Flock Health Planning

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Key points

- Flock health plans are flock specific and should be developed in conjunction with your own vet.

- A health plan must be an effective record of the action points agreed between vet and farm client to drive the health management of the flock.

- A calendar of events is a good reminder so no treatments are forgotten.

- Benchmarking is useful to measure progress.

- The plan should be user friendly, active and of real benefit to the farm business, not just sit on the shelf waiting for the quality assurance audit.

- Keep it simple and workable, the plan should not be more detailed than the flock owner requires.

- Prevention is better than cure especially when working to prolong the efficacy of existing treatments and prevent antibiotic and anthelmintic resistance.

- A good biosecurity plan will help prevent the introduction of disease when buying in new stock.

- Practical action plans show what has to be done on a monthly basis.

- If used successfully animal, health, welfare and profit will improve.

- Continually monitor to ensure the plan is working for you with at least an annual review with your vet.
Introduction

The shepherd who brought out these prize winning blackface rams on the front cover taught me a lesson as a young vet, 35 years ago, which I have never forgotten. When I suggested he should be worming his ewes pre tupping he said “They are in good condition, they don’t need wormed”. I took samples and sure enough the worm counts were low. This is now one of the major rules of SCOPS and the general principle now is that medicines should be used as little as possible but as much as necessary.

The aim of a health plan is to improve the health and welfare of your sheep flock by collaborative working between the livestock farmer, the veterinary practitioner and animal health advisors to put in place an effective working plan for your farm focusing on pro-active preventative disease management. Health plans record production figures, health status and disease outbreaks so that forward planning can be put in place to enable timely interventions, reduce management costs, prevent and control disease and therefore improve health and welfare of livestock and farm profits.

Advance planning allows for treatments to be given at the most appropriate time of the year and also enables the farmer and shepherd to be given advance warning of seasonal disease risks specific to their flock. Husbandry actions, such as pasture management, and nutrition can also be included in the plan.

Targets can be set and the flock performance continuously monitored to measure performance and to give an early warning of any problems in the flock. If targets are not being achieved, the cause should be investigated with your vet and the health plan revised to address the problem.

The farmer, vet and any other livestock health advisor should form a team with the aim of producing healthy animals leading to healthy returns.
Q1. Why Health Plan?

Under the Veterinary Medicines Regulations, vets may prescribe POM-V veterinary medicinal products only to animals under their care. A current health plan shows that treatments have been reviewed and medicines are being used as little as possible but as much as necessary. With the growing pressure on antibiotic and anthelmintic resistance this is becoming increasingly important.

It is a requirement for the Sheep Welfare Code and certain farm assurance bodies, including QMS, Red Tractor Assurance, RSPCA Freedom Foods, SOPA and the Soil Association, but rather than just recording past triumphs and disasters it is more useful to use this information to identify ways to improve the health and production of your flock. Flock health planning has been proven to increase profitability.

The positive collaboration created between the flockmaster, vet and health advisor is one of the most valuable aspects of health planning. Disease prevention is better than cure and a workable health plan will produce real benefits to the sheep flock and to the economics of the farm business.
Q2. What facts should I record?

- Dates and the other requirements of the Veterinary Medicines regulations for all current treatments are a legal requirement and must be recorded whether a Health Plan is drawn up or not. These can either be recorded in a Medicines book or as part of the Health Plan.

- Production figures e.g. scanning results, lamb mortality, barren rate and lamb sales figures are very useful to target where losses may be occurring e.g. is it a nutritional or an infectious disease issue?

- Breaking lamb mortality down into stillborn, deaths in the first 48 hours and pre and post weaning allows any investigation to focus on the most likely cause e.g. abortion, hypothermia, coccidiosis and pneumonia.

- Dates and type of current animal treatments e.g. vaccinations, wormers and parasiticides.

- Details of recent disease problems allow preventative strategies to be put in place e.g. vaccination regimes.

- Results of any blood sampling e.g. trace elements deficiencies allowing the evaluation of the economics of pasture, bolus or feed supplements.

- Keeping an annual calendar of events may be helpful where key weekly tasks can be planned e.g. at the beginning of the year preparing for lambing looking at nutrition, vaccination and parasite control.

Extract from Scottish Animal Health Planning System: Physical Performance
Q3. Where should I record these facts?

