INITIATIVE ON
Livestock and Climate

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Experiences from the field. Local innovation in adaptation to climate change in Amhara Region, Ethiopia

Tigist Worku, Birgit Habermann, Elizabeth Getahun

27. & 28. 11.2023 Addis Ababa

LC WP1 Stakeholder Engagement Week

Study sites Livestock and Climate

- All sites: “wet dega”, 2300-3200m
- Zone: North Shewa (Amhara Region)
- Mojana Wedera
  - Tarmber
  - Alemtena
  - Feresemegalebiya
- Basona Werana
  - Gudo beret
  - Abamote
  - Debele
- Menz Gera
  - Ashen
  - Tsehay sina
  - Gragn

Photo: Birgit Habermann/ILRI

Part 1: Finding Positive Deviants/Pioneer Farmers with a Qualitative Approach

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Method: Qualitative Identification

Habermann, B., Worku, T., Goshme, S., Crane, T. and Getahun, E. 2023. Positive deviance in adaptation to climate change with sheep fattening: New pathways for farmer-led extension in Ethiopia. Poster presented at Tropentag 2023: Competing pathways for equitable food systems transformation: trade-offs and synergies, Berlin, 20-22 September 2023. Nairobi, Kenya: ILRI. https://cgspace.cgiar.org/handle/10568/131982

Criteria for selection of Positive Deviants:

1. Awareness of climate change
2. Adaptation practice implemented
    1. Livestock practice: sheep fattening
    2. Intention to mitigate the impact of CC
    3. Implementing and improving feed management practices to improve both productivity and profitability in sheep fattening
3. Pioneering character
    1. Endogenous innovation rather than adoption
    2. Unique ways of knowing and learning
    3. Tries out new things, and also abandons failures
4. Willingness to engage in knowledge sharing with others

Habermann, B., Crane, T.A., Gichuki, L., Worku, T., Mugumya, R., Maiyo, N., Kiptoo, E., Goshme, S., Tugume, G. and Getahun, E. 2023. Positive deviance in adaptation to climate change: making work for development what works for people. Presented at the EADI CEsA General Conference 2023: Towards New Rhythms of Development, Lisbon, Portugal, 10-13 July 2023. Nairobi, Kenya: ILRI. https://cgspace.cgiar.org/handle/10568/131919


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Photo: Apollo Habtamu/ILRI


Photo: Birgit Habermann/ILRI


Photo: Apollo Habtamu/ILRI

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Criteria for selection of Relevant Adaptation Practice:

- Relevance
- Frequency
- Priority
- Implementation

Sheep fattening in response to CC:

Highlands: hail and morning frosts damage important cash crops

Modern sheep fattening (see also Wamatu et al):

- Affordable practice/Replaces cash crops
- Sheep can be sold for mobilizing assets
- Alternative to dairy (cost, infrastructure)
- Market Access
- High demand for sheep during holidays

Sheep fattening in response to CC:

Highlands: hail and morning frosts damage important cash crops

- Low risk
- Zero-grazing: reduces labor for herding
- Low investment
- With good management, high returns
- Good breeds, good feed… reduces turn-over to 3-4 months!

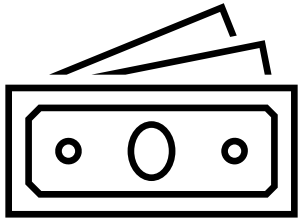
Record keeping

Weight, body scores, assessment of animals

Labour, infrastructure/ investments

What feed?
Quality?

Profitability?



Semi-structured Interviews

On-Demand pioneers and DAs Training

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 ጥዋት	የተሰጠዉን ማብራሪያ ምን ያህል ተረድተዋል? 	
	ይህ ስልጠና ለእረሶ ምን ያህል ጠቀሞሜታ ነበረዉ? 	
	ይህን ለሌሎች ለማሰወቅ ምን ያህል ፍላጎቱ አሎት? 	

