ADVISORY COMMITTEE ON ANIMAL FEEDINGSTUFFS

39th Meeting of ACAF on 11 September 2007

Discussion Paper

EUROPEAN COMMISSION REVIEW OF THE REGULATION OF COCCIDIOSTATS AND HISTOMANOSTATS AS FEED ADDITIVES - UPDATE

Action: The Committee is asked to give their view(s) on the future regulation of coccidiostats and histomonostats.
EUROPEAN COMMISSION REVIEW OF THE REGULATION OF COCCIDIOSTATS AND HISTOMANOSTATS AS FEED ADDITIVES - UPDATE

Introduction

1. The initial request by the European Commission for information to assist them in the preparation of a report on the phasing out of the use of coccidiostats and histomonostats as feed additives was introduced to ACAF at its 6 March 2007 meeting. During the intervening period the Veterinary Medicines Directorate (VMD) has sought information from interested stakeholders, including the Veterinary Residues Committee, and presented this for consideration by the Veterinary Products Committee (VPC).

2. The purpose of this paper is to provide ACAF with the views of the other interested groups consulted and seek the Committee’s view on the future regulation of coccidiostats and histomonostats.

Background

3. Coccidiostats and histomonostats are currently regulated as feed additives under EC Regulation 1831/2003. Article 11 (1) requires the European Commission to provide a report to the European Parliament and Council of Ministers by 1 January 2008 concerning a decision on the phasing out of coccidiostats and histomonostats as feed additives before 1 January 2012. Following such a decision the availability of these products would depend on their regulation as veterinary medicinal products. Currently, there are no authorised histomonostat feed additives available in the UK.

4. The Commission wrote to the International Federation for Animal Health (IFAH) seeking information on sales of such products, the incidence and prevalence of the current state of coccidiosis, and the use of possible alternatives. The letter was copied to Member States with the intention that they would circulate it to appropriate stakeholders with a view to supplying the Commission with consolidated information. The VMD circulated the Commission’s letter to the coccidiostat manufacturers and conventional poultry producers asking for their opinions. These industry groups were very much opposed to any change in the regulation of coccidiostats, on the grounds that the change would bring about additional costs, which in turn would compromise control of coccidiosis by reducing availability of products. They were also concerned that the current tight controls on the use of coccidiostats could not be replicated under the medicinal products legislation.

6. As the industry’s views were opposed to the current UK governmental position, based on VPC advice in 2003 that these products should be regulated as medicines, the VMD felt that it would be advisable to seek
views from other stakeholders prior to presenting this additional information to the VPC for consideration. In order to present a balanced view, the VMD consulted the organic sector, the Veterinary Residues Committee and relevant consumer organisations for their opinions.

7. The VMD wrote to the Commission on 25 May 2007 and provided a summary of the views of the UK industry. At the same time the VMD told the Commission that they would be writing again once the UK position had been reviewed.

8. At its July 2007 meeting, the VPC was asked to consider the additional information supplied, and provide advice to the VMD to help form a UK position on whether prophylactic coccidiostats and histomonostats should remain regulated as feed additives or be phased out and regulated as veterinary medicines. The information presented to the VPC is annexed to this paper.

9. The VPC advised that the use of coccidiostats and histomonostats should remain under the feed additive legislation.

**Action**

10. The Committee is asked to give their view(s) on the future regulation of coccidiostats and histomonostats.

_Veterinary Medicines Directorate_
_August 2007_
EUROPEAN COMMISSION REVIEW OF THE REGULATION OF COCCIDIOSTATS AND HISTOMANOSTATS AS FEED ADDITIVES

Introduction

1. Article 11 (1) of Regulation 1831/2002 requires the Commission to provide a report to the European Parliament and Council by 1 January 2008 concerning a decision on the phasing out of coccidiostats and histomonostats as feed additives before 1 January 2012. Background information on coccidiostats and information on the substances which are contained in authorised coccidiostat feed additives can be found in Annex 1. Currently, there are no authorised histomonostat feed additives available in the UK.

