

## Our Partners

- Appropriate Technology (AT) Uganda
- Caritas Hinche
- Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD)
- Centro Regional Avaroa
- Escuela Superior Politécnica de Chimborazo (ESPOCH)
- Foundation for the Promotion and Research of Andean Products (PROINPA)
- Global Conservation Agriculture Program
- Growing Nations
- Gobierno Provincial de Bolívar (GPB)
- Haiti Ministry of Agriculture and Natural Resources
- Institut d' Economie Rurale du Mali (IER)
- Instituto Nacional de Investigaciones Agropecuarias (INIAP)
- International Center for Tropical Agriculture (CIAT)
- International Plant Nutrition Institute (IPNI)
- International Maize and Wheat Improvement Center (CIMMYT)
- Landcare Foundation of the Philippines (LCPI)
- Local Initiatives for Biodiversity, Research, and Development (LI-BIRD)
- Makerere University
- Manor House Agricultural Center (MHAC)
- Moi University
- National University of Lesotho (NUL)
- Odisha University of Agriculture and Technology (OUAT)
- Royal University of Agriculture
- SACRED Africa
- Savanna Agricultural Research Institute (SARI)
- Secretaría Nacional de Ciencia y Tecnología (SENACYT), Ecuador
- Secretaría Nacional de Agua (SENAGUA), Ecuador
- Sindicato Agrario Tiraque
- Universidad Estatal de Bolívar (UEB)
- Universidad Mayor de San Simón (UMSS)
- University of the Philippines Los Baños (UPLB)
- Wa Polytechnic
- Zanmi Agrikol

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# SANREM IL

Sustainable Agriculture and  
Natural Resource Management  
Innovation Lab



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FROM THE AMERICAN PEOPLE



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*Invent the Future*

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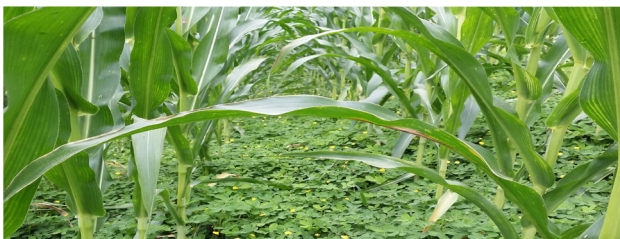
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Cover Photo: Mustard field in a conservation agriculture system in Orisha, India

## About Us

The Sustainable Agriculture and Natural Resource Management Innovation Lab (SANREM IL) supports people in developing countries who are making important decisions about sustainable agriculture and natural resource management.



Maize-Arachis pinto: a successful cropping system for northern Mindanao in the Philippines.

Our program:

- increases income generation
- empowers stakeholders
- integrates gender concerns
- improves soil quality and fertility
- enhances resource management
- strengthens local institutions
- improves market access for smallholders and communities
- promotes sustainable, environmentally sound development

## Long-Term Research Activities

The Long-Term Research Award (LTRA) activities are the main mechanism of the program and include seven projects developing conservation agriculture production systems (CAPS) in 13 countries across Africa, Asia, and Latin America. All of the activities seek to reduce food insecurity for small-scale farmers through CAPS.

- A CAPS program for the Central Plateau of Haiti
- Pathways to CAPS in the Andes
- Improving soil quality and crop productivity through CAPS in West Africa
- Developing sustainable CAPS for smallholder farmers in Southern Africa
- CAPS for smallholder farms in eastern Uganda and western Kenya
- CAPS among tribal societies in India and Nepal
- Conservation agriculture for food security in Cambodia and the Philippines

## Phase IV

SANREM CRSP's current research theme for Phase IV is:

### *Increasing smallholder food security through the introduction of conservation agriculture production systems (CAPS)*

Our research aims to increase smallholders' agricultural productivity and food security through cropping systems that contribute to and take advantage of improved soil quality and fertility.



Two women farmers tend their field grown under CAPS in Uganda.

## Cross-Cutting Research Activities

Each LTRA collaborates with and contributes to a cross-cutting research activity (CCRA). They identify and organize common research elements that will help generalize and expand findings to a wider range of sites and circumstances.

**Economic and impact analysis:** identifies elements to maximize net benefits to smallholders, minimize risks, and maximize CAPS adoption

**Technology networks:** examines communication networks between farmers and their contacts in the agricultural sector to identify characteristics that enable smallholder CAPS development

**Soil quality and carbon sequestration:** measures the changes in soil organic carbon, which has potential for agronomic and environmental benefits

**Gendered knowledge:** identifies gender-related factors that contribute to the success or failure of CAPS and recommends practices that reduce the inequities between men and women

## What is Conservation Agriculture?

Conservation agriculture entails:

1. Maintaining a year-round soil cover
2. Minimizing soil disturbance from tillage
3. Utilizing crop rotation systems

In developing nations where farmers are trying to provide more food for expanding populations, the soil gets its nutrients depleted rapidly. Yields can suffer, and, in some cases, farmers must develop new land or even contribute to deforestation in order to find fertile farmland.

By increasing the health of the soil with CAPS, farmers can sustainably farm an area of land for longer and even get higher yields over time. Farming with CAPS can also have positive social and gender benefits, since farmers save labor time from not having to till the soil. This time can be used to grow other crops, pursue additional education, and more.



A happy woman in a SANREM experimental field in Northern Cambodia.

## Innovation Lab Knowledgebase

Our Knowledgebase provides information resources relevant to sustainable agriculture and natural resource management.

## Associate Awards

Via associate awards, USAID missions contract with the SANREM to conduct additional technical assistance related to sustainable agriculture and natural resource management.

<http://www.oired.vt.edu/.sanremcrsp/>