

Inter-animal variation in milk fat C18:1 *trans*-10, C18:1 *trans*-11 and C15:0 concentration in early lactating dairy cows

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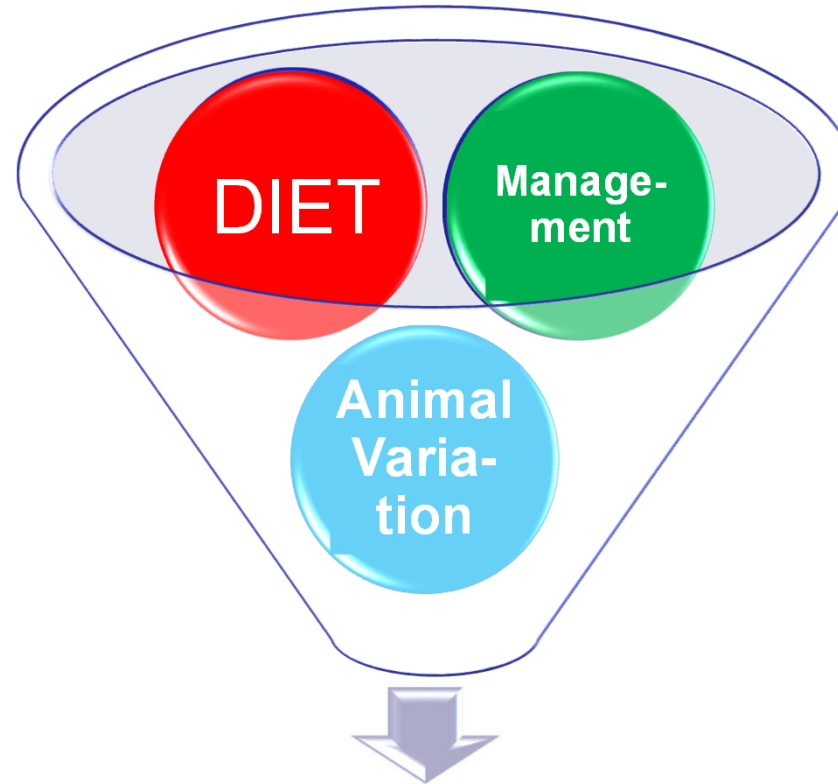
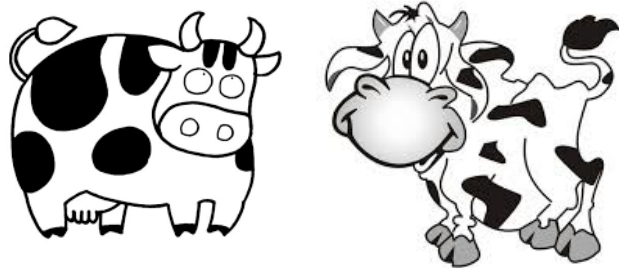
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Introduction



SARA

Eating Behavior

SARA

Induction

Rumen Absorption

Trials



C18:1 *trans*-10
C15:0
variation



Animal variation

Rumen pH Decrease

C18:1 *trans*-11
1

detected

Immune response

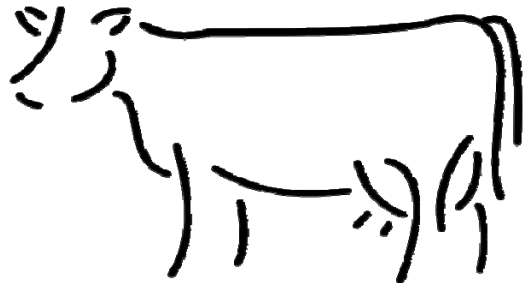


Objective

Hypothesis: *Inter-animal* variations in SARA exist during early lactation

Tools: SARA proxy—**C18:1 *trans*-10**, **C18:1 *trans*-11** and **C15:0**

Methods and Material



150

Concentrate 3.7-4 kg

9-10kg

Diet **1d**  **22d** 

Basal Diet Grass silage/maize silage (50/50)

