

Agro-Chain greenhouse gas Emissions (ACE) calculator: user-friendly and accessible tool for rapid assessment of net climate impact effect of food loss reducing interventions

Project Title: P251 - Reducing agro-food induced GHG emissions through effective FLW reducing strategies

Description of the innovation: The ACE calculator describes all activities in post-harvest operations that induce greenhouse gas (GHG) emissions. Emissions associated to lost produce (including agricultural production emissions) are allocated to the food products that stay in the distribution chain. Scenario comparison shows effects of interventions on total losses and GHG emissions. Different from existing tools like CoolFarm tool this method is unique in level of detail of postharvest chain description, essential to analyze postharvest intervention effects.

New Innovation: No

Stage of innovation: Stage 3: available/ ready for uptake (AV)

Innovation type: Research and Communication Methodologies and Tools

Geographic Scope: Global

Number of individual improved lines/varieties: <Not Applicable>

Description of Stage reached: The tool is supplemented with generic data (so all fresh and semi-processed food products can be analyzed with it). The tool is ready to describe also crop-specific operations (like rice threshing and milling), but the number of such crop-specific process descriptions is still relatively low; will be extended in 2021.

Name of lead organization/entity to take innovation to this stage: WUR - Wageningen University and Research Centre

Names of top five contributing organizations/entities to this stage: <Not Defined>

Milestones: No milestones associated

Sub-IDs:

- 31 - Reduced net greenhouse gas emissions from agriculture, forests and other forms of land-use (Mitigation and adaptation achieved)

Contributing Centers/PPA partners:

- WUR - Wageningen University and Research Centre

Evidence link:

- <https://cgspace.cgiar.org/handle/10568/106161>

Deliverables associated:

- D26989 - Webinar on ACE calculator, attended by 92 participants and over 200 views via social media channels (<https://tinyurl.com/ydd4xlzf>)
- D26972 - Agro-Chain greenhouse gas Emissions (ACE) calculator update 2020 (<https://cgspace.cgiar.org/handle/10568/106161>)
- D10243 - Promising business cases and their greenhouse gas emissions for potato smallholders in Kenya (Scientific journal: Environmental Research Letters) (mdpi.com/2073-4395/11/9/1857)

Contributing CRPs/Platforms:

- CCAFS - Climate Change, Agriculture and Food Security