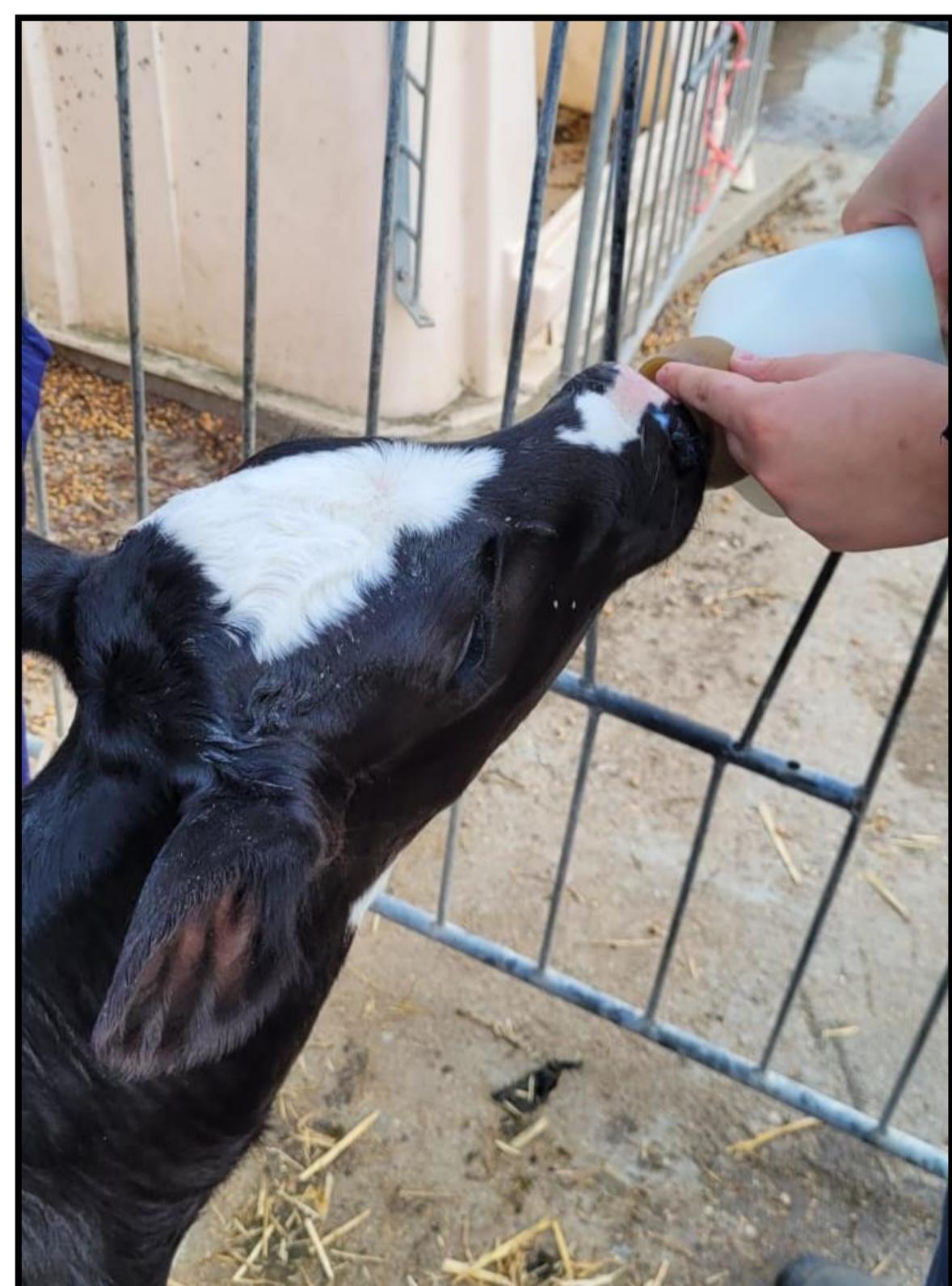


Feeding colostrum based on birth weight improves dairy calves' passive immunization



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Colostrum is a highly valuable feed

Antibodies



Nutrients



- An adequate amount of **good quality colostrum** after birth secures a **healthy start** for the newborn calf
- Bigger calves need **more nutrients and antibodies**

In dairy farms:

- Good quality colostrum can be **limited**
- **Standard volume** of colostrum (3-4 L) is usually given, regardless of the calf's weight

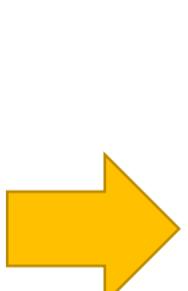
Research Question

Does feeding colostrum based on the calf's weight improve passive immunization (PIT) ?

