



Liver Fluke Control in Sheep



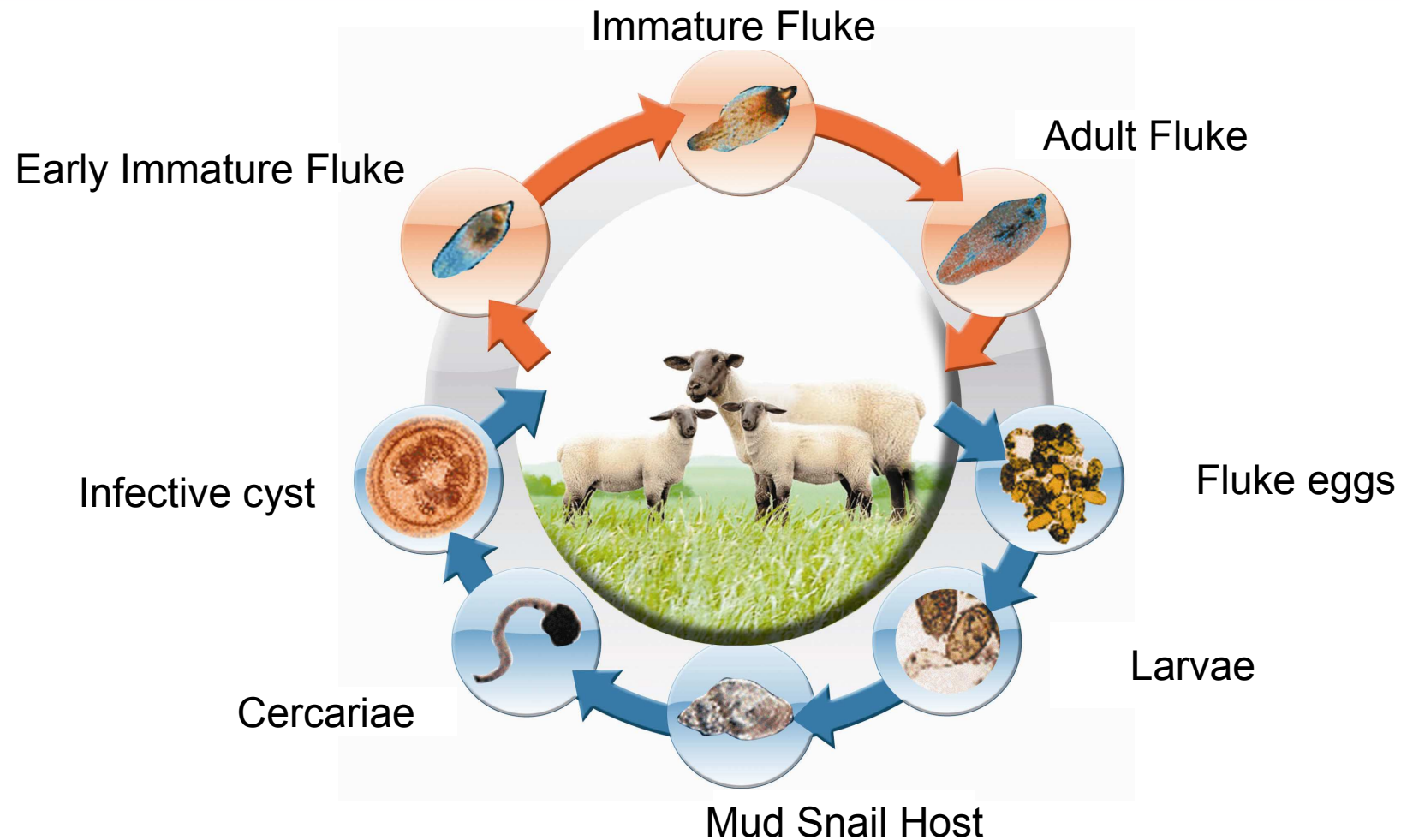
A Serious Threat to Productivity



- Liver fluke is a serious parasite affecting all grazing animals.
- Only one species of fluke infects UK livestock – *Fasciola hepatica*.
- Liver fluke is not host specific.
- Sheep do not develop immunity to fluke.