2. The Commission wrote to the International Federation for Animal Health (IFAH) seeking information on sales of such products, the incidence and prevalence of the current state of coccidiosis, and the use of possible alternatives. The letter was copied to Member States with the intention that they would circulate it to appropriate stakeholders with a view to supplying the Commission with consolidated information. We circulated the Commission’s letter to the coccidiostat manufacturers and the “conventional” poultry producers asking for their opinions.

3. This issue was previously considered by the VPC on the basis of the advice of the VPC Working Group on Antimicrobial Resistance Report published in 2003 when it was agreed that these products should be regulated as veterinary medicinal products rather than feed additives. Therefore the UK’s current position endorsed by the Veterinary Products Committee (VPC) and the Food Standards Agency (FSA), is that the use of coccidiostats and histomonostats should be phased out as feed additives by 31 December 2012 after which their use should be regulated as veterinary medicinal products.

4. The responses from the manufacturers of the products and the poultry industry indicated that they were universally against this position. As a result of the information they have given us, we feel that it would be advisable to make this additional information available to the VPC for consideration. Please see a summary of responses at Annex 2.

5. As the current UK position has not been supported by industry groups we have sent a holding response to the Commission to meet their timetable. In that response, we provided the Commission with a summary of industry responses and we indicated to the Commission that we were reviewing our current position of supporting regulating coccidiostats and histomonostats as veterinary medicines. Following this review we will write to the Commission confirming our position.
6. In order that we achieve a balanced view, we also sought the views of the Soil Association as representatives of the organic producers; consumers organisations and, the Veterinary Residues Committee. Please see a summary of responses at Annex 3.

7. We also sought the views of the Food Standards Agency and in addition we received a copy of a report from the Poultry Veterinary Study Group of the E.U. to the Commission. Please see a summary of these responses at Annex 4.

8. A formal consultation will be held with all stakeholders when the Commission’s Report is published next year.

Recommendation
9. The VMD is minded to ask the VPC to consider the additional information as outlined in Annexes 2, 3 and 4, and provide advice to the VMD to form a UK position on whether prophylactic coccidiostats and histomonostats should remain regulated as feed additives or be phased out and regulated as veterinary medicines.
COCCIDIOSTATS AND HISTOMONOSTATS

Coccidiostats and histomonostats are substances used as poultry feed additives to prevent coccidiosis or histomoniasis (black head).

These substances are authorised only as prophylactic products to prevent coccidiosis or histomoniasis. They are not used to treat the diseases. The products are authorised throughout Europe and differ from veterinary medicinal products in that they are not subject to a veterinary prescription and have different data requirements. However, they must satisfy safety, quality and efficacy.

**Coccidiosis disease**
Coccidiosis is caused by a protozoan parasite and is characterised by diarrhoea and dysentery and, sometimes leads to mortality and financial loss. Control of this infection is especially important in the poultry industry where the prophylactic use of coccidiostats prevents disease from developing.

Several active substances are authorised as coccidiostats, which are used on a rotational basis to help prevent resistance to any one substance. All are antimicrobials, but are not related to those used in human medicine.

**Histomoniasis disease**
Histomoniasis, also known as blackhead, affects poultry but generally only becomes clinically evident in turkeys. It is also caused by a protozoan parasite. The disease leads to wasting and sometimes mortality.

The last histomonostat authorised as a feed additive contained dimetridazole. The authorisation was withdrawn in the EU by the Commission in 2002 during a re-evaluation procedure because of inadequate safety data.

**Feed additives**
Feed additives are substances, which are intentionally added to feed or water to favourably affect the characteristics of the feed, satisfy the nutritional needs of animals, favourably affect animal production, performance or welfare, and environmental consequences of animal production and in addition substances which have a coccidiostatic or histomonostatic effect when administered as prophylactics.

**Sales (from the VMD Sales Data Report 2006)**
In 2004 in the UK, sales of coccidiostats as active ingredients amounted to 224 tonnes of which 173 tonnes were ionophores. In 2005, sales of coccidiostats as active ingredients amounted to 231 tonnes of which 173 tonnes were ionophores. At the time of writing, the 2006 figures were not yet available.
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Responses from the UK pharmaceutical and the Poultry Industry

The following paragraphs will reflect the views of the UK Industry stakeholders, which include the National Office of Animal Health (NOAH), who represent the manufacturers of the additives; the Agricultural Industries Confederation (AIC) who represent feed mills; the National Farmers Union (NFU) the British Poultry Council (BPC), who represent the poultry meat sector and, the British Veterinary Poultry Association. The views of the independent Advisory Committee on Animal feedingstuffs (ACAF) are also included here;

1. **Summary of views from stakeholders:**

   1.1 To maintain availability of in-feed coccidiostats, should they cease to be feed additives, they will have to be authorised as veterinary medicines.