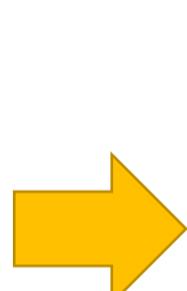
Materials and Methods



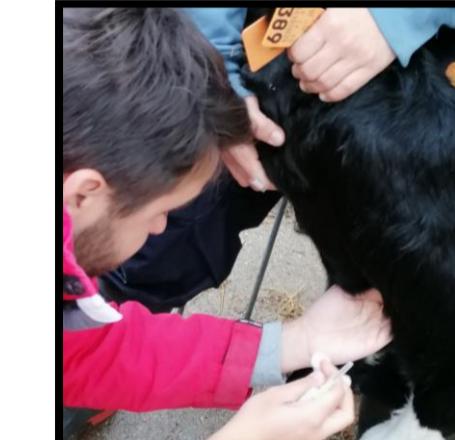
n = 30
24 Friesian
6 cross-Friesian



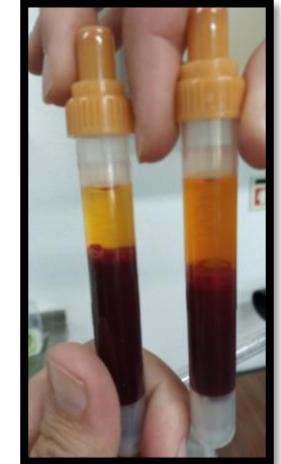
Birth weight (BW)
Heavy calves: > 41.8 kg
Light calves: ≤ 41.8 kg



Volume of colostrum fed (VOL)
Volume of colostrum fed per kg of BW (VOL/kg)
(Brix ≥ 20 %; < 12 h)

