Cysticercus ovis Condemnations in Sheep – An Emerging Problem
Dr. Jocelyn Jansen and Dr. Ab Rehmtulla, OMAFRA; Dr. Paula Menzies, Dr. Andrew Peregrine and Elise Tatone, Ontario Veterinary College, University of Guelph

Cysticercus ovis (C. ovis) is the intermediate larval stage of the canid tapeworm, Taenia ovis. The adult tapeworm lives in the intestines of domestic dogs and wild canids (ie. coyotes, foxes, wolves). Infections have been documented rarely in cats. Tapeworm segments, which contain thousands of eggs, are passed in the feces and contaminate the environment of sheep and goats. Eggs can survive in the environment (feed and pasture) for three to twelve months. Eggs are ingested by sheep/goats while grazing on pasture or while consuming contaminated stored feeds.

Eggs hatch in the intestine and then the larvae penetrate the intestinal wall and are carried via the bloodstream to target tissues. Small (~5mm x 9mm), fluid-filled cysts develop. The most common sites to find cysts are the masseter muscles, heart, diaphragm and skeletal muscles. It is believed to take seven to ten weeks for a cyst to fully develop and become infective. If a dog eats raw sheep or goat tissues that contain cysts, the larval tapeworm will develop into an adult in the dog’s intestine and the cycle will continue.

Cysticerci do not usually stimulate an inflammatory response in the intermediate host’s tissues and are often detected at slaughter inspection. The disease is also known as “sheep measles”. Cysts start out as clear, fluid-filled structures and over time degenerate. Dead cysts are seen as hard, caseous or calcified nodules in the muscle. C. ovis is neither a reportable nor a zoonotic disease in sheep or goats (unlike Cysticercus bovis in cattle). However it is condemnable. Carcasses that are only lightly infected can be trimmed and passed for human consumption.

Figure 1. C. ovis scolex and four suckers recovered from a cyst. Photo courtesy of OVC (2008).
C. ovis continued

The FAO meat inspection manual for developing countries suggests the following guidelines for carcass condemnation:

"In heavy infestations the carcass is condemned. It is commonly considered that an animal is heavily infested if lesions are discovered in two of the usual inspection sites including the masseter muscle, tongue, oesophagus, heart, diaphragm or exposed musculature and in two sites during incision into the shoulder and the rounds. Carcasses with C. ovis infestations may not be acceptable for export.”

![Figure 2. Muscle containing C. ovis cysts. Photo courtesy of AHL (2008).](image)

The economic losses associated with this infection can be substantial to buyers and producers. Ontario has experienced sporadic outbreaks of C. ovis in feeder lambs over the past 15 years, but in 2008 the severity of the problem increased. There is also great concern that if the infection becomes established in wild canids, the disease may be difficult to control.

Once a lamb is infected there is no treatment that will remove the cysts. The most important control measure is deworming the dog (working, guard or pet) with a suitable cestocidal drug 3 to 4 times a year. Dogs should be dewormed once a month if cysts have been found in sheep carcasses. Anthelmintic treatments include: epsiprantel (ie. Cestex*Tablets, 5.5 mg/kg), praziquantel (ie.

![Figure 3. Condemnations due to C. ovis, 2003-2009*. Data for 2009 is for January to May ONLY.](image)

Droncit® or Drontal® formulations, number of tablets or injectable volume based on body weight), or nitroscanate (ie. Lopatol® Tablets, number of tablets based on body weight).

Additional preventative measures include not feeding raw sheep meat back to dogs. Sheep meat can be frozen at -10°C for 7 days or cooked thoroughly at 72°C to destroy tapeworms in cysts. Producers should also ensure that all deadstock is disposed of properly on-farm to prevent scavenging.

References

Profile of a Sheep Shearer: Don Metheral

When Don Metheral turned 16 and decided to learn how to shear sheep, not too many people were surprised. He grew up on a farm that had always owned sheep making him familiar with the animal. He was often times found helping around the wool shed so he had a fair idea of what he was getting into. Plus, his father sheared locally as did his two older brothers so he knew where to go to get started. Initial lessons took place on the home farm, but later Don journeyed half way around the world to train with the New Zealand Wool Board.