   1.2 The VMD’s current position, endorsed by the VPC and FSA, is that these additives should be regulated as veterinary medicines. However, in light of the industry’s universal concerns, the VMD is intending to present new information to the VPC and the FSA to review its current position.

   1.3 Industry believes the potential for very large additional costs on the animal health industry means there is a major risk to product availability (for both major and minor species) with potential impacts on animal health and welfare.

   1.4 The ability to choose from current range of highly regulated coccidiostats not only effectively controls a devastating disease but also protects human health and the environment.

   1.5 Industry opinion is that the current system of regulatory control which allows coccidiosis to be controlled at relatively low cost also allows the EU poultry industry to be reasonably competitive.

   1.6 Industry opinion is that regulating coccidiostats as veterinary medicines would bring no real gains and would increase risks to human health.

   1.7 Industry believes the use of therapeutic antibiotics authorised as veterinary medicinal products will increase.

   1.8 Industry believes there will be greater dependence on imported poultry meat from Third Countries.

   1.9 Industry strongly urges the Commission to maintain the regulation of coccidiostats and histomonostats under the feed additive legislation.


**Detail**

1. **The possible use of alternative products**

Although vaccines certainly have a significant role to play in control of the disease, particularly in breeding stock, their use in commercial broiler flocks remains limited. The poultry industry and animal health and welfare are best served by safeguarding for the future the current range of products.

Vaccines are applied at very specific points in the life-cycle of poultry flocks. Accuracy of application appears to be a concern, with the possibility of some poultry within a flock achieving sub-optimal protection. In comparison with ionophore-based in-feed products, there may be less long-term effect on gut microbial balance, leading to poorer gut health. One consequence of a wide-spread switch to vaccines could therefore be an increase in the requirement for therapeutic antibiotics.

*The VMD’s position is that the products work within the terms of their authorisations. They are given at time specific points and are delivered in water or feed; both routes may have some degree of a less accurate delivery than injection, but oral intake is a common method for all poultry vaccines and therefore is no more of an issue for these vaccines than any others. All authorised vaccines have durations of immunity appropriate to the type of bird (e.g. broiler) in which they are intended for use. Vaccine manufacturers have argued that the introduction of these vaccines would lead to lower use of antibiotics.*

The use of “alternative therapies” such as essential oils, herb extracts, plant and yeast extracts, acids etc. although occasionally reported to have anticoccidial efficacy, have shown limited and inconsistent results in carefully controlled scientific trials and as such do not represent realistic options in commercial operations. Should an effective alternative be found, presumably it would itself be subject to the same controls as the current coccidiostats, and thus problems associated with a transfer to veterinary medicine control would remain even if alternatives were found.

2. **Incidence and prevalence of the current state of coccidiosis**

Coccidiosis is a ubiquitous problem; however the use of coccidiostats maintains incidence and prevalence at a manageable level. If availability of coccidiostats is compromised, secondary infections would occur and the therapeutic use of antimicrobials would increase. Given that the current range of coccidiostats is not related to antimicrobials used for human medicine and some of those used as veterinary medicinal products are related, the opportunities for the development of resistance to human antimicrobials through use in animals may well increase.

3. **Regulation as veterinary medicinal products**

If coccidiostats are phased out as feed additives, in view of the above information it is likely that the only viable alternative is that these products are authorised as veterinary medicinal products. In addition The Veterinary Products Committee Sub Group on Antimicrobial Resistance recommended in their draft report that coccidiostats should be evaluated and regulated in the same way as veterinary medicines.

