

Buying sheep can be a health hazard

J.W. Plant

Former Program Leader Flock Health

John Seaman

Research Leader Animal Health & Food Sciences, Health Science, Strategic Alliances and Evaluation, Orange

Every year graziers introduce sheep on to their properties for restocking, as ram replacements, as short term woolcutters or as sheep for fattening. These sheep may have been bought direct from properties, from store sales, from circuit sales and, in some cases, from fat sales. Remember that rams from studs are introduced sheep.

Where disease is concerned, the rule for buyers is *caveat emptor* (let the buyer beware). The main concern is usually to prevent the introduction of sheep lice, footrot, ovine brucellosis (OB) or ovine Johne's disease (OJD). However, there are many other diseases which should be considered to ensure that the sheep enterprise remains profitable. Steps must be taken not only to prevent the introduction of disease but also to avoid exposing introduced sheep to diseases that are already present on the property.

When buying sheep from saleyards it must be remembered that inspectors in saleyards cannot guarantee freedom from disease because of the small numbers of animals that are examined and the difficulty of examining animals in pens.

The ideal situation is to buy sheep directly from a property where you know the disease status, treatment and vaccination history of the sheep being sold. Sheep bought from saleyards usually have no guarantees or flock history.

Vendors offering restocker sheep for sale are required to complete and sign a Health Statement for each consignment, and this Statement must be made available for prospective purchasers to inspect.

The Health Statement includes disease information relating to the consignment sheep – footrot, OB, OJD and lice; and on any treatments they may

have received – vaccinations, anthelmintics and external parasite treatments.

The Health Statement cannot tell the whole story on the sheep, but when completed it can give vital information and indicate what, if any, further inquiries you should make before you buy.

This Primefact outlines diseases you should consider when introducing sheep on to a property and the steps that you can take to reduce the risks associated with particular diseases.

Sheep lice

In New South Wales, approximately 20 per cent of flocks are infested with sheep lice; however, very few infested pens are detected in saleyards. Generally, inspectors in saleyards can detect only medium to heavy lice infestations, and only in sheep with more than three months' wool. It is very difficult to detect light lice infestations in sheep with less than three months' wool and it may take several months for a light infestation to become obvious.

Lice are small, wingless insects which feed either by biting or by sucking. They hatch from their eggs in a form resembling the adult and go through a series of moults as they grow to adulthood. The sheep body louse requires near ideal conditions to survive and breed. These conditions are found on the skin near the base of the fleece. The number of lice present on an infested sheep fluctuates with the season and with the amount of wool present. The lowest number of lice are present in the summer; hot summers reduce the ability of lice to survive and breed. For further information see Primefact 483 *Sheep lice*.

Recommendations

- Obtain as much history as possible from the Health Statement and the vendor, including the origin of the stock, any lice treatment after the last shearing and, if possible, whether the sheep were lousy before the last treatment.
- Examine the stock when they arrive at the property, looking carefully at any animal showing



signs of rubbing or biting. If the sheep are lousy, it is important to obtain details of previous treatments, to ensure that there is no problem with chemical resistance and that the appropriate treatment can be given. If there is no evidence of lice, keep the introduced sheep quarantined from other stock on the property for three months. This will allow a light lice infestation to become obvious.

- If lice are detected in the introduced sheep, then seek assistance from your local veterinarian to determine the susceptibility of the lice to the various insecticides and then treat the sheep accordingly. Use chemicals according to label instructions to avoid residue problems.

Footrot

It is very difficult to detect footrot in saleyard pens when the sheep are crowded together. It is even harder when footrot is not particularly active (for example in the dry summer months).

When inspecting sheep in a paddock, remember that chronically infected sheep may not show signs of lameness or loss of condition, and that the infection can persist in an infected foot for many years.

Footrot in sheep appears in a number of forms, ranging from a relatively mild (benign) condition through to a chronic infection with underrunning of the sole, overgrown feet and rotting tissue. Other animals may have a chronic infection with underrunning, but have no obvious lameness. Unfavourable environmental conditions and recent treatments will mask the disease. For further information refer to Primefact 265 *Footrot: sheep and goats*.

Recommendations

- Insist on a Health Statement with the footrot section completed. Ask questions of the vendor, e.g. the origin of the consignment sheep (introduced or home-bred), footrot history of his/her flock, management of introductions, situation on neighbouring properties, etc.
- If footrot is considered a potential problem inspect the sheep before you buy and view with extreme caution any mob that shows evidence of having been pared or footbathed.
- Be careful if buying lines of sheep with mixed earmarks, which could indicate a dealer's mob or a mob from several sources, increasing the risk of buying sheep from an infected property.
- Buy sheep in non-spread periods to avoid the risk of introducing sheep that are in the early stages of the disease and which may not become obvious for another two to three weeks.

