
CONSULTATION DOCUMENT – NATIONAL SCRAPIE PLAN SCRAPIE FLOCKS SCHEME



SCOTTISH EXECUTIVE

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1 Summary

- 1.1. Scrapie is a fatal brain disease of sheep. The National Scrapie Plan (NSP) for Great Britain is a long-term initiative, at present voluntary, to reduce and eventually eradicate scrapie (and any other TSE¹ that might be present) from the national sheep flock. This will be achieved mainly through a two pronged approach with schemes to increase the level of natural genetic resistance in the national flock and deal with flocks affected with Scrapie.
- 1.2. A genetic approach is possible because each sheep has a natural level of resistance or susceptibility to scrapie, which can be determined through a scrapie genotyping test on a blood sample. The more resistant sheep can then be preferentially used for breeding to pass on their resistance through their progeny.
- 1.3. NSP ram genotyping is now available, free, to all owners of pure bred breeding flocks. Further information on the Plan is published on the internet at: www.defra.gov.uk/animalh/bse/bse-science/scrapie/nsp/nsp.html. The operation of the NSP is kept under regular review in light of the latest scientific research and advice.
- 1.4. When Rural Affairs Departments consulted on the original proposals for the NSP we explained that a future element of the Plan would include help for scrapie affected flocks. This consultation paper describes the intended NSP genotyping scheme specifically for holdings that report cases of scrapie or have had scrapie in recent years.
- 1.5. The voluntary scheme described in this paper will provide for all of the sheep on a holding reporting scrapie once it is introduced or since July 1998 to be genotyped, and for the susceptible sheep to be disposed of and replaced with certain genotypes. Only sheep of certain genotypes from participating scrapie affected holdings will go into the food chain. Compensation will be paid and there will be assistance with replacing breeding rams with those of the most scrapie resistant genotype. A table describing the different scrapie genotypes in sheep and how they will be treated under this scheme is at Annex A.
- 1.6. In considering the required features of this voluntary scheme (Section 3 below) we have had regard to legislation being proposed by the European Commission for compulsory genotyping on scrapie affected holdings (Section 5 below). Introducing this voluntary scheme first will allow us to help some historically affected holdings and prepare the way for a compulsory scheme.

¹ Transmissible Spongiform Encephalopathy – in sheep scrapie and *theoretically* BSE.

- 1.7. A scrapie plan is being developed by the Department of Agriculture and Rural Development in Northern Ireland, including a scheme for scrapie affected holdings².

2 Scrapie

- 2.1. Scrapie affects flocks in all parts of Great Britain³. In recent years on average 167 flocks per annum had confirmed cases⁴. Typically they average about 500 or so animals (but their size can vary widely). About half of the flocks reported single cases (although some have been affected by a persistent problem) and about half of the flocks have had cases before.
- 2.2. The total number of reported cases was about 600 per annum (pre FMD). We also estimate from an anonymous survey of sheep farmers conducted in 1998 that only 1 in 8 farmers report suspicions of scrapie. (A repeat survey is being conducted during October to November 2002). Scrapie can often reoccur with most cases occurring in animals between 2-5 years of age. The risk of this happening can be substantially reduced by a) using resistant rams and b) identifying and culling TSE susceptible animals on affected holdings and replacing them with more resistant ones.

3 Scheme features

- 3.1. The following will be the key features of the proposed NSP Scrapie Flocks Scheme:

Eligibility

- 3.2. The scheme will be voluntary (see, however, Section 6 below on the EU dimension). Any farmer in Great Britain who has a case of scrapie confirmed on his/her holding after the start of this scheme, or since July 1998, will be eligible and will be invited to join. (Eligibility is being extended back to 1998 because this was when the compulsory slaughter/compensation regime for scrapie was introduced).
- 3.3. Holdings which have new or further cases after October 2003 will probably not be eligible to join this voluntary scheme as compulsory EU genotyping requirements for scrapie affected holdings may then be in place (see Section 6 below). Thereafter, any holding that had joined this scheme but then reported a further case of scrapie would be caught by the compulsory EU requirements (which are currently proposed to be broadly similar to this scheme).