Today, Don continues to work as a shearer; in fact, he’s made it his full time job spending 11 months per year traveling throughout Canada and the US shearing. During his busy time, January to the end of April, Don shears seven days per week and only allows himself one day off to celebrate his birthday.

Although his hectic schedule is challenging at times, Don says it’s not the shearing itself that wears him down. “Shearing is the easy part! It’s the driving and being away from my wife Kelly and our three kids that’s tough,” he says.

But the enjoyment that he gets out of his work is enough to make the sacrifice worthwhile. “I get a sense of accomplishment at the end of the day looking at all the sheep and knowing I did a quality job for my producers,” says Don. Shearing professionally is not the only area Don has found success. Since the age of 17, he’s been entering, and winning, shearing competitions all over the world. Don has competed in countless state fairs and livestock exhibitions, including the Calgary Stampede, as well as international competitions in New Zealand and England. “It’s true that shearing is a way to gain income, but for me it’s also a sport that I try to improve on everyday,” he says.

The World Shearing Competition took Don to Ireland and Norway in 1998 and 2008 respectively- two experiences Don says he will never forget. “The worlds were great because I was able to meet many people in the industry, shear different breeds and see other styles of shearing,” he says. His favourite part though- representing Canada on an international level. In both competitions, Don placed in the top 20 ranking him as one of the best shearers in the world.

The CSF was proud to sponsor Don’s attendance at the 2008 worlds in Norway, support he truly appreciated. “We cannot say how thankful we are to the CSF for the sponsorship they provided. It made a real difference going to the worlds knowing our industry was behind us,” says Don. The CSF’s support also offered Don a sense of validation, confirming to him that his contribution to the Canadian sheep industry is an important one. “There is a lot of support and backing in other countries for shearing but in Canada it’s not the same. The CSF’s sponsorship told me that they consider shearing a vital part of the industry, one they were willing to encourage,” he says.

When it comes to giving producers advice about shearing Don offers the following. When picking a shearer, producers should work with someone who has patience for both animals and people. He says, a decent shearer will be clean, efficient, have a good manner of handling and will not over charge. The best way for producers to find a shearer to work with is by asking around. “Word of mouth and other producers are your best bet,” he says. He also suggests looking in the Canadian Wool Growers magazine.

Producers can help make the shearing process easier too. Don requests that producers set up their handling facility in advance if they have one, stressing “everyone should have one.” Shearing needs to take place in clean, well lit area so producers should take that into consideration when designing facilities.

Don also recommends taking sheep off feed and water for 12 hours prior to shearing. And to ensure a successful shearing day, Don says producers need to stay focused, “remember, it’s not vaccination, drenching or foot trimming day.”

Finally, if you’re someone who is interested in learning how to shear, Don has one piece of advice, “Go to New Zealand!”
Scrapie Canada Update

By Courtney Denard, National Scrapie Coordinator

Two new cases of atypical scrapie have been confirmed by the Canadian Food Inspection Agency (CFIA) making this Canada’s second and third positive cases to date.

Atypical scrapie is a newly recognized form of transmissible spongiform encephalopathy (TSE) that differs from classical scrapie, affecting a different part of the brain and producing different reactions on certain biochemical laboratory tests. Most cases are detected in much older, sometimes apparently healthy sheep of genotypes associated with increased resistance to classical scrapie. Considerable more research is required as current knowledge of this disease is limited.

The United Kingdom Spongiform Encephalopathy Advisory Committee (SEAC) has concluded that atypical scrapie can be distinguished from classical scrapie. In fact, the SEAC states that it may be more appropriate to consider atypical scrapie a distinct TSE of small ruminants, rather than a variation of the classical disease. The World Organization for Animal Health (OIE) agrees. The latest OIE Scrapie Chapter says “atypical scrapie is clinically, pathologically, biochemically and epidemiologically unrelated to ‘classical’ scrapie, may not be contagious and in effect, may be a spontaneous degenerative condition of older sheep.”

