Winter Health Strategy

A housed animal is the most expensive animal on the farm eating silage and expensive concentrates in a costly shed instead of grazing grass. It is therefore vital that we do everything to ensure that there is nothing hampering their performance while housed.

There are several factors which will affect the performance of an animal during housing:

a) Diet
b) Health status
c) Ventilation
d) Lying area
e) Feed area
f) Access to water

After diet, the health status of an animal is most important. Parasites such as stomach worms, lungworm and fluke can have a serious effect on animal performance. As cattle only pick up parasites at grass, housing offers farmers the ideal opportunity to "clean out" stock.

1. Lungworm

Dosing should be considered at least four weeks before housing to allow any damage to the lungs to heal before animals come into sheds where they will face a dustier, more enclosed environment. There is no reported anthelmintic resistance in lungworm. If you use a product with persistency (e.g. avermectin) you can do your housing dose for lung and stomach worms at this stage, just check the product as to what the length of persistency is. Ivermectins have a 28 day persistency, Doramectins (Dectomax) has a 35 day persistency, Moxidectin (Cydectin) has a 42 day persistency against lungworm. The persistency against stomach worms is usually less, therefore you need to read the label.

2. Stomach worms

Can be treated like lungworm or at housing. There is, however, anthelmintic resistance in stomach worms.

Anthelmintic Resistance is where the parasite we are looking to control has the ability to tolerate the normally effective dose of the anthelmintic being used. In work carried out by Orla Keane (Teagasc) they found resistance to Ivermectin on 100% of farms tested, 75% of farms tested had resistance to the white drenches and 25% had resistance to the yellow drenches. It is thought that levamisole is used less, thus reducing exposure of the stomach worm population to this product. This may account for the higher efficacy of this drug.

You can check if a product works on your farm by carrying out a faecal egg count (FEC) before and after dosing – see appendix. Then administer the product using best practice.

There are currently three classes of wormers licenced in Ireland to control worms, see Table 1 below.

Table 1: Classes of wormers licensed in Ireland, their chemical groups, and example products

Class	Common Name	Chemical	Sample products
Benzimidazole	**White (1-BZ)**	**Albendazole**	**Albex, Endospec, Tramazole**
		Fenbendazole	**Panacur, Zerofen, Fenben**
		Oxfenbendazole	**Oxfencare, Parafend,Wormal**
Levamisole	**Yellow (2–LV)**	**Levamisole**	**Levacide, Vermisole**
Macrocyclic Lactone	**Clear (3-ML)**	**Ivermectin**	**Animec, Bimectin, Qualimec**
		Doramectin	**Dectomax**
		Eprinomectin	**Eprinex**
		Moxidectin	**Cydectin**

Anthelmintics from different classes (e.g. 1-BZ, 2-LV or 3-ML) have different modes of action but within a class products have the same mode of action - when resistance develops to one product within a class, then **<u>all</u>** the products in the same class will become useless on your farm. Incorporating a rotation regime of active ingredients into your health plan will help to minimise the risk of anthelmintic resistance and should be discussed with your vet.

***Do not use a levamisole at housing as they do not kill inhibited larvae which could re-emerge in January/February*.**

3. **Liver Fluke**

Is present on most farms and needs to be considered **always** at housing. If killing cattle check with the factory what the livers were like or use Farm Beef Health Check data available on ICBF

Dosing for fluke is complicated by the fact that there are 3 different stages in the life cycle and 7 different active ingredients that kill different stages of the parasite. It therefore depends on how long the cattle are housed as to what product you should use. See table below.