Six Pioneers Field days

Feedback Reports and Workshop

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ቦታ፡ ሰ/ሸ/ዞ/ደብረ ብርሃን፣ ጉዶበረት ቀበሌ

የጋራ ምርምር ቆዳታ፡ አንዱ አመት ከአራት ወር

Photo: Apollo Habtamu/ILRI

መኖ ተጨማሪዎች፣ሰር፣የገብስናባቄላ ገለባ ነበር።

- በየካቲት 20113 ዓ.ም ለማድለብ ተመሰሰዱ ሁለት በጎች ነበረዋት። የአንዳኛው በግ ክብደት 36.9 ኪ.ግ. የሁለተኛው በግ ደግሞ 34.3 ኪ.ግ ነበር። የበጉን የሰውነት ሁኔታ ለሁለት ወራት ስናነፃፅር የ አንዳኛው በግ 0.1 ኪ.ግ ጭማሪ ደሰየ ሲሆን ሁለተኛው በግ ደግሞ 0.9 ኪ.ግ ጭማሪ አሳይቷል። ይህ በተለያየ ምክንያት ሊሆን ይችላል ነገር ግን እንደ መረጃ ስብስባችን ከሆነ የዚህ ወር መኖ ምንጭ የሰብል ተረፈ-ምርት፣ግጦሽ፣ የገብስና ባቄላ ነው። በዚህ ወር በቤት ውስጥ የተሰሩየበጎቹ የሰውነት ክብደት እንዴጨምሩ የሚረዳቸውን የምግብ ማሟያ ያዋሽን አልመገቡም።
- በመጋቢት 2013 ዓ.ም ለማድለብ ሁለት በጎች ነበረዋት እና የአንዳኛው በግ የሰውነት ክብደት 35 ኪ.ግ እና የሁለተኛው በግ 32.5 ኪ.ግ ነበር። በዚህ ወር የሁሉም በጎች መኖ ምንጭ የሰብል ተረፈ-ምርት፣ የዛፍ ሰሰርን የቤት ውስጥ መኖ ተጨማሪዎች፣ የገብስ ባቄላ እና ስንዴ ነበር።
- በሚያዚያ 2013 ዓ.ም ለማድለብ ተመሰሰዱ ሁለት በጎች ነበራችሁ። የአንደኛው በግ ክብደት 35.5 ኪ.ግ ሲሆን የሁለተኛው በግ ደግሞ 34 ኪ.ግ። የበጎቹን የሰውነት ክብደት ለሁለት ወራት ስናነፃፅር አንዳኛው በግ 0.1 ኪ.ግ ሲጨምር ሁለተኛው በግ ደግሞ 1.5 ኪ.ግ ጭማሪ አሳይቷል።የዚህ ወር መኖ ምንጭ ከገበያ፣ የሰብል ተረፈ ምርት፣ሰር፣በቤት የተሰሩ መኖ ማሟያ ያዋች እና የገብስ ባቄላዎች የመኖ ማሟያ ያዋች ናቸው።
- በመጋቢት 2014 ዓ.ም ለማድለብ ሁለት በግ ነበራችሁ እና የአንዳኛው በግ የሰውነት ክብደት 27.5 ኪ.ግ እና የሁለተኛው በግ 37 ኪ.ግ ነበር። በዚህ ወር የሁሉም በጎች መኖ ምንጭ የሰብል ተረፈ ምርት፣ የሰር ቤት መኖ ተጨማሪዎች እና የገብስ ባቄላ ነበር።
- በሚያዚያ 2014 ዓ.ም ለማድለብ ተመሰሰዱ ሁለት በጎች ነበሩሽ፣ የአንዳኛው በግ ክብደት 30 ኪሎ ግራም እና የሁለተኛው በግ ደግሞ 38.5 ኪ.ግ ነበር። የበጎቹን