One of the first reported cases of atypical scrapie occurred in sheep in Norway in 1998. Affected sheep displayed the loss of muscle coordination in the absence of itching and scratching (a common symptom of classical scrapie in Europe).

Three cases of atypical scrapie diagnosed in Great Britain provided further information on the disease. The positive sheep came from a research flock belonging to the UK Department for Environment, Food and Rural Affairs (DEFRA). Made up of sheep (and offspring) imported from New Zealand- a country that is scrapie free- and under strict biosecurity, the flock was considered to be at extremely low risk for scrapie.

Post-mortem examinations of three sheep from the UK research flock (in 2006 and 2007) found evidence of atypical scrapie. A research report into the three cases published in the BMC Veterinary Research Journal in February 2009 speculates that it is likely that the atypical scrapie arose spontaneously in the three sheep and did not come from an external source. The report also hypothesizes that atypical scrapie is likely to occur in flocks worldwide, especially in older sheep of susceptible genotypes. The three sheep in question were all over six years old. To date, no evidence of atypical scrapie has been found in New Zealand and the country still maintains its scrapie-free status.

Over the past decade, similar atypical scrapie cases have been found at a low level in many other areas including most countries in the European Union. Portugal has had an unusually high number of cases of atypical scrapie; Canada has detected two cases of atypical scrapie since 2005; and in the past two to three years, the US has detected six cases of atypical scrapie.

The surveillance rates in North America appear sufficient to detect the presence of atypical scrapie. The current test that the CFIA uses for surveillance sampling is recognized by the OIE as capable of detecting all strains of scrapie, as well as other TSEs. As such, Canada anticipates detecting sporadic cases of atypical scrapie. When this happens, additional laboratory characterization of the strain of scrapie and the genotype of the affected sheep will be undertaken in order to learn as much as possible from the case.

In recognition of the general international understanding that atypical scrapie is probably not a contagious disease, and occurs frequently as a single case within a flock, the CFIA will not respond to a case of atypical scrapie in the same manner as a case of classical scrapie. Canadian sheep flocks in which a case of atypical scrapie is detected will be screened for the presence of concurrent classical scrapie. If classical scrapie is not detected, it is highly unlikely that CFIA will take any additional measures related to the detection of the case of atypical scrapie.
When it comes to human health, there is no basis to suggest that atypical scrapie poses a risk to humans. Thus far, scientists have found no evidence that atypical scrapie can be transmitted to people, or that it is dangerous to people in any way.

Finally, the confirmation of atypical scrapie cases has not appeared to have had an impact on international trade and associated requirements. The first report of the detection of a case of atypical scrapie in a country recognized as scrapie-free (eg. New Zealand or Australia) may be different, but to date this has not happened.

Scrapie Canada continued

Ottawa Meetings - The Border and Scrapie Dominated Discussions

The need for an increased emphasis on re-instating exports of small ruminant breeding animals to the U.S. and Mexico was just one of the key messages taken to Ottawa on June 18th. During a series of meetings with representatives from the Canadian Food Inspection Agency (CFIA) and Agriculture and Agri-Food Canada (AAFC), Andrew Gordanier, Vice Chair of the Canadian Sheep Federation (CSF) and Jennifer MacTavish, Executive Director, spoke at length about the industry's need to regain its key export markets and the necessity of establishing scrapie prevalence, in addition to discussing predation and traceability.

Canadian Food Inspection Agency

The morning began with a meeting with Dr. Brian Evans, Executive Vice-President of the CFIA and Canada's Chief Veterinary Officer, Mr. Tony Ritchie, Executive Director of Programs and Mr. Paul Mayers Associate Vice President of Programs. Scrapie its prevalence, its eradication and its link to market access was discussed at great length. The CFIA acknowledged that their understanding is that small ruminants are included in Rule 3, however, they were unable to provide any indications on when they thought Rule 3 would be released for comments.

