

Orphan lambs: Artificial rearing can pay if the lambs would otherwise have died

Key points

- In high fecundity flocks, about 25 per cent of triplets are either born dead or die before they are 12 weeks of age.
- In severe storms, losses due to exposure and mis-mothering can be higher than this.
- Orphan and triplet lambs, which otherwise would have died, can be successfully reared on fortified cow colostrum and meal.
- The total cost is around \$30/lamb (excluding labour). With prime lambs worth around \$65/head, it is clearly economic to artificially rear such lambs.
- It is not economic to remove small triplet lambs for rearing. If a ewe is capable of rearing its lambs it should be allowed to do so.
- Artificial rearing requires good animal husbandry skills, and careful attention to hygiene and animal health.

Higher fecundity ewes have been a life-line for sheep farmers in recent years.

But as lambing percentages climb toward 200 per cent, there is only one downside in the eyes of many farmers: “what do I do with the triplets?”

To answer that question, a triplet management trial was incorporated in 2001 into the elite lamb project at AgResearch Poukawa. The weakest lamb was removed from every second set of triplets and artificially reared along the lines of the once-a-day calf rearing regime.

The trial showed that it's not economic to remove a triplet lamb for artificial rearing, unless the lamb would otherwise have died.

Despite this, there is still a big potential for artificial lamb rearing. In the Poukawa Elite Flock, which is probably typical of other high fecundity flocks, 25 per cent of triplets are either born dead or die before they are 12 weeks of age.

Two [large-scale rearing experiments](#) (Note: large PDF file—384Kb) were also undertaken by Southland farmers Anthony Sutherland and Paul Marshall. These experiments were funded by Meat New Zealand and WoolPro through the FITT programme and have come up with a viable system for rearing orphan and surplus lambs.

The following are the recommendations from the FITT trial for artificially rearing orphan lambs:

1. Create pens using hurdles or gates in an existing building or covered yards.
2. Allow 0.4 m²/lamb, with a maximum of 15 lambs per pen. Disinfect floor, gates and feeding equipment and weekly thereafter.
3. Bedding: 150 mm of dry (untreated) sawdust.
4. Unrestricted access to water.

5. Meal troughs: 1 m lengths of household guttering (2 per pen) fixed with brackets 30 mm above bedding.
6. Before introducing lambs to the pens, vaccinate for scabby mouth (if it's a problem on your farm). Train them to feed off a bottle and then a multi-teat bucket-type feeder. Allow 3 days for this. A few lambs will fail to adjust and should be mothered on to ewes that have lost lambs.
7. To reduce the risk of E. coli-type scours, new lambs should be dosed with All-Lac probiotic (0.5 g/lamb) in their first feed or add Acid-Pak 4-Way to the milk or colostrum (0.75 g/litre).
8. The FITT programme added 70 g/l of lamb milk replacer powder to antibiotic-free cow colostrum. However it may well be viable to simply feed cow colostrum without adding milk replacer. Store the colostrum under refrigeration, stabilising it first by adding 11 teaspoons of plain yoghurt to 200 litres.
9. The Poukawa regime aimed to reduce feeding to once a day as soon as possible: Starting with 3 × 300 ml feeds a day, reducing to 2 × 400 ml at 8 days, 1 × 400 ml at 15 days and 1 × 250 ml at 22 days.
10. An ad-lib feeding regime would reduce disease transfer, but the economics of it have not been explored.
11. Lamb feeders can be made from plastic buckets. Teats should be at 200 mm centres to minimise contact and pink eye transfer between feeding lambs. To prevent damage to the lips of vigorously feeding lambs, the bucket should ideally be made from a plastic that has some 'give' in it.
12. Clean and sterilise the feeder after every feed, to reduce build up of scour bacteria, scabby mouth etc.
13. Milk replacers are more expensive than dry feeds, so aim to wean lambs onto dry feed as quickly as possible (24 days). From week 2, feed a mix of meal (preferably pelleted) and good quality forage. The better the quality of the forage, the sooner they will start eating. Chaffhage and cereal based calf pellets were used at Poukawa and worked well.
14. A good starter meal should supply 12.5–13 MJ ME/kg DM, and have a protein level around 18 per cent. Calcium, phosphorus, magnesium and sodium must be included at the appropriate levels, and a trace mineral and vitamin premix added.
15. From 22 days, lambs that have reached 12 kg should be introduced to high quality clover-dominant pasture. Cease milk feeding of these lambs from 24 days.
16. Keep lighter lambs on milk and meal until they reach 12 kg.
17. Meal feeding should continue until day 77. Expect weaned lambs to grow 200–300 g/day.
18. Health: Remove sick or scouring lambs to a 'hospital' pen. Use disposable latex gloves when handling these animals. Disinfect gumboots, feeders and other equipment when moving them from the pen.
19. Take scouring lambs off milk and give them electrolytes. Sulphur-based antibiotics are useful with Brandenburg scours. Naval sucking can be prevented by castrating the perpetrators they're always ram lambs.

The total cost this system is around \$30/lamb (excluding labour). With prime lambs worth around \$65/head, it is clearly economic to artificially rear orphan and surplus lambs.