




SOCIAL ISOLATION IN SHEEP

Sheep are very social animals, and as a result they become severely stressed when socially isolated from one another (Hutson et al., 2007).

Consequences of social isolation


Stress from social isolation has several consequences for sheep **welfare** and **productivity** (Barnard et al. 2015)

Resulting in

- ↑ Stress hormones (De et al., 2018) 
- ↑ Heart rate, respiration and temperature (De et al., 2018) 
- ↓ Food, water intake, weight (De et al., 2018) 
- Stress behaviours
- ↑ Vocalizations, locomotions (De et al., 2018).

Behavioural indicators of stress during social isolation

Increased vocalizations

- High-pitched bleats (Barnard et al., 2015).
- Vocalizations are typically rare in sheep since they mainly communicate visually (Nowak et al., 2018) 

Increased locomotion

- Rearing, jumping, escape attempts (Barnard et al., 2015). 

Factors associated with an increase or decrease in stress behaviours

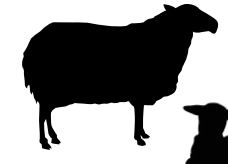
Age

- Young lambs (Vierin & Boussou, 2003) ↑ 

Sex

- Female sheep (Vierin & Boussou, 2003). ↑ 




Lamb and Ewes

- Lamb and ewe separation (Vierin & Boussou, 2003). ↑ 
- Primiparous (first birth) ewes (Vierin & Boussou, 2003). ↑
- Pregnant ewes close to birth (Poindron & Romeyer, 1997). ↓

Differences in breeds

- Light breeds (Barnard et al., 2015) ↑

Decreasing stress behaviours

- **Use a single pen** with visual access to conspecifics (Guesdon et al., 2015). 
- **Habituate** to handling procedures (Nowak et al., 2008)
- Keep in **familiar environment** (Price & Thos, 1980).
- **A familiar human** can be a **companion** (Price & Thos, 1980 ; Nowak et al., 2008). 
- One study found that when sheep were shown **images of familiar sheep** their stress during isolation was greatly reduced (de Costa et al., 2004) 

Asheley Brydges
ZOO L567