

Climate-Smart Bundled Small Ruminant Innovations in the Curriculum of Ethiopian Universities

Berhanu Belay | Tesfaye Getachew | Aynalem Haile

Capacity development report



AICCRA
Accelerating the Impact of CGIAR
Climate Research for Africa



Climate-Smart Bundled Small Ruminant Innovations in the Curriculum of Ethiopian Universities

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA)

December 2022

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About AICCRA reports

Titles in this series aim to disseminate interim climate change, agriculture, and food security research and practices and stimulate feedback from the scientific community.

About AICCRA

The Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) project is supported by a grant from the International Development Association (IDA) of the World Bank.

Contact us

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA). Email: aiccra@cgiar.org

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Acknowledgments

The Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) project is supported by a grant from the International Development Association (IDA) of the World Bank. IDA helps the world's poorest countries by providing grants and low to zero-interest loans for projects and programs that boost economic growth, reduce poverty, and improve poor people's lives. IDA is one of the largest sources of assistance for the world's 76 poorest countries, 39 of which are in Africa. Annual IDA commitments have averaged about \$21 billion over circa 2017-2020, with approximately 61 percent going to Africa.

About the authors

Berhanu Belay is a Consultant at the International Center for Agricultural Research in the Dry Areas (ICARDA).

Tesfaye Getachew is Research Management Coordinator at the International Center for Agricultural Research in the Dry Areas (ICARDA).

Aynalem Haile is a Principal Scientist in small ruminant breeding at the International Center for Agricultural Research in the Dry Areas (ICARDA).

Climate-smart bundled small ruminant innovations in the curriculum of Ethiopian Universities

Background

Relevance and quality of education are ensured by updating the curriculum with contemporary data and experiences. Universities and staff teaching courses must update the curriculum to make our curriculum need-based and meet the current changes and experiences. Including local data in our teaching and learning documents is an equally important issue. Including local data arouses students' interest and motivation to learn and ensure the relevance of education. A researcher may have data and articles from the research endeavors, and using the same data for teaching and learning eases the understanding of the chapter or the topic in the face of the students. The experience shall also help the teacher make the topic more relevant because the data is generated from the researcher's experience. The case studies could also be picked from the local research outputs, which could ultimately make part of the teaching resources to ensure the relevance of the teaching and learning efforts. This basic principle has driven us to include CBBP in Ethiopian universities' undergraduate programs. We integrated CBBP into 27 undergraduate programs in 27 Universities. The CBBP in a post-graduate program differs from the undergraduate program in terms of depth, case studies coverage, and sophistication of data analyses. The experience in the undergraduate program gave us the impetus to include CBBP in post-graduate programs. We integrated CBBP in 15 Universities and 32 post-graduate programs (26 MSc and 6 Ph.D. programs). The Universities also run CBBPs in the nearby communities, which could generate data and create a learning hub to improve the competence of graduates.

Objectives

- Integrate CBBP practices in post-graduate programs of Universities to ensure the relevance of Education

Procedures

- Create demands through sharing achievements of Undergraduates programs
- Form a committee to work out to revamp the curriculum with CBBP practices
- Integrate the CBBP and pass official evidence to the department for documentation and feedback to ICARDA

Output

- We integrated CBBP in 17 Universities' PG curriculum and 36 Post-graduate programs (30 MSc and 6 Ph.D. programs)

Evidence

The support letters from Universities to testify to the incorporation of CBBP are included below.

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BAHIR DAR UNIVERSITY
COLLEGE OF AGRICULTURE AND
ENVIRONMENTAL SCIENCES
DEPARTMENT OF ANIMAL SCIENCES

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ቁጥር- 1/1467/1.1.3

FeR.No

ቀን Date: 28/03/2015

To: International Center for Agricultural Research in the Dry Areas (ICARDA)

Addis Ababa

Subject: Notification of the integration of CBBP in PG programs

It is known that Bahir Dar University is collaborating with ICARDA to incorporate the concept and application of Community Based Breeding Program (CBBP) into the postgraduate Animal Sciences related curriculum to provide students with the knowledge and skills of CBBP. Accordingly, Bahir Dar university, College of Agriculture and Environmental Sciences, Animals Sciences department has incorporated the principles and application of CBBP in the MSc in Animal Genetics and Breeding, MSc in Animal Production, and PhD in Animal Genetics and Breeding curriculum. Therefore, this is to request capacity building to students and instructors in this regard.