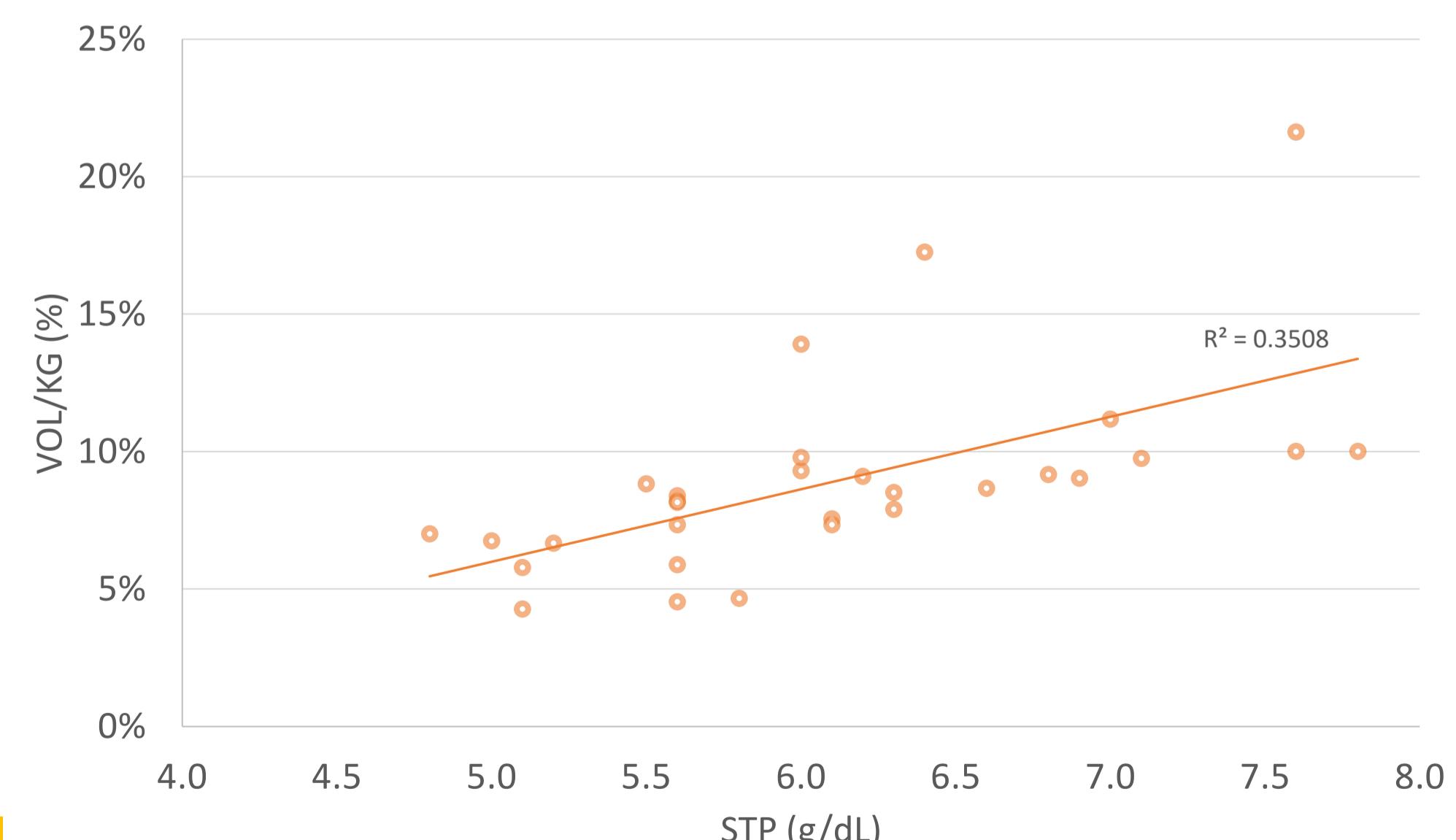
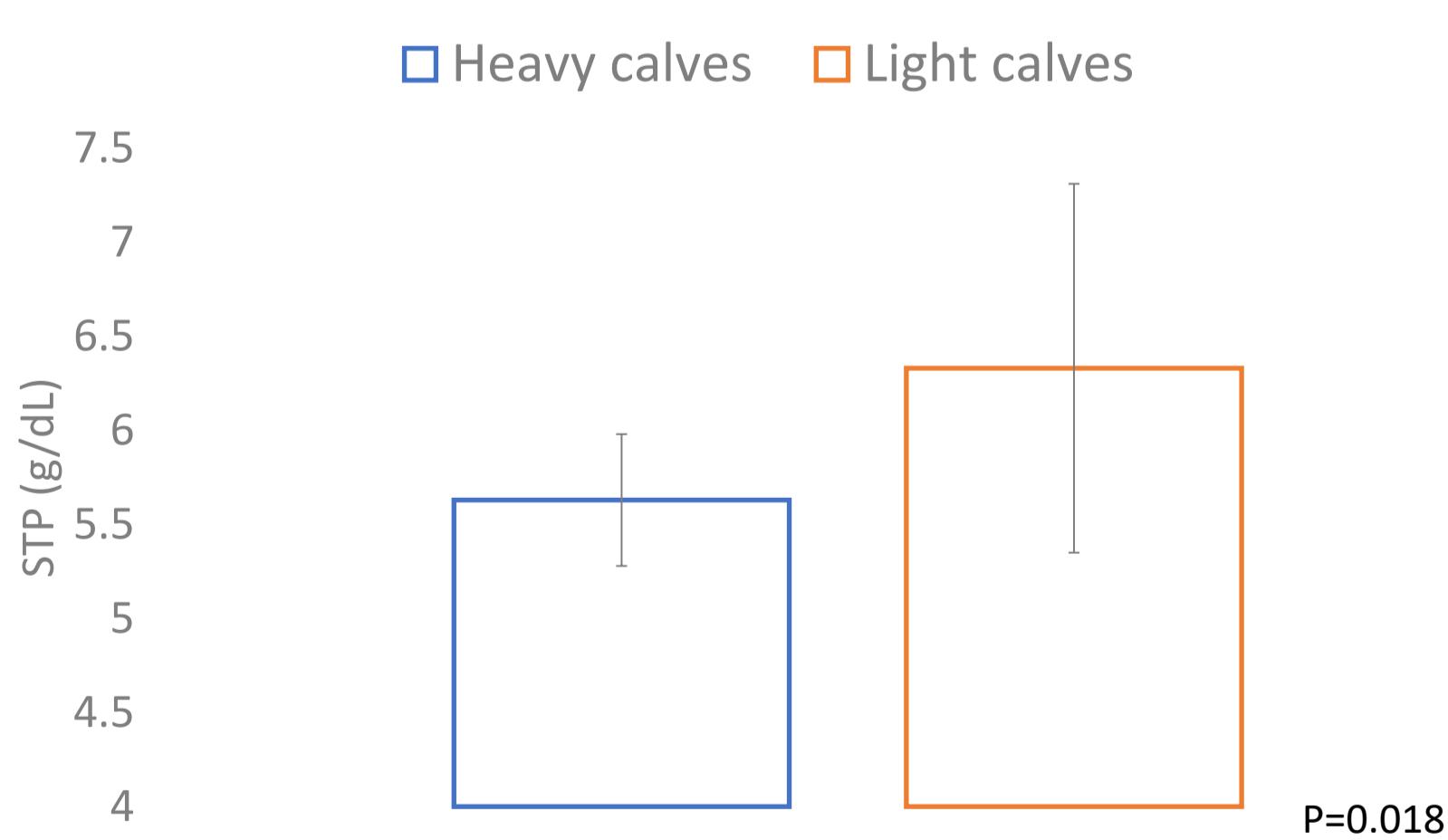


Blood sample
(24 h of life)



Serum total protein (STP)
(evaluate PIT)

Results



- ✓ STP was **positively correlated** with VOL ($r=0.7$) and VOL/Kg ($r=0.75$);
- ✓ VOL/kg < 8% increased 7 times the likelihood of **occurring failure of PIT** (STP < 5.8 g/dL)

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Conclusion

Heavier calves should consume more colostrum than lighter calves and not a management-based standardized volume.