Launching of the Africa Asia Dairy Genetic Gains (AADGG) platform in Nepal

INITIATIVE ON Sustainable Animal Productivity

Buffalo value chain

Ojango Julie[1], Gideon Kipkosgei[1], Suresh Basnet[2], Yanamani Nepal[1] and Padmakumar Varijakshapanicker[1]

[1]International Livestock Research Institute
[2]Consultant

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Outcome

The Africa Asia Dairy Genetic Gains (AADGG) Platform, an integrated, centralized, multi-functional, web and Android-based system, is a game changer in the livestock development sector in Nepal. It benefits not only the Ministry of Agriculture and Livestock Development (MoALD) but also other national institutions by digitalizing information in a centralized national database. The platform's unique features enable the collection, recording, storing, and management of farm/herd, animal performance, and services, supporting dairy production enterprises such as artificial insemination (AI), pregnancy diagnosis (PD), and vaccination and health interventions in a single platform.

As part of the interventions in the dairy sector of Nepal under the CGIAR Initiative on Sustainable Animal Productivity for Livelihoods, Nutrition and Gender Inclusion (SAPLING), the AADGG platform was introduced to the Nepal MoALD. This was to support the integration and management of data on dairy animal performance across different farming systems in Nepal. Subsequently, the data captured will be used to generate information to guide the improvement of dairy productivity. The AADGG platform consists of an Android-based Dairy Data App (which works online/offline mode) to collect individual animal data from different types of farms, a web-based data capture interphase for Large-scale Farms (LSF) to ease the collection of performance information on larger numbers of animals reared on large farms (which runs under the sub-domain https://lsf.moald.gov.np/), and a centralized, integrated, web-based main platform to collate data from several sources for additional synthesis to generate relevant information for feedback to individual dairy producers and other actors in the national dairy sector (which runs under the sub-domain https://aadgg.moald.gov.np/).

Through collaborative engagements between the AADGG team and the MoALD, a national committee was established through the MoALD to steer the process of adopting and monitoring progress with the AADGG platform. The steering committee reviewed the existing policy framework for livestock data capture and the relevant support structures required to enable the adoption of the AADGG platform using this link. The platform has now been deployed in the above-mentioned subdomains under the domain (https://moald.gov.np/) of MoALD on the server provided by the Integrated Data Management Center (https://idmc.gov.np), earlier known as the National Information Technology Center (NITC). The initial use of the platform will be to integrate data collected from different farmers initially involved in the government-led Pedigree and Performance Recording System (PPRS), in addition to collecting data from smallholder dairy farmers in the areas selected for initial activities under the SAPLING program.

Partners

Nepal's adoption of the AADGG platform is a collaborative effort with several partners from the country. These include the MoALD, provincial ministries, the Department of Livestock Services (DLS), the National Livestock Breeding Offices (NLBOs) in Pokhara, Lahan and Nepalgunj, the National Animal Breeding and Genetics Research Centre (NABGRC), local level government, universities, research institutes and international development agencies such as Heifer Nepal. Hosting of the national database is supported by the Integrated Data Management Center (IDMS, https://idmc.gov.np) under the Department of Information Technology (DoIT).

Relevance of the intervention

Any improvements and changes in the livestock sector are hinged on the availability of information and data on animal characteristics and their performance within different production environments. From the collation of on-farm records, national animal databases are built and maintained for ready access to information on existing Animal Genetic Resources (AnGR) in a country. This information is critical for strategic planning, cost-effective development of livestock improvement programs and conservation of threatened AnGR. Livestock recording

systems thus provide a multipurpose technological tool for transforming livestock production, notably in low and middle-income countries (Hoffmann et al., 2011). The implementation of a dairy animal data management system within a country is essential for carrying out a breeding program to improve animal productivity under the existing production systems. In Nepal, the AADGG platform provides an opportunity for MoALD and other agencies/organizations working in the livestock sector to manage, track and monitor livestock activities, performance and productivity electronically across the country.

Evidence

The AADGG platform in Nepal was launched on 13 November 2024, followed by a training of trainers (ToT) for the key national stakeholders. A video capturing the event is accessible on the AADGG Facebook page using this link. The system has been deployed in the government sub-domain under the main domain (https://moald.gov.np/) provided by Nepal's MoALD. The ministry currently performs the administrative role in the platform. Through the MoALD, one national institution reporting to the ministry will be mandated to continue the implementation and management of the platform. Through the platform, different stakeholders can request access to the data and information it contains by following relevant protocols developed by the MoALD.

Way forward

The national partners trained on the use of the AADGG platform outlined specific activities that they would initiate to support the widespread adoption of the data platform and tools as follows:

- Organize training sessions for their colleagues and data collection teams within their units on using the AADGG mobile and web-based application to input cattle and buffalo data into the platform for the selection of top-performing breeding animals.
- Support the adoption of the AADGG platform as the national database for dairy animals and follow up on the opportunity to integrate the ongoing PPRS program data onto the AADGG platform.
- Contribute to the development of protocols and standards for the certification of improved quality dairy animals to be promoted as 'seed animals' for breeding.
- Take an active role in monitoring the quality of data collected on farms and use the information generated to guide decisions related to dairy production in Nepal.
- Facilitate cooperation and coordination among key stakeholders, including national universities and cooperatives, to support the implementation of the animal identification and traceability protocols developed through the collaboration with AADGG.

Photo

Conducting training to trainers (ToT) on the AADGG platform in Nepal (photo credit: Abdul Sidiki/ILRI).

References

Hoffmann, I., Besbes, B., Battaglia, D., H., W., 2011. Capacity building in support of animal identification for recording and traceability: FAO's multipurpose and global approach. Animal Production and Health Division, Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

Authors: Ojango Julie[1], Gideon Kipkosgei[1], Suresh Basnet[2], Yanamani Nepal[1] and Padmakumar Varijakshapanicker[1]

[1]International Livestock Research Institute

[2]Consultant

SAPLING Initiative Lead, Isabelle Baltenweck - I. Baltenweck@cgiar.org

SAPLING Initiative Deputy Lead, Rekik Mourad - M.Rekik@cgiar.org

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