Liver Fluke Lifecycle



Liver Fluke: Risk factors

The risk of fluke is influenced by the environment:

- Weather in the autumn of the previous year (Aug-Nov).
- Weather in the summer of the same year (May-June).
- Incidence of fluke in the previous season.



Liver Fluke: Danger Periods

Dangerous levels of infective cysts are found on the pasture:

- **April - June:** Over-wintered infection in the snail host. These cysts cause early autumn infection in stock.
- **August - November:** Over-wintered fluke eggs, or new fluke eggs shed in the spring. These cysts cause winter infection in stock.



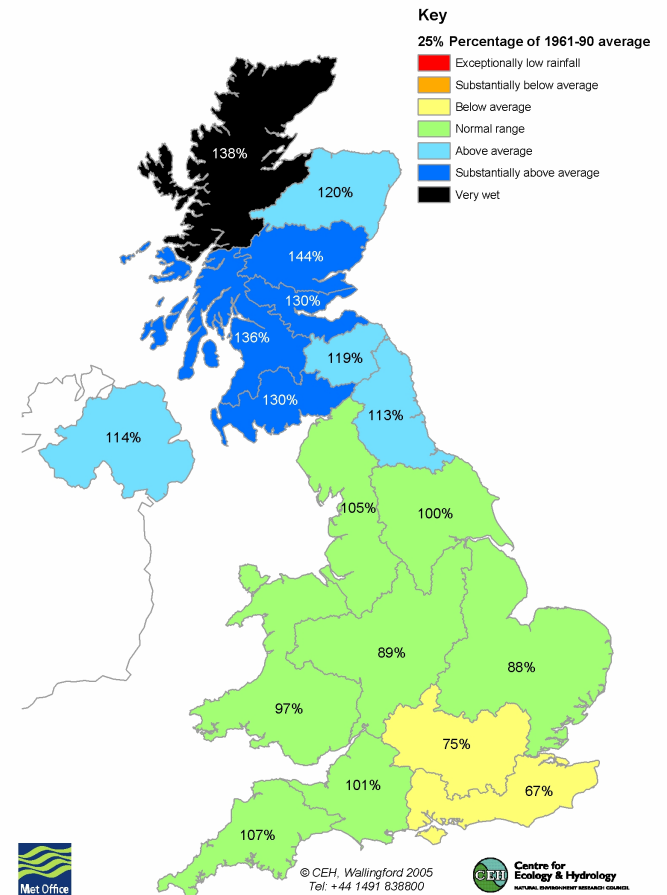
The Fluke Warning



- Novartis collects data relevant to fluke incidence.
- Rainfall and temperature data from the Met office.
- Fluke incidence figures from SAC and VI Centres.
- Fluke related liver condemnations from more than 30 abattoirs.

Find the Fluke Warning on:

www.fluke-and-worms.co.uk



The Fluke Warning



Fluke Warning
Winter 2005

FLUKE'S ECONOMIC IMPACT

In Sheep

- Liveweight gain reduced by more than 10 per cent
- Multiple lambs reduced by 10 per cent
- Birth weight reduced by more than 5 per cent
- Lamb weight gain reduced by up to 30 per cent

In Cattle

- Milk yield reduced by up to 15 per cent
- Weight gain reduced by 10 per cent

And remember

Sheep and cattle show clinical signs of disease - and can die - with an infection of only 100 liver fluke. However, even very low infection levels - as few as 50 fluke - can result in significant production losses.

Is liver fluke depressing your lambing rates?

Liver fluke was identified as the principal cause of very poor lambing percentages in some flocks in 2004 and 2005. Research into this link suggests it is due to both forward and delayed mating, and not to reduced lambing rates in the flocks.

