Selection of Case studies and Participants to share Experiences on Investments in Conservation Agriculture and Sustainable Mechanization for Smallholders in Africa

Plenary Session at the 8th World Congress on Conservation Agriculture (8WCCA)
Bern, Switzerland, 21 – 25 June 2021

1. Introduction to the 8WCCA Session on Experiences & Investments in Smallholder Conservation Agriculture and Sustainable Mechanization in Africa

The 8th World Congress on Conservation Agriculture, with the theme "*Profitable and Sustainable Farming with Conservation Agriculture",* will be held in Bern Switzerland, June 21 to 25, 2021. The congress is jointly organized by the European Conservation Agriculture Federation (ECAF), and its member in Switzerland, Swiss No-till (SNT), with technical support of the Food and Agriculture Organization of the United Nations (FAO), and in partnership with, amongst others, the African Conservation Tillage Network (ACT). The Congress intends to provide a forum to show Conservation Agriculture (CA) in its entire diversity to enable and inspire farmers and other stakeholders to further improve and promote CA systems internationally.

In partnership with and support of FAO, ACT will organize a special two-hour plenary session at the 8WCCA, with a focus on the link between investing in Sustainable Agricultural Mechanization (SAM) and business orientation of smallholder farmers in Africa. The two-hour plenary session reserved for the FAO and ACT session "*Experiences and Investments in Conservation Agriculture and Sustainable Mechanization for Smallholders in Africa"* provides an opportunity for Africa to synthesise and share CA developments in the continent and provoke strategic thinking on how we want farming through CA and SAM to propel Africa towards the 'Africa We Want'. The session is scheduled for 13.30 – 15.30 hrs on Wednesday 23 June 2021.

Provision of services in "*Investment Needs for Sustainable Mechanization for Africa"* is a project led by FAO and implemented by ACT with the main objective of developing sustainable agricultural mechanization in sub-Saharan African countries by providing investment orientation, developing the capacity of stakeholders, creating and strengthening a framework for sharing knowledge and experience. The project is part of the implementation of the Framework for Sustainable Mechanization for Africa F-SAMA developed in 2018, jointly by FAO and the African Union. Among

other important aspects, the framework strongly promotes a shift from conventional tillage practices to more environmentally adapted practices, such as Conservation Agriculture (CA) and minimum or no-tillage systems. It also emphasizes the need to consider mechanization holistically along the entire agri-food value chain.

To effectively utilize the allocated plenary session for Africa at the 8WCCA, an inclusive programme, (attached in Annex 1), has been developed. It involves the identification and competitive selection of the best performing (successful) case studies on investments in sustainable agricultural mechanization to represent each of the five sub-Regions in Africa [Central, Eastern, Northern, Southern and Western]. Determination of the best performing case studies from each sub-region requires a clear and transparent process by an independent team of experts knowledgeable in the broader sustainability criteria.

The following criteria and selection procedure will be considered in the identification and selection of the targeted Case Studies and Participants to the 8WCCA.

2. Selection of Case Studies for sharing at the 8WCCA

2.1. What is a case study?

In the context of this selection, a case study is the approach being used to generate an in-depth, multi-faceted understanding of an investment project in its real-life context. They are documented materials in a variety of media describing a sustainable agricultural mechanization investment project to detailed information about a complex project. Key points summarising the features and our approach to case studies are as follows:

- Descriptive material about work completed or work in progress, which illustrates one or more identified learning points.
- Our case studies are written, including relevant numerical data and can include information presented through a variety of other media.
- Designed to stimulate discussion and encourage people to compare their own experiences to those of others working in the field.
- Language and presentation of the content need to be accessible so people can quickly absorb and work with them.