Obviously part of the delay was the US election and there has been some delays in getting people within the US government appointed to positions; most notably the Under Secretary for Agriculture.

The small ruminant industry's business plan for establishing scrapie prevalence was presented and they were receptive and encouraging. The industry was commended for being proactive in its approach and for its desire to not only determine the prevalence of scrapie in its flock and herd, but to also want to set an eradicate target and deadline to meet the OIE requirements for Scrapie Free certification. The CFIA will be investigating what resources they will need to help implement a prevalence study.

Minister Ritz

The final meeting of the day was with Minister Ritz. It should be noted that after the industry's meeting with the Minister on 25 March, there has been a letter writing campaign regarding the inability to access to US and Mexican markets. The Minister's office contacted the CSF office to set up the 18 June meeting as a result of this letter writing campaign. So thank you – to all of you who took the time to send in a letter.

This was an especially positive, yet concise, meeting. The Minister was incredibly well briefed on the issues facing the sheep industry in relation to trade, predation scrapie and traceability, and the work the CSF is engaged in. The Minister expressed support opening the border for small ruminant breeding stock. He was interested in the relationship between a scrapie prevalence study, setting an eradication deadline and the government's ability to lobby on our behalf to get the border open.
Recently there have been a few instances where issues have arisen suggesting that producers, processors and government staff are less than 100% sure as to what all is covered by or addressed by the Canadian Sheep Identification Program (CSIP). So given these misconceptions and misunderstandings as to the components, rules and regulations of the CSIP I’ll review the program, the background, and the requirements and obligations for each level of the value chain.

National Identification programs were first addressed in the mid-90’s as the threat of BSE and Scrapie became more evident. In these early years, the Canadian Sheep Federation (CSF) and other smaller industry groups opted to allow the cattle industry to take the lead and develop their system, the idea being to use this in the future as a model for future animal ID systems for other species. In 1998 the CSF board of directors resolved to endorse the concept of a national identification program for sheep in Canada and established a technical committee to develop the program.

Based on extensive consultations with producers and other industry stakeholders across the country in 2000, the CSF collected feedback and heard that the industry would support a national identification program as long as it was “affordable, flexible and effective” for the sheep industry. Based on this and the program plan the CSF requested regulatory changes be made to the legislation that governs mandatory animal identification and in 2002 a meeting was held in Winnipeg to draft amendments that incorporated the requirements of the sheep sector. The final changes to the legislation were reviewed and accepted by the National Identification Committee of the CSF in March 2002. The legislation was enacted on January 1, 2004 making it mandatory for all sheep in Canada to be individually identified and tagged.

For all sheep in Canada, an officially approved national identification ear tag must be applied before the animal leaves its flock of origin. As a minimum requirement the ear tag bears a visible unique CSIP number and a “CA” logo. The numbers are assigned to tag manufacturers and tags are distributed through authorized retail stores and other distributors depending on the requirements of the provincial organisations. The distribution centre maintains records of which numbers went to which producers through the individual producer name or identification number. This information is reported to a central database maintained by the Canadian Cattle Identification Agency (CCIA). At the packing plant the unique identification number is maintained up to and including the point of carcass inspection.

Sheep producers are required to keep records of the movement of animals. This decision was made mainly to keep expenses down for producers and encourage participation. As we continue to improve and develop our national traceability systems, we endeavour to include value-added benefits to the producer. Providing tools and resources to assist in management and improvement of the national flock benefit not only the individual but our industry as a whole. A “Record of Movement” form has been designed and is available from the CSF website at www.cansheep.ca/ under the “Programs/Canadian Sheep Identification Program/Forms” tab.

These records are used in place of retired tags to determine if an animal in question has gone to slaughter or been moved to another location or farm. One option for the future is to have the tag numbers retired at slaughter. This involves tags being read and entered into the CCIA database as “retired” by the slaughter facility, which effectively tells officials that the animal is no longer part of the national flock.