“Given the concerns raised by expert groups on the therapeutic and prophylactic use of antimicrobials in livestock it is recommended that all such use should be restricted under veterinary control. Consequently, all antimicrobials licensed for therapeutic and prophylactic use in livestock should be prescription only medicines. The
Working Group is of the opinion that coccidiostats are used solely for the prevention or treatment of disease in animals and should therefore be authorised as veterinary medicinal products under EU legislation 81/851°. (Now 2001/82).

Therefore, VMD’s current position is that as the products are used for the treatment and prevention of disease they should be authorised according to the criteria for all veterinary medicines. This approach supports the UK’s strategy to address concerns over antimicrobial resistance.

The industry provided comments on the benefits and risks of this position:

1. Benefits
One respondent commented that this would help reduce coccidiostats residues in poultry meat for human consumption, a problem attributed to poor feed bin management. Whilst the residues are not a human health problem, consumers are of the opinion that any residues in food were unwelcome. The VMD’s position is that poor feed bin management was related equally to VMPs and additives, the residue issue is a result of the mill management and not whether it is an additive or VMP.

Another respondent supported this position and made the point that Defra and the FSA should work closely with the poultry industry in particular to ensure they were prepared for any phase out. Good biosecurity and farm management were also important in the control of disease.

There were no perceived benefits put forward by the industry

2. Risks
The following comments are all attributed to the industry and not the VMD.

2.1 Costs – Availability
A transfer to veterinary medicines legislation is likely to be associated with additional data requirements, such as new scientific dossiers and changing purity specifications. While the feed additives are regulated to a high set of standards, they are inevitably different standards from those for veterinary medicines as EFSA and CVMP have developed requirements separately. Any such costs of generating new data could lead to loss of products, particularly indications for turkeys and rabbits. One aspect of a potential transfer to veterinary medicines which is associated with uncertainty and potentially critical costs is that of the potential in future for the VMD to require products to meet the standards for VMPs. While there are no European Pharmacopeia monographs for the substances in question at this time, there is a possibility that they might be developed in future. Achieving this would require enormous investment. For all these reasons, it is likely that companies will choose to drop out of the EU market for some substances, narrowing the remaining range of available products.

Loss or restriction of the use of in-feed coccidiostats is likely to have a significant impact on bird health, as a result of poorer coccidiosis control and, directly and indirectly, on bird welfare through disease and poorer litter quality.

2.2 Costs – Prescriptions
In feed veterinary medicines are subject to veterinary prescription. It is estimated that 80% of poultry feed would then become prescription-only. This would impose major additional costs on vets, feed mills and thus poultry farmers. Obviously, there would be additional administrative costs associated with prescribing and supplying to that prescription, but more subtly, major additional burdens are imposed once the choice of coccidiostats is moved from the feed mill to individual vets caring for poultry for independent and smaller producers. In such a scenario, co-ordinating production runs of feed with frequent changes of coccidiostat, at the same time as coping with currently prescribed feed additives, and maintaining low levels of carry-over into finisher feed becomes very difficult, and could lead to increased costs. Under the current legal requirements for veterinary prescriptions the following cost factors apply, assuming a veterinary prescription charge of £50.

a. Broilers
   The total additional cost of prescriptions to the broiler producer will be 1.28M to £1.70M per annum.

b. Turkeys
   The total additional cost of prescriptions to the turkey producer will be £60,000 per annum.

c. Layer replacements
   Little cost impact as a vaccination programme is generally followed.

In cost terms, the change of status from additive to VMP for coccidiostats and histomonostats will add direct costs in the region of £1.34M to £1.76M per annum to the poultry industry whilst adding further administrative burden.

3. Veterinary medicine means less control
Moving from feed additive to veterinary medicine product authorisation would lessen, not enhance control of coccidiostats. Most users of these products are large feed mills or integrated poultry producers who are totally familiar with feed additive legislation and who have a detailed knowledge approved under Regulation 183/2005 on feed hygiene, a condition of which is that they apply HACCP principles. Coccidiosis control is important and coccidiostats have been used successfully for many years without a requirement for direct veterinary intervention, with few reported problems. Most large poultry producers will either employ a veterinarian or use consultant veterinarians who will be involved in formulating the anticoccidial policy for animals in their care. As such, although not currently prescribed, these products are already used under veterinary supervision in these companies. Another potential lessening of control is that the scope for off-label use becomes much greater. It is a concern that it would make the job at feed mills even more difficult, and could lead to errors as vets away from the big integrators, not experienced with use of coccidiostats, were suddenly given responsibility for product choice and dosage, and experts at feed mills sidelined and becoming responsible simply for doing what the prescription says.