It is widely acknowledged that liver fluke is a major cause of production loss in sheep and cattle. The impact of liver fluke on production is often underestimated, as many farmers do not realise the extent of the damage it can cause. Research has shown that liver fluke can cause a significant reduction in lambing percentages, and that this is due to both forward and delayed mating, and not to reduced lambing rates in the flocks.

New 'Power Gun' Set to Target Liver Fluke Losses

It is a worrying fact that, despite the fact that liver fluke is a major cause of production loss in sheep and cattle, many farmers do not realise the extent of the damage it can cause. Research has shown that liver fluke can cause a significant reduction in lambing percentages, and that this is due to both forward and delayed mating, and not to reduced lambing rates in the flocks.

Treatment calendar

The ideal treatment regime for fluke will vary from farm to farm, but below is a typical regime for a mixed beef and sheep flock, with a view to minimising fluke damage.

AUTUMN

Cattle Dose two weeks after housing with a product effective against all stages of fluke.

Sheep Dose pre-lupping to improve live condition and fertility with a combination product.

WINTER

Cattle Dose mid-winter with a fluke product.

Sheep Dose with a fluke product to kill fluke that have developed since autumn treatment.

SPRING

Sheep Dose immediately before or after lambing to reduce pasture contamination from fluke eggs.

Superior Fluke Control at Housing

Liver fluke can cause a significant reduction in lambing percentages, and that this is due to both forward and delayed mating, and not to reduced lambing rates in the flocks.

FASINEX

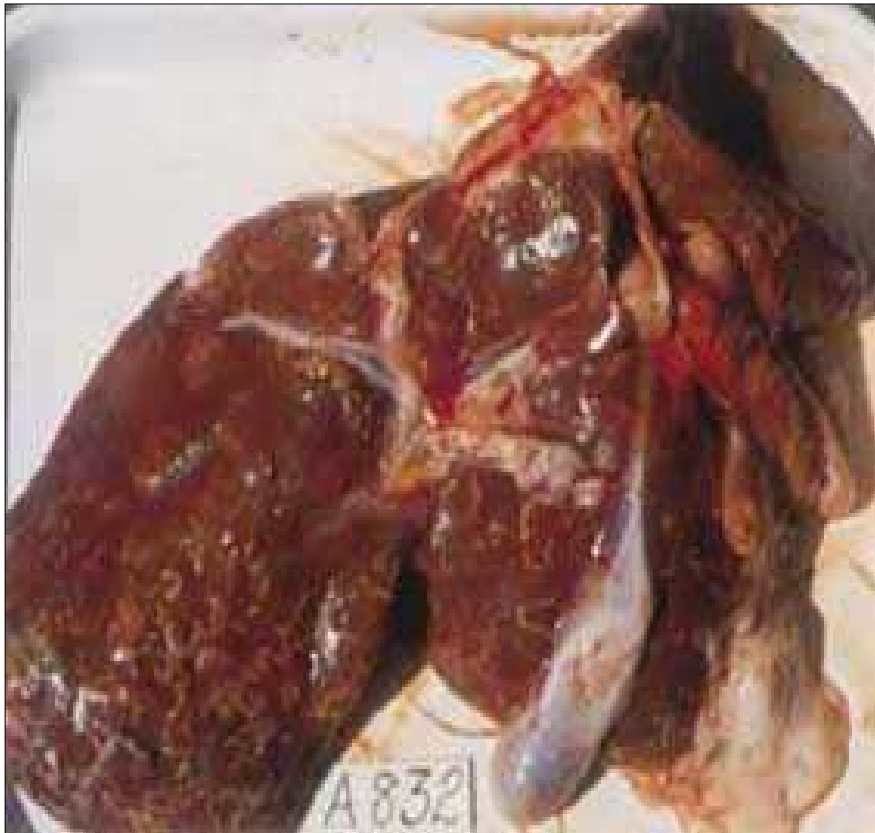
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ACUTE LIVER FLUKE DISEASE CONTROL

FASINEX

Because acute liver fluke disease control is a life or death decision

Liver Fluke: The Disease



Acute Fluke

- Early immature fluke tunnelling through the liver tissue.
- Rapid loss of condition and sudden death.