- Ensure that the truck used to move the sheep has been hosed out thoroughly with high pressure water before the sheep are loaded for their journey.
- If possible, keep the introduced sheep isolated from other sheep on the property until they have been through conditions suitable for the development and spread of footrot and the disease has had the opportunity to manifest itself.
- Carefully examine any lame sheep in an introduced mob.

Footrot vendor declaration form

The vendor declaration form has been developed by NSW Department of Primary Industries in consultation with the sheep industry to give assurance that the sheep offered for sale are free of footrot. The Vendor Declaration provides additional information to the Health Statement and is recommended when footrot is considered to be a potential problem. There is no obligation for the vendor to use the form, but if a vendor can comply with the conditions of the declaration, the purchaser can be more confident that the sheep are free of footrot.

The form can be completed by a vendor who is confident of the disease status of the sheep being offered for sale. The vendor declares that:

- The stock have/have not been bred on the property. If the stock have not been bred on the property, the owner should state when the stock were introduced.
- The sheep have been inspected within the previous seven days and there is no evidence of footrot in the flock.
- There has been no evidence of footrot on the property within the previous 12 months.
- The sheep have/have not had treatments for foot conditions.
- The sheep have/have not been subject to a laboratory test for footrot. The vendor then gives details of the earmarks/eartags on the sheep and signs the form. Any disputes over the details on the form are a matter between the vendor and the purchaser. The forms are available on the NSW DPI website at www.dpi.nsw.gov.au/reader/sheep-footrot and can be obtained from stock and station agents and Rural Lands Protection Boards.

NB: sheep moving from a Residual Footrot area (e.g. Victoria, South Australia or Tasmania) into a Protected or Control Area in NSW **must** be accompanied by a valid Footrot Vendor Declaration

Ovine Johne's disease

OJD is an incurable wasting disease of sheep caused by the bacteria *Mycobacterium paratuberculosis*. The bacteria are shed in the dung of infected animals, and spread to other sheep through ingestion of contaminated feed or water. The disease has been detected in a number of regions in Australia, and there is a national program in place to monitor prevalence and assist producers to minimise the risk of introduction, and to manage any detected infections.

A vaccine is available that will effectively reduce the impact of the disease provided it is given to sheep before they are exposed. It is a single 1 mL dose for life, and is best given at marking. OJD has a long incubation period and may not be obvious until some years after infected sheep are introduced onto a property.

Recommendations

- Be aware of the risk of OJD, particularly if buying unvaccinated sheep from higher prevalence areas.
- Check the Health Statement accompanying the sheep, and ask questions of the vendor.
- If unvaccinated sheep are purchased, consider vaccinating them immediately on arrival. This is always good insurance. The disease is very hard to detect in the early stages, so even sheep from low prevalence areas can be a risk.
- Ideally run the introductions separately for as long as possible.
- Regularly monitor all your sheep, and the introductions in particular, for signs of ill-thrift, and call your veterinarian if you do start to see an unexplained tail in any of your mobs.

For further information on OJD refer to the website at www.dpi.nsw.gov.au/reader/ojd or contact your veterinarian.

Anthelmintic resistance

Anthelmintic resistance is widespread in sheep flocks in New South Wales and there is a risk of introducing resistant strains of parasites onto a property when sheep are brought in.

Anthelmintic resistance cannot be detected by inspecting sheep nor is there any simple test to detect resistance in sale sheep. When introducing sheep, it is advisable to assume the worst and treat them as though they are carrying resistant parasites. A quarantine drench is recommended for introduced sheep. See Primefact 477 *Quarantine drenching – don't import resistant sheep worms* for further details. An anthelmintic resistance test (NSW 'DrenchTest') is available from Regional Veterinary Laboratories to determine the drench

resistance status of the flock. For further information contact your local veterinarian.

Recommendations

- Before buying sheep, find out if they have been on a worm control program such as WormKill or DrenchPlan. Sometimes it may be possible to find out if there is a problem with a specific family of anthelmintics.
- Drench the sheep with a highly effective combination of drenches (e.g. ML + Lev + BZ) on arrival according to body weight and hold them in the yards for at least 24 hours with access to water and hay. The practice of drenching the sheep and then letting them out into the holding paddocks around the shed and yards is not recommended. If resistant parasites are present, worm eggs that are not killed immediately by the drench will survive on these areas, and larvae can then hatch and infect sheep that are brought into the yards.
- Put the sheep on a worm control program appropriate for the property (either WormKill, DrenchPlan or (Far)WestWorm suitably fine-tuned for your property).

