

Dryland Systems

Dryland Systems, is the first large-scale research program to use an integrated agro-ecosystems approach to improve productivity and livelihoods in dry areas. The program aims to improve food security for the rural poor, protect the natural resource base, and empower small-scale farmers and pastoralists. Scientists, development agents and farming communities will work together to study and test a range of 'technology packages' that have the potential to be scaled-up across communities, countries, and regions – to help cope with climate change. This includes working with countries to strengthen policies and institutional support for agriculture.



Why focus on drylands?

Dry areas cover 41% of the world's land area and are home to 2.5 billion people. Poverty, food insecurity, and environmental degradation are widespread.

How is this program unique?

Traditional research and development methods, focusing on a particular commodity or system component, have largely failed in dryland systems, because of the complexity of these systems. Dryland Systems will use an integrated approach, looking at the system as a whole, to promote innovation.

Research themes

- Models for strengthening innovation systems, building capacity, and linking knowledge to policy action
- Reducing vulnerability and risk in smallholder agriculture
- Sustainable intensification: more productive, profitable systems, better market linkages
- Measuring impacts and cross-regional synthesis

Target regions

- West African Sahel and Dry Savannas
- East and Southern Africa
- North Africa and West Asia
- Central Asia
- South Asia

Partners

Eight CGIAR Centers, international development agencies, inter-governmental development fora, and R&D organizations from more than 40 countries.



Outcomes

- New technology packages to improve agricultural productivity, the efficient use of resources, food security and livelihoods
- More resilient agro-ecosystems, able to recover from 'shocks' such as drought or disease epidemics
- More diverse crop-range-livestock systems, new income opportunities through value addition
- Stronger national R&D systems, better research-policy linkages, supportive institutions



Traditionally, research-development-impact was viewed as a linear process. Instead Dryland Systems envisions an upward spiral of learning and growing. Results and feedback from technology users feeds back into research, resulting in an iterative cycle, with continuous improvement in technologies. This approach is demand-driven, focused and results-oriented. With every 'revolution', learning improves and technologies become better targeted to users' needs, leading to greater impacts on poverty and livelihoods.

Partners

AVRDC
Biodiversity
CGIAR Sub-Saharan Africa
Challenge Program
(CIAT,CIP)
FAO
ICARDA (lead center)
ICBA
ICRISAT
ILRI
IWMI
World Agroforestry
WorldFish

Along with regional/global stakeholder organizations representing the Near East, North Africa, East/Central Africa, Asia/Pacific, Central Asia/Caucasus, West Africa, and Latin America and national programs from 29 countries in Africa, East Asia, Central Asia, South Asia, the Middle East, Europe and North America

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