

New Study reveals: Ancient Cheese Makers used tree leaves to boost milk production

A comprehensive study enriches our understanding of ancient agricultural techniques and highlights the resourcefulness of early European farmers in nurturing and sustaining their herds.

A ground-breaking study published in *Nature Ecology and Evolution* sheds light on the innovative practices of Central Europe's early cheese makers (Salque et al. 2013, *Nature*). Researchers at German Archaeological Institute (Berlin), University of Bristol, Museum National d'histoire Naturelle (Paris) and Kiel University conducted and collated over 2,000 stable isotopic measurements of cattle teeth, bones, and pottery fats, revealing how pioneer farmers adapted their cattle herding techniques to the rich forested landscape of Central Europe.

Led by Dr. Rosalind Gillis from the German Archaeological Institute in Berlin, the study highlights an intriguing early practice: feeding cattle with leaves collected from trees during the summer to sustain them through the winter. This practice not only enhanced the health of female cows but also significantly increased milk production and calf births out with the main birthing season of late spring providing pioneer communities with milk during colder months.

The Project

The research was conducted by a collaborative team from research institutions, archaeological agencies and departments across Europe and funded by the Advanced ERC research project, NeoMilk led by Professor Richard Evershed at the University of Bristol, as well as other European funding agencies.

Publication

Gillis, R.E., Kendall, I.P., Roffet-Salque, M. *et al.* Diverse prehistoric cattle husbandry strategies in the forests of Central Europe. *Nat Ecol Evol* (2024). <https://doi.org/10.1038/s41559-024-02553-y>

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Fig. 1: A model of LBK cattle herding and diet with reference to stable isotopes © Dr. Rosalind Gillis // *Rosalind Gillis*. Credit: trees, cattle, deer and sheep icons from Vecteezy.com.