Liver fluke

Sheep from flukey properties can introduce the infection on to clean properties. Graziers with a routine fluke control program should be aware of the risk of introducing fluke infested sheep. A WormTest might be considered to monitor for fluke. For further information, refer to Primefact 446 *Liver fluke disease in sheep and cattle*.

Recommendations

- Obtain information about the origin of the stock and any previous treatments for liver fluke.
- If the stock have come from flukey areas and have not been treated recently, they should be treated with an efficient flukicide (preferably triclabendazole) to kill immature fluke as part of the quarantine drench.
- Place the sheep on an appropriate fluke control program if this parasite is known to occur on your property.

Clostridial diseases

Sheep which have not been vaccinated against clostridial disease may be susceptible to infection, particularly if they are brought from the more arid parts of the state where the risk of infection is not so high.

Recommendations

- Check whether the sheep have been vaccinated against the clostridial diseases (and cheesy

gland). Details should be on the vendor's Health Statement.

- If the vaccination history is not available or is incomplete, assume that the sheep are not vaccinated.
- Adopt the appropriate vaccination program for your district.

For further information see Primefact 423 *How vaccination works* and Primefact 422 *Vaccination programs for sheep*.

Ovine brucellosis

Rams at fat or store sales are usually cull rams and are very likely to be carrying ovine brucellosis. Do not buy rams at store sales, in saleyards or from non-accredited flocks because of the risk of introducing ovine brucellosis on to your property.

There is also a risk of introducing brucellosis on to a property through pregnant ewes that have come from an infected property. Rams can pick up brucellosis from an infected ewe at lambing time, when the ewe may excrete the organism in the birth fluids. However, there is no evidence of risk to rams that are mated with these ewes after weaning.

Ovine brucellosis causes infertility and sterility in rams and can cause abortion in ewes. In the ram, lesions (abnormalities) occur in the testis, epididymides and in the accessory sex glands. The infection first affects the epididymides, causing inflammation and swelling of the surrounding tissues. In chronic infections, lesions can result in complete blockage of the epididymides, resulting in the ram being sterile.

Recommendations

- Buy rams only from flocks that are accredited free of ovine brucellosis. Lists are available from NSW Department of Primary Industries, Rural Lands Protection Board offices or from breed societies. There is no need to blood test rams from accredited flocks.
- Do not buy rams that have had only one negative blood test. Brucellosis has a long incubation period, and two negative blood tests, at least 60 days apart, on all rams in the group, are required before a veterinarian can issue a certificate of freedom from the disease in non-accredited sheep.
- Do not run introduced lambing ewes with rams, unless you know that the ewes have been joined to rams free of ovine brucellosis
- Examine the genitalia of the ram(s) before purchasing.

Blowfly strike

Unmulesed sheep are more prone to breech strike than mulesed animals. It is recommended that, whenever possible, replacement breeding stock and wethers be purchased as mulesed sheep. The additional cost of buying mulesed sheep will be recouped several times over in the savings on fly control over the life of the sheep. In addition fleece rot will predispose to flystrike, particularly bodystrike. Selection against fleece rot has been shown to reduce the incidence of flystrike by over 30%. Producers should avoid buying sheep with obvious signs of fleece rot.

Mayor fly activity occurs in autumn and spring coinciding with moist, warm conditions. Hot, dry weather and cold conditions limit the development of sheep blowfly populations. The green blowfly initiates more than 80 per cent of strikes. It is particularly attracted to areas of the sheep's fleece which are moist and affected with fleece rot or mycotic dermatitis (in the case of body strike) and areas scalded or stained by urine or dung (in the case of breech strike). The fly lays its eggs in the wool, and the maggots hatch out in 12 to 24 hours. They feed on the skin surface for a further 12 to 24 hours until their mouthparts harden sufficiently to tear the skin. The strike usually becomes obvious three to four days later, producing discolouration of wool and irritation. Struck sheep develop fever and lose appetite. They often leave the mob seeking shelter under trees and bushes or amongst fallen timber. For further information on sheep blowflies refer to Primefact 485

Recommendations

- Buy mulesed sheep.
- Ensure that the sheep have been correctly mulesed with the correct tail length.
- Avoid buying sheep with signs of fleece rot.

Cheesy gland

Cheesy gland not only causes losses in slaughter stock, but is believed to be a significant cause of production loss and mortality in adult stock from pneumonia and chronic infections. With the increasing importance of the disease in the export meat market, graziers should consider cheesy gland when introducing sheep on to their properties.