² www.dardni.gov.uk/pr2001/pr010501.htm

³ 2000 - flocks: England 63%, Scotland 24%, Wales 13%

⁴ July 1998-2000 (i.e. pre FMD)

Application period

- 3.4. We will aim to open this voluntary scheme to applications before the end of April 2003. It is proposed that two application windows should apply. For eligible holdings which had a case of scrapie *prior* to the launch of this scheme the window will be 12 months from the launch of the scheme. For holdings which have their first case of scrapie *after* the launch of this scheme and before the possible entry into force of a compulsory EU scheme the window will be 12 months from the date of confirmation of their *first* case of scrapie. These application windows would be subject to review by the end of the first year of the scheme's operation. Your views on the windows of opportunity for applications are sought.

All sheep on the holding will be genotyped

- 3.5. Many holdings have more than one flock, and breed type. They will often be run together. Scrapie is an infectious disease. As a rule therefore all sheep on the holding will be genotyped. However, on the basis of veterinary consideration at the time of application, it may be appropriate not to test another flock on the holding for example if it was separate from and had not been in recent contact with the flock of the affected sheep. It may also, for example, be impractical to apply scheme measures to all flocks where a case had been confirmed on common grazing or at a market.

All sheep genotyped will be electronically identified

- 3.6. This will be by means of a ruminal bolus, as in current NSP schemes. This will ensure a unique ID for each sheep and its genotype test result.

Disposal of 'susceptible' animals on an SFS holding, and the food chain.

- 3.7. The ARR/ARR genotype is understood to be the most scrapie resistant of the 15 known genotypes, with the three genotypes carrying 1 copy of the ARR allele (and no copy of the VRQ allele) generally regarded as 'semi-resistant' (see Annex A).
- 3.8. Under the proposed Scrapie Flocks Scheme sheep on participating holdings could only be used for breeding if they have certain genotypes. If they do not have those genotypes they would have to be culled or castrated.
- 3.9. Once the animals for disposal have been identified they may also need to be visibly identified to assist in their subsequent removal for disposal.
- 3.10. Only certain genotypes from participating holdings will be allowed to go into the food chain. The requirement will be that they must have: at least 1 ARR allele in their genotype in order to be slaughtered for human consumption (see below and Annex A).

- 3.11. It is already the case that any animal suspected of showing clinical signs of scrapie must by law be slaughtered and its brain tested for signs of the disease. Thereafter the carcass is destroyed. It would be impractical and prohibitively expensive to test every genotypically susceptible sheep on participating SFS holdings for signs of pre clinical infection. However, such susceptible animals would represent a higher risk of incubating the infection as they may have been exposed to the infective agent.
- 3.12. On this basis, and having regard to the theoretical public health risk from BSE in sheep (which were it present might be masked by scrapie) the Spongiform Encephalopathy Advisory Committee (SEAC) have said that removing scrapie 'susceptible' animals from scrapie-affected flocks and not allowing them into the food chain would be an appropriate precautionary measure⁵. The Food Standards Agency supports this view. It is also consistent with the opinions of the European Union's Scientific Steering Committee⁶.

Male sheep on the holding cannot be used for breeding unless they are of the ARR/ARR genotype.

- 3.13. Present knowledge is that of the 15 known scrapie genotypes the ARR/ARR genotype is the most resistant to TSEs (never having had a confirmed case of natural scrapie).
- 3.14. In order to make as rapid a progress as possible in improving the TSE resistance of the flock(s) on the affected holdings it will be a requirement that only ARR/ARR males will be used as stock rams on the holding. Following the initial genotyping of all of the sheep on the holding after it joins the scheme, stock rams of other genotypes will therefore have to be culled and disposed of (paragraphs 3.21-3 below refer to the time scale for this action). They will not be able to be sold to other holdings. If they are replaced with other stock rams they must be ARR/ARR genotypes. Any new stock rams brought onto the holding while it is in the scheme must be ARR/ARR.
- 3.15. The advantage of this requirement is that once the flock owner has been able to ensure that all of the stock rams on an affected holding are of this most resistant genotype all of the progeny they sire should have at least one copy of the ARR allele in their genotype and will thus have some resistance to TSEs. Such progeny will be allowed into the food chain.
- 3.16. There will of course be a certain number of male sheep on the holding that would not in any case be used for breeding, regardless of their genotype. One example would be male lambs that may not meet the breed criteria for becoming stock rams. They would, ordinarily, be castrated and fattened for consumption. The requirement described at 3.10 above would apply to these animals in order for them to go for slaughter for consumption (i.e. at least 1 ARR allele in their genotype). Otherwise they would be slaughtered and destroyed.

