

**TERMS OF REFERENCE – Limited Market Consultation  
Project No. 1-1-11-301-2**

<b>Smallholder Dairy Development</b>
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## **1. INTRODUCTION**

The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 under the Lomé Convention between the ACP (African, Caribbean and Pacific) Group of States and the European Union Member States. Since 2000, it has operated within the framework of the ACP-EC Cotonou Agreement. The mandate of the Centre under the aegis of Article 3 of the Cotonou Agreement calls on the Centre:

***“To strengthen policy and institutional capacity development and information and communication management capacities of ACP agricultural and rural development organizations. It shall assist such organizations in formulating and implementing policies and programmes to reduce poverty, promote sustainable food security preserve the natural resource base and thus contribute to building self-reliance in ACP rural and agricultural development.”***

This tender consists of two lots (Lot A and Lot B), each with its own background, purpose and tasks. The organizations / consultancy firms are required to bid for either or both of two lots.

## **2. BACKGROUND**

*Lot A: Desk Study: Opportunities to improve the reproductive performance of smallholder dairy cows in Africa*

Dairy sector development in smallholder farming systems is of strategic importance especially for addressing food security and improved livelihoods in sub-Saharan Africa and countries in the Caribbean and Pacific. However, the practice of artificial insemination, which can improve yield and quality of milk, is not well established because of a number of technical challenges including the number and disperse nature of smallholder dairy herds and farmers, limited technical knowledge and capability, environmental constraints including electricity and refrigeration facilities, and the inability to access and store sufficient quantities of inputs e.g. hormones and improved genetic stock and make them available and affordable in small quantities as needed. There is need to improve the efficiency of artificial insemination (AI) in the ACP region within the constraints of smallholder farming systems.

*Lot B: Technical and Economic Evaluation of Oestrus synchronization in Ethiopia*

Oestrus synchronization is widely used as a method to improve the efficiency of artificial insemination (AI). Various methods for oestrus synchronization have been developed primarily for use in large well organized farming systems, all based on the use of (a combination) of hormones. However, the practice is not well established in developing countries because of a number of technical challenges including the inability to access hormones in small quantities. However, dairy sector development is of strategic importance in Ethiopia for addressing food security and improved livelihoods. The Ethiopia authorities have carried out the Synchronisation trials with the cross breeding of local cattle with H.fresian and Jersey breeds. This effort has been carried out in four regions out of the capital.

### 3. PURPOSE

*Lot A: Desk Study: Opportunities to improve the reproductive performance of smallholder dairy cows in Africa*

The primary objective of the project is to review established practice and assess opportunities to improve the reproductive performance of smallholder dairy cows in the context of sub-Saharan Africa and propose technical and policy options on artificial insemination for development of the dairy sector.

*Lot B: Technical and Economic Evaluation of Oestrus synchronization in Ethiopia*

The primary objective of the project is to assess the technical and economic feasibility of oestrus synchronization in smallholder dairy cows kept under Ethiopian conditions to provide guidance for policy and practice.

### 4. TASKS

*Lot A: Desk Study: Opportunities to improve the reproductive performance of smallholder dairy cows in Africa*

This should include a desk study to evaluate the various methods available for artificial insemination of dairy cows in smallholder dairy farms under sub-tropical conditions with a focus on sub-Saharan Africa. This desk study will include a detailed literature review and synthesis report or concept paper with key technical recommendations on feasibility of options which will be used by CTA to inform its policy and markets and knowledge programmes.

*Lot B: Technical and Economic Evaluation of Oestrus synchronization in Ethiopia*

1. A field visit of not more than two weeks in the first instances to Ethiopia to review the veterinary and livestock research and extension services, farms to observe existing methods of artificial insemination and meet with key officials to obtain all relevant information that will be needed to advise the Ethiopian Ministry of Agriculture concerning the potential risks and benefits of using hormonally induced oestrus synchronization in combination with AI. The start date for the field visit is mid-August. A half-day seminar will be convened during the visit to share observations and key findings and seek feedback on preliminary recommendations with technical specialists and other interested stakeholders.
2. Production of a final draft report which will include information on the technical and economic feasibility of oestrus synchronization in Ethiopia including the sources for procuring the hormones which will be needed for the preferred method of oestrus synchronization as well as a ranking of the various options for their usefulness (cost-effectiveness) for smallholder producers in Ethiopia. The final draft report will be reviewed by CTA in consultation with Ethiopian technical experts and the combined comments will be submitted to the consultant by CTA for incorporation in the final report.

### 5. EXPECTED OUTPUT

*Lot A: Desk Study: Opportunities to improve the reproductive performance of smallholder dairy cows in Africa*

A detailed literature review and concept paper which includes a list of references with key technical recommendations on feasibility of the options.

**Lot B: *Technical and Economic Evaluation of Oestrus synchronization in Ethiopia***

- Field visit report to Ethiopia with a summary of key messages on main findings and key outputs of discussions and feedback from the half-day seminar
- Final technical and economic feasibility report.

**6. ESTIMATED VALUE**

**LOT A: *Opportunities to improve the reproductive performance of smallholder dairy cows in Africa***

Euro 10,000 fees maximum,-

**LOT B: *Technical and Economic Evaluation of Oestrus synchronization in Ethiopia***

Euro 15,000 fees maximum.

Consultant/ consulting firms and organizations should also propose a budget for reimbursable costs; return airfare, hotel accommodation, airport transfers, ground transportation, communication etc. However, please note that reimbursable costs for the Ethiopian mission are separate and will be considered within the framework of CTA's rules and regulations.

**7. EXPERTISE & EXPERIENCE**

**Lot A and Lot B**

- Interested individuals, organizations / consultancy firms must provide their CV, in case of independent expert, or CVs of its team of experts for organizations/ firms using the CTA consultant's database format provided.
- Knowledge and experience of Artificial insemination and African smallholder livestock systems and in particular the small-scale dairy sector are an advantage.

**8. INSTRUCTIONS**

Please provide a proposal for the required services (LOT A and or B). The proposal should reach us no later than July 27<sup>th</sup> 2012

When sending in your proposal, please:

- Refer to the project number indicated on Page 1.
- Indicate which Lot (A or B) or Lots (A&B) you are responding to.
- Indicate the total cost distinguishing between: (i) Fees; and (ii) reimbursable costs.
- Provide a time schedule for delivering the finished product(s). Please note all tasks are due by 31 October 2012.

**9. CTA Contact Person**

If you need clarifications, please contact: Mrs. Judith Ann Francis, Senior Programme Coordinator, Science and Technology Policy ([Francis@cta.int](mailto:Francis@cta.int)) All communication to Ms Francis should be copied to Ms Ellen Mulder, Project Assistant ([Mulder@cta.int](mailto:Mulder@cta.int)).