Components of the Program

National Identification and Traceability - Time For Review

By Sean McKenzie, National ID and Traceability Coordinator
Current, the minimum requirement for tagging of sheep leaving the farm or origin is the Ketchum Kurl-Lock #3 tag. This tag is not machine readable and would require a considerable amount of labour to read and retire from the database, so again choosing to reduce expenses to the system, the decision was made to use on-farm records for this purpose. In the future, as we move towards electronic records and tags, tag retirement will become feasible. It may also be possible for abattoirs to provide carcass grading information back to producers to use for genetic improvement and their on-farm management.

In the event of a health or safety issue involving an animal, the Canadian Food Inspection Agency (CFIA) will be given access to the CCIA sheep database showing the flock of origin. Using the records maintained by the producers, CFIA will trace the movement of the animal from the flock of origin to its last location to determine the source of the problem.

In the vast majority of cases, when no health or safety issue is noted, the unique individual ID will be accessed only when it is entered into the CCIA database.

Guidelines that apply to everyone along the sheep production chain: Before any animal, ram, lamb or ewe leaves the farm of origin they must be tagged with an approved CSIP ear tag (these will be described shortly) and this includes trips to Fairs, exhibitions, veterinary clinics, or community pastures. It is illegal under the Health of Animals Act and corresponding regulations to transport untagged animals. When acquiring new animals, be it onto a feedlot, into auction yards or to a producer flock only animals with approved CSIP ear tags should be accepted. Any sheep that are imported must have an approved CSIP tag applied within seven days of arrival.

Also records of the following must be kept of the following:

- All sheep 18 months or older leaving your farm or feedlot, other than those sold directly to a federally or provincially inspected abattoir.
- Imported sheep must have a Canadian-approved national identification tag applied within seven days of arrival.
- Approved CSIP ear tags must not be removed from any live animal or tampered with for any reason and must not be re-used. If an animal dies on your property, the tag should be removed, saved and recorded with the cause of death if known.
- Tags must only be purchased from an approved distributor. When purchasing tags, you will be asked to provide your name, telephone number and address.

Guidelines Specifically for Producers

When shipping animals all producers must keep certain records on farm that may be necessary for use in disease traceback scenarios or for audit purposes. These records include all sheep or lambs entering your flock for breeding purposes and all sheep 18 months or older leaving your farm, other than those sold directly to either a provincially or federally inspected abattoir. For producers buying livestock, all animals purchased must bear approved CSIP ear tags. If one of these original tags is subsequently lost a replacement tag must be applied immediately and any information known about the origins of that animal, including the original number if possible, should be recorded.

It is illegal to remove from any live animal, tamper with or re-use any CSIP tag. Should an animal die while still on farm and is found the tag may be removed and saved, with the information as to cause of death recorded if it is known. These tags cannot be re-used.
ID and Traceability continued

**Where to Buy Tags**

Tags must only be purchased through a provincially approved distributor. For the controlled distribution provinces of BC, AB, MB, NFLD and NS, tags are available exclusively from the Canadian Cooperative of Woolgrowers (CCWG) as check-off fees apply in these provinces. The Market distribution provinces of ON, NB and PEI can obtain tags from CCWG, Ketchum Manufacturing Inc. or local farm supply stores. QC producers purchase their tags from Agri-Traçabilité Québec, and SK producers from the Saskatchewan Sheep Development Board. The different distribution points are chosen by the individual provincial sheep associations, each for their own specific province. When a producer purchases tags he or she will be asked to provide their name, telephone number and address so that the series of tag numbers can be properly assigned to that specific producer. Tags cannot be shared or sold from one producer to another and it is against the regulations for producers in Controlled distribution provinces to purchase tags outside of their province and for producers in Market distribution provinces to purchase tags from provinces other than theirs or another Market Distribution province.

**Guidelines For Packing Plants**

Packing plants that slaughter sheep are required to abide by the following guidelines:

- If an animal lost its tag in transit, the packing plant must maintain a record of any ID number on the animal, the name and address of the person bringing the animal to the abattoir, and any other information that will enable the animal's origin to be traced.