Feedback Reports and Workshop


Photo: Apollo Habtamu/ILRI

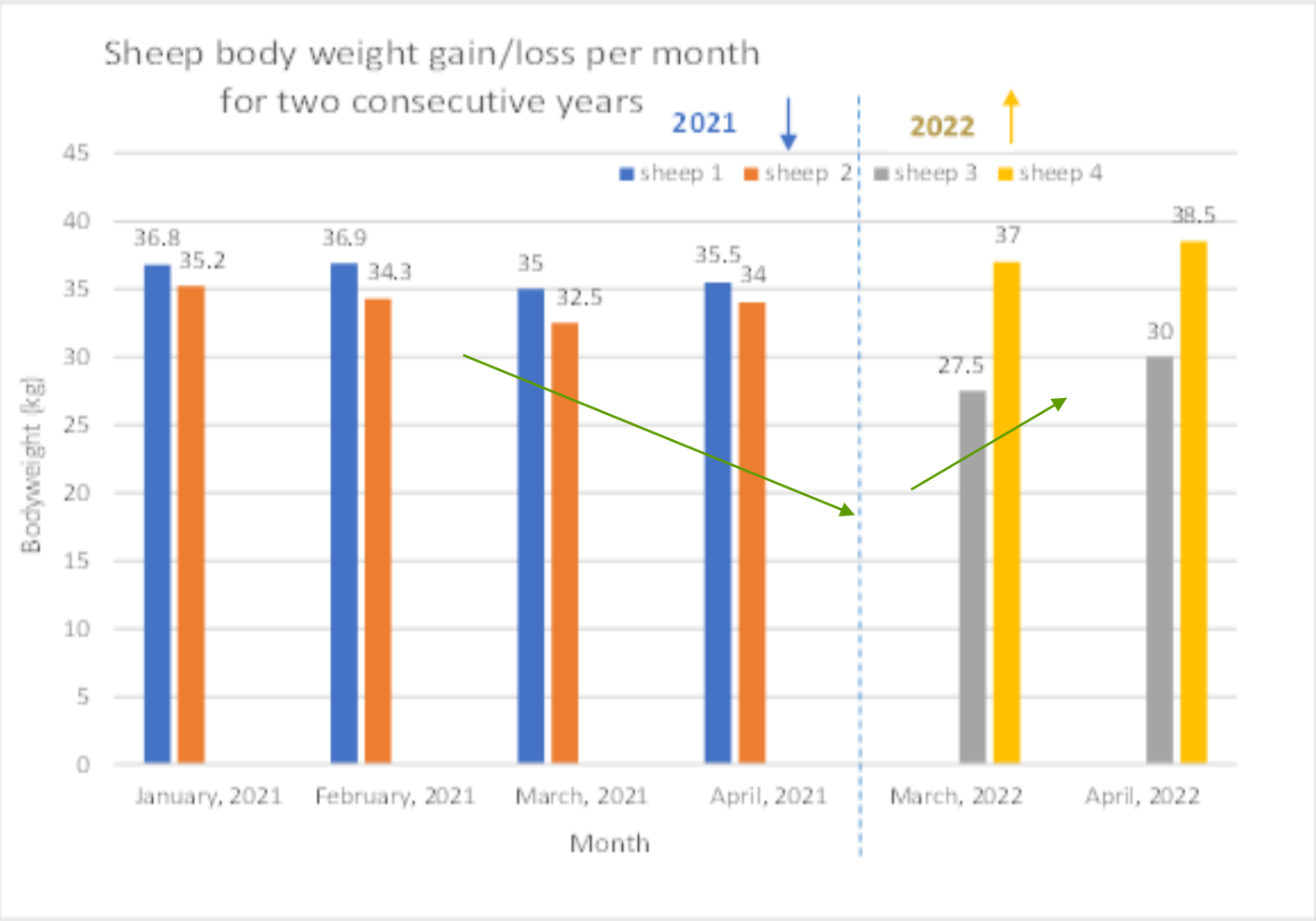
Results

Technologies/Adaptation Practices under sheep fattening:

- Use of home-made concentrate feeds
- Use of feed trough
- Hay making
- Feeding forage

Feed concentrate preparation by Ms Tenagne

Results



- This example from a feedback report for a female pioneer farmer shows how she improved fattening from year 1 to year 2.

