Amongst the factors which must be considered in studies on mortality amongst newborn lambs, is the period during which they must exist on their own tissue reserves, i.e., the period between birth and successful sucking. The only relevant data appear to be those of Wallace (1949) concerning Romney lambs.

The observations reported here were made on single and twin Corriedale lambs from well fed 6-year-old ewes, and on fine-wool!
Merino lambs from ewes of mixed ages; some were very well fed and others very poorly fed. Lambing took place under continual observation, in open yards, illuminated at night. The times at which the following events occurred were recorded: birth of lamb, first attempt to stand, first stood, first sought udder, first reached udder and first appeared to suck. In the second set of observations, lambs were observed for only the first 40 minutes after birth.

The ages at which the single and twin Corriedales first stood and first appeared to suck are distributed in Figures la and lb, as examples of the results; the distributions of age were very similar for single and twin lambs. These distributions and those of the other stages are skew with the mean greater than the mode, i.e., most of the lambs stood, etc., at the smaller ages.

Some of the results of the two series of observations are shown in Figures 2a and 2b, together with the published data of Wallace (1949). The curves concerning time to stand are closely bunched. However, the high plane of lambs of the second set of observations, and Wallace's twins and singles appeared to suck much earlier than did the low plane lambs and the Corriedales. In very few cases in

![Diagram 2a: Time taken for lambs in various groups to first stand.](image)

![Diagram 2b: Time taken for lambs in various groups to first appear to suck.](image)
the present observations did maternal behaviour appear to have any effect on the progress of the lamb towards sucking.

These curves emphasize the extreme variation in behaviour between individuals, and indicate that real differences do exist in behaviour between groups. There is some evidence, which will be presented elsewhere, that the variations may be associated with differences in ability of lambs to maintain body temperature during the drying of the coat, or under cold, wet and windy conditions. This may account for the relatively slow progress of the Corriedales. However, groups do differ independently of the environment as illustrated by the differences in the behaviour between the high and low plane lambs which were born in the same environment.

There was significantly higher mortality amongst those Corriedales which took longest to stand and longest to appear to suck. More than half of those which died, did reach the udder and appear to suck; since most of these lambs did not obtain milk it is suggested that their reserves were so depleted when they finally reached the udder that they lacked the “vigour” to suck successfully. This is supported by findings that under severe weather conditions the energy used by a newborn lamb can approach 70 kcal/hr; after 2 or 3 hr the total energy expended would amount to a substantial proportion of the estimated initial energy reserves (600-900 kcal).

Reference