

Title: Automated imaging & quantification of plate-based insect assays

High-throughput insect bioassays are widely used in crop-protection research to evaluate pesticide efficacy and potential off-target effects. Common assays measure mortality, motility, growth, and feeding on treated diets or plant material. Many of these readouts still rely on manual observation or semi-quantitative visual scoring, which can be labor-intensive, subjective, and limited in resolution.

Ramona Optics' array microscope captures high-resolution video across an entire multi-well plate in parallel. Automated image-analysis tools quantify organism activity and diet or leaf consumption, converting traditionally manual assay readouts into objective, quantitative, and time-resolved measurements.