Introduction

- Bamenda is the capital of the North-West region in Cameroon.
- There are Mbororo pastoral producers with local breeds of zebu cattle (Pic.1).
- There are also sedentary Grassfielders who received European dairy cattle from an American NGO (Pic.2).
- Mid-2016, the last milk factory closed.
- Some milk farmers stopped selling milk and others continued (Fig.1).
- Overall, four types of adaptation were observed (Fig. 2).
- The objective of this study is to analyze if certain determinants can predict dairy producers’ level of adaptability to market shock.

Methods

- We did household surveys (2017) in urban, peri-urban, and rural zones of Bamenda with 201 current and 123 former milk producers (Fig. 1).
- All respondents were active producers and sellers in early 2016 (pre-shock).
- Grassfielders (215 households) chose among 3 adaptation levels: Sellers, Keepers, and Quitters. A multinomial logit model (MNL) was applied.
- The Mbororo’en (105 households) chose between 2 adaptation levels: Sellers and Self-consumers. A logit model (LM) was run.
- 16 independent variables were chosen.

Results

- For the MNL, Sellers was the reference group and Relative Risk Ratios (RRR) were used as a measure of variables’ effects (Fig.3).
- When the variable’s RRR is <1, it is more likely for a Grassfielder to remain a Seller.
- Producers with a land title, many children, and dairy trainings often remained Sellers.
- Grassfielders using price information and members of cooperatives often became Keepers or Quitters.
- For the LM, Fig.4 shows the marginal effects of each variable on Mbororo dairy producers.

Results (cntd.)

- Variables with positive sign (Fig.4) helped producers to remain Sellers, those with negative value pushed producers to become Self-consumers.
- Mbororo’en who were part of a cooperative were significantly more likely to stay in the dairy market.

Highlights

- Grassfielders who remained Sellers mostly had a land title, a larger family, and attended dairy trainings.
- Mbororo’en who remained Sellers mostly were older, with larger families, and members of a dairy cooperative.

Figure 1: Map of Bamenda with GPS points of current and former milk producers. The large circles represent the urban and peri-urban limits.

Figure 2: The four levels of producers’ adaptation after milk factory shut-down.

Figure 3: MNL’s Relative Risk Ratios for each adaptation levels. MPI = Market Price Info, LDI = Livestock Diversity Index

Figure 4: LM marginal effects on Mbororo’s adaptability to market shock.

Picture 1: Local Zebus for sale at the cattle market in Bamenda.

Picture 2: Holstein-Friesian calf grazing on Cameroonian pasture.

Picture 3: MNL’s Relative Risk Ratios for each adaptation levels.

Picture 4: Map showing the location of Mbororo producers in Bamenda, with various colors indicating different adaptation levels.

Picture 5: Screenshot of a Table showing the marginal effects of various variables on Mbororo dairy producers.