1. PURPOSE
1.1- To describe the procedures for feeding and watering research animals at the large animal research unit (LARU).
1.2- To provide balanced nutrition for research animals.

2. RESPONSIBILITY
2.1- Technical staff.

3. MATERIALS
- Hay
- Calf Grain 20% protein (with Rumensin)
- Fresh water
- Feed cart
- Grain bins
- Fresh water

4. PROCEDURES
4.1- Food:
4.1.1- Alternate diets may be given only in accordance with an approved protocol or the approval of the facility veterinarian.
4.1.2- If calves are not weaned, milk replacer powder is purchased and fed accordingly (see below).
4.1.3- Starter 20% calf grain (with Rumensin®) is purchased every other week to ensure freshness and fed accordingly (see below).
4.1.4- Before use, verify date the feed was manufactured (stamped on the bag). Do not use feed that is older than 6 months.
4.1.5- Dry food must be stored in closed containers away from heat.
4.1.6- PROCEDURE FOR DAILY MILK REPLACER FEEDING:
   a. Calculate the amount of milk replacer required by multiplying the dose according to age by the number of calves to be fed.
   b. Between 2 and 6 weeks of age, calves will receive a daily total of 6L of milk divided in two feedings of 3L each (am & pm).
   c. After 6 weeks of age and until weaning, they will receive only of 3L of milk in the pm (last meal). This is a baseline, the supervisor will tell you when to switch the animals from 2 x day to 1x day to no milk replacer.
   d. To prepare the milk replacer, dissolve 150g of powder per litter of warm water (450 g = 3 cup marker using the measuring cup). First dissolve the powder in half the volume of warm water at ~45°C, after complete dissolution, bring to final volume with warm water at ~20°C. Ready milk should be around 37-39°C.
   e. Feed the calves by pouring 3L of milk into each of the designated milk buckets in the pen.
   f. Each calf should drink the total 3L assigned to each, unless otherwise indicated by the supervisor. Make sure they are all drinking and report any deviation from expected consumption.
4.1.7- PROCEDURE FOR DAILY GRAIN FEEDING:
a. The pelleted concentrate (calf starter) is fed to the calves at an initial dose of 1 Kg per day.
b. After weaning, the amount of grain is increased progressively as the animals grow. Follow the
table provided by the grain supplier.
c. Use the measuring scoop (Kg units) to feed the appropriate amount
d. The total daily amount should be fed half in the morning and half in the afternoon.
e. For calves getting milk replacer only once daily in the pm, give the calf starter first thing in the
a.m.
f. For all animals getting milk replacer, always feed the grain after they have finished the milk.
g. Scoop the measured amount into individual feeders.

4.4.1.8 - PROCEDURE FOR DAILY HAY FEEDING:
a. remove old hay from hay baskets
b. replenish hay baskets with fresh hay (2"d cut grass hay)
c. hay is fed ad libitum in the AM and PM

4.2- Water:
4.2.1- All water is from the City of Montreal municipal water supply unless otherwise required by protocol.
4.2.2- No animal is to be deprived of free access to water at any time unless specifically required by
protocol.
4.2.3- In this protocol animals are deprived from water for 12 hours prior to general anesthesia and LOPU
(Laparoscopy oocyte pick-up) which is performed every 2 weeks.
4.2.4- Automatic watering systems must be checked daily to ensure that the float level is well adjusted
and that there is no overflow of water.
4.2.5- It is important to observe carefully during the 1st few days for water intake.

5. RELATED SOPs
5.1- Husbandry Schedule Calves – LARU# 11 (calves)