



SOP 4.22 Bovine cumulative use measurement

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Purpose

- (1) The objective of this standard operating procedure is to provide guidance to the Charles Sturt University staff on maintaining accurate records of all activities involving the cattle and to ensure that each individual animal is safeguarded against overuse. This procedure relies upon the use of an appropriate point system and will allow the cumulative impact of the work undertaken by Charles Sturt University cattle to be objectively and consistently monitored. The following points apply:
 - a. Cumulative points are tallied after each animal use and a spelling period of a minimum four-week period is mandatory once the maximum points have been reached. Or before if the farming operations staff member deems necessary.
 - b. Maximum points are as follows:
 - **Adult animal** (Cow, Bull, Heifer, Steer > 12 months old) –60 points
 - **Pregnant Cow** - 40 points
 - **Calves & Weaners** (< 12 months old) – 40 points.
 - c. Points will reset after each four-week spelling. Users should ensure they use animals that are starting at 0 points for projects that are predicted to reach maximum points. It should be noted in the Animal Ethics Committee (AEC) approval may be obtained for animals to go above the maximum points allowance in certain circumstances on a case-by-case basis if animal or human benefits are deemed valuable.
 - d. The cumulative points carried by each animal will be reported to the AEC monthly.
 - e. Cumulative points will be reviewed annually, the points allocation system will be reviewed and amended, if needed, by the farming operations team.

Scope

- (2) This applies to all CSU cattle, and anyone involved in maintaining the herd. It provides guidance for animal usage in compliance with AEC requirements and the Australian Code for the care and use of animals for scientific purposes, excluding detailed procedural descriptions and ethical judgments, which are addressed elsewhere.
- (3) All researchers and teaching staff using animals for scientific purposes must be competent. For definition of competency refer to Charles Sturt University's Policy on 'Animal Care Competency Training and Assessment'

Data logging

- (4) Farming operations staff will log points (associated with each husbandry session) in real time to minimise the risk of information loss. Each husbandry session will attract the highest score of an individual procedure as opposed to the accumulative score of each procedure when multiple procedures are carried out at the same time (e.g. when weighing, condition scoring



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and vaccination are carried out in one session). Staff are to be provided with portable equipment with internet access to successfully apply this procedure. All procedures the animals undergo will acquire points (Table 1).

Point allocation	Description	Procedure examples
1	Minimal intervention involves all procedures that can reasonably be expected to have minimal impact on animal welfare.	General handling and yard work, e.g. Weighing, condition & fat scoring, aging by dentition. Observation by students in yards. (excludes moving between paddocks- no points)
2	Minor intervention procedures that involve, interventions that can reasonably be expected to have a short-term effect on behaviour but a temporary but minimal impact on animal welfare. These interventions are likely to include, but not be limited to, those necessary to manage the animal and safeguard its longer-term wellbeing.	Drenching and or vaccinating*, ear tagging, Head bail, Crush Handling Backline (fly protection) *, Transrectal palpation and ultrasound pregnancy scanning, vaginoscopic examination, Footbath, Student handling, Administering prescribed medication, Blood collection by a competent staff member, Faecal collection from rectum, Controlled internal drug release (intravaginal CIDR implant), artificial insemination.
3	Mild intervention procedures that involve, interventions that can have a relatively long lasting, (up to 24h) impact on animal welfare. These interventions cause discomfort (physical or mental) for a period of time (up to 24h) or be acute but intense for a shorter period of time.	Individual restraint- Halter practical, Metri Check examination, vaginoscopic examination, artificial insemination- Students. Vehicle transport, Intra venous fluids, Foot trimming, Blood collection by a supervised student, Small group penning (<24 hours, then 3 points given, for each 24-hour period after that), epidural anaesthesia, Semen collection by electroejaculation.
4	Moderate intervention procedures that involve interventions that are invasive or involve prolonged discomfort and/or inability to move freely. Require careful management to ensure that welfare is not compromised beyond undergoing the procedure.	Disbudding, Branding – Freeze, , CT scan, Individual penning (<24 hours, then 4 points given for each 24-hour period after that), Semen collection by electroejaculation, Tattoo, Gagging
5	Major intervention procedures that involve interventions that are invasive or involved prolonged discomfort and/or inability to move freely. Require careful clinical management to ensure that welfare is safeguarded for an extended period after following the procedure.	De horning, Weaning, Castration, Vasectomy, Surgical procedures, Stomach tubing. Caesarean, Marking, Calving intervention/dystocia, transvaginal ultrasound guided ovum pickup (OPU)

*This may be included in the higher-level intervention procedures



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Impact of procedure on wellbeing of animals

- (5) Animals will be excluded from research & classes when showing signs of aversion to activity. Behaviours of concern may include, but are not limited to fretting, jumping, running toward barriers, open mouth breathing. Farming operations team to determine.
- (6) Animals will be removed from activities due to ailments and injuries. Farming operations team to determine.
- (7) Farming operations team to determine whether livestock will be used when the temperature exceeds 33 degrees Celcius.
- (8) Future amendments to SOP as scientific literature emerges.

Animal care

- (9) For further information contact Farming operations team.

Qualifications, experience or training necessary to perform this procedure.

- (10) Only staff that are a part of the Farming operations team may log procedures via 'AgriWebb' livestock farm management software.

Record requirements.

- (11) Records will be sent to the Animal Ethics Committee via email in time to meet the Agenda closing date deadline.

Associated documentation (including pictures if available)

- (12) None

Glossary

- (13) Not applicable

References and relevant links

- (14) This procedure has been adapted from the following resources:
 - a. Cavalieri J., Dowling B., Foyle L., Godfrey C., Lloyd J., Penny J., Tranter W., Watts S., Wearn J., & Willis G. (2023). Guidelines for the use and reuse of animals for teaching within veterinary medical education programs. Clinical Theriogenology, 15, 29-37. <https://doi.org/10.58292/ct.v15.9593>
 - b. National Health and Medical Research Council. (2013). Australian code for the care and use of animals for scientific purposes, 8th edition. Canberra: National Health and Medical Research Council.