⁵ www.defra.gov.uk/news/seac/seac202.htm (SEAC minutes 10th April 2002 meeting, paras 5.6-7)

⁶ SSC Opinion 4-5 April 2002 (on the safe sourcing of small ruminant materials).
www.europa.eu.int/comm/food/fs/sc/ssc/out257_en.pdf

All female sheep on the holding must be of a genotype that has: at least 1 ARR allele, and if they are used for breeding - no VRQ allele (and in certain situations only possibly no ARQ allele also).

3.17. Because the significant proportion of the sheep on a holding will be females imposing the same genotype/breeding restrictions as for stock rams on breeding females may be impractical for some participating holdings. Nevertheless, it is desirable that progress towards greater TSE resistance on the holding is as rapid as practicable. It will therefore be a requirement that the females in the flock - used for breeding - *must* have a genotype that *does* contain at least 1 ARR allele (resistance), *and* that does *not* contain a VRQ allele (susceptibility) (paragraph 3.24 below refers to the time scale for this action). There will likewise be a certain number of female sheep on the holding that would not ordinarily be used for breeding. One example would include female lambs that would have been bred and/or sold for fattening for consumption. The requirement described at 3.10 above would apply to these animals in order for them to go for slaughter for consumption (i.e. at least 1 ARR allele in their genotype). Otherwise they would be slaughtered and destroyed.

On *certain* holdings it *may* be appropriate to restrict the use of ewes *for breeding* if they carry the ARQ allele in their genotype. This may be appropriate, for example, if the case of clinical scrapie that had been confirmed on the holding were in a sheep that had a genotype that carried the ARQ allele. Such a decision would only be taken after a veterinary assessment of relevant factors such as the genotyping results for the sheep on the holding, and the origin of the affected animal.

Genotype certificates

3.18. A certificate of genotype will be issued for any sheep tested and shown to be of the ARR/ARR genotype. Only ARR/ARR sheep from the holding will be able to be sold on for breeding.

If they can be identified - the parents, last progeny, embryos and ova of the animal in which the disease was confirmed will be destroyed

3.19. As these animals and materials present a risk of transmission it is appropriate, where practicable, to require their destruction.

'Susceptible' sheep from a scheme holding will be phased out and disposed of over a reasonable timescale

3.20. How quickly this can be achieved will depend on a variety of factors such as the flock size(s), and the proportion of susceptible genotypes found on the holding once the sheep are genotyped. Consideration will be given on a flock by flock basis.

Males

- 3.21. There is particular merit in replacing non-ARR/ARR breeding rams (this genotype has the greatest known scrapie resistance) with ones of that genotype as soon as possible. As mentioned at 3.7 above doing so would mean that the lambs sired by those rams would be 'semi' resistant in that they would have at least 1 copy of the ARR allele in their genotype. Under the rules of this scheme they could therefore be allowed to go into the food chain (see 3.10 above) and this could obviate the need to genotype lamb crops from the holding once all the rams on the holding were of that genotype.
- 3.22. It will therefore be a requirement of the scheme that, following genotyping, all breeding rams which are not of the ARR/ARR genotype must be destroyed as quickly as practicable and replaced with ones of that genotype, before the next breeding season.
- 3.23. There might be a derogation from this requirement in exceptional circumstances (for example if no ram of a suitable breed with the ARR/ARR genotype could be sourced in which case ARR heterozygous rams (1 ARR allele only) may be allowed as part of a controlled breeding programme for a prescribed period. This would, however, mean that the benefits to the flock from participating in this scheme could be delayed, and there might also be cost implications.

Females

- 3.24. We appreciate that in some instances the requirement to remove susceptible genotypes may be impracticable where there are large numbers of ewes on the holding which are found to have susceptible genotypes. However, phasing out the susceptible ewes should be possible within four years (or sooner) even for holdings with proportionately most susceptible females.

