



# AuthenBeef: use of blockchain technology in beef production to ensure authenticity and traceability



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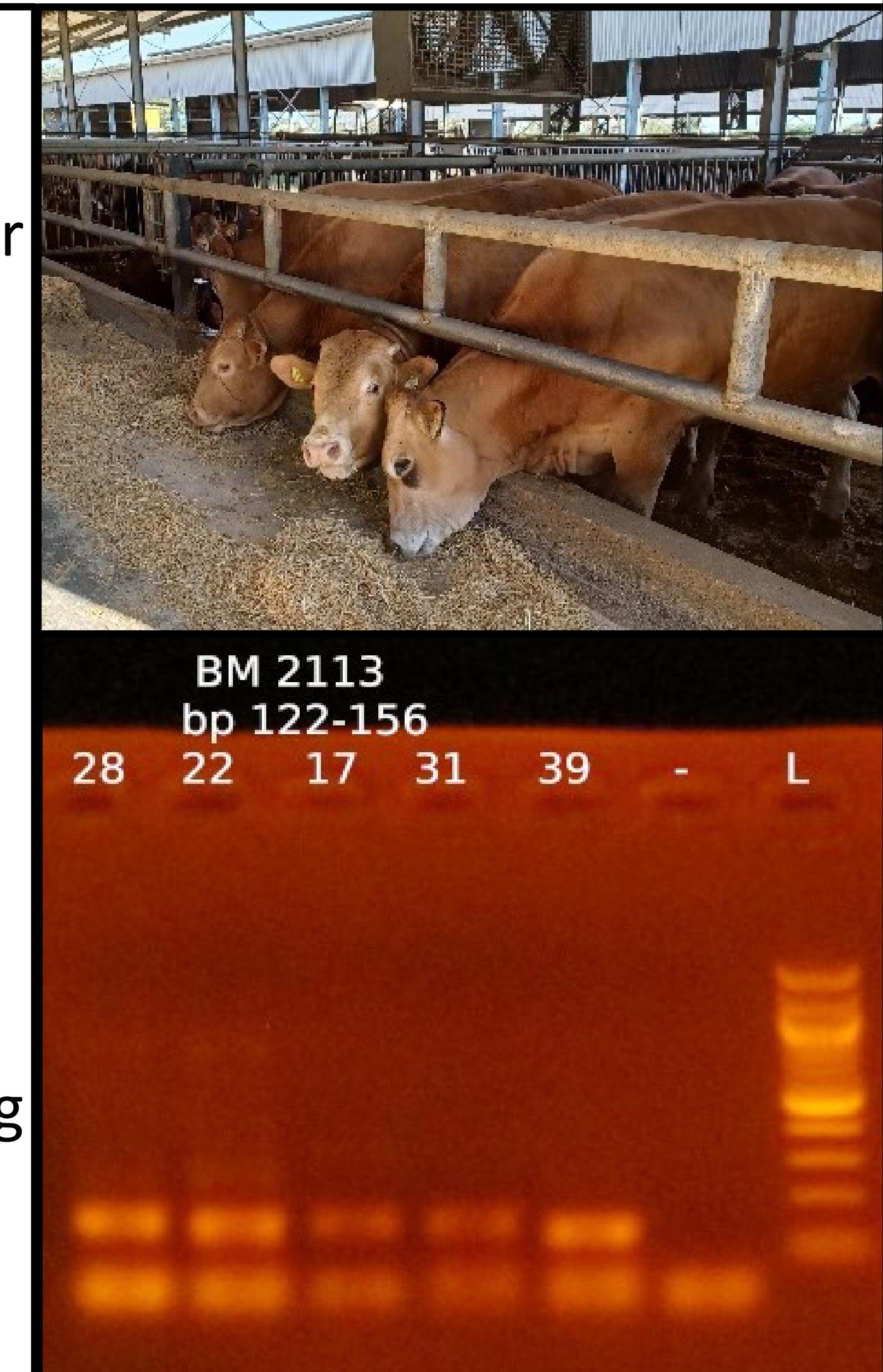
## INTRODUCTION AND OBJECTIVE

The main attributes consumers value in addition to quality when buying meat are provenance and traceability.

The objective of AuthenBeef is to implement a fully **traceable beef supply chain** using **blockchain technology** combined with **genetic markers** both up the chain to market and back down the chain to farm.

