**Session Proposal**

# Session Title

Advances in Best Management Practices for Achieving Climate-Smart Agriculture

# Session Organizers

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# Session Description

Climate-smart agriculture (CSA) is a crucial strategy to sustainably increase agricultural productivity, enhance resilience, and reduce greenhouse gas emissions in the face of climate change. This session will explore the latest advances in best management practices (BMPs) that support CSA, including but not limited to nutrient management, soil health restoration, conservation tillage, cover cropping, integrated crop-livestock systems, and precision agriculture. By bringing together scientists, practitioners, and policymakers, this session aims to foster dialogue on the biophysical, socio-economic, and policy dimensions of implementing BMPs globally and locally.

We welcome contributions that use interdisciplinary approaches, long-term field experiments, modeling tools, or remote sensing to quantify the effectiveness of BMPs in mitigating climate impacts, improving soil carbon sequestration, and enhancing ecosystem services. Emphasis will be placed on context-specific solutions for different agroecosystems and climatic zones, and how these can be scaled up to contribute to national and global climate goals.

This session will also offer a platform for early-career researchers and professionals from developing countries to share innovative ideas and region-specific challenges. It will foster international collaboration toward the adoption of climate-resilient soil and land management strategies.

# Format

Oral presentations, poster presentations, panel discussions,

# Proposed Speakers

1. Alon Ben-Gal,Speaker, Soil, Water and Environmental Sciences, Agricultural Research Organization-Volcani Institute, Gilat Research Center, Mobile Post Negev,

Dr. Ben-Gal is a leading expert in precision irrigation, soil–plant–water relationships, and the development of climate-resilient agricultural practices in arid and semi-arid environments. His research integrates field experimentation with modeling and remote sensing to optimize water and nutrient use efficiency, contributing significantly to climate-smart agriculture. With extensive experience in applying best management practices for sustainable water management under climate stress, he brings invaluable insights into adaptive strategies for enhancing soil productivity and ecosystem resilience. Dr. Ben-Gal’s work has had a major impact on policy and practical implementation in water-scarce regions worldwide.

1. Samuel C. Zipper, Kansas Geological Survey, Lawrence, KS

Dr. Zipper is a recognized expert in ecohydrology and agricultural water sustainability, focusing on the interactions between land use, water resources, and climate. His research employs field studies, hydrological modeling, and geospatial analysis to understand how agricultural best management practices influence groundwater recharge, streamflow, and drought resilience. Dr. Zipper’s work is instrumental in informing water policy and management strategies across the U.S. Midwest and beyond. His interdisciplinary approach provides critical insights into optimizing soil and water conservation practices under changing climatic conditions, making him a valuable contributor to discussions on climate-smart and water-smart agriculture.