Rare breeds

- 3.25. The Government has a commitment to sustainable farming and biodiversity⁷ and thus the conservation of rare breeds. Some rare breeds have a high prevalence of the more resistant genotypes, however, we do not have a complete picture and we are aware that owners of some rare breeds are concerned that there may be little or no resistant genes in their breed. If there is a flock of a rare breed on a holding participating in this scheme it is possible that the genotyping results of that flock may show that it has little or even no genotypes containing the ARR allele. In such exceptional circumstances we will consider to what extent the imposition of the above mentioned breeding restrictions is likely to cause problems for the breed and therefore what alternative arrangements may be considered. In such circumstances these deliberations may be informed by the results of a rare breeds genotypes survey which is being carried out by the Government during the course of this year in 800 rare breed flocks⁸.

⁷ www.defra.gov.uk/corporate/sdstrategy/chapter3.htm - Defra's sustainable development strategy (paragraphs 3.14, 3.29, and 3.40)

⁸ www.rare-breeds.com/html/news_articles/scrapie.html

Compensation payments for culled susceptible sheep

3.26. The following rates of compensation are proposed:

- *£90 for culled susceptible breeding sheep -*
For the purposes of this scheme it is suggested that a breeding sheep should be an animal where permanent incisor teeth have erupted through the gum. This figure equates to the rate currently payable for a confirmed scrapie case as laid down in the TSE (England) Regulations 2002.
- *£50 for culled susceptible lambs -*
For the purposes of this scheme it is suggested that a lamb is a sheep where permanent incisor teeth have not erupted through the gum. As noted above, once the rams on the holding are all ARR/ARR then it should not be necessary to genotype and dispose of their progeny as they could be sold into the food chain.

Compensation payments - review

3.27. It is intended that the above rates should apply from the outset of the scheme. However, in due course compensation for measures concerned with scrapie control and eradication will need to be considered in the context of the Government's broader policy on compensation for all animal diseases. The Government will in due course undertake a separate consultation on proposed measures to rationalise the overall approach to compensation for all notifiable animal diseases, with the overall aim of simplifying the entire mechanism, and increasing the transparency of setting compensation rates. The above rates will need to be kept under review in the light of the outcome of that consultation and other relevant factors.

A contribution payment of up to £500 towards the cost of replacing culled stock rams with rams of the ARR/ARR genotype.

3.28. The requirement will be to use only ARR/ARR ram genotypes, the most TSE resistant. Until the NSP-GB and other genotyping initiatives has resulted in a general increase in the numbers of ARR/ARR rams in the national flock some of these rams *may* be in short supply. Rams of this genotype are generally achieving higher market prices at this years ram sales.

3.29. A payment of up to £500 is proposed to assist farmers in being able to purchase replacement stock rams of this genotype which they will be obliged to use. For stock rams purchased with this assistance there will be no cumulation with the compensation rate mentioned at paragraph 3.26 above i.e. where a susceptible stock ram is culled and replaced with an ARR/ARR resistant stock ram only the £500 will be payable and not the £90. This payment of up to £500 will not be available for any other stock ram genotypes.

- 3.30. It may be appropriate to consider providing assistance with the genotyping of replacement animals, of the permitted genotypes, (before purchase). This could be a large burden on the NSP budget. It may therefore be necessary to restrict this to a maximum of two genotype tests per breeding animal to be culled and replaced. Your views on this are welcomed.

4 Scheme Budget

- 4.1. This voluntary scheme will be funded from the existing NSP budget. It will open to applications early in financial year 2003/04 (paragraph 3.4 above). It will then be available to currently affected holdings and some historically affected holdings (paragraphs 3.2-3 above). This same year may also see the introduction of similar, but compulsory measures on an EU-wide basis (section 6 below) which will also be funded from the NSP budget. The operation of this voluntary scheme may therefore become subject to constraints either financial (e.g. budget) and/or administrative (e.g. field resources). In that case it may be necessary to prioritise applications under the voluntary scheme, e.g. on the basis of a veterinary assessment of risk having regard to relevant factors concerning the history of the scrapie case.

5 Scope of this consultation

- 5.1. This consultation is directed at interested parties in England. Parallel consultations are being conducted by ARAD in Wales, and SEERAD in Scotland. Recipients of this consultation document are listed at Annex B. Comments from all stakeholders are welcome. We are particularly interested in comments from sheep breeders/producers, their representative bodies and from consumer interests.