In this context, while there may be an initial perception that veterinary control brings better control, in practice control is currently vested with expert professionals, and a move to veterinary medicines control would lessen that effective professional input.
4. Imports

Industry believe phasing out of coccidiostats and histomonostats as feed additives, resulting in a change to veterinary medicines, would be contrary to the principles of Better Regulation through increasing administrative burdens and increasing costs without commensurate gains in human or animal health. The poultry industry is a highly competitive global industry, which directly employs 400,000 people in the EU. They believe that the transfer to veterinary medicines is contrary to the aims of the Lisbon Agenda of making the EU more competitive. There is an awareness that the UK Veterinary Residues Committee and consumer activists have expressed doubts about whether the quality of residues control is the same in other countries and, whether imported meat is being adequately tested. If these concerns are well founded, then transfer to veterinary medicines control resulting in more meat imports would further add to consumer risks.

5. Current regulatory controls

Regulatory control should protect human health, animal health and the environment, while seeking to minimise costs on the primary producers, the feed industry and the animal health industry. The industry view is that the current system does that well and is not in need of radical change. The current system protects human health.
Views of the Soil Association as representatives of the organic producers; consumers’ organisations and, the Veterinary Residues Committee:

No responses were received from the consumer representatives other than those members of the Veterinary Residues Committee (VRC). Therefore below is a summary of responses from the Soil Association and the VRC.

The Soil Association (SA).

Summary

• The Soil Association strongly supports the current VMD position that the use of coccidiostats and histomonostats as feed additives should be phased out and that their use in future should be under prescription and regulated as veterinary medicines.

• Greater efforts should be made by the industry to reduce the incidence of coccidiosis through a reduction in stocking rates and the use of clean grazing systems in outdoor production.

Reasons for supporting the requirement for prescriptions.

1. Despite renewed efforts from the industry, residues from some coccidiostats, or their metabolites, continue to be found in food, which can pose real risks to the health of consumers. All efforts should be made to increase the effective regulation of these products, since residue-testing programmes can only ever sample a very small proportion of the produce on sale.

2. Resistance to coccidiostats develops readily; therefore industry has developed rotational programmes to limit this. Nevertheless, a large number of chemicals have become ineffective due to their excessive use. Bringing the use of coccidiostats under veterinary control would be an important contribution to limiting their use wherever possible and prolonging their effective life.

3. There is some scientific evidence showing that the use of ionophore coccidiostats can increase the incidence of salmonella in poultry. This is probably because ionophores are gram-positive antibiotics and, since salmonella are gram-negative micro-organisms, they are not killed by such drugs but can gain a competitive advantage from the reduction of gram-positive bacteria in the gut. While the incidence of salmonella in chickens has fallen in recent years due to the introduction of vaccination, vaccines in general provide immunisation only against specific strains of salmonella. In theory this may create an environmental niche for the emergence of new strains of salmonella.

4. Many coccidiostats have growth promoting effects. Both monensin and salinomycin were previously licensed as growth promoters and lasalocid is currently authorised as a growth promoter in a number of countries. The increase in the sales of coccidiostats in the UK since the banning of antibiotic growth promoters began in 1997 suggests that some of the current usage may not be essential for the control of coccidiosis and may be associated purely
with growth promotion. This may also partly explain why the industry opposes the need for prescriptions which might have the effect of reducing the overall sales of these products.

VMD comment - the SA say that monensin and salinomycin were previously used as AGPs. However, these were not authorised for use in poultry, they were for cattle and pigs respectively, these ingredients would therefore not necessarily be used as AGPs in poultry. No poultry AGP is included in this comparison.

SA note that lasalocid is used as an AGP in some countries. It is authorised as both a feed additive and a VMP in the UK for use in poultry and gamebirds respectively. It has been noticed that there is a marked change in the relative proportions of these sales reported over time. For the last 3 years a much bigger proportion of sales has been as a VMP rather than a feed additive.