- Engagement with other farmers for experience exchange, record keeping, and a better understanding of feed quality, as well as minimal training by local experts, supported her in further improving her practice.

Habermann, B., Crane, T.A., Gichuki, L., Worku, T., Mugumya, R., Maiyo, N., Kiptoo, E., Goshme, S., Tugume, G. and Getahun, E. 2023. Positive deviance in adaptation to climate change: making work for development what works for people. Presented at the EADI CEsA General Conference 2023: Towards New Rhythms of Development, Lisbon, Portugal, 10-13 July 2023. Nairobi, Kenya: ILRI. https://cgspace.cgiar.org/handle/10568/131919

A more detailed publication is planned for 2024.

Part 2: Finding Positive Deviants/Pioneer Farmers with a Quantitative Approach with an adapted Rhomis Household Survey

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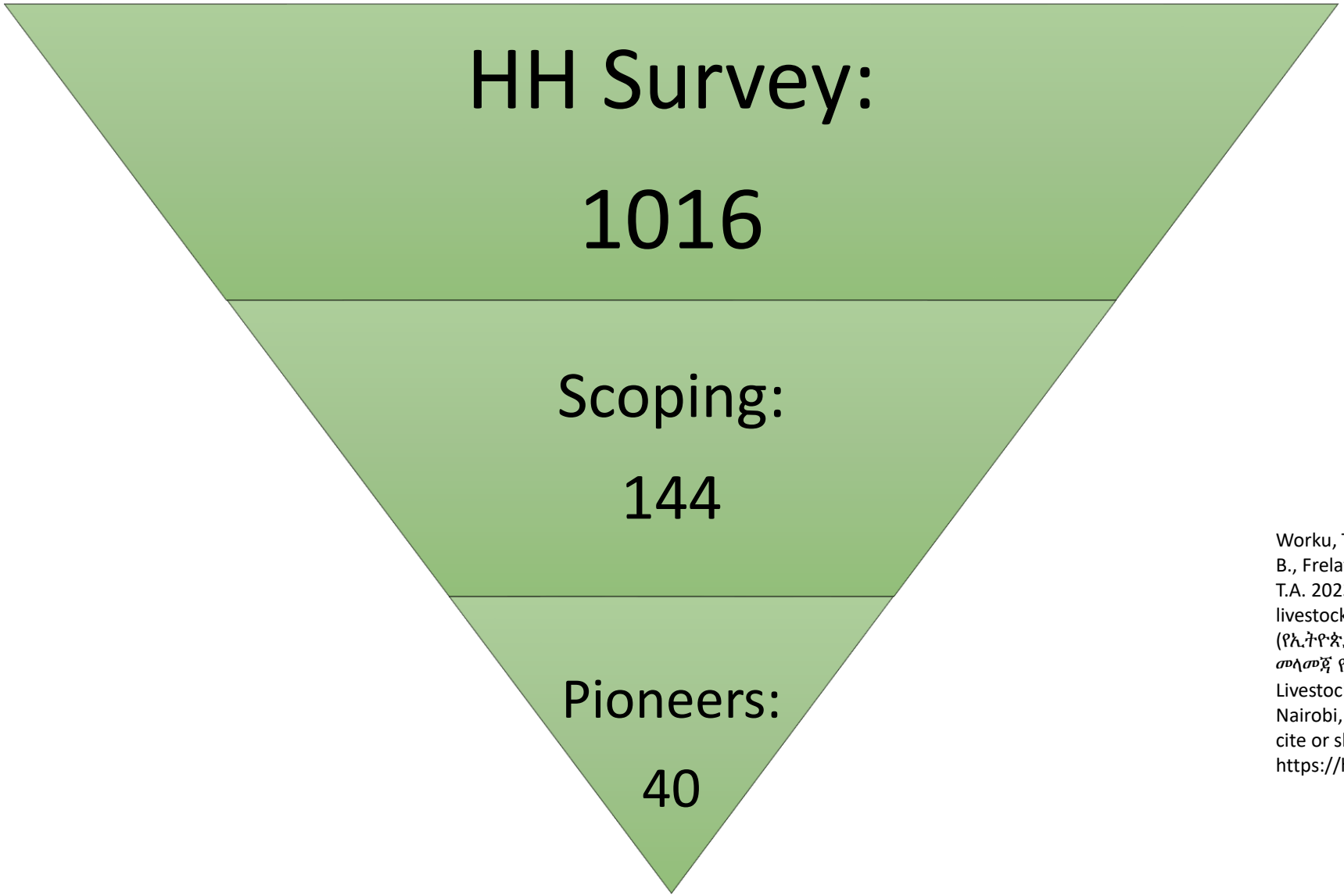
Identification of New pioneers



