



Prosperity from the Ground Up

Water Smart Agriculture as a Pathway to Resilience,
Economic Opportunity and Rootedness

Farmers in Central America and Mexico face a growing problem. Erratic rainfall patterns, rising temperatures and recurrent drought threaten the livelihoods of millions of smallholder farmers who depend on seasonal rainfall. To make things worse, farming practices like incorrect fertilization, overgrazing, and the burning and deforestation of hillsides hurt yields and make farmers more vulnerable to extreme weather.

An estimated 75% of farmland in Central America suffers from soil degradation. Meanwhile, climate-related shocks—years of drought culminating in the extreme drought of 2018 and back-to-back hurricanes in 2020—have caused devastating and repeated crop loss. Mounting evidence shows the surge in Central American migration is linked to these more frequent climate shocks and the subsequent escalation of poverty and food insecurity.

WE CAN AND MUST DO BETTER.

The Promise of Water-Smart Agriculture

Water Smart Agriculture—Agua y Suelo para la Agricultura (ASA)—is the practice of managing soil to manage water and increase yields. The ASA approach provides practical and effective methods for adapting to the region's increasingly extreme and variable climate, cultivating resilience so that farmers and rural communities can build a prosperous future at home.

100,000

FARMERS REACHED
WITH TRAINING AND TOOLS

3,000+

FARMERS DEMONSTRATING
THE BENEFITS OF ASA

ASA WORKS IN:



ASA AGUA Y SUELO PARA
LA AGRICULTURA

How does it work? Here's the dirt.

ASA helps farmers maximize the potential of their land, resulting in production levels rarely seen in small-scale agriculture in the region. Protecting soil and making efficient



use of water optimizes productivity, allowing us to get the most out of every raindrop. We do that by increasing the infiltration and retention of water in soil, making more moisture available to crop roots, rather than losing it to runoff or evaporation. ASA shifts away from the conventional practices of hillside agriculture that strip soils bare. We keep soil covered and manage soil fertility. That increases organic matter,

restores soil health and leads to bigger yields. It also plays an important role in restoring and conserving the water resources of communities downstream.

Core ASA farming practices:

- **Improved fertilization:** Using the right fertilizer, in the right amount, at the right time, in the right place
- **Keep it covered:** Farmers minimize tillage and conserve crop residues—the stalks, stems, and leaves leftover after harvest—to produce mulch that protects soil and locks in moisture
- **Cover crops:** Protect soil and add nitrogen and biomass that improve soil fertility and help it capture and store more rainfall
- **Diversification:** Integration of agroforestry and other crops for household consumption and income

THE FARMER FIRST.

Rather than a one-size-fits-all approach, farmers apply ASA practices to the specific challenges and opportunities of their local environment, using hands-on learning, experimentation and soil data.

TOOLS FOR TRANSFORMATION.

We're collaborating with governments, scientists, private sector and communities to build local leadership and ensure that by 2030, 500,000 farm families are building resilient livelihoods and restoring their soil and water resources with ASA.



Find out more about how water-smart agriculture builds prosperity from the ground up. Join us at asa.crs.org



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For more information, contact asa@crs.org.

A WIN-WIN FOR THE ECONOMY AND THE ENVIRONMENT

\$1⁰⁰ = **\$2⁴⁶**
INVESTED MORE

IN FARMER INCOME

**THE ECONOMIC VALUE
OF CARBON
SEQUESTERED,
RAINFALL STORED
AND NUTRIENTS
CAPTURED IN THE SOIL** IS AT LEAST
\$7⁷⁰ PER
HECTARE
PER YEAR

ASA PRACTICES HARVESTED



THAN ON
CONVENTIONAL PLOTS
during the 2018 drought.

25%
more
farmers
WOULD MEET THEIR
BASIC CORN PRODUCTION
NEEDS IN A YEAR WITH
SEVERE DROUGHT IF THEY
ADOPTED ASA PRACTICES