SA notes that there has been an increase in sales of coccidiostats in the UK since 1997. We believe this to be incorrect. Our sales data report states that we have no accurate data from before 2000 and that any figures quoted for this period are below actual amounts. There was a small increase in sales from 2000 to 2001 but from this date onwards to 2005 (the most up to date published figures) there has been a steady decrease in annual sales. This downwards trend is not an artifact of decreasing animal numbers (poultry number vary annually but not on a downward trend) or a reflection in decrease in live weight slaughter of poultry.

SA also suggests that at least some of the current coccidiostat usage is for growth promotion. We have received no evidence to support this theory.
The Veterinary Residues Committee

We received comments from seven members of the Committee, the Chair, two consumer representatives, a pharmaceutical industry representative, a vet, an analytical chemist and a food safety risk assessment representative, who is also a member of the FEEDAP Panel of the European Food Safety Authority who evaluate feed additive applications.

Summary

- The Chair summed up that the majority of VRC members are content with the position put forward by the pharmaceutical and poultry Industry in Annex 1, that coccidiostats and histomonostats should remain regulated as feed additives. This said with the proviso that at least one member did not share the view of the majority.

- Consumer health and safety are paramount. Also important is a thriving UK poultry industry, which provides a vast amount of relatively low cost protein for UK consumers. It is true that consumers do not want ‘additives’ in their food, but there is also a need to accept that the use of substances in food production is necessary, provided it is strictly approved and controlled to the highest standards. It is also clear that there are animal health and welfare issues.

Detailed comments

The majority of members were in favour of retaining coccidiostats and histomonostats as feed additives.

Those against offered the following comments:-

1. Consumers want to be assured that they are eating poultry which is free from any medication or bacterial infections or contaminants or harmful products, therefore, if this can be achieved by either licensing/phasing out of coccidiostats, then we should go down this route.

2. Questions were asked: Organic chickens don’t have these additives in their feed, so why others? If extra costs to manufacturers lead to withdrawal of products from the market, will there be an animal welfare issue? What other options do poultry producers have in order to prevent/control coccidiosis? (Veterinary member comment “Organic chickens are kept at lower stocking density but can still be affected by coccidiosis. They tend to use vaccination which is not applicable to all types of poultry and is considerably more expensive, which may be recouped by the high price commanded by organic products.”)

Those members who were in favour of retaining coccidiostats and histomonostats as feed additives offered the following comments:-

3. The data requirements regarding safety are very similar for coccidiostats used as feed additives and those licensed as veterinary medicines. The scientific assessment was and is now at least to the standards of Veterinary Medicines. There is one major difference in the manufacturing dossier. Anticoccidials can be a defined mixture of an active ingredient and other extraneous
ingredients, this defined mixture is tested for toxicity, carcinogenicity and mutagenicity using the same testing regimens expected of veterinary medicines. The “unpurified” products are demonstrated to be safe.

However under veterinary medicines legislation, the active ingredient has to be purified, therefore an extra step would have to be introduced into the manufacturing process. This would significantly increase the cost and change the nature of the input into the premixes, as the ionophores are only soluble in organic solvents. This would result in a huge cost to the manufacturer, following on from costs already incurred to enable re-evaluation of these products to achieve brand specific approval. Therefore, it is likely that important products will be lost risking animal health and welfare. Another respondent said that the very real logistical nightmare or reregistering products as pharmaceutical grade will lead to a loss of products.

4. A point not already made in the industry Annex, currently anticoccidials can only be used in approved feed mills in exact accordance with their authorisation. If they became veterinary medicines it would become possible for veterinary surgeons to use them for different species and different doses under the cascade. This in effect leads to less control rather than more.

5. There is a continuing need to control coccidiosis in poultry when they are managed in large numbers. The need to maintain a level playing field for costs, to both home and third country producers remains an important factor.

6. Existing regulation of feed additives, supported by the concentration on feed mills to avoid carry-over and improved, on farm bin management offer the safest approach for both consumers and the industry, therefore present arrangements should be retained.
Responses from the Poultry Veterinary Study Group of the EU (PVSG) and the FSA.