- The animal's individual ID number must be maintained and kept with the carcass until the carcass and offal is approved for human consumption or is condemned.

- Approved CSIP ear tags must not be removed from any live animal or tampered with for any reason and must not be reused.

**Guidelines For Livestock Dealers and Auction Marts**

Livestock dealers and auction marts are required to abide by the following guidelines:

- If a lamb or sheep has lost a tag in transit, keep a record of the origin and subsequent destination of the animal (date, name and address of source, date of departure, name and address of person who removed the animal).

- You may choose to apply a new tag and if so tags must be purchased from an approved distributor. When purchasing tags, you will be asked to provide your name, address and phone number.

**Guidelines For Truckers**

Truckers are required to:

- Transport only sheep and lambs bearing an approved CSIP ear tag.

- Approved CSIP ear tags must not be removed from any live animal or tampered with for any reason and must not be reused.

- If a tag is lost during transit the animal can be retagged at the destination, but all information known on that animal should be recorded and associated to the new number as it is with feedlots and producer.
## ID and Traceability continued

### Enforcement

The CSIP is regulated by the federal Health of Animals Act and Health of Animals Regulations and is enforced by the Canadian Food Inspection Agency (CFIA). Under these regulations the CFIA has the authority to apply monetary fines at their discretion. For most ID related violations a fine of $500 per violation may be applied which may be reduced to $250 if paid within 15 days. Prosecution is also an enforcement option. The CFIA reserves the right – for example, in cases involving significant risk to the health and safety of sheep or the public, or in cases of flagrant non-compliance – to proceed with a prosecution under the Health of Animals Act.

### CSIP Tags

Currently there are four (4) tag types that are approved for use under the CSIP. These are (in no particular order):

- Pink Ketchum Kurl Lock #3 tag
- Pink Allflex dangle (panel type) tag
- Yellow Allflex RFID (electronic) button tag
- Yellow Shearwell Data SET tag (electronic)

For any further information or questions, you can visit the CSIP section of the CSF website at www.cansheep.ca; call the toll free number at 1-888-684-7739; or send me an email at sean@cansheep.ca.

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**Canada announces Slaughter Improvement Program**

Source: <www.meatpoultry.com>

OTTAWA, ONTARIO — The Harper Government’s Economic Action Plan supports the livestock sector by making meat packing and processing facilities more competitive and accessible to farmers across the country, according to a news release. Agriculture Minister Gerry Ritz and Minister of National Revenue and Minister of State (Agriculture) Jean-Pierre Blackburn announced the three-year, C$50-million Slaughter Improvement Program is now in place and will soon be accepting applications.

"By improving processing, we're helping to help create a greater demand for livestock and better prices for farmers," Mr. Ritz said.

"We are addressing regional gaps in this sector by providing new marketing options and lower transportation costs in areas where limited access to meat packing and processing facilities is affecting the growth of the sector," Mr. Blackburn added.

The program will make federal repayable contributions available to support investments made by the private sector and other levels of government in sound business plans aimed at reducing costs, increasing revenues and improving operations of meat-packing and processing operations in Canada. Investing in a stronger meat packing and processing industry in Canada benefits the entire value chain and leads to a more profitable and competitive industry and a stronger economy.

Meat processing is responsible for US$18.2 billion in annual sales for Canadian livestock farmers.

Program details will be published in coming weeks and application forms will be available by the end of June.
Irish sheep conference shows benefits of EID

Source: Farmers Weekly

Strategic use of creep feed, attention to grassland management and the use of EID as a management tool, were the talking points at the recent Irish Grassland Association Sheep Conference, County Kilkenny, Ireland

A demonstration of EID technology, used to collect data for a new Irish sheep genetic index, proved it could be put to good use and may be an essential tool for big sheep farmers looking to improve health and breeding records.

Crosby Cleland, Farmers Weekly Sheep Farmer of the Year, has long recognised how EID can be used in a practical sense for some commercial sheep farmers. "I have been using EID alongside an auto-draft system at my farm in County Down for several years with great success.