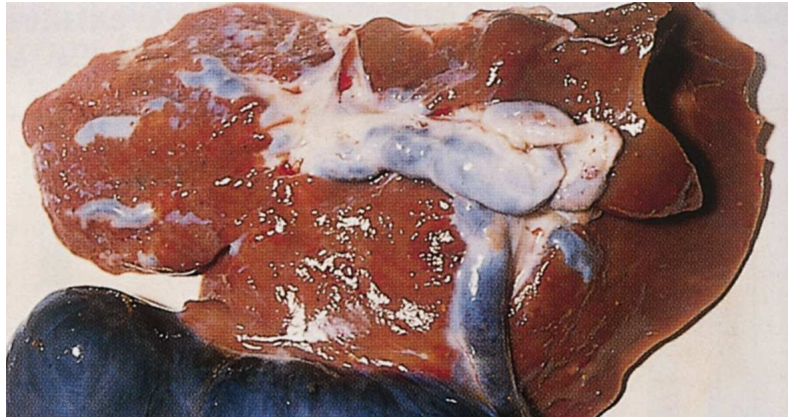
Liver Fluke: The Disease



Sub-acute Fluke

- Immature fluke.
- Loss of condition.

Liver Fluke: The Disease



Chronic Fluke

- Adult fluke feeding in the bile ducts.
- Loss of condition, anaemia and bottle jaw.



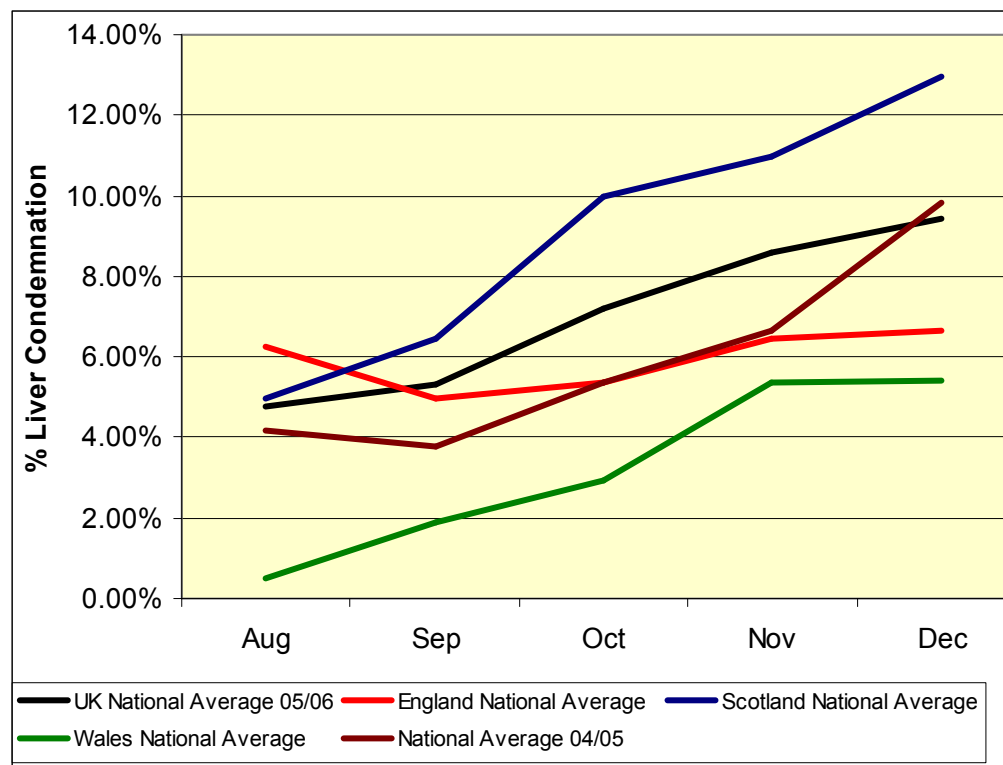
Liver Fluke: The Costs

Abattoir data shows up to 26% of sheep livers were condemned due to fluke this season thus far (2005-2006).



