# **Fact Sheet**

# INCREASING AGRICULTURAL sustainability with SIMLESA in Ethiopia

#### **Key facts**



Growing maize under conservation agriculture (CA)-based practices increased yields by 28%.



It is estimated that over 47,400 farmers have adopted SIMLESA technologies.

21 improved legume varieties better suited to local conditions have been identified and scaled out for dissemination.



More than 297 researchers and partners have been trained in the CA-based technologies.

### Technology package:

The Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) project has promoted:

- Reduced tillage to decrease soil erosion.
- Increased crop residue retention to improve soil nutrient content.
- Use of improved maize and legume varieties to improve climate resilience.





- More deliberate crop diversification for food and income security.
- Intercropping and crop rotation to increase yields and decrease farm labor.

## Farmer challenges:

- Drought.
- Low availability and high cost of improved seed.
- Lack of credit to buy seed and fertilizer.
- Shortage of herbicide suppliers.
- Limited access to markets and agricultural information.

### SIMLESA approaches:

- On-farm research activities undertaken across agroecologies to test the suitability of CA-based practices.
- Participatory seed selection trials carried out with farmers to identify the preferred seed qualities of farmers.
- Agricultural 'innovation platforms' or knowledge exchange and action forums established to bring members of the value chain together.
- On-farm demonstrations and field days held at selected farmer fields to provide training in agronomic management practices, such as minimum tillage and weed control.





## Achievements

- Growing common beans and maize under CA-based practices were found to produce 40% and 28% yield advantages, respectively, compared to growing the crops under conventional methods.
- Compared to conventional farming methods, CA-based practices increased the stover yields of maize and common beans by 25% and 34% respectively.
- Since 2010, 170 maize, 172 legume and 53 forage variety seed selection trials have been carried out with farmers.
- Nine hybrid maize varieties and 21 improved legume varieties better suited to local conditions have been identified and scaled out for dissemination.
- Since 2010, over 26,000 tons of improved seed identified by the project has been produced across the country by private seed companies, farmer cooperatives and research centers.
- In 2016 and 2017, 94 long-term on-station and on-farm experiments were conducted across the country to test and adapt CA-based practices.
- Between 2012 and 2017, it is estimated that over 47,400 farmers adopted SIMLESA technologies (39,843 men and 7,594 women).
- Over 4,300 women have taken part in SIMLESA exchange visits.
- SIMLESA-Ethiopia has trained 18 MSc students, eight PhD students and supported nine undergraduate students with their theses.
- More than 297 researchers and partners have been trained in the CA-based technologies.

## Scaling out

- By working with local newspapers and TV channels, the SIMLESA messages of reduced tillage, maize-legume intercropping and crop rotation has been scaled out to farmers.
- Organizations such as the Regional States Bureau of Agriculture and Natural Resources from Oromia, Amhara, and the Southern Nations and Nationalities helped to provide SIMLESA trainings to farmers.
- In collaboration with researchers and agricultural extension workers, farmer cooperatives, seed enterprises and private seed companies are producing and distributing newly released varieties of maize and legumes in SIMLESA project areas.

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#### References

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