



# EVIDENCE OF SUCCESS

## CLIMATE-SMART APPROACHES TO SMALLHOLDER DAIRY DEVELOPMENT IN EAST AFRICA

### ► ABOUT BIG FACTS

Big Facts is a resource of the most up-to-date and robust facts relevant to the nexus of climate change, agriculture and food security. It is intended to provide a credible and reliable platform for fact checking amid the range of claims that appear in reports, advocacy materials and other sources. Full sources are supplied for all facts and figures and all content has gone through a process of peer review.

Big Facts is also an open-access resource. We encourage everyone to download, use and share the facts and graphic images. We believe that by sharing knowledge we can aid the type of interdisciplinary understanding and collaboration necessary for meeting the challenges posed to agriculture and food security in the face of climate change.

The Big Facts project is led by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). CCAFS is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together the world's best researchers in agricultural science, development research, climate science and Earth System science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security.

We are well aware that this field is progressing rapidly, and that science is always open for re-evaluation. We welcome your suggestions for improvements, updates and corrections at [ccafs@cgiar.org](mailto:ccafs@cgiar.org).

#### Acknowledgments

Project leaders: Snorre Frid-Nielsen, James Norman, Dhanush Dinesh, Sonja Vermeulen





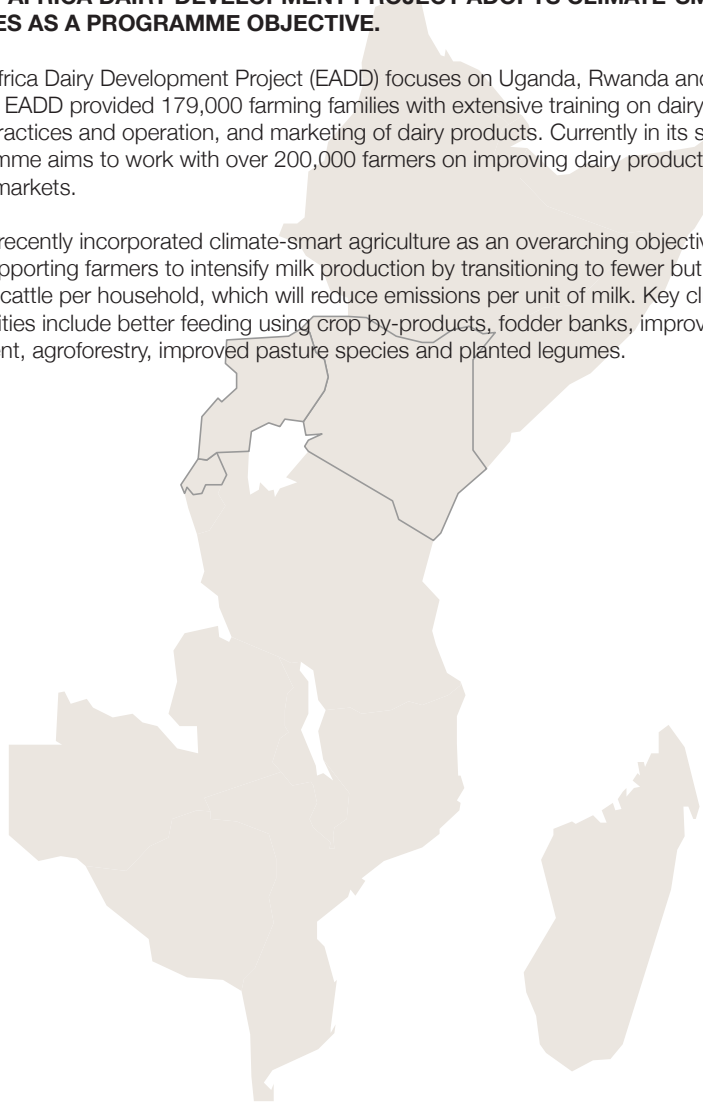
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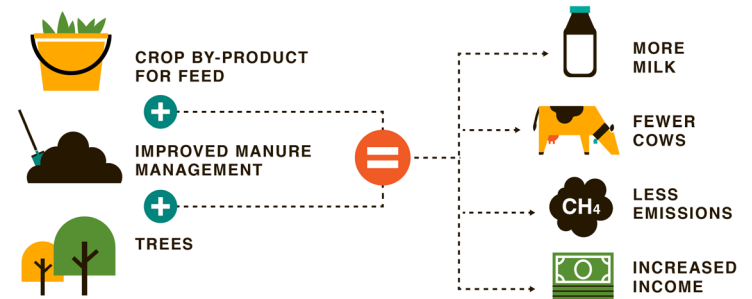
### THE EAST AFRICA DAIRY DEVELOPMENT PROJECT ADOPTS CLIMATE-SMART PRACTICES AS A PROGRAMME OBJECTIVE.