Abattoir Liver Condemnations

2005 – 2006 Abattoir Liver Condemnations



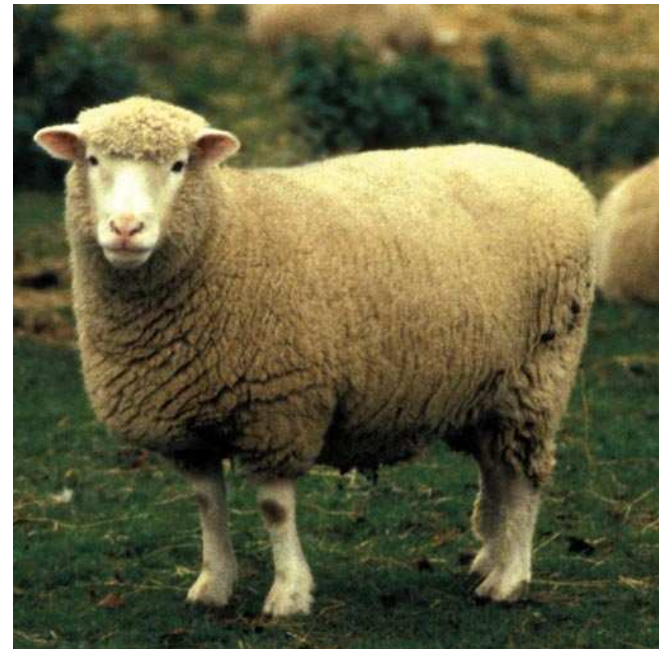
Liver Fluke: The Losses

Sub-clinical Fluke in Sheep:

Just 50 fluke can cause significant production losses.

Ewes

- Live weight gain reduced by more than 10%.
- Multiple births reduced by 10%.
- Liver damage from fluke can also predispose to Black's disease.



Liver Fluke: The Losses

Lambs

- Birth weight reduced by more than 5%.
- Lamb weight gain reduced by up to 30%.



Liver Fluke Control: Habitat



Reduce exposure to the snail host :

- Drainage – to eliminate the snail habitat.
- Molluscicides – to kill the intermediate snail host.
- Fence off snail habitats – to restrict access of stock to infected pasture.
- Withhold animals from the wettest fields during high risk periods.

