

**Alfalfa grazing increases vitamin E content and improves fatty acid profile in *L. dorsi* from light lambs**

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was to assess the effects of forage inclusion (alfalfa grazing vs. concentrate-fed indoors) in the diet and lactation length (weaning at 13 kg vs. suckling until slaughter at 23 kg) on the fatty acid (FA) profile and vitamin E content in *L. dorsi* of Rasa Aragonesa lambs. Thirty-two single lambs were assigned to one of four treatments in a 2 x 2 factorial design. ANOVA test was performed. The effect of forage inclusion was significant on FA profile and on  $\alpha$ -tocopherol and  $\gamma$ -tocopherol contents while the effect of lactation length was less clear. Alfalfa grazing lambs had greater content of  $\alpha$ -tocopherol and lower  $\gamma$ -tocopherol than concentrate-fed lambs ( $P < 0.05$ ). Some concentrate feedstuffs (as soybean and colza) increase the  $\gamma$ -tocopherol content, whereas forage has a negligible content. Alfalfa grazing increased the MUFA and CLA content and decreased the PUFA n-6/n-3 ratio ( $P < 0.05$ ). Lactation length had a less noticeable effect on vitamin E content and on FA profile. Weaned lambs had slightly greater  $\alpha$ -tocopherol ( $P = 0.06$ ) because alfalfa grazing lambs had greater content than lactating lambs whereas weaning did not affect the content in concentrate-fed lambs ( $P < 0.001$ ). Weaning did not affect  $\gamma$ -tocopherol content ( $P > 0.05$ ). Weaned lambs presented less SFA, CLA and PUFA n-3 and more PUFA and PUFA n-6/n-3 than the lactating lambs ( $P < 0.05$ ). It can be concluded that alfalfa grazing improved the FA profile and increased the  $\alpha$ -tocopherol in light lamb meat, which could contribute to human health. Lactation length had a less clear effect on vitamin E but suckling until slaughter increased CLA content and the PUFA n-6/n-3 ratio.