Health plans vary from paper based, wall planners to web based computer programmes. Whichever type you select the main purpose is that it is referred to and the recommended actions carried out at the appropriate time:

a) Paper based (e.g. RSPCA Freedom Foods Veterinary Health Plan - Sheep)

b) Wall planner (e.g. Easiplanner – Flock Health Planner)

c) Computerised (e.g. Good Health Plans)

d) Web based (e.g. Scottish Animal Health Planning System (SAHPS), The Welsh Lamb & Beef Producers Animal Health Plan)

The Scottish Animal Health Planning System (SAHPS) has been funded by The Scottish Government to support veterinary surgeons and farmers involved with farm health planning through the Animal Health & Welfare Management Programme (AHWMP) & Animal Welfare Management Programme (AWMP). The system can be used free of charge by AHWMP/AWMP accredited veterinary surgeons and their farm clients in Scotland or purchased in the rest of the UK (See www.sahps.co.uk for further information).

One of the advantages of a web based system is that the farmer, vets and advisors can simultaneously access the system from their individual locations and collaborate in real time.
Q4. How can health planning help?

Monitoring disease outbreaks, incorporating advance warnings of seasonal disease risks specific to their flock and taking advantage of current disease incidence data, flock health plans allow for treatments to be given at the most appropriate time of the year.

For example, flystrike is a major problem in some flocks, but using the flystrike model from Bristol University flystrike can be predicted and by treating early you can prevent the blowfly population increasing rather than waiting until the population has already peaked. Timely treatment saves time, money and suffering.

Figure A below demonstrates the outcome of following traditional flystrike practice, the treatment is applied to both ewes and lambs once, when the blowfly challenge is at its peak at the end of July. In B the insecticide is applied twice, once at the start of May, and once in late July. It can be seen that the timing of treatment is crucial to control flystrike effectively.

Vaccination records should be checked and new vaccinations introduced where appropriate. Remember to include tups and replacement ewes in your vaccination programme. Sustainable parasite control is another area where health planning can really bring benefits. Prevention and control strategies should be developed for each category of sheep at different times of the year taking into account risk, biology of the parasite and pasture management. Accurate diagnosis and application of treatments only where required will result in more effective parasite control and reduce the development of drug resistance in worm populations within the flock and on the farm.
Q5. How can health planning save money?

There are hundreds of vaccines, wormers, pour-ons and vitamin/mineral preparations on the market. Not all of them are appropriate for every flock. By recognising the specific threats and deficiencies in your area and on your farm the treatments used can often be reduced.

Vaccines are now available for clostridial diseases, pasteurellosis, EAE (enzootic abortion of ewes), toxoplasmosis, Orf, Louping ill and Footrot. A review can help decide which ones are cost effective in your flock e.g. use of live Orf vaccine in a clean flock can introduce the disease. Correct storage and use of vaccines is essential for them to be effective as some live vaccines require cold storage and have a short shelf life. One farmer survey showed that only 40% of sheep vaccines are used correctly, therefore there is a lot of room for improvement and a good health plan will help to optimize your vaccination strategy on the farm.

Worm control is another area where following Moredun and SCOPS recommendations to check the effectiveness of the anthelmintics used and targeting the treatments where they are required can save time and money and reduce the risk of development of anthelmintic resistance. Normally adult ewes in good condition do not carry a worm burden pre-tupping and dosing of these animals for worms is unnecessary. At lambing worm egg counts can be used to target treatments especially in single bearing ewes.

Scottish Animal Health Planning System (SAHPS) can be used to benchmark flocks within the same ownership and against the SAHPS average. The table above shows 3 flocks being compared with the total flocks data in the system.
Q6. What is the most important part of the health plan?

All parts are important but a biosecurity section is essential. Most flockmasters have enough to worry about without introducing new problems. It is vital when purchasing replacement or foundation stock, including rams that you are aware of the health status of the incoming sheep and remember some problems are more obvious than others!

Common diseases to watch out for when introducing new stock:

**Enzootic Abortion (EAE)**
Abortion caused by infection with the bacteria *Chlamydia abortus* is easily spread between sheep. Infected sheep may abort 2-3 weeks before full term. Vaccination of ewes prior to mating will help prevent the disease and it is recommended to buy in EAE free/accredited stock as replacements. (Moredun Newsheet Vol 5, No 8).

**Maedi Visna (MV)**
MV, which is becoming more common, is a slow viral infection causing disease in adult sheep, principally pneumonia with wasting, chronic mastitis and on rare occasions nervous symptoms. Most pedigree flocks are MV accredited. Although because of the long incubation period, single blood tests are not reliable on individual animals but more reliable on a flock basis. Therefore sheep are best sourced from MV accredited flocks.