Worku, T., Getahun, E., Habermann, B., Frelat, R., Hammond, J. and Crane, T.A. 2023. Ethiopia households and livestock systems adaptation survey (የኢትዮጵያ ቤተሰቦችና የአየር ንብረት ለውጥ መላመጃ የከብት ሥርዓት ጥናት ውጤት). Livestock and Climate Survey Brief. Nairobi, Kenya: ILRI. Permanent link to cite or share this item: https://hdl.handle.net/10568/132365

A positive deviant farmer is….

- A skilled smallholder sheep farmer, with a high percentage of sheep sold,
- Has high diversity in feed baskets, and a low percentage of grazing (sheep fattening).
- Who has a high adaptation capacity, because of a high diversity of crops and livestock on a farm, and
- Who has a high diversity of income sources.
- Who applies various technologies on farms, and provides technological advice to the community.

Worku, T., Getahun, E., Habermann, B., Frelat, R., Hammond, J. and Crane, T.A. 2023. Ethiopia households and livestock systems adaptation survey (የኢትዮጵያ ቤተሰቦችና የአየር ንብረት ለውጥ መላመጃ የኩበት ሥርዓት ጥናት ውጤት). Livestock and Climate Survey Brief. Nairobi, Kenya: ILRI. Permanent link to cite or share this item: https://hdl.handle.net/10568/132365

PCSL Pioneers & their groups

- **Farmer-led scaling based on PD groups**
  - Group based F2F training
  - Communication & outreach
  - Exchange visits to other sites

New pioneers, new groups

- **Citizen Science data collection:**
  - Productivity: Monthly data collection (six months/ two seasons)
  - body weight to observe changes in weight and body condition.
  - Collecting feed samples
  - SSIs: short informal interviews, 2-3 times per year
- **Farmer-led scaling based on PD groups**

Progress up to now

- 1016 Farmers interviewed with survey
- Scoping: 144 farmers
- Final, validated sample are 40 farmers
- Next step: record keeping and study of practices

Worku, T., Getahun, E., Habermann, B., Frelat, R., Hammond, J. and Crane, T.A. 2023. Ethiopia households and livestock systems adaptation survey (የኢትዮጵያ ቤተሰቦችና የአየር ንብረት ለውጥ መላመጃ የከብት ሥርዓት ጥናት ውጤት). Livestock and Climate Survey Brief. Nairobi, Kenya: ILRI. Permanent link to cite or share this item: https://hdl.handle.net/10568/132365

What have we learned so far?

- Positive deviants are pioneer farmers, not best adopters (model farmers)
- Iterative and responsive interaction between scientists, extension and pioneer farmers: changes in practice
- Record keeping taken up by pioneer farmers
- The research process helped pioneer farmers to understand what they do is right.
- Change of self-perception of pioneer farmers supports farmer-to-farmer learning
- Practices as a learning ground led to attitude and knowledge change through observation and reflection by farmers

Habermann, B., Crane, T.A., Gichuki, L., Worku, T., Mugumya, R., Maiyo, N., Kiptoo, E., Goshme, S., Tugume, G. and Getahun, E. 2023. Positive deviance in adaptation to climate change: making work for development what works for people. Presented at the EADI CEsA General Conference 2023: Towards New Rhythms of Development, Lisbon, Portugal, 10-13 July 2023. Nairobi, Kenya: ILRI. https://cgspace.cgiar.org/handle/10568/131919

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