2.2. Purpose of the case studies

i). The case study materials need to illustrate your case study learning points

The selected case study materials will need to demonstrate clearly the particular learning points. In this case, the desired learning points are focused around social, economic, environmental sustainability considerations and also technical feasibility.

ii). Audience for your case study

Your primary target audience are medium and smallholder farmers and private sector stakeholders interested to invest sustainable farming using CA and SAM.

iii). Size and presentation of the case study

Given the targeted audience, consider a blend of text, graphical and visual illustrations to present your case study materials to make it accessible as a learning tool to readers. Annex 1 presents a proposed outline of the text report, while Annex 2 presents an outline for the PowerPoint presentation. It is strongly recommended that you also share a short (three-minutes video clip) in addition to the write-up and the PowerPoint presentation.

2.3.Case Study Eligibility Criteria

For any sustainable agricultural mechanization investment to qualify as a case study, it will need to prequalify to the listed conditions, beyond the social/economic/environmental considerations:

1. The farming investment must be along the sustainable agricultural mechanization value chain with the primary technologies, innovations and practices being based on Conservation Agriculture and Sustainable Agricultural Mechanization (SAM).
2. The investment(s) should have been operating at a minimum of three years with trends of "success" to be verified by the section criteria in section 3.
3. The scope of the investments eligible for case studies includes private, community, public or public-private-community partnership.
4. The case study could be selected from either the temperate, tropical or the more challenging semi-arid drylands of Africa.
5. Only one case study will be selected from each sub-region for representation at the 8WCCA and subsequent further documentation. However, each sub-regional selection committee will be expected to submit at least six case studies outlining the best three for the evaluation and selection of one sub-regional case study by the Regional Selection Committee.

3. Criteria for Selection of Case Studies

The proposed set of case study selection criteria is intended to evaluate submitted case studies from the sub-regions and determine the best to be shared at the 8WCCA and subsequent documentation. The proposed selection criteria will be updated by the "Regional Selection Committee" including the development of agreed criterion weights prior to being applied to each of the three sub-regional projects. The sub-regions will use and adapted criteria to select the best three case studies from a sub-region out of six or equivalent case studies from the sub-region. Based on the social, environmental and economic sustainability, the case studies are meant to provide the proof of concept on successful investments in SAM and trigger discussions amongst stakeholders and enhanced investments.

Most case studies could be complex and decisions need to be made on the key elements to be selected to present to the audience to avoid overwhelming with detail. For the case studies in the discussion, only successful case studies, as opposed to those where things went wrong, will be considered.

The Case Study Administrator at ACT will receive and acknowledge each submission and screen all applications for eligibility. After initial screening, members of the Case Study selection committee

from the different categories will evaluate applications based on its innovativeness and sustainability and documents submitted for nomination.

Table 1 presents a guide of the Case Study assessment criteria to be appraise by the Regional Selection Committee prior to use by both the sub-regional and regional committees.

Table 1. Guide of the Case Study Assessment Criteria

No.	Assessment Criteria	Rating	Remarks
	Economic Sustainability	**35**	
1.	Return on investment		
2.	Profitability ratios - Gross margin & Net margin ratios		
3.	Risk management/ mitigation		
	Social Sustainability	**35**	
4.	Representation and gender equity, gender sensitive impact		
5.	Community ownership, participation & contribution		
6.	Impact on household food security over long term		
7.	Short-term and long-term job creation potential		
8.	Potential for project spread/scalability		
9.	Social and political acceptability		
10.	Development of skills and capacity within the community		
	Environmental Sustainability: sustainable use and conservation of natural resources	**30**	
11.	Increasing resilience to climate change		
12.	Air resources quality and noise (dusty air pollution)		
13.	Water resources – quantity and quality		
14.	Soil resources – loss (erosion) and condition (degradation)		
15.	Plant and animal resources: species biodiversity, production & management – impact on diversification		
16.	Waste management: generation and disposal		
TOTAL		**100**	

4. Case Study Selection Committee

The Case Study Selection Committee will be established by the AfricaMechanize Steering Committee[1]. This committee will be responsible to do the following:

R1. Review and self-internalize the intention of the Calls for Case Studies for the 8WCCA
R2. Appraise, with involvement of the sub-regional teams, the Eligibility and Selection Criteria for Case Studies.