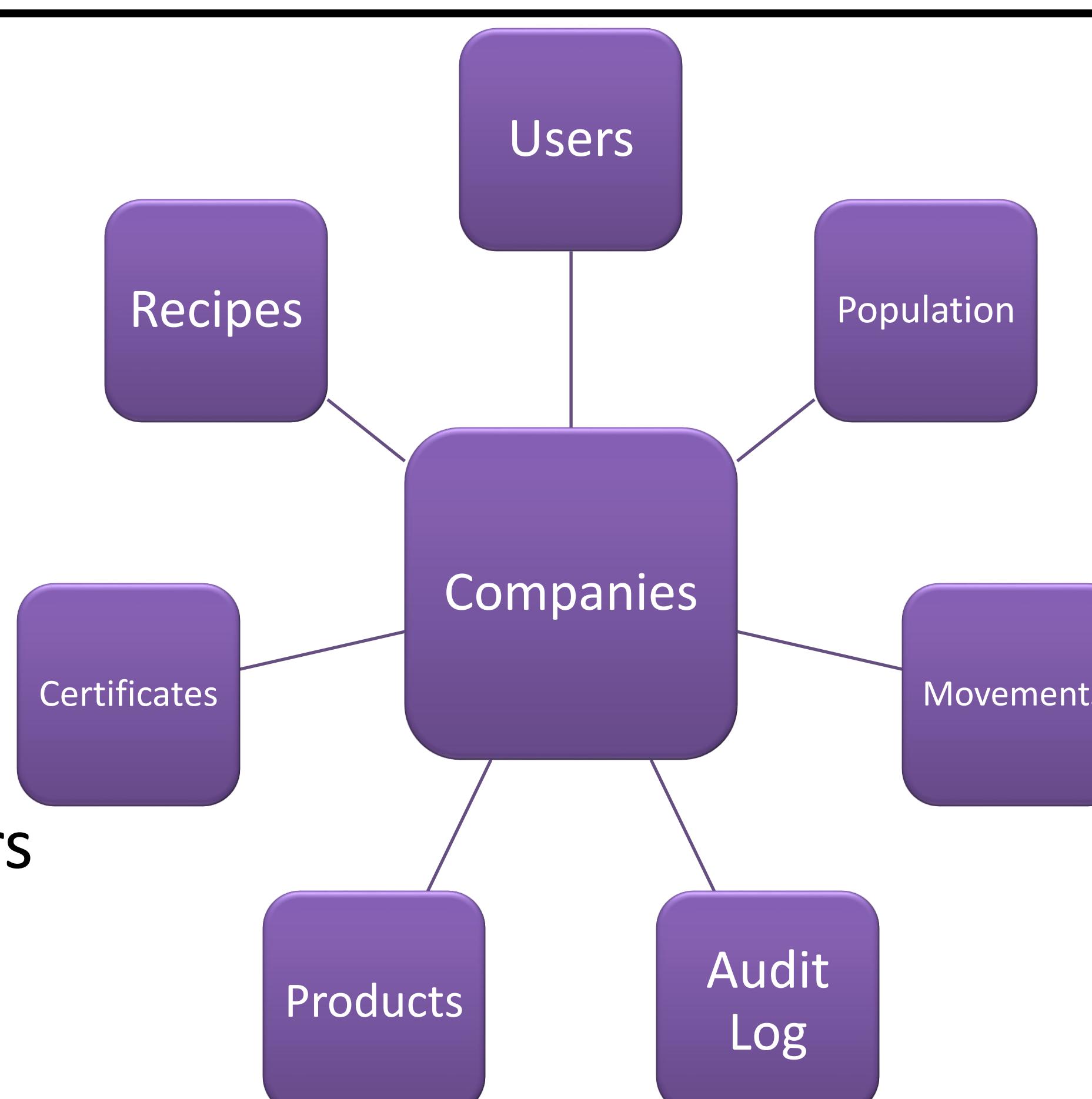
## MATERIALS AND METHODS

- **Genetic analysis protocol:** 17 microsatellite markers → International Society for Animal Genetics
- **Genotyping & Identification:**
  - Individual animal blood sampling at slaughter
  - Meat sample collection at the selling point stage
  - Identification based on the genetic profile of blood and meat samples (n=250)
- **Recording system & Blockchain technology:**
  - Platform for recording traceable data
  - Key data entry points → entire production process → feedlots to final marketing of meat and its products
  - Decoding system using QR coding → real-time information to consumers



## RESULTS

- Preliminary stage
- **Genotyping & Identification:**
  - 133/250 blood and meat samples
- **AuthenBeef recording platform:**
  - Back office → system information
  - Front office → information for end-users
  - QR coding
- **Data entry:** in progress



## CONCLUSIONS

AuthenBeef offers a **marketing strategy** making the most of the **provenance and traceability of beef** and hence ensuring greater financial returns in the value chain.

## ACKNOWLEDGMENTS

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