With best regards,

Esubalew Adimasu Ayele
Head, Department of Animal
Sciences



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IN REPLYING, PLEASE QUOTE OUR REF. NO.

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The Federal Democratic Republic of Ethiopia
Ministry of Science & Higher Education
Debre Markos University
College of Agriculture and Natural Resource
Department of animal science

ቁጥር:- አ/ሳ/490/29/15

ቀን:- 23/03/2015ዓ.ም

ICARDA (ILRI)

ደ/ማ/ዩ፣

ጉዳዩ፤ መረጃ መስጠትን ይመለከታል፤

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“ከሠላምታ ጋር”

ታረቀኝ ወንድማገኝ ገላው (ዶ/ር)
Tarekegn Wondimagegn Gelaw (PhD)
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ክፍል ተጠሪ
Department of Animal
Science Head

☎ 058 771 67 69

Fax: 058 771 17 64

✉ 269

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Ref No An.01/446/2022
Date: Dec 01 2022

To : International Centre for Agricultural Research in the Dry Areas (ICARDA)

Subject: To confirm CBBP is included in animal breeding courses both for under graduate (BSc in Animal Science) and post Graduate (MSc in Animal Production) curriculum.

Based on the consensus /agreement made at the workshop (organized by ICARDA at Naki Hotel, July 2021), we included the CBBP in Animal breeding courses both for under Graduate (BSc in Animal Science) and post Graduate (MSc in Animal Production) curriculum.



Best Regards!

ብርሃኑ የሰራህ አዳም
Birhanu Yeserah Adam

Head Department of
Animal Science

CC//

- ❖ College of Agricultural and invironmental Sciences
- ❖ department of Animal Science

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The Federal Democratic Republic of Ethiopia
Ministry of Education
Injibara University
Department of Animal Science

Ref no:- እንጅ/ዩ/አ/አ/ግ/038/15

Date:- 21/03/2015 E.C

To International Center for Agricultural Research in the Dry Areas (ICARDA)

Addis Ababa,

Subject: Incorporating Community Based Breeding Program (CBBP);

As we know now a days breed improvement is highly assured its objective through the newly introduced approach called community based breeding program. This program is practiced in different sites of the country, reported to a promising result. To sustaine the system qualified personnels in the system is required that forced to be part of the related courses.

Therefore, Injibara University, college of agriculture food and climate science, department of animal science incorporated community based breeding program (CBBP) in two post graduate programs as a chapter namely MSc in Animal Genetics and Breeding and MSc in Animal Production in their breeding course.

CC//

- To College of Agriculture, Food and Climate Science
Injibara University



“Sincerely”

ይታይህ አያና ጊታሁን
Yitayih Ayana Getahun (MSc)

የእኩልነት ሳይንስ ትምህርት ልጅ
Head, Department of
Animal Science



JIMMA UNIVERSITY

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ቁጥር
Ref.No Ansc1296/2022
ቀን
Date 2/12/2022

From: - Department of Animal Sciences

Tel +251-47-21-13-870

Fax +251-047-111-0934

Jimma University

Jimma

To: International Centre for Agricultural research in Dry Areas (ICARDA)

Addis Ababa

Re: Community based breeding program integrated in the curriculum

The department of Animal sciences trains post graduate students in different post graduate programs. The curriculum has included **Community based breeding program** in three post graduate programs listed in the table below.

No	Program	Study level	Course name	course code	Cr.hr
1	Livestock Production and Management	PhD	Advances in Animal Breeding and Biotechnology	LpMt 711	3 (2+1)
2	Animal Breeding and Genetics	MSc	Applied Animal Breeding: Design and Evaluation of Breeding Programs	AnBG 523	3 (2+1)
3	Animal Production	MSc	Applied Animal Breeding	ANPR 521	3 (2+1)

Regards


Aregaw Abssa Dediccho
Head, Department of
Animal Science





F.D.R.E. Higher Education
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 Mizan-Tepi University
 ሚዛን-ቴፒ ዩኒቨርሲቲ
 Office of Vice President for Research and Community Service
 የምርምርና ግብረሰብ አገልግሎት ማ/ፕ/ጽ/ቤት

Ref.No

Date

MTU/99/804/4.1/2
 02 DEC 2022

To; ICARDA
 Addis Ababa

Subject:- University CBBP Project

It is known that Mizan -Tepi University is working on **CBBP** project in selected zones and districts. Additionally, we have included **CBBP** in the curriculum for master's students in Animal breeding and genetics in the department of animal science. Accordingly, we would like to request your esteemed office to provide us with training, technology, transfer, material, & technical support for our ongoing CBBP project.