Methods and Material

Milk samples: Once a week



Milk fat extraction



Milk fat methylation

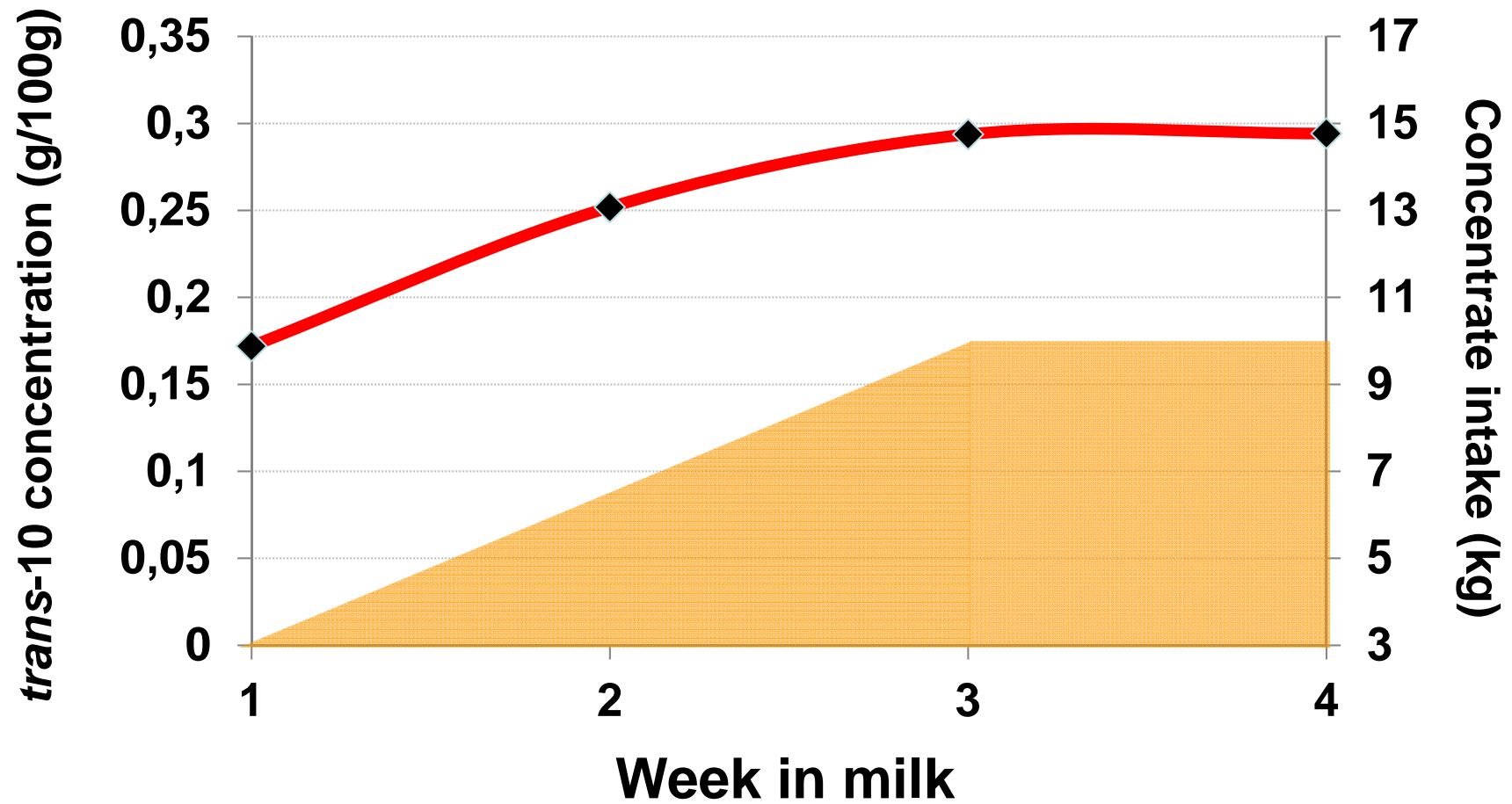


Results



Results

C18:1 *trans*-10 concentration



