



# ISTRO

International  
Soil and Tillage  
Research Organisation

## 22<sup>nd</sup> International Soil and Tillage Research Conference

### Abstract and Session Topic Areas

Many topics may overlap. Please pick your session that closest meets your research, teaching, and extension outreach goals. We prefer oral presentations instead of poster presentations due to conference hotel logistics.

#### Regenerative Agriculture

- Biodiversity and ecosystem services
- Cover crops and residue additions
- Soil health and quality
- Conservation agriculture
- Crop production efficiency
- Methodologies for visual, chemical, and physical soil examination

#### Soil Biology and Biochemistry

- Soil microbiology
- Biodiversity

#### Soil Fertility and Plant Nutrition

- Soil chemistry
- Nutrient cycling
- Legumes, grasses, brassica, forbes nutrient availability

#### Crop Protection

- Plant pathology
- Weed science
- Entomology
- Other pest management issues
- System changes when introducing high-residue and cover crops

#### Soil and Water Management

- Soil physics/water movement
- Water scarcity
- Water quality

- Irrigation management

### **Environmental Quality**

- Climate change
- Agricultural runoff, leaching, and other loss mechanisms
- Gaseous losses of nutrients
- Carbon sequestration and management
- Microplastics

### **Tillage**

- Tillage implements and other equipment
- Tire size and pressure
- Controlled traffic farming
- Conservation soil tillage
- Soil compaction

### **Precision Agriculture and Modeling**

- Technology
- Equipment
- Artificial Intelligence
- Big data
- Unmanned aerial vehicles

### **Global Food Security Challenges**

- Country/region specific issues and reports
- Curriculum for teaching
- Input prices and availability

### **On-Farm, Applied Research and Extension**

- Extension outreach programming
- Working with growers
- Applied demonstration data