The Poultry Veterinary Study Group of the EU.
The Veterinary Group acknowledges that, from the painful experience that they have had with histomonostats, that it is very difficult to find solutions when realising too late how dramatic the situation can be as a result of a “medicine” ban. For this reason, the PVSG decided to organise a working group on coccidiosis. The objectives of the group were:

a) To evaluate the consequences of a coccidiostats ban on poultry health, poultry welfare and poultry farming.
b) To evaluate the efficacy of alternative methods to prevent coccidiosis.
c) To evaluate the opportunity to use coccidiostats as medicines only.

Summary
- From the conclusions of this working group, they are deeply concerned that there should be any suggestion of a ban on the use of coccidiostats as feed additives.

Detail
The PVSG position and recommendations is repeated below. We can provide you with a copy of the full report should you wish.

1. There is no direct need for anticoccidials as feed additive to control coccidiosis in rearing breeders, layers and alternative broiler production like organic chickens or free range chickens according conditions described in the EU regulation: Vaccination is the first choice in these kinds of poultry production, the choice for anticoccidials would only be necessary in case of non-availability of vaccine and in case of lack of efficacy of the vaccine.

2. In turkeys there is no proven alternative to anticoccidials available.

3. In conventional broilers there are no proven alternatives available.

4. For the kinds of production in which we have no proven alternatives, anticoccidials as feed additives are the first choice to control coccidiosis and must remain as they are placed now.

5. There is no danger that they will cause resistance in humans: Mode of action and the non-use of associated substances in humans provide that there is no hazard or risk associated with the use of anticoccidials as feed additives.

6. There is no need to cease with anticoccidials as feed additives under scientific based verifications and we see little benefit in requiring that anticoccidials are subject to veterinary prescription as a medicated feed. The use of a control program looking into efficacy, resistance, programs would be advisable (e.g. Swedish program).
7. Phase-out of anticoccidials would have a very big impact on animal welfare and international competition. Therefore it is necessary to include investigation of socio-economic aspects and the consequences for the whole production chain within the MS.

8. We as PVSGEU incorporate almost 100% of poultry veterinary experience within the EU would prefer and recommend that anticoccidials remain as safe and proven feed additives as the only effective and recommendable system currently available. We have no verified alternative, nor expect one in the near future.

9. The requirement to provide data to establish MRL’s under brand specific approval has already brought the existing anticoccidials in line with medicines in this key aspect of product safety. In some cases this led to a shortening of the withdrawal period, suggesting that there was already a valid science-based safety assessment under the feed additives regulations, which, if anything, erred on the side of caution.

**The Food Standards Agency**
The Food Standards Agency shares the current view of the Veterinary Medicines Directorate that the products in question would be better placed within the control of the European and domestic veterinary medicines legislation. They contend that this line is defensible from a consumer safety perspective and they are not aware of anything of significance that has happened in recent years that would require them to change their stance. Nevertheless, they note the views recently expressed by some industry respondents to the initial VMD request for information and that the matter is to be considered by the VPC. The Food Standards Agency will review their line in the light of any advice from the VPC.
Summary

Because coccidiosis is impossible to eradicate and can be devastating if allowed to take hold, prevention through the use of coccidiostats is essential in commercial production. The products need to be applied continuously, usually via the feed for prevention but occasionally via drinking water when treatment is needed. Vaccines against coccidiosis in poultry also have a place in controlling the disease and they are used more commonly in parent and grandparent stock.

Regulation (EU) 1831/2003 includes the option to reconsider the future status of coccidiostats with the view to their possible phase out. Now, four years on, European broiler producers have gained additional experience that strongly points to the fact that there is a continued need for coccidiostat products to ensure a sustainable poultry production. A phase-out of coccidiostat feed additives is not realistic because it would have significant detrimental effects on animal health and welfare, and thus EU poultry production, especially since effective alternatives are not available.

It is important to highlight the fact that, despite the major research programmes embarked upon by the manufacturers of coccidiostats, conducted over many years, no effective alternative products or approaches for controlling coccidiosis in commercial situations have been discovered. Hence the need to preserve the status of the currently available products.