Table 2: Products that are licenced to treat fluke in Ireland

Active ingredient	Sample product	Dose after cattle housed		Admin route	Withdrawal
Triclabendazole	Endofluke 10%	2 weeks	Early immature, immature, adult fluke	Oral drench	56 days
	Fasinex 240	2 weeks		Oral drench	56 days
	Tribex 10%			Oral drench	56 days
	Cydecdectin Triclamox	6 weeks		Pour on	143 days
Closantel	Closamectin inj	7 weeks	Immature, adult fluke	Injection	49 days
	Closamectin Pour-on	7 weeks		Pour-on	58 days (was 28 days)
	Flukiver 5% bovis	8 weeks		Injection	77 days
Nitroxynil	**Fascionix 34%**	8 weeks	Immature, adult fluke	Injection	60 days
Albendazole	Albex 10%	10 -12 weeks	Adult Fluke	Oral drench	14 days
	Endospec 10%	10 -12weeks		Oral drench	14 days
Clorsulon	Bi mectin plus	10 -12weeks	Adult Fluke	Injection	66 days
	Ivomec super	10 -12 weeks		Injection	66 days
Oxyclozanide	Levafas Diamond	10- 12 weeks	Adult Fluke	Oral Drench	28 days
	Zanil	10 -12 weeks		Oral Drench	13 days

E.g. If you use **Fascionix 34%** at housing, this will only kill immature and adult fluke but not early immature and you will have to dose again in 8 weeks when the early immature fluke have developed.

Be careful with withdrawal dates if you are finishing cattle.

4. **External Parasites**

Winter is also the most common time to see infestations of external parasites such as lice and mange and these should be considered when selecting treatments. Injectable and pour-on products can be used for mange and sucking lice but only pour-on products are effective against biting lice

5. **Viruses**

Can happen at any time but the stress of weaning, castration and especially housing can bring on the symptoms. These viruses can reduce the performance of your animal either slightly, so many farmers are unaware they are present and performance is affected or they can cause major outbreaks of pneumonia causing actual deaths and excessive vet bills. The most common viruses are IBR, RSV and Pi3. A proper vaccination programme can play an important role here in reducing their effect. Animals should be vaccinated at least a month before housing to allow the immunity to build up before housing. There are many products on the market, talk to your vet.

Testing for anthelminthic resistance:

To determine if you have anthelmintic resistance at farm level, you can carry out a drench test. You collect faecal samples from 10 to 20 randomly selected weanlings on day one and send that away to determine the faecal egg count. You then dose the animal on the same day with the product to be tested. Faecal samples are collected again after treatment (7 days post-treatment for levamisole; 14 days post-treatment for benzimidazole and macrocyclic lactone) and the egg count is again determined. The reduction in the egg count after treatment is a measure of the effectiveness of the anthelmintic treatment. A fully effective anthelmintic dose reduces egg count to zero after administration. If the egg count reduction is less than 95%, then anthelmintic resistance is considered to be present.

How to take a faecal egg sample:

- Collect samples in the morning after a period of rest
- As cattle are quietly disturbed, they should defecate in one spot
- Worms are not evenly distributed. Faeces should be collected from three different areas
- 10 different samples from at least 10 different animals should be taken
- Dung should be placed in sample pots and placed in sealed, airtight zip bags
- Fill in the required information on slip, the more information the better. Include recent dosing history
- Post to the lab that day or a least within 24 hours of collection
- **Do not** post from Thursday on in case they are left in the post over the weekend.
- **Do not** freeze
- **Do not** place in direct sunlight

Best practice when dosing:

- Ensure the correct dosing technique is used and that the animals are treated according to the manufacturer's instructions and dose rates. I.e. intramuscular vs sub-cutaneous

- Dosing equipment should be checked before treatment to ensure it is delivering the correct amount.

- Animals should be weighed or a few of the biggest animals in the group selected and weighed to determine the dose rate and all dosed to the weight of the **heaviest** animal.

- Continual use of anthelmintics from the same class should be avoided and combination anthelminthic products (flukicide + wormer) only used when it is necessary to target both fluke and worms.

- Keep the cleanest grazing such as reseeds, after grass, for the most naïve animals such as calves.

- Calves can also be grazed ahead of older animals or mixed with sheep to reduce the worm challenge.

- If using avermectin in calves with say a 5 week persistency, calves should be dosed every 6-7 weeks to allow them to build natural immunity to worms, however faecal egg sampling will show if worms are present

- Cows are immune to gut & stomach worms

- It can take two grazing seasons for older cattle to gain full immunity.

- A good biosecurity protocol for all bought-in animals should be implemented to prevent bringing resistant worms onto the farm. Bought in stock should be treated with an anthelmintic and housed for 48 hours. They should then be turned out to a contaminated pasture recently grazed by cattle.