

ABSTRACT

**Adipose invasion of muscle in Wagyu cattle: Monitoring by histology and melting temperature**

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Remarkably, Wagyu cattle progressively desaturate intramuscular and subcutaneous fat leading to melting temperatures (T<sub>m</sub>) well below 38°C. In parallel, the adipose tissue expands, arborises and invades the muscle. The process is aggressive in that it leads to loss of myofibres resulting in much smaller fascicles and therefore fine marbling or snowflaking.

The “Microscopic score” appears to be an excellent measure of marbling especially for lesser and greater degrees which are not quantified reliably by others methods.

By comparing muscle groups, we conclude that the tailhead is a suitable site for sequential monitoring. Melting temperatures of intramuscular and subcutaneous tissue are also useful.