6 Implementation and the European Dimension

- 6.1. The European Commission have published draft proposals for compulsory genotyping and breeding for scrapie resistance in scrapie affected flocks. They provide for whole flock genotyping, culling and destruction of susceptible genotypes, and compensation. There is a substantial degree of similarity between the EU proposals and these proposals. The main difference is that the EU proposals are compulsory and will only apply to holdings with cases confirmed after the EU proposals apply. They will not apply retrospectively.
- 6.2. It is not expected that the EU proposals, if adopted, will be in force before late in 2003. In view of the urgency of tackling scrapie on holdings with the disease we wish to launch this voluntary scheme before then - by the end of April 2003 if possible. This is because we wish to be able to invite newly affected and historically affected holdings to join this scheme and to begin genotyping and breeding for resistance as soon as possible.
- 6.3. The launch date of April 2003 is subject to the consideration of responses to this consultation and approval of these proposals under EU state aid rules.

7 Timing of this consultation

- 7.1. A period of 8 weeks (not including the Christmas holiday) is being allowed for this consultation. Although this is shorter than the standard period usually allowed for consultations these proposals are for a voluntary scheme and they have been discussed on a number of occasions with industry and other members of the Government's Sheep and Goats TSEs Stakeholder Group who support them in principle. We will also be consulting at a later date on the implementation of the Commission's proposals for compulsory genotyping on scrapie affected holdings once they have been adopted.
- 7.2. We will respond as sympathetically as possible to requests for individual extensions to this consultation deadline. Any queries about the conduct of this consultation will be referred to and pursued by the head of Defra Sheep TSEs Division.

8 Issues for comment

- 8.1. We would be grateful for your views on the issues raised in the document including:
- Taking precautionary action on historically affected holdings rather than just newly affected ones, as likely to be provided for in future EU requirements (paragraphs 3.2-3).
 - The windows of opportunity for flock owners to apply to participate in this voluntary scheme (paragraph 3.4).
 - The time scale to phase out and dispose of non ARR/ARR genotyped rams (paragraphs 3.21-3)
 - The time scale to phase out and dispose of susceptible ewes (paragraph 3.24).
 - The compensation levels for culling of susceptible sheep (paragraph 3.26).
 - The contributory payment towards the cost of replacing susceptible breeding rams with ones of the ARR/ARR genotype (paragraph 3.29).
 - The provision of assistance with the genotyping of replacement animals (3.30).

9 Impact upon eligible participants

- 9.1. The Scrapie Flocks Scheme is a voluntary initiative and thus owners of scrapie affected flocks will decide if they wish to participate having regard to the rules. A regulatory impact assessment will be produced for a subsequent consultation on the implementation of the compulsory EU proposals.

Annex A

CONSULTATION PAPER			
Scrapie Flocks Scheme treatment of the different scrapie genotypes			
Genotype	Resistance/susceptibility	Females	Males
ARR/ARR	Sheep that are genetically most resistant to scrapie.	No restriction of any kind on their use	
ARR/AHQ	Sheep that genetically have some resistance to scrapie, and need careful selection when used for further breeding.	Can be used for breeding on the holding (only) or go directly for slaughter for consumption	Cannot be used (or sold) for breeding
ARR/ARH		----- and possible restriction on <i>breeding</i> (only) if the scrapie case had ARQ in its genotype	but
ARR/ARQ			Can go directly for slaughter for consumption
ARQ/ARH	Sheep that genetically have little resistance to scrapie	<u>Slaughter & destruction</u> As soon as practicable – or within the duration of the contract with the flock owner(s). Replacements must be one of the four genotypes listed at the top of this table i.e. which contain: the ARR allele, but which do <u>not</u> contain the VRQ allele (or, potentially, if the known genotype of the scrapie case had an ARQ allele that <i>might</i> not be permitted also) £90 compensation for breeding ewes and £50 for lambs.	<u>Slaughter & destruction</u> Before the next breeding season wherever possible - with the ARR/ARR genotype only permitted for replacement stock rams. Up to £500 assistance towards the replacement cost – of stock rams of this genotype. Or, instead £90 compensation if the ram is culled and not replaced. Or, £50 compensation for lambs culled.
ARQ/AHQ			
AHQ/AHQ			
ARH/ARH			
AHQ/ARH			
ARQ/ARQ			
AHQ/VRQ	Sheep that are genetically most susceptible to scrapie.		
ARH/VRQ			
ARQ/VRQ			
VRQ/VRQ			
ARR/VRQ	Sheep that are genetically susceptible to scrapie	Cannot be used (or sold) for breeding but Can go directly for slaughter for consumption	