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Worm management in lambs at and post weaning and how to protect your flock

## Weaning

Lambs are usually weaned between 12 and 14 weeks of age. The decision on when to wean should be determined by ewe body condition, feed availability and lamb growth rates. These factors change every year, so the ideal weaning date cannot be set in stone.

### Assess at eight weeks

Assessing ewes and weighing lambs at around eight weeks of age (from midpoint of lambing) can give an indication of the ewe's milk supply, the health status of the group and forage supply. It also allows a weaning date to be decided, as ewe condition and lamb performance can be assessed.

### Aim to have 90% of the ewes at the target BCS

If ewes at eight weeks post-lambing are falling below the ideal BCS target, the lambs may need to be weaned earlier to allow sufficient time for the ewes to gain condition by tugging. Ewes in the right condition at tugging tend to have more lambs the following year. It takes six to eight weeks for a ewe to gain one BCS on unrestricted grazing.

Target growth rates for lambs up to eight weeks of age should be greater than 250g per day. If a lamb (with a 4kg birthweight) gained an average of 250g per day from birth to eight weeks (56 days) it would weigh 18kg, or 21kg if it gained at 300g per day. If lamb growth rate is lower, it may be due to parasites, ewe condition affecting milk production or forage supply and is worth investigating.

### Up to weaning

From eight weeks of age a lamb's energy intake is greater from grass than from milk, so competition for high-quality grass between ewes and lambs reaches a critical point. The time this happens will change each year depending on grazing management and grass growth. If the grass is growing well and ewes are in good condition, weaning can be delayed without reducing lamb liveweight gain. However, if forage availability is low, lamb growth rates will suffer, as ewes and lambs compete for the same grass.

If lamb growth rates are lower than 200g per day, this should trigger weaning and lambs should be moved onto better quality forage. If creep feed is being fed, liveweight gain may not decline after eight weeks. So weaning decisions will be based on how long the lambs have until they are finished as well as ewe condition. The target for systems with high creep use is to sell over 60% of lambs before weaning.

### Transition period

Research shows that animals that experience novel feeds, such as red clover, chicory or cereals, when with their mothers perform better once they are exposed to the feed when weaned. It is therefore important to think about a transition period if the lambs are being weaned onto different feeds. It can take up to three weeks for the rumen to adapt to a new feed and care is needed to prevent a weaning check.

Any treatments, such as vaccines or wormers, should be given before weaning as stress can affect the immune response, especially to vaccines, making lambs more susceptible to disease. Ideally, lambs should be weaned onto a pasture they know but out of sight and sound of the ewes. Once they have settled, they can be moved to pasture with a known low worm burden or onto a forage crop. Use faecal egg counts to confirm the level of parasite challenge in recently weaned lambs.

## Group lambs by age at weaning

Keeping lambs in tight age groups at turnout makes treatment decisions more accurate and FECs more meaningful for the group. Other management decisions are also easier, eg weaning and withdrawal periods post-treatment before marketing. Provide pasture of lowest risk for weaned lambs. Be prepared to wean lambs early (down to about 12 weeks of age), and move them to low risk areas to avoid high larval levels that can build up over the season.

## Mixed grazing and reduced stocking densities

Where grazing options are limited, pasture contamination can be reduced by grazing cattle and sheep together, but not goats. This reduces the stocking density of the host species, but can make pasture utilisation more difficult. Rotating grazing between cattle and sheep during the season is another way to dilute the worm burden.

## Grazing quality

Good quality grazing (nutrition) is essential for high lamb growth rates, and also makes lambs more resilient to worms as the season progresses. Avoid making lambs graze very low sward heights (2-3cm) to reduce their intake of infective larvae, which are concentrated in the bottom of the grass.

Mature ewes, in good body condition, can be used post-weaning to reduce the level of contamination on high risk pastures that have carried ewes and lambs since spring. They ingest large quantities of infective larvae, killing them off and lowering the challenge. This can be very useful for all sheep farms looking to reduce worm burdens the following spring (NB this does not apply to *Nematodirus*).

## Alternative and bioactive crops

Research has shown that grazing on bioactive forages, such as chicory and birdsfoot trefoil, can reduce the negative effects of worms in sheep.

## Quarantine - Three elements:

1. Isolate (quarantine) in-coming stock. Yard for the first 24-48 hours and then keep them isolated from the resident flock for as long as possible, 3 weeks being the absolute minimum.
2. Treat the sheep against the unseen threats from parasites (see below) while they are yarded.
3. Maintain isolation when they are turned out to field(s) that have carried sheep this season.

## Recommended Treatments for Resistant Roundworms and Sheep scab

The SCOPS recommendation is based on the principle that giving two broad spectrum anthelmintics (both with a minimal risk of there being any resistance to them) will ensure that as near to 100% of the worms as possible are killed. SCOPS also strongly recommends that all sheep# are treated against the risk of sheep scab. The two main options are:

	Option 1	Option 2
Resistant worms	Drench with either 4-AD (Zolvix™) or 5-SI (Startect™) + Inject with 1% moxidectin*	Drench with either 4-AD (Zolvix™) or 5-SI (Startect™) + a moxidectin drench
Sheep scab	Covered by the moxidectin injection above.	Plunge Dip in an OP#

\*If Footvax has or is to be used then the moxidectin 1% should be replaced by either 2% moxidectin OR doramectin. Alternatively consider option 2.

#In the case of short keep store lambs, withdrawal periods can be an issue and the only option in terms of sheep scab may be to make sure they are kept away from any breeding ewes, including avoiding any contact with vehicles, equipment etc.

## Liver Fluke

For liver fluke there is an element of risk assessment to be done. Where a risk is perceived that in-coming stock (cattle and/or sheep) originated from a farm where there are liver fluke, they will need to be treated. The choice of treatment depends on the status of the receiving farm so knowledge of your farm history is essential. The three categories are:

1. There is no history of liver fluke on receiving farm and a minimal risk of any snail habitats to support imported fluke. In this case treatment is simply required to remove any burden from the in-coming stock and prevent disease.
2. There is no history of liver fluke on receiving farm but there is a risk that there are some snail habitats which could support imported liver fluke. In this case treatment is required to prevent disease in the in-coming stock but also stop the liver fluke life-cycle establishing on the farm.
3. The receiving farm has a history of liver fluke. Treatment in this case is aimed at preventing disease in the in-coming stock AND preventing importation of Triclabendazole (TCBZ) resistant liver fluke.

### There are three treatment options for in-coming stock:

- Triclabendazole – but this must be followed up by a drench check to make sure it has worked effectively – but remember that sheep may have a zero egg count early in the season because only immature liver fluke are present. To cover this, a follow-up treatment with closantel or nitroxylin approximately six weeks later may be necessary. Triclabendazole treatment is not recommended for farms in the third category above.

OR

- Closantel or nitroxylin - two treatments six weeks apart. Animals must graze low risk pasture between treatments and after the second if possible.

OR

- Animals housed and treated with closantel or nitroxylin if animals are not at risk of immediate disease treatment can be delayed until they have been housed for at least 5-6 weeks which means only one treatment is necessary.

Download the 2015 SCOPS 'Know Your Anthelmintics' leaflet at [www.scops.org.uk](http://www.scops.org.uk)

