A 24-month collaborative 'Core Vaccination' project – organised by NSA and MSD Animal Health – has demonstrated the benefits of a consistent vaccination programme.

The initiative followed National Office of Animal Health (NOAH) livestock vaccination guidelines and looked at lameness, infectious abortion, clostridial diseases and pasteurellosis as disease management priorities.

Phil Stocker, NSA Chief Executive, comments: "The economic and welfare impact of these threats to UK sheep production are such that disease prevention is significantly preferable to treatment. What's more, vaccines are a key component in improving the health and welfare of sheep flocks across the nation.

"Correct usage increases productivity and promotes the wider one health agenda to reduce our industry's reliance on antibiotic treatments and ultimately lower farm carbon footprints, while producing food and other public goods."

NSA Ambassadors

Implemented on the farms of four NSA Next Generation Ambassadors, the project demonstrated the benefits of consistent implementation of the five-point plan for the reduction of sheep lameness. There was a reduction in lameness prevalence of 66% across the group managing 2,500 ewes, with each participating flock reducing their lameness prevalence by at least half over the two-year period.

Hannah Donegan of MSD comments: "At the start of the project in 2020, the combined lameness prevalence figure across all four farms was 6.6%. By the end of the project average lameness prevalence had been reduced to 2.2%.

"The five-point lameness reduction plan gives

a clear strategy for managing any foot problems. Implemented correctly over the longer term, it builds natural disease resilience within a flock, reduces the disease challenge and spread on farm, and improves flock immunity through vaccination.

"It involves treating affected animals promptly, culling persistent offenders, avoiding the propagation of infection when sheep are gathered together, quarantining any bought-in stock and routine whole flock vaccination against footrot, the most common infectious disease implicated in sheep lameness."



At the start of the project, the participating farms undertook a lameness control assessment by a trained adviser. This demonstrated all four were only implementing parts of the five-point plan.

"Vaccination scored lowest and farms were focusing their effort on trying to avoid infection being spread at gathering and handling," says Ms Donegan.

The farms were all encouraged to implement the five-point plan more thoroughly and had made significant progress by the end of the 24 months.

"Rigorous implementation of the five-point plan led to the significant lameness prevalence improvement," says Ms Donegan. "All the farms implemented a stricter policy when it came to lameness being a reason to cull, with repeat offenders and misshapen feet being unacceptable."

As a result of the stricter protocols all participating farms noted the severity of lameness cases also reduced, as well as use of footbathing and antibiotics.

"The results obtained showed there was a 30% reduction in moderately lame animals and a 50% reduction in severely lame animals, as measured by Liverpool University's four-point locomotion score," says Ms Donegan.

"Footbathing was reduced by up to half on some farms. Antibiotic usage fell by 33%, on average across the four farms, compared with their 2020 baseline, simply because there weren't as many lame animals to treat. This fall in usage and number of treatments is also explained by the implementation of rigorous culling policies. Best practice guidelines suggest if a sheep presents twice for lameness treatment, it should be culled."

Cost savings

Ms Donegan calculates a cost saving of £6,125 across the four farms as a result of implementing the five-point plan more fully and keeping lameness levels at 2% or less.

"Extrapolating over a five-year period – and taking into account the cost of vaccination against footrot – there is a potential saving of more than £5 per ewe per year. This doesn't consider any saving on labour costs as a result of less time spent dealing with lame sheep or footbathing," she says.

Ms Donegan concludes that the project highlights the importance of committing fully to the five-point plan.

"You're in it for the long haul and rigorous implementation of all five points is the key. If one element is dropped, this reduces your safety margin and may impact adversely on your overall control of lameness. Stick with it and be fully aware when your high-risk periods are so timely and relevant action can be taken" she says.

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Whole flock vaccination a 'game-changer' for tackling lameness

As a strong advocate of employing vaccination to control sheep diseases, continuous improvement is how NSA Next Generation Ambassador Ernie Richards describes progress with managing sheep lameness.

"I've always been a believer in disease prevention over treatment and we routinely vaccinate ewes against infectious abortion, clostridial diseases and pasteurellosis. We've also tried vaccination for footrot lameness in the past," he says.

For the last eight years, Mr Richards has managed 1,000 purebred Lleyns as a closed flock for Stuart and Helen Morris near Hay-on-Wye, Powys.

The flock lambs in two 500-ewe batches, one in March and one in April, with 250 ewe replacements retained each year and other females selected to sell as ewe lambs or shearlings at the autumn breeding sales. Prime lambs are sold deadweight.

"When I started working for Mr Morris in 2015, he'd be the first to admit lameness

was an issue in the ewes. Since implementing all areas of the five-point plan we've seen a noticeable improvement and there's barely a lame sheep on the farm," says Mr Richards, boasting a 70% fall in lameness prevalence (from 5.65% to 1.71%) between 2020 and 2022.

Advice

"Moving to whole flock vaccination has been the real game-changer.

Instead of just vaccinating the ewes as we were doing, we also vaccinated our replacements, ewe lambs and tups. My advice now is not to compromise.

"Our high-risk period is always heading into the later winter months and housing for lambing. We did see a spike in lameness in December 2021 following a period of extreme weather when sheep were congregating around feed stations at pasture."

During the 24-month project, Mr Richards



has also seen a progressive drop in the number of antibiotic treatments administered to lame sheep.

"Looking at our 2020 baseline, we saw a 23% reduction in treatments during 2021 and a 28% reduction in 2022," he says. "Less time spent having to catch and treat lame animals is enough to justify the cost of the vaccine alone, even before you consider all the sheep now look healthier and are in better condition because they are not in pain."



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