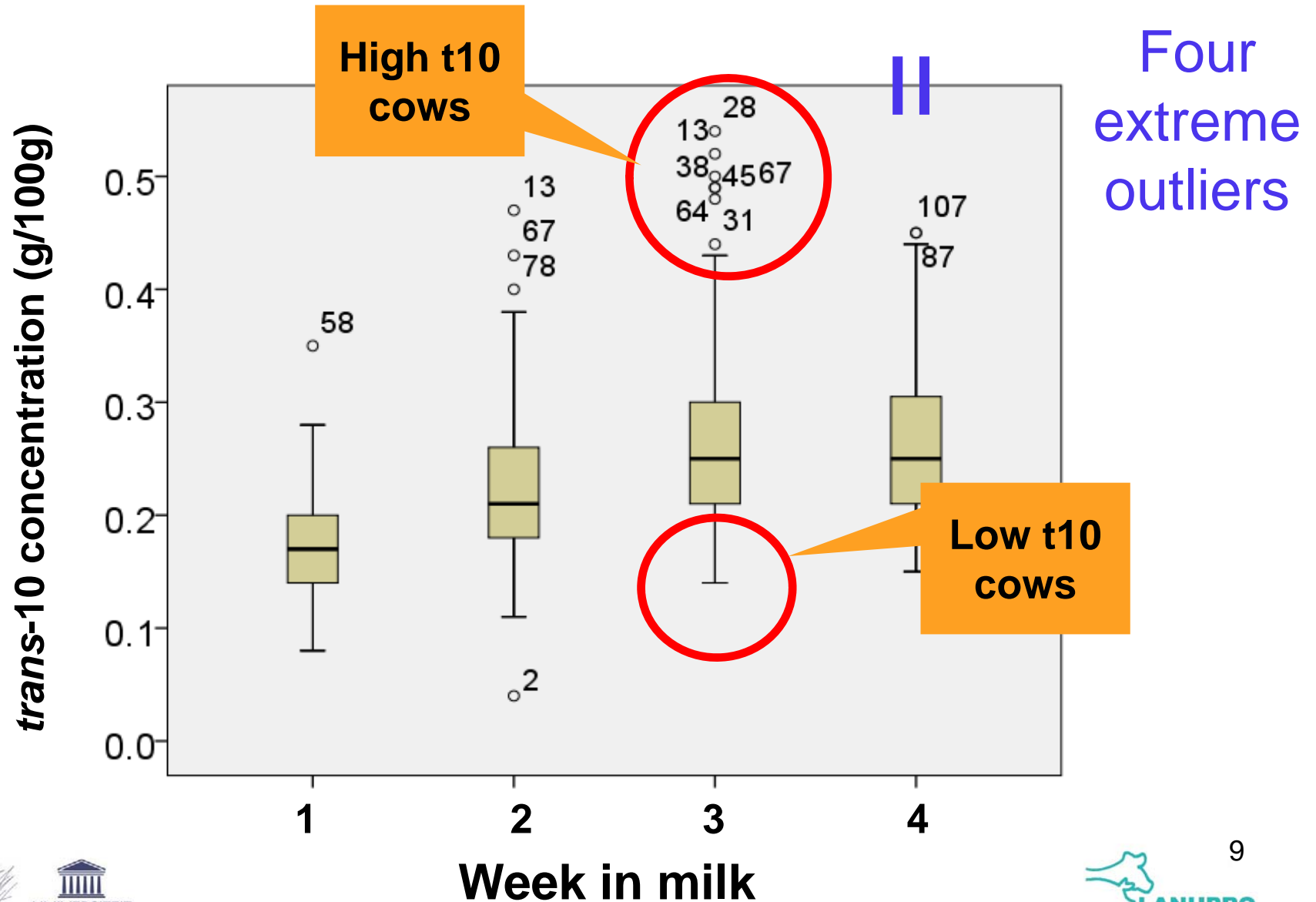
trans-10



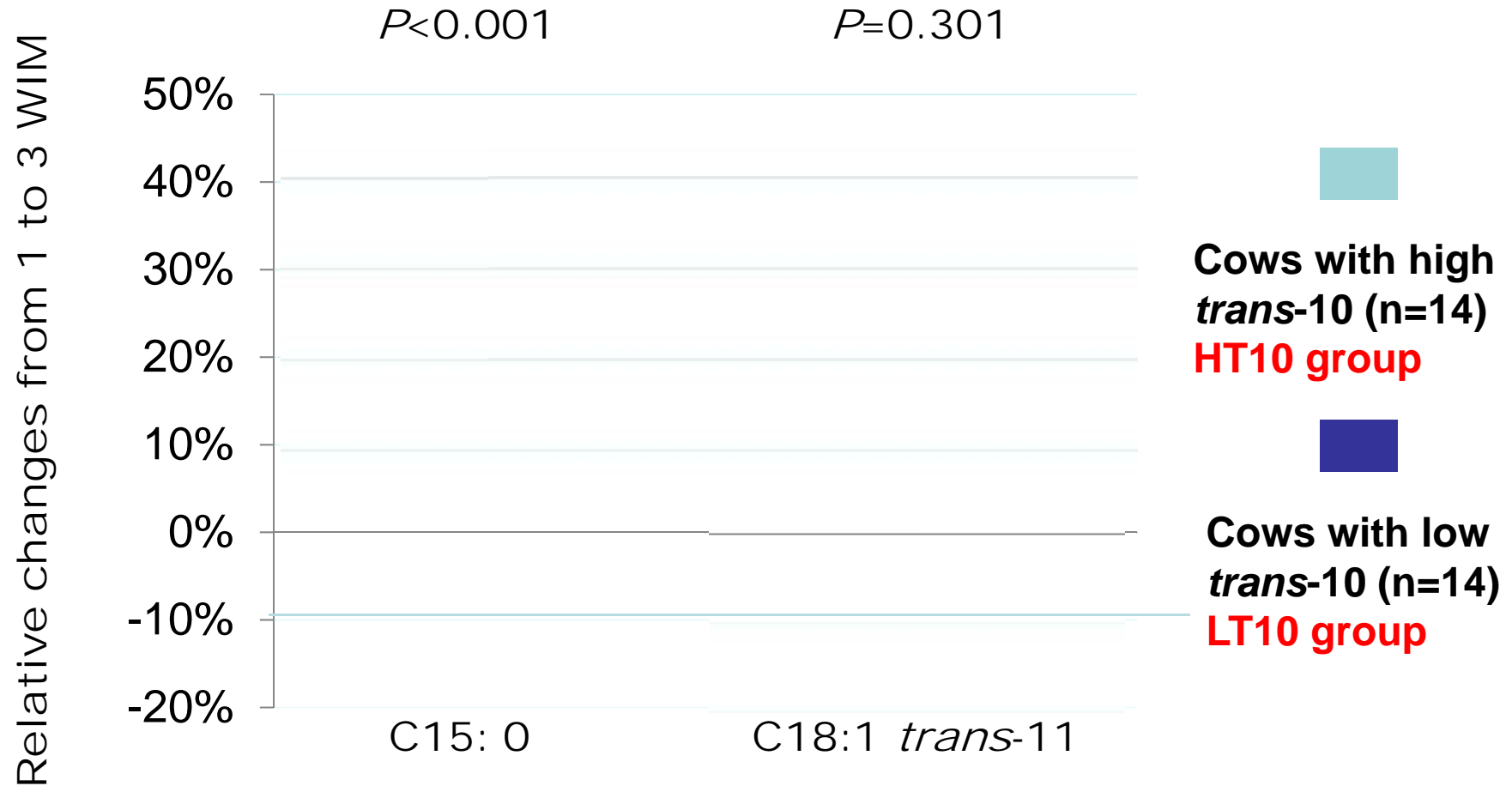
Concentrate



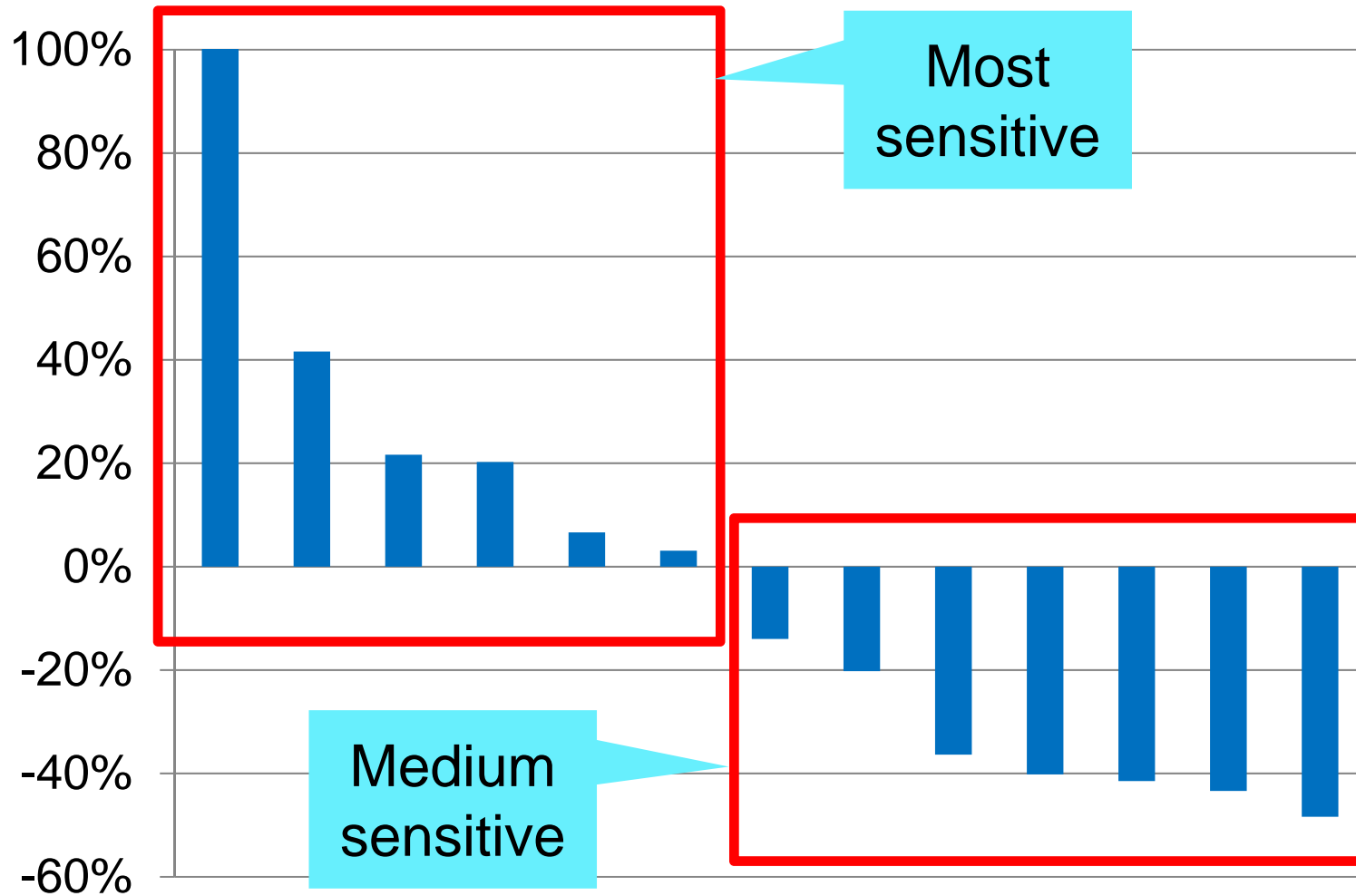
C18:1 *trans*-10 concentration



Relative changes of MFA from 1 to 3 WIM



Trans-10 changes from 3 to 4 WIM in HT10 group



Conclusion

- **The combination of C18:1 trans-10, C18:1 trans-11 and C15:0 could show the inter-animal variation in SARA during early lactation**
- **Based on our previous findings, we pick out three groups of cows (most sensitive, medium sensitive and control group (LT10)) for further study.**

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Thanks and Comments