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**Extending the interval between second vaccination and slaughter: II. Changes in the reproductive capacity of immunocastrated ram lambs.**

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Deterioration of semen in immunocastrated rams

**Table S1** *Scoring system used to evaluate the appearance quality and mass motility of semen samples collected from immunocastrated (n = 5), Burdizzo-castrated (n = 5) and intact ram (n = 5) Dohne Merino lambs, as adapted from* *Hafez and Hafez (2008) and Ramsem (2017).*

|  |  |  |  |
| --- | --- | --- | --- |
| **Score** | **Class** | **Appearance** | **Motility** |
| 5 | Excellent | Thick, creamy. | Dense, very rapidly moving waves; 90% of sperm are motile. |
| 4 | Good | Creamy. | Vigorous wave movement; 70-85% of sperm cells are active. |
| 3 | Fair | Thin, creamy. | General but slow-moving waves; 45-65% sperm are motile. |
| 2 | Poor | Milky. | Slow movement with no waves; 20-40% poor motility. |
| 1 | Very poor | Thin, milky. | Only weak individual movement; only about 10% motile. |
| 0 | Unsatisfactory | Transparent | Total immobility. |

**Figure S1** *The timmed testes cut in half for surface colour measurement indicating the differences in size and colour between castrated lamb treatments. Testes 8 and 30 were from Dohne Merino lambs immunocastrated with a six or four-week interval between second vaccination and slaughter, respectively. Testes 34 was collected from an intact ram, while testes 11 to 20 represent the entirety of the Burdizzo-castrated treatment group.*

**Figure S2** *The average (± SE) serum androstenedione concentrations (ng/mL) measured in lambs immunocastrated with either six (ICS6; n = 10) or four (ICS4; n = 10) weeks between second vaccination and slaughter, Burdizzo-castrated lambs (B; n = 10) and intact control rams (R; n = 10). Vaccinations are indicated by arrows. Letters indicate significant differences between means at a significance level of 5 %.*