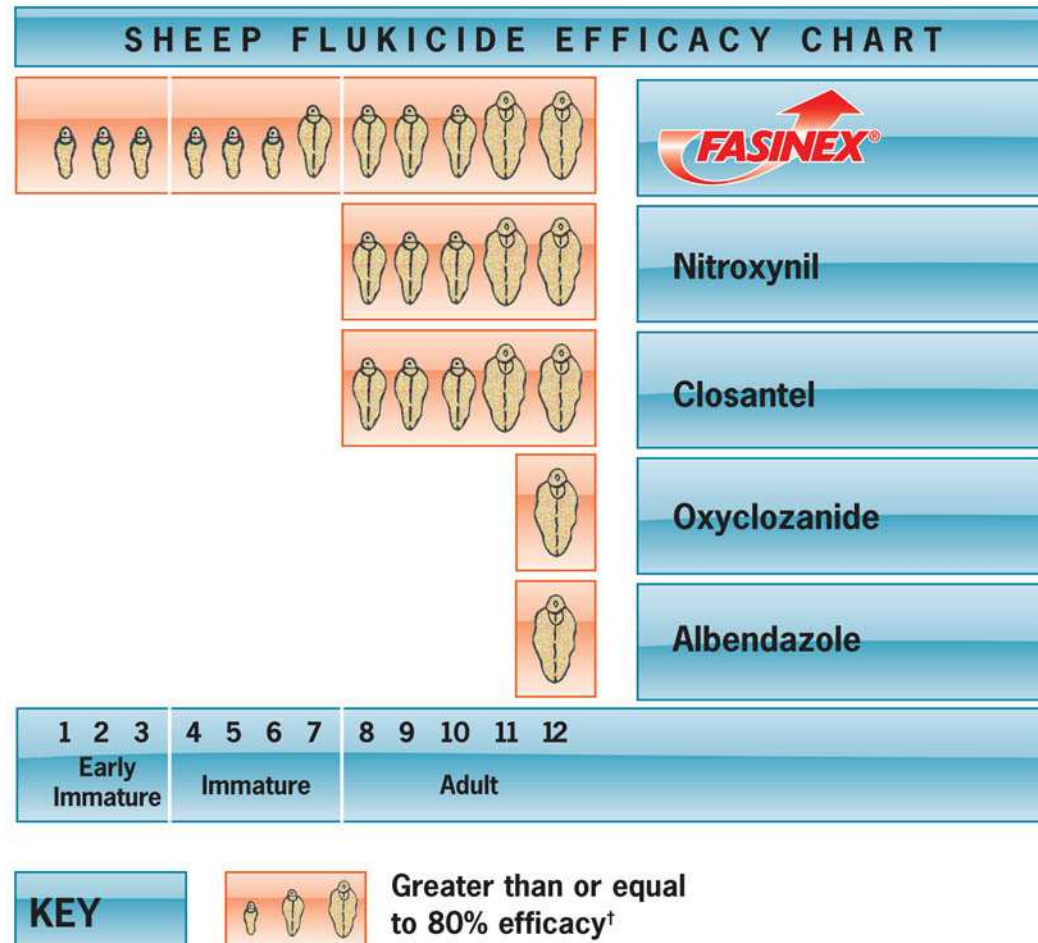
Liver Fluke Control: Flukicides



Kill liver fluke as quickly and as early as possible:

- There are a range of flukicides on the market, with varying levels of efficacy.
- Only triclabendazole, the active ingredient in Fasinex, kills all 3 stages of liver fluke: early immature, immature and adult.
- All 3 stages of fluke cause damage - therefore the most effective flukicide will kill them all.
- Control of fluke is no control at all, if immature fluke remain.

