

Dissemination of improved genetics from community-based breeding programs to new villages

Aynalem Haile, Tesfaye Getachew, Mourad Rekik and Barbara Rischkowsky

ICARDA, Addis Ababa, Ethiopia

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Editing, design and layout—(Organization Name)

Cover photo—Caption (photo credit: Organization Name/Name of photographer).

ISBN:

Citation: Aynalem Haile, Tesfaye Getachew, Mourad Rekik and Barbara Rischkowsky, 2019. Dissemination of improved genetics from community-based breeding programs to new villages, Research Report, Addis Ababa, Ethiopia, ICARDA.

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Background

As part of the priority country initiative of consolidating CRP research to date and translate it into a pilot integrated package of interventions, the genetics team focused among others on dissemination of improved genetics from community-based breeding programs.

Small ruminant producers in Ethiopia had little or no access to genetically improved sheep and goat breeding animals. There was little capacity and skills and no supporting infrastructure in the national system to support breeding programs for smallholder sheep and goat producer. ICARDA and ILRI have worked on community-based breeding programs in Ethiopia since 2010. Successes and still existing challenges are well documented. In this initiative the superior sires from the CBBPs will be used to jump start breeding programs in the new villages. Some of the initial accomplishments include the following.

Achievements

- One new site in each of the four study areas was selected by respective researchers and approved together. Selected sites are Zeram in Menz, Sikala in Abergelle, Lemisaticho in Doyogena and Chena in Bonga.
- Farmer selection, organizing them into groups, base line data collection is completed in two sites (Zeram and LemiSaticho) and is progressing well in the other two sites (Sikala and Chena).

- Performance and pedigree data collection has started in three of the villages (Zeram, Lemisaticho and Sikala) using trained enumerators recruited for the purpose. Uploading baseline data to AniCloud is being implemented using tablets.
- Formation of formal breeder cooperative is in progress in all new sites. Support from district level cooperative office and nearby research center is crucial to formalize cooperative and running breeding programs.
- A total of 59 breeding sires were purchased from old CBBP and transferred to new community (14 rams for Zeram, 29 bucks for Sikala, 10 rams for Lemisaticho and 6 rams for Shena site).
- Routine data collection, recording and uploading to the AniCloud and sire selection were implemented in all old sites.
- Awareness creation and discussion with participant communities were held in all sites. The following points were discussed.
 - Non-selected rams were observed and reported in few flocks of Menz particularly in Sina Amba. Main reason was that consumers at market need bigger and castrated animals so that many farmers are not interested in early castration/fattening as they perceived that early castration affects growth of animals. Less attention to follow-up and cull unwanted males from the cooperative leaders and enumerators side were also mentioned as reason. As castration interfere with growth hormone it might have effect on the growth of animals when castrated at early age. But early castration/fattening might be advantageous in generating quick economic return. Overall economic advantage of early castration and its effect on growth need to be proved by research. Until then the community agreed either 1. To sell or castrate before

mating age, 2. use apron to protect mating if they don't want to castrate.

Finally, participants agreed that the committee and enumerators need to be accountable to closely follow and pass decisions on those violating the agreed law.

- Most of the sites are progressing very well in implementation of the breeding programs. They are generating and accumulating capital in different forms like cash in bank, breeding animals and fixed assets like big multipurpose houses. However, some members in Menz are reluctant to participate in managing and taking care of communal breeding as well as culled breeding rams. Incentive option to benefit those households managing breeding and culled animal (which is widely practiced in Bonga) was discussed with the community. They agreed on sharing profit between cooperative and a household managing animals. We also advised them that discussion and passing decision on such and any other administrative issues is crucial. However, they need to communicate with researchers for technical issues.
- Aggressiveness of rams when they are kept for more than one service year, high management cost of culled males as market is usually delayed, interest of the community to sale ewes to external market and interest to sell ram lambs before selection age (6 months) due to pressing cash need were raised and discussed at Doyogena and Bonga. It is true that the use of sires for many years has its own advantage and dis-advantages. It is advisable to transfer to other mating group if the sire is more aggressive and has superior EBVs. We strongly advised them not to sell ewes to external market as it depletes the accumulated genetic gain. Selling before selection age need to be solved by discussing with the cooperative and researchers. The

cooperative might buy potential candidates and retain them until selection age as it has been practiced in Bonga. And the good correlation between three month and six months weight guarantee the possibility of making selection at early age

Conclusion

The priority country program started late in the year. Therefore, we have not completed the planned activities for the year. However, the establishment of new breeding programs through dissemination of improved genetics from CBBPs is progressing very well.