



## Production of beef in mountain areas and fatty acid composition of the muscle *longissimus dorsi* in the Herens breed. Prospects for traceability.

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### Objectives

- analyze fatty acid composition (n-3, n-6, C18:1 *trans*-isomers, CLA)
- develop the use of fatty acids as biomarkers for:
  - grass consumption
  - the area of production



### Material & Methods

Fattening of 43 **Herens** steers, a rustic alpine Swiss breed (Valais), in

- two different mountains areas at the same altitude (**1200 m**)  
Alps in the Valais (**MontVS**) and Jura mountains (**MontJU**);
- a free-stall barn on the **Plains** at **380 m** with no access to pastures

Poster n° 67- Session n°3

## Main results

### Biomarkers

➤ The relationship between specific fatty acids and total lipids depended on the treatment. The slopes were very different.

➤ C18:3 n-6 seemed to be an indicator of grass consumption. This fatty acid was not detected in the muscle of the animals from the Plains.

➤ Using discriminant factorial analysis, it was possible to distinguish clearly 3 groups corresponding to the treatments and to re-allocate 100% of the animals to the right group.