The East Africa Dairy Development Project (EADD) focuses on Uganda, Rwanda and Kenya. In its first phase, EADD provided 179,000 farming families with extensive training on dairy husbandry, business practices and operation, and marketing of dairy products. Currently in its second phase, the programme aims to work with over 200,000 farmers on improving dairy production and access to markets.

EADD has recently incorporated climate-smart agriculture as an overarching objective. This involves supporting farmers to intensify milk production by transitioning to fewer but more productive cattle per household, which will reduce emissions per unit of milk. Key climate-smart activities include better feeding using crop by-products, fodder banks, improved manure management, agroforestry, improved pasture species and planted legumes.



East African dairy farmers are gaining productivity with less emissions through a combination of climate-smart practices.



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### Timeline

EADD began its first phase in 2008 and is currently in its second phase.

### Partners and funding sources

EADD is funded by the Bill & Melinda Gates Foundation and has received a grant of USD 25.5 million for the second phase of the programme. The programme is delivered with a consortium of partners including TechnoServe, the International Livestock Research Institute (ILRI), the World Agroforestry Centre (ICRAF), African Breeders Service and the Standard Assessment of Mitigation Potential and Livelihoods in Smallholder Systems (SAMPLES) project. To address capacity and knowledge gaps in measuring greenhouse gas emissions in smallholder systems, FAO and partners including ICRAF are working at an EADD site in Kenya, estimating emissions and productivity in dairy systems.

### Key lessons and impacts

- The development of an association of dairy producers has enabled scaling up of climate-smart agricultural activities via knowledge sharing.

### What makes it climate-smart?

**FOOD AND INCOME:** The programme aims to increase milk production by intensifying production, which results in increased income and greater availability of dairy products.

**ADAPTATION:** Diversified fodder sources increase resilience in livestock systems, and agroforestry helps to stabilize ecosystem services such as water retention in soils, which improve resistance to dry periods during the growing season.

**MITIGATION:** Reducing the number of cattle and increasing productivity will decrease emissions per unit of milk. Improved manure management also reduces methane emissions.

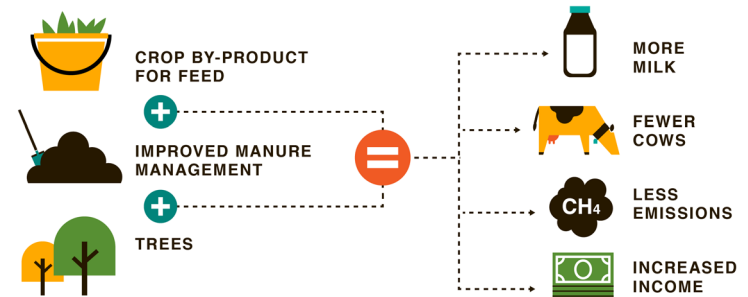
### REFERENCES

CCAFS. 2014. East African Dairy Development program adopts Climate Smart Agriculture. Copenhagen: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

FAO. 2012. Assessing the climate change mitigation potential of the EADD-MICCA pilot project with the Ex-Ante Carbon Balance Tool (EX-ACT). Rome: FAO.

Seeberg-Elverfeldt C, Rioux J, Kirui J. 2012. Climate-smart agriculture put into practice in smallholder dairy development project in Kenya. weADAPT, the Collaborative Platform on Climate Adaptation. (Available from <http://weadapt.org/knowledge-base/synergies-between-adaptation-and-mitigation/climate-smart-agriculture-put-into-practice-in-smallholder-dairy-development-project-in-kenya>) (Accessed on 13 June 2014)

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