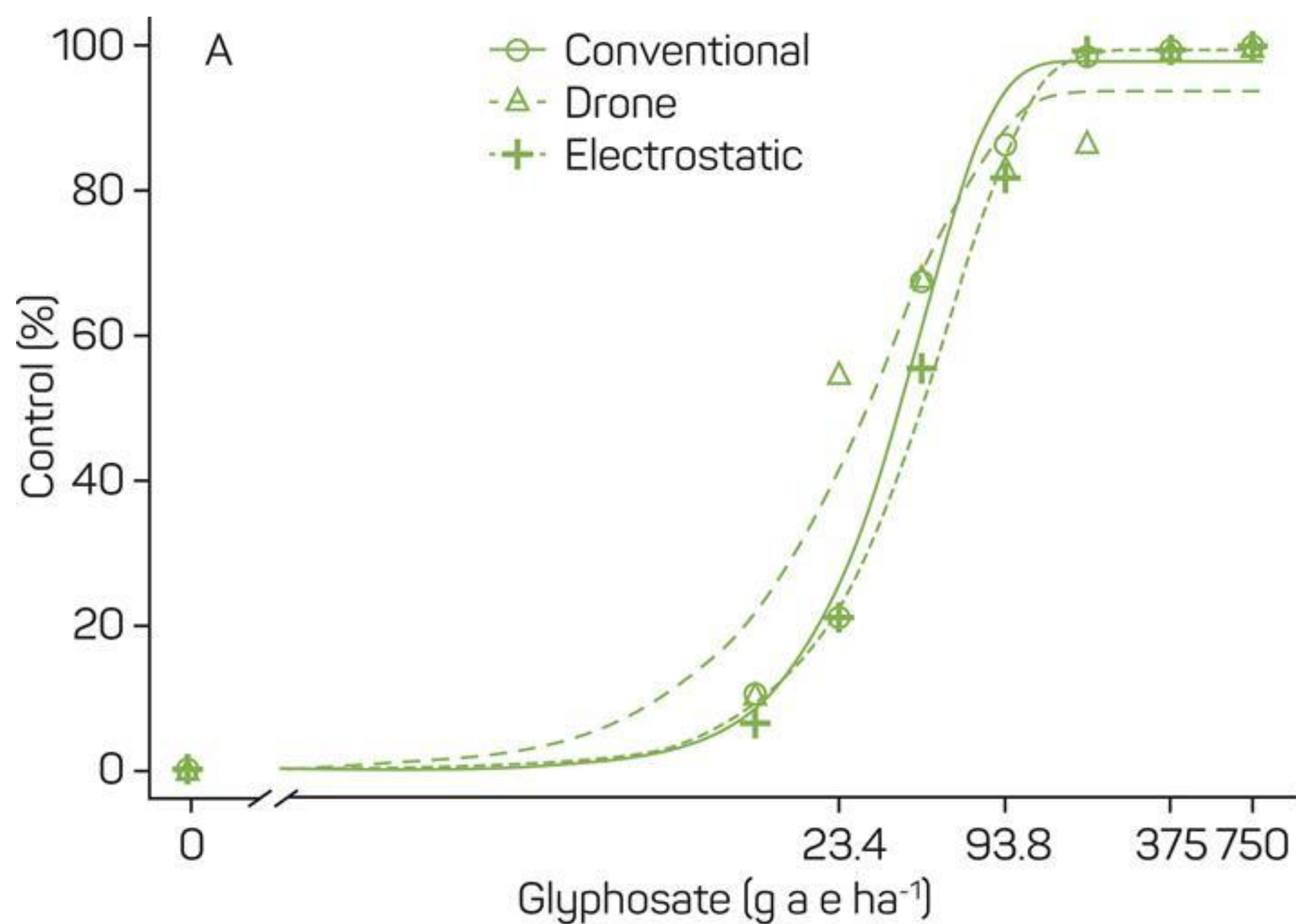
Ruby Tiwari, Paul Nugent, Tim Seipel

Montana State University, Bozeman, MT



- ✓ Less exposure to chemicals
- ✓ Targeted spot spraying
- ✓ Hard-to-reach zones

- ✓ Automated flight paths
- ✓ Real-time monitoring
- ✓ GPS-guided spraying

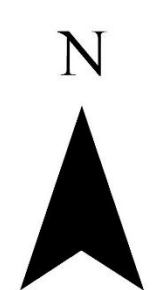


**Herbicide applications via drones provided better control of weeds compared to terrestrial methods**  
(Palacios-Zuñiga et al., 2024)

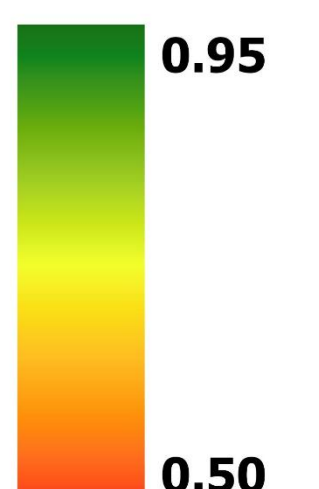
## On-going research: Pre-harvest weed control in pulses using spray drone

RGB Composite

NDVI



NDVI



Drone Flight: 06/13/2025

0 25 50 100 Feet