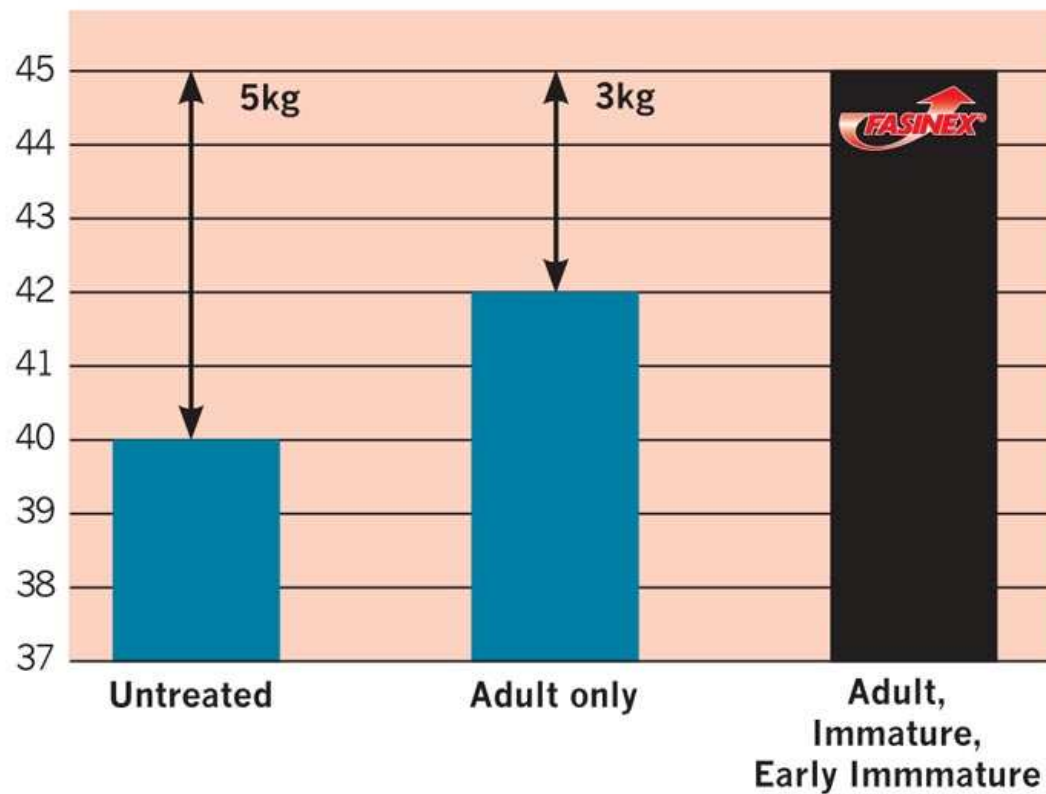
Liver Fluke Control: Flukicides



Benefit of Killing all 3 Stages



Weight gain in sheep over a 18 week period infected with just 50 liver fluke



Benefit of Killing all 3 Stages



- Fasinex kills all three stages of fluke. So it needs fewer doses to achieve the same fluke kill as other flukicides.
- 1 dose Fasinex = At least 4 doses of albendazole or oxclozanide.
- 1 dose Fasinex = Approximately 2 doses of closantel or nitroxynil.

Combined Treatment of Fluke and Worms



- There are times of the year when it is ideal to treat against both liver fluke and worms.
- Combinex is the UK's No.1 combination fluke and worm treatment.
- Combinex combines the power of Fasinex, to kill liver fluke, with levamisole - a fast-acting broad-spectrum wormer against stomach worms, gutworms and lungworms – including white-drench resistant worms.

Dosing with Combinex and Fasinex

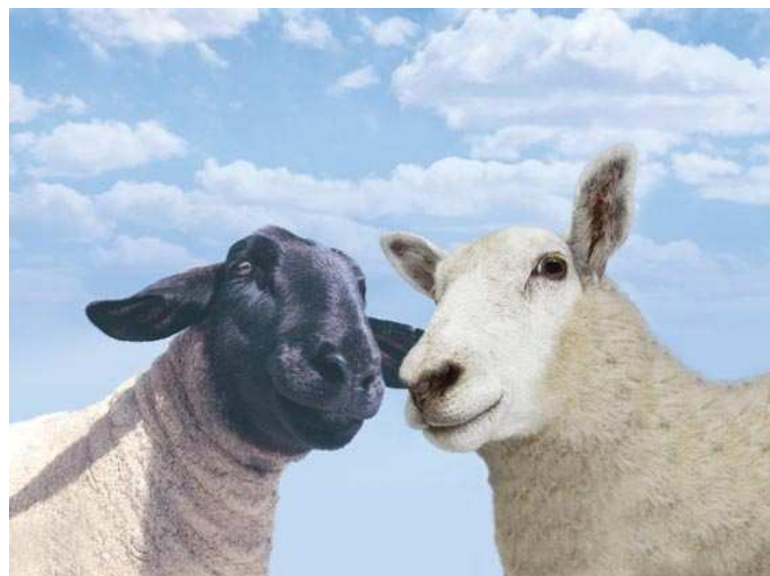


Autumn

Treat affected stock pre-tupping with Combinex, to improve the condition and fertility of ewes. Don't forget to treat the rams!

Mid-Winter

Treat with Fasinex, to remove fluke that have developed since the autumn treatment



Dosing with Combinex and Fasinex



Spring

Treat at lambing time with Combinex, to reduce pasture contamination with fluke and worm eggs

Summer

In high risk situations, treat with Combinex or Fasinex. Dose at 10-weekly intervals from Mar/Apr to Oct/Nov



Fluke Control with Fasinex and Combinex



**Kills all 3 stages of fluke for fitter, healthier,
better looking sheep.**



**Saves time, Saves money, Saves your flock
from fluke and worms**



Dalehead
Veterinary Group