**Caseous Lymphadenitis (CLA)**
CLA is a bacterial disease that mainly causes abscesses in the glands of the head and neck but also the internal organs of affected sheep. The bacterium (*Corynebacterium pseudotuberculosis*), can survive in the environment for several months and is highly infectious. Establish if there is a history of abscesses when buying new stock. Thorough clinical examination at time of purchase is vital; look at the older rams and ewes for evidence of “lumps and bumps” around the head and neck. Isolate all bought in sheep, including rams, until they are likely to be 'safe'. This means at least two months quarantine.
and even then, the presence of undetected and resolved lesions may remain a potential source of infection. There is no vaccine currently available in the UK and antibiotics are not effective. Moredun has developed a diagnostic test which will help to establish CLA monitored free flocks. (Moredun Newssheet Vol 5, No 1).

**OPA**

OPA is a slow viral disease producing cancerous changes in the lungs. As the tumour grows within the lungs, it displaces healthy lung tissue and interferes with normal breathing. The result is a chronic pneumonia which is not affected by antibiotic treatment. At the moment there is no flock or individual test available but recent research at Moredun raises hopes for a test in the future. (Moredun Newssheet Vol 5, No 16).

**Codd**

Sheep owners should also be aware of contagious digital dermatitis (Codd) responsible for causing severe lameness involving the loss of horn cases on affected feet. It is thought to be caused by a bacteria, spirochaetes, closely related to that causing digital dermatitis in cattle. There is rapid under running of the horn and the whole horn case is shed in two to three days. In a flock outbreak up to 70% of sheep can be acutely lame. If Codd is suspected then veterinary advice should be sought without delay. Careful observation of all purchased sheep during the 21 day quarantine period will indicate if this infection has been introduced. (Moredun Newssheet Vol 5, No 19).

**Orf**

Orf is an infectious disease caused by a parapox virus and is widespread in the UK. Lesions are most commonly found round the mouth of lambs or on the udder of milking ewes. These lesions can become secondarily infected, usually with a staphylococcus species which further exacerbates the disease. The lesion heals spontaneously in about 4 weeks if the secondary bacteria are controlled. Close observation over the 21 day quarantine period will determine if orf is about to erupt in the newly purchased sheep. Treating any infection in a newly introduced group as opposed to the whole flock is highly cost effective in both labour and drug usage. (Moredun Newssheet Vol 5, No 2).

**Sheep scab**

The sheep scab mite, Psoroptes ovis, is small (less than 1mm in length) and as a result is virtually undetectable, even on close examination. The disease is highly infectious and early clinical signs include restlessness, scratching and stained fleece. Symptoms can be similar to those of lice infection, and it is important to distinguish between them because treatment may be different for each parasite. The skin lesions appear two to three weeks after initial infection, although it can take longer (>50 days) for these to become apparent. There is already a sheep scab eradication initiative in Scotland and a new industry led initiative is about to be launched in England and Wales. This is industry led by the National Sheep Association in partnership with other stake holders and with the three Chief Veterinary Officers giving it their support. (Moredun Newssheet Vol 5, No 12).
Roundworms and Liver Fluke
Be careful not to introduce drug resistant fluke or worm populations when buying in new stock. It is important to conduct correct quarantine treatments for new sheep being introduced to the flock. (Moredun Newssheet Vol 5, No 15 and 17).

The risk of introducing EAE, MV, CLA, OPA, CODD, Orf, Sheep Scab, Resistant Worms & Fluke can all be reduced by careful sourcing of stock and appropriate quarantine checks and treatments.

Remember bought in stock can also be at risk from diseases within your flock. It is therefore very important to know your existing health status.

Q7. Do I have to review a health plan?

The challenge is to access and update the health plan with production and health data that allows on-going review and therefore effective decision making. If this can’t be achieved then, it is good to review the plan at least annually as diseases change.

For example, the threats of Bluetongue and Schmallenberg have receded while the risk of fluke has increased; the advice on Footrot treatment has changed with foot paring being discouraged with preference given to injectable antibiotic and separation of affected animals; and with regard to roundworm control, anthelmintic resistance is on the increase.

The advantage of a web based system is that producers can constantly be warned of disease threats to their area e.g. Nematodirus outbreaks.

Q8. When should I start the health plan process?

The ideal time is 8 weeks before tupping at the start of the sheep year, but 6 weeks after the end of lambing is also a good point because the problems of the recent lambing are still fresh in your mind. However, planning is often best done during the quieter time of your year and the sooner you start the sooner your flock health and production will improve.

Most modern health planners are user friendly!
Photographs courtesy of: Moredun and Ian Gill

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