**Participatory evaluation of innovations in oestrus synchronization and artificial insemination for dairy development, Sidama, Ethiopia**

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This study was conducted in 2015 in three clustered districts of Sidama Zone, Southern Ethiopia. The major farming systems are *enset* (*Ensete ventricosum)*-livestock and *enset*-coffee-livestock. Most of the cattle are indigenous breeds, which have low production and reproduction performance. Although artificial insemination (AI) has been practiced for a long time, it has been limited to major urban areas and efficiency of the service has been very low. Shortage and high price of crossbred animals has limited participation of smallholder farmers in dairy production and marketing. Thus, hormonal oestrus synchronization and mass artificial insemination (OSMAI) program has been introduced in order to improve the efficiency of conventional AI. However, its field performance has been low due to various constraints. This study evaluated the gaps and constraints and provided technological, organizational and institutional innovations to improve OSMAI. The study interviewed 144 dairy producers (48 from each district), of which 50% were OSMAI beneficiaries, AI technicians, livestock & animal health experts. Household survey with structured questionnaires, focus group discussions, key informants interview and livestock commodity platforms were employed for data collection. Mean livestock holding per household was 5.35 TLU, and cattle accounted for the largest (90%) proportion. The contribution of crossbreds was only 7.8%. The following gaps are identified: a) perception related - lack of access to information, lack of organized and effective awareness creation activities, lack of commitment and support from leadership; b) capacity related - poor technical capacity of AI technicians, livestock & animal health experts, and dairy producers; c) organization and institution related - centralized & inefficient OSMAI implementing team, poor coordination, resource mobilization and lack of incentives for AI technicians, poor follow up of inseminated animals; weak vertical and horizontal linkage among zone, district and communities; d) technology related - lack of experience on semen quality analysis and shortage of Jersey semen (preferred by the producers). Awareness creation and capacity development of actors and service providers, organizational/institutional, and technological innovations are recommended interventions to improve the efficiency and effectiveness of OSMAI in the area.

**Key words**: Genetic improvement; oestrus synchronization; mass artificial insemination; dairy