Cheesy gland is a chronic bacterial disease of sheep, causing abscesses in lymph nodes of the body and internal organs. Infection can occur in sheep with less than three to four weeks' wool. Shearing and dipping are regarded as important times when cheesy gland infection is spread.

The organism can infect unbroken skin. Infection can occur by rubbing pus or contaminated dip on the unbroken skin of recently shorn sheep. Dipping 'off shears' in dip contaminated with the organism can cause rapid spread of infection. After passing through the skin, the organisms are trapped in the lymph nodes of the body and release a toxin which destroys lymph node tissue. The result is an abscess that often contains large amounts of greenish pus. After a few weeks the pus becomes dry and 'cheesy' in appearance. Abscesses commonly occur in the point of the shoulder and the flank. For further information see Primefact 424 *Caseous lymphadenitis (cheesy gland) in sheep*.

Recommendations

- Buy breeding sheep and replacement wethers from properties that have a regular cheesy gland vaccination program.
- When the sheep arrive on the property, ensure that vaccination for cheesy gland is included in the routine treatment program for the sheep.

Scabby mouth

Introducing susceptible sheep onto a property already infected with scabby mouth may cause problems. Susceptible sheep should be vaccinated. Otherwise the flock should be watched when they are more vulnerable to infection (for example when they are grazing in paddocks with a lot of thistle). If an outbreak occurs, vaccination may help to reduce production losses.

Scabby mouth is a highly contagious viral disease of the skin of sheep and goats which usually affects lambs and kids in their first year of life. It can also infect humans. Infection usually causes scabs and pustules around the lips, but it can also affect the udder and the skin around the coronet and pasterns. On some properties the virus can remain dormant for many years and outbreaks of scabby mouth only occur under certain conditions.

Poisonous plants and weeds

Seeds of weeds and poisonous plants in the wool of introduced sheep may cause problems in later seasons. Some examples are Paterson's curse, St John's wort, khaki weed, thistles and Bathurst burr. If there are high levels of contaminating seed in the wool, restrict the sheep to certain areas and consider specific weed control in the future. Early shearing might be considered if the infestation is severe.

Hydatids

Even a property with a careful hydatid control program runs the risk of introducing hydatids through infected sheep.

Recommendations

- Do not feed offal to dogs.
- Ensure that farm dogs cannot get to dead sheep in the paddock.
- If there is a risk of hydatids consider a treatment control program for all dogs. Consult your veterinarian for advice.

Chemical residues

There are no tests that can be carried out in saleyards to detect chemical residues in either meat or wool. However, graziers should keep accurate records of where sheep were purchased and if possible, records of earmarks or ear tags. Residues of particular concern include chemicals no longer registered for sheep treatments such as arsenic and organochlorines like dieldrin, or existing chemicals such as organophosphates which have been used inappropriately. Wool contaminated with these residues presents an occupational or environmental hazard and is severely discounted in the market.

Sheep identification

The National Livestock Identification System (NLIS) for sheep was introduced on 1 January 2006 as a scheme developed by industry for identifying and tracing sheep and lambs. All sheep born on or after 1 January 2006 must be tagged with an approved NLIS tag before leaving their property of birth. The scheme uses colour coded, visually readable ear tags printed with a Property Identification Code (PIC) and the NLIS logo. Traceback is achieved by documenting PICs on a current National Vendor Declaration (NVD) when sheep are sold. Tagging will help to determine the origin of any chemical residues or disease if contaminated or infected sheep are traced back to the property of origin.

For further information on NLIS refer to the website at www.dpi.nsw.gov.au/reader/nlis-sheep-goats

Summary

Graziers should be aware of the disease risks of introduced sheep and should take appropriate preventive measures. Graziers must realise that saleyard inspections can give no guarantee of freedom from disease. There is a need for graziers offering healthy sheep for sale to emphasise this point.

Obtain as much information as possible from the vendor about previous treatments in the flock. In addition the following recommendations should be considered:

- If possible, quarantine the sheep from other sheep on the property until they have been

through a period where the major diseases could be expected to show up. With lice, this means keeping introduced sheep separate from the main flock for up to three months or until they have been treated. With footrot, the introduced sheep should be kept separate from other sheep on the property until they have been through a period when conditions are conducive to the spread of footrot.

- Don't import resistant sheep worms. Seek advice on treatment of sheep when they arrive on the property. In general, introduced sheep should be drenched with a highly effective combination of drenches and then started on a worm control program suitable for your area.
- Put the sheep on an appropriate vaccination program when they arrive on the property.
- Graziers offering sheep for sale should promote the disease free status of their flock.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (May 2007). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Primary Industries or the user's independent adviser.

Always read the label

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