With regards

ዶ/ር አበዮት አሰረስ ሸታዎ
 Abyt Asres Shetano (PhD)
 የምርምርና ግብረሰብ አገልግሎት ማ/ፕ/ጽ/ቤት
 Research & Community
 service Vice president

CC:

- Research & community service vice president
- CBBP Project members

MTU

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The Federal Democratic Republic of Ethiopia
Ministry of Education, Samara University
Animal Science Department
Samara, Ethiopia

Rf.no: AnSc 8/24/98/15

Date: 23/03/2015 E.C

To ICARDA

Addis Ababa, Ethiopia

Subject: Reporting the Integration of CBBP in the postgraduate curriculum

Samara University is the one higher educational institute engaged in CBBP which has coordinating by the international organization ICARDA and now a date it trying to practice the new genetic improvement approach CBBP specifically to improve Afar goat productivity. Previously, ICARDA has given the direction to integrate the CBBP in the curricula which applying both in undergraduate and post graduate programs of Animal Sciences to adopt and address it broadly the breed improvement approach CBBP throughout the country via formal education system delivering in the Universities.

Accordingly, the department council held deliberate discussions on CBBP integration in curricula by mode of amendment as subunit under the relevant course. Therefore, we need to confirm that curriculum amendment has been completed and CBBP has been incorporated in curriculum of postgraduate program entitled "**Livestock Production & Pastoral Development**" under the course of Animal Breeding and Genetics.

Best regards,



Ashmael Adem

Head Department of Animal Sciences

Cc

- ▶ College of Veterinary Medicine and Animal Sciences Office
- ▶ Research and Community Services Directorate Office

Samara University

Serving the community!!!

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University of Gondar
College of Veterinary Medicine and Animal Sciences
Animal Science
Gondar, Ethiopia

Ref: ALS/1560/2022
Date: 12/11/2022

To ICARDA
Addis Ababa

Subject: - Course Content Notification

As stated in the subject University of Gondar College of Veterinary Medicine and Animal Science, Department of Animal Science is running three post-graduate programs at the master's level namely, MSc. in animal breeding and genetics, MSc. in Animal production and MSc. in animal nutrition.

This is, therefore, to notify you that, community based breeding program is included as a chapter in the course advanced animal breeding that is given for the two programs (animal production and animal breeding & genetics).



Regards

ካሱን ደሳለኝ ያሎው
Kassahun Desalegn Yalew

የእንስሳት ሳይንስ ት/ት ኮፍል ጋራ
Head Department Animal Science

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Human Resource
Fax - 251-058-



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College of Veterinary Medicine and animal sciences

058 1110174
251-058 114 1233

V/President for Admin

URL Address: WWW.uog.edu.et

058114 2145

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V/P/for Academic & Research
058114 1238

Gondar Ethiopia

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F.D.R.E. Ministry Of Education Wachemo
University Hossana

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College of Agricultural sciences
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Department of Animal Sciences

#TC/REF. NO. የግ/ሳ/ህ/አ/ን...42/14
ቀን /DATE12/2/22

To ICARDA

A.A

Subject: Notifying CBBP Incorporated in Post-graduate Courses

As mentioned in subject line above Wachemo University, College of Agricultural Science, Department of Animal Science launched two post graduate programmes namely Animal Production and Animal Breeding and Genetics. In these two programmes the CBBP was incorporated in the courses Advanced Animal Breeding in Animal Breeding and Genetics program and Applied Animal Breeding for in Animal Production program under course description and sub chapters.

With Kind Regards,



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Deginet H/meskel Abose
የእንስሳት ሳይንስ
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Head, Department of
Animal Science

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P.O.Box: 667

Phon.Ng: +251-046-555-19-10 ፋክስ 251-
Fax: +251-046-555-19-30

In replying, please quote our ref.