[1] Composed of the (i) The African Union Commission, Department of Agriculture, Rural Development, Blue Economy and Sustainable Environment (ARBE), as Chair, (ii) FAO as Technical Advisor, and (iii) ACT as Secretariat.

R3. Publicize awards criteria and calls for nominations to the pan-African community.
R4. Review incoming responses /nominations to calls and disqualify, prequalify or assess Case Studies based on applicable criteria.
R5. Coordinate and support documentation and presentation of the Case Studies.
R6. Inform the pan-Africa community about the uniqueness of and learnings from the case studies.

It is proposed that the Case Study Selection Teams/Committees at the sub-regional and Regional levels be composed of representatives from FAO Sub-Regional office, Farmers Federation, Regional Economic Community, representatives of DAMES from 3-4 countries and ACT as Secretariat.

5. Selection of Participants to the 8WCCA

The names of participants to the 8WCCA will be proposed by their respective institutions and approved by the Selection Committee. All selected Case Studies will be formally documented, publicly announced and presented during the 8WCCA.

6. Annexes

6.1.Annex 1

The tone, language and style of the case study should be straightforward, emphasises learning points with clarity. The length of the written case study should not exceed five pages. The below outline is proposed for the case study.

- **Title.** A thoughtful title that captures the essence of the case study.
- **Abstract.** A one- or two-paragraph statement summing up the study (what, why, when, where, how, and who). This summary introduces the project, questions, hypothesis, and highlights of the important findings.
- **Introduction.** (or Background). Describes what you did, and why it was of interest. Typically, several paragraphs, the introduction includes background information.
- **Hypothesis.** Presents the hypothesis (or hypotheses) that is the basis of your investigation, describes the question(s) that led to development of the hypothesis, and explains why the hypothesis was framed as it was (technical background, design interest, occupant concerns, etc.). Include a series of inquiry questions that would logically help you substantiate or refute the hypothesis.
- **Methodology**. Describes the step-by-step procedure employed and explains why it is appropriate to this case study, provides details of how, what, when, where, and who. It should be easily repeatable by another team.
- **Results** (or Data). Presents the data that were collected (so the reader can make a judgment about your work based on same information you used); the data should be organized and processed to some extent for clarity but should not be just a summary.

- **Analysis**. An explanation of what the information you collected means in the context of the sustainable agriculture, hypothesis, and methods. The analysis is your interpretation (or opinion) of what the results or facts mean. The emphasis must be put on the 3 dimensions of sustainable development, namely social, economic and environmental
- **Conclusions**. A fairly concise statement of what the case study found and what you have learned. Was the hypothesis proved? Can you explain what you found if there are odd things showing up? Can you recommend on replicability or scaling of the case study? What are the "lessons learned"?
- **References**. Provide a list of applicable references; generally, include only citations to materials that were critical to your case study (i.e., not a long bibliography).
- **Acknowledgments**. Provide thanks to those who deserve it (politically or actually).
- **Appendix**. To include extra graphs, surveys used, team information, etc. pertaining to the case study.

6.2.Annex 2: Outline for PowerPoint presentation [Maximum 7 slides]

- **Cover page.** Country/Institution logo, Case study title, Presenter name & designation.
- **Introduction.** Describe the Case Study: what, why, when, where, how, and who. Highlights of the important findings.
- **Methodology**. Describes the step-by-step procedure employed (how, what, when, where, and who) and explain why it is appropriate to this case study, provides details of.
- **Results and analysis**. Presentation of the data that were collected, showing trends and analysis of sustainability (economic, social and environmental) of agriculture.
- **Conclusions**. A fairly concise statement of what the case study found and what you have learned. Explain what you found if there are odd things showing up? Can you recommend on replicability or scaling of the case study? What are the "lessons learned"?