Factors affecting pregnancy rate after cervical insemination in dairy sheep flocks

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Objective

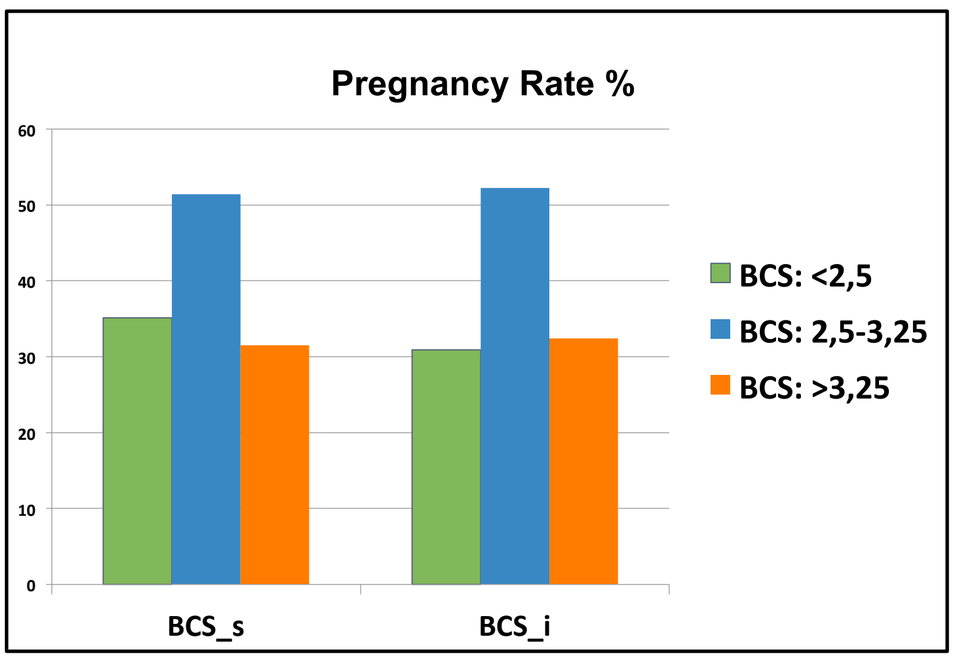
The objective was to assess the factors affecting the success of cervical artificial insemination (CAI) with chilled semen in intensively reared dairy ewes in Greece

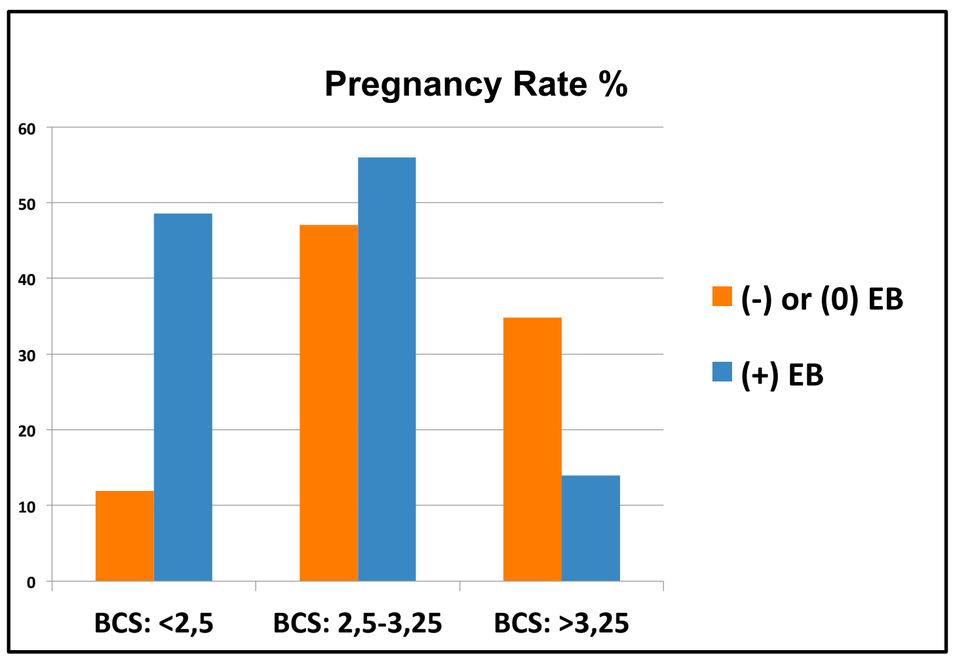
Methods

- **1,242 adult ewes from 14 flocks in northern Greece (Lacaune, n=885 and Chios, n=357)**
- **CAI with chilled semen (15^{o}C) - 400x 10^{6} spz/dose**
- **Pregnancy Diagnosis (PD) 35-40 days post CAI**
- **Recording of:**
  - **Ewe details: breed, parity, previous lambing date, number of previous synchronizations**
  - **Body Condition Score at onset of synchronization (BCS_s), at the day of CAI (BCS_i) and at the day of PD (BCS_p)**
  - **Procedure details: onset of synchronization to CAI interval, semen collection to CAI interval, semen deposition depth, cervical mucus presence, duration of CAI**
  - **Housing conditions: bedding space, air volume, ventilation**
  - **Dietary management**
- **Chi- square independence test → association between CAI success and categorical variables**
- **One-way analysis of variance → difference of continuous variables between pregnant and non- pregnant ewes**

Results

- **Ewe breed, parity, semen deposition depth, time from semen collection to CAI and presence of rams during the synchronization period significantly affected CAI success (P<0.05)**
- **Pregnancy rate in farms with poor ventilation was significantly lower (P<0.05) compared to farms with adequate ventilation (40.0% vs. 53.4%)**
- **Significant effect of BCS and Energy Balance (EB) on pregnancy rate**





Conclusion

Selection of appropriate ewes, BCS recording prior to synchronization and evaluation of dietary management and housing conditions are key factors dictating pregnancy rates following CAI.

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