ቁጥር/Ref.No.: AnSc 418/327/2015

ቀን/Date: 022/03/2015 (01/12/22)

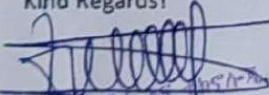
To: International Center for Agricultural Research in Dry Area (ICARDA)

Addis Ababa

Subject: Incorporation of CBBP in the MSc curriculum

The Department of Animal Science has been teaching Post Graduate students in Animal Production since 2019. Applied Animal Breeding is one of the core courses in the programe. Based on your intiation on incorporating Community Based Breeding Program (CBBP) on MSc programs, the department council has considered it and belived it will enreach the curriculum. Therefore, this is to inform you that our department has incorporated the course objective, course description and practical session described in your guiding document in the course "Applied Animal Breeding".

Kind Regards!


Feki Misbah
Head, Department of Animal
Production & Technology

CC:

➤ To College of Agriculture and Natural Resource (CANR)

Website: <http://www.wku.edu.et>

Phone No: +251118844858

E-mail: misbahfeki@gmail.com

feki.misbah@wku.edu.et or

Mobile No: +251911260432



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Department of Animal Science

ቁጥር/Ref.No: Ande 01/9
ቀን/Date: 23/03/2015

→ To: ICARDA
Addis Ababa

Subject: Integretion of Community Based Breeding Program (CBBP)

Under the Department of Animal Science, in both MSc in Animal Production and PhD in Animal Production (with sub streams), the Integretion of Community Based Breeding Program (CBBP) has been included when the program revised last year.



With Regards,

Dr. Tibebu Kochare
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ሳይንስ ትምህርት ክፍል ሥራ
Head, Department of Animal
and Range Sciences

- Cc:-
- ✓ CoA
 - ✓ Dep't of Animal Science



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 Federal Democratic Republic of Ethiopia Ministry of Education
 Asosaa University
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 College of Agriculture and Natural Resource

ቁጥር:- አሰዩ/ግ/ተ/ሀ/ኮሌጅ

01/675/15
 28/03/2015

To: International Center for Agriculture Research for Dry Land Area (ICARDA)
Addis Ababa

Subject:- Sending Information about the inclusion of CBBP in to Curreculum
 graduate Programs

As it is recalled back, ICARDA and Ethiopan public higher education intitates discussed and agreed upon the Inclusion of CBBP in both under-graduate and post-graduate programs. This is therefore to inform you that we have included in two MSc. programs (Animal production and Animal genetics and breeding) and in under graguate (BSc.) program in animal production

With best regards,

Dr. Befikadu Zewdie Gma
 Dean
 College of Agriculture & Natural Resource





December 07, 2022
Ref.No: SARS/87/15

To: International Center For Agriculture Research In Dry Areas (ICARDA)

Subject: Notifying the inclusion of Community Based Breeding Program (CBBP) under
BSc, MSc and PhD Curricula

Community Based Breeding Program (CBBP) is an attractive option to achieve genetic improvement of small ruminants in low-input systems which could clearly fit and applicable in the context and farming systems of both Haraghe Zones. Based on this, ICARDA has genuinely selected Haramaya University to work with under its mandate area particularly East Haraghe Zone.

As a result, during our curricula revision both for undergraduate and postgraduate programs, the concept of CBBP as the chapter in **Animal Breeding Course for BSc in Animal Sciences, Applied Animal Breeding (ABG 522) course for MSc, Designing and Optimization of Livestock Breeding Programs (ABG 712) course for PhD programs in Animal Breeding and Genetics.**

This is therefore, to notify your esteemed organization for our proper consideration and inclusion of Community Based Breeding Program (CBBP) as the chapter in different animal breeding and genetics courses. In the future during curricula revision, we will consider CBBP as the subject in the postgraduate programs in collaboration with your organization.

With regards,

Head, School of Animal and
Rangeland Sciences
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CC

❖ To Mr. Dugasa Dessalegn, focal person of ICARDA at Haramaya University



AICCRA
Accelerating Impacts of CGIAR
Climate Research for Africa



About AICCRA

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) is a project that helps deliver a climate-smart African future driven by science and innovation in agriculture.

It is led by the Alliance of Bioversity International and CIAT and supported by a grant from the International Development Association (IDA) of the World Bank.

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