Annex 1: Warble fly outbreaks and the use of organophosphates

Introduction

1 This Annex describes how the Government responded to the incidence of warble fly infestations in the 1970s and 1980s. Warble fly was a significant cattle pest in the 1970s and 1980s throughout England and Wales in particular, the greater incidence being in the southern half of the country. Surveys had shown that the average incidence of cattle affected by warble fly passing through livestock markets was over 40 per cent in England and Wales and about 20 per cent in Scotland.243

2 The larvae of the warble fly live within the body of the cow. Their presence may cause distress to the animal and can have severe economic consequences. The meat may be damaged, and heavily infected hides can be useless for leather. Furthermore, milk yield can be reduced by as much as 25 per cent.244

Eradication campaigns

3 In 1978 it was estimated that 38 per cent of cattle in Great Britain were infected with warble fly. The eradication campaign began with the Warble Fly (England and Wales) Order 1978 (SI 1197),245 which relied on compulsory treatment of affected animals in spring with recommendations for voluntary treatment of all susceptible cattle in the autumn.246

4 On 15 March 1982 the Warble Fly (England and Wales) Order (SI 234) (‘the 1982 Order’)247 came into force. This made warble fly infestation in cattle a notifiable disease,248 gave MAFF veterinary inspectors power to serve compulsory treatment notices on farmers whose herds were found to be affected by warble fly, and allowed inspectors to restrict the movement of cattle until the treatment was carried out.249 The 1982 Order required infected cattle to be treated in spring, with a follow-up treatment in autumn.250 The eradication schemes also provided for veterinary inspection of the treatment on farm, and the exemption of cattle from treatment under the authority of a veterinary inspector, if the inspector was satisfied that it was impracticable or inexpedient to treat the animal in question.

243 M54 tab 1 p. 47
245 L9 tab 1
246 M54 tab 1 p. 70
247 L9 tab 2
248 Article 4
249 Article 5
250 Articles 6 and 7
5 By 1983 only localised areas of low incidence remained, and the Warble Fly (England and Wales) Order 1983 (SI No 1382) (‘the 1983 Order’) was introduced. This allowed the Minister of Agriculture, Fisheries and Food to declare an area to be an ‘infected area’ if he or she believed or suspected that warble fly existed in that area, and to require treatment of cattle there.

6 Infected areas were declared at various times, notably after the hot dry summers of 1983 and 1984. After the 1983 Order came into force, Anglesey was declared an ‘infected area’. In 1984 infected areas were declared in six localities; Anglesey, the Lleyn Peninsula in Gwynedd, east Cornwall, parts of Dorset and Wiltshire, parts of north Somerset and south Avon, and parts of the Dumfries and Galloway region. Further orders were made in 1985 covering west Cornwall, east Cornwall, much of south Devon, Dorset and parts of neighbouring counties including most of south Avon, and the Isle of Anglesey and the Lleyn Peninsula. In 1986 the areas subject to orders were west Dorset, neighbouring parts of Somerset, and south-west Devon including Dartmoor.

7 By January 1985, the incidence of affected cattle had declined from the 1978 figure of 38 per cent to less than 0.01 per cent.

8 In 1993 warble fly re-entered the UK in imported cattle, which resulted in the Agriculture Departments increasing serological checks on imported cattle. In England and Wales, 39 areas were subject to ‘infected area treatment’ in the autumn. From 1994, animals found to be infested were sent back to the country of origin. The Animals (Post-Import Control) Order 1995 required all imported bovines (other than those from Northern Ireland or those for immediate slaughter) to be treated with an approved warble fly treatment within 24 hours of arrival at premises of destination.

9 MAFF continues to run a comprehensive control programme under the legislation in force. Whenever infestation is found or suspected, either the individual animals or the herd, and in some cases all animals within three kilometres of the affected herd, are required to be treated, and movement restrictions apply. Blood testing is available where practicable, allowing treatment to be restricted to infested animals only. Regular publicity campaigns are run, and importers are reminded of their obligation to treat imported cattle.

Treatment and dosage for warble fly

10 Under the 1978 Order, farmers were required to treat their cattle with either Phosmet, Famphur or Fenthion – pour-on types of organophosphate (OP) insecticide – or Derris, a contact insecticide. This Order and the subsequent Orders required these products to be applied according to manufacturers’ instructions.
11 Pour-on OPs are effective because of the systemic nature of their action, which ensures the death of a high percentage of larvae before they complete their migration. Non-systemic or contact insecticides remain on the surface of the treated animal.261 Pour-on OPs were applied to cattle along the back of the head and the entire length of the spinal column.262

12 The 1982 Order discontinued the use of Derris as an alternative to OPs, because the activity of Derris meant that it was only effective in destroying larvae as they emerged from the animal. The Government therefore considered it to be ineffective in helping to eliminate warble fly on a national basis.

13 Ivomec (active ingredient ivermectin), an injectible parasiticide for cattle, was introduced to the market in 1981 and provision for its use to treat warble fly was made in the 1982 Order. If Ivomec was used on dairy cows, milk could not be used from those cows for a period of 28 days, in contrast to a six-hour withdrawal period if OPs were used. Accordingly, Ivomec was more commonly used on beef cows and other cattle, as the financial penalties for dairy farmers were severe.263

14 It has been estimated that the peak level of OP usage was around 1979–80, with a reduction in the following years as the infection became less common and the use of Ivomec increased.264

15 However, Mr Mark Purdey, an organic farmer, suggests that OPs were used more extensively in the 1980s, and had a significant impact on the BSE story – see vol. 2: Science for further discussion of his theories.265

261 T16 p. 2
263 T16 p. 63
264 S269A Andrews para. 45; S270 Cook para. 47
265 S23 Purdey para. 9