"There is no doubt EID should be a voluntary scheme, but it can prove an invaluable tool for larger flocks with more than 400 ewes or the smaller pedigree enterprise," said Mr Cleland.

"Prior to installing our system, we were manually recording numbers and information, which was hugely time consuming. Putting in the technology cost about £8000, which was easily paid back in labour savings."

The system had allowed him to improve flock genetics and helped in scrapie monitoring. "To export to southern Ireland I need to do a lot of book work to prove our scrapie status. This system automatically records and prints off a list, which saves time significantly."

The big guys could definitely get extra value from installing EID and extra kit on farm, agreed Patrick Donnellan, Irish Cattle Breeder Federation. "This extra technology has advantages in terms of handling and drafting for the big producer of 300-400 sheep.

"But there is no doubt introducing EID for small flocks based on traceability is overkill," he said. "The only way the small farmer can see the full advantage of EID is when the whole industry is hooked up so there is feedback along the supply chain, thereby getting information on how individual progeny performed."

Boosting growth rates
Sheep farmers were becoming too reliant on concentrates to achieve high lamb growth rates, said Michael McHugh.

"In this economic climate and with current lamb prices, sheep farmers must concentrate on improving grass quality and incorporating clover to reduce dependency on concentrate feeding."

"On average, 36% of total variable costs for Irish flocks come from concentrate use," said Mr McHugh. "Many farmers are opting to feed creep to finish lambs earlier and avoid price falls in the market due to late finishing."

Strategic use of concentrates may be necessary to finish tail enders, but spending on concentrates should be reduced to 20% of variable costs, achieving this target was worth up to 100 Euros per hectare. "With good grassland management you can get mid-season lambs to finishing weights without supplementary feeding."

Forward creep grazing, by grazing lambs on high grass covers in front of ewes, may be the answer. "This can increase lamb weaning weights by 2kg and allows tight grazing of pastures in June, without reducing lamb thrive. This will also maintain grass quality for post-weaning grazing in July," said Mr McHugh.

Continued on next page
Sheep shortage forces abattoir into temporary closure

Source: www.abc.net.au

The state's largest mutton and lamb abattoir has been forced to close for six weeks because of drastically low sheep numbers. Figures from the Australian Bureau of Statistics show Australia's flock has hit 78 million (lowest since 1920).

Fletcher's International in Narrikup was recently forced to re-structure its business and sack about one-hundred casual staff. Fletchers' Greg Cross says the abattoir usually closes for one month each year for maintenance but it has had to close early this year.

"Our destiny's in the hands of the farmers and without them we haven't got an industry," he said. "We just hope it'll turn itself around and balance out." Mr Fletcher is hoping high red meat prices will entice sheep producers back into the industry. He says demand for lamb is still strong and, as a result, producers are being paid more than $4/kg.

Benefits of EID continued

Post-weaning lamb-thrive could also be maximised by close grass management. "A target post-weaning growth rate on grass-fed lambs is 150g a day. This can be achieved by grazing at a pasture height of 9cm down to 6cm in rotational grazing." Grazing pasture tightly in early June keeps grass leafy and improves lamb growth post-weaning."

But where target drafting dates were not being achieved, it may be necessary to feed concentrates to compensate for poor performance. "But intakes should be controlled to a maximum of 25kg a lamb," he said. "Lamb health and grass quality are key to reducing the need for creep feeding."

The best response to creep was achieved at low feeding levels. "Enhance the response to creep by encouraging lambs to creep graze and limit creep to a maximum 300-400g a lamb a day."

Creep feeding could bring forward slaughter dates by 32 days compared with gras-fed lambs. But despite this extra performance in liveweight gain, the margin from feeding was small and could be a substantial cost unless feed was cheap, he added. But creep can be used strategically to bring forward finishing dates when prices were high and likely to fall. Good results could be achieved by using simple, inexpensive rations containing cereals.