

APBAConf2025 VACS Capacity Side Event 2

Date: October 8, 2025, | **Venue:** Elephant Hills Resort, Victoria Falls, Zimbabwe

Title: Tailoring breeding analytics to the needs of opportunity crops

Coordinator: Gregory Vogel

Background: Plant breeders today have access to an ever-expanding toolbox of predictive and analytical technologies. However, the effectiveness of these tools depends heavily on context, particularly for opportunity crops with limited breeding resources. This workshop will explore the strategic application of data analytics and breeding methods, including methods based on high dimensional marker data such as genomic prediction and genome-wide association. Discussion will be tailored to selecting appropriate methods based on breeding goals, data availability, and crop-specific constraints. The workshop will also discuss advances in plant genetic resources management and methods for prioritizing germplasm accessions for incorporation into new breeding programs. Through presentations and discussion, we aim to equip participants with practical insights into tailoring modern techniques to maximize impact in opportunity crop improvement.

Session format: The session will be interactive with a combination of presentations from invited speakers and active discussion from audience members.

Expected outcomes: Session attendees will:

- Recognize key opportunities for applying predictive breeding methodologies to accelerate progress toward specific research and breeding objectives.
- Develop a clearer understanding of emerging challenges and innovations in germplasm management.

Target audience: VACS Scholars and Professionals.