Since coccidiostats (ionophores and chemicals) are not used in human medicine, there is no public health issue associated with antibiotic resistance. Indeed, due to the unique mode of action of certain coccidiostats, the potential for bacterial resistance to occur is negligible to non-existent.

The major stakeholders, including the coccidiostat manufacturers (IFAH-Europe), the European feed compounders (FEFAC) and the poultry producers (AVEC), are convinced that the current arrangements, whereby the products are authorized under the Feed Additive Regulation, should continue. Excellent controls are in place and the system is well understood and tightly adhered to via quality systems including GMP and HACCP.

1. Coccidiosis and Control Measures

1.1 Nature of coccidiosis

The disease coccidiosis is caused by a highly host-specific protozoan parasite, *Eimeria*, of which there are seven main species that affect poultry, five others that are specific to turkeys and six in rabbits (4, 14). Coccidiosis is also a problem in cattle and pigs, but the main focus of this report is poultry and rabbits since that is by far the largest segment that uses control measures.

The organism is widespread in the environment, can be carried in its resting form in the environment by vermin and birds and is highly tolerant to weather conditions and disinfectants, making it virtually impossible to eradicate (19) Once ingested, it rapidly invades the intestinal tissues, multiplies and is again excreted as multiple viable ‘eggs’ (oocysts) that re-infect neighbouring animals and become disseminated into the surrounding litter and buildings.
The effect on the host, without treatment, ranges from mild intestinal inflammation and poor weight gain resulting from depressed feed intake through loss of appetite, through to haemorrhagic diarrhoea and death, depending upon the severity of the infection and the species involved (2, 13).

1.2 The Prevalence of Coccidiosis
In commercial poultry and rabbit production, although no precise prevalence and incidence data of clinical and subclinical coccidiosis are available (1, 14), it can be assumed that the parasite is present in all flocks and facilities.

1.3 The Cost of Coccidiosis
Coccidiosis is a widespread health problem in broiler industry and is probably one of the most expensive diseases of commercial poultry production (8, 22). It is virtually impossible to imagine what the economic impact would be should coccidiostats become unavailable or less accessible.

Even today, with the full complement of coccidiostats being available, subclinical outbreaks can occur and even clinical outbreaks in exceptional circumstances. Estimates of economical losses in these situations vary a lot according to different authors. Worldwide losses due to coccidiosis in broilers were estimated to be from US$ 750 million to more than US$ 1.5 billion/year, chiefly due to subclinical losses and despite the use of coccidiostats in continuous medication programs (4, 21 Weber (1997) cited by 17).

Nationally, in the UK for example, total losses due to coccidiosis in chickens in 1995, when the annual production was 625 million broilers, were estimated to at least GB £39 million. Of these losses, 17.5% were due to the cost of prophylaxis and therapy of commercial broilers, and 80.5% were due to mortality and lack of production (20). However, according to Bennett (1), these losses can be estimated to GB £12.6 million (between GB £10.2-14.2 million). Despite the huge variations of these estimates, they consistently demonstrate that the major cost of the disease is related to the lack of production and not to the cost of treatment and prevention measures.

1.4 Coccidiostats
The nature of the parasitic infestation is such that coccidiosis is present at all poultry farms even in the presence of high sanitary standards and management. In commercial production, the main method of controlling the disease, in conjunction with strict hygiene and bio-security methods, is through the addition of small, precisely measured, amounts of coccidiostats to the feed. Generally, the coccidiostats need to be fed for the life of the animal (in the case of broilers) in order to protect against re-infection from the ever-present oocyst stage of the disease.

The availability and the continuous preventive use of coccidiostats has significantly contributed to the development and growth of the poultry production as well as health and welfare. A major boost in coccidiosis control occurred in the 1970’s with the introduction of monensin as the first ionophore coccidiostat; this allowed broiler production to develop to its present scope (21). Prior to this, only chemical coccidiostats were available with their somewhat erratic efficacy due to rapid build up of resistance by the parasite. Coccidiosis outbreaks were common and difficult to treat or prevent.

There are now six ionophore coccidiostats in use today. Part of their effectiveness lies in the fact that whilst they kill the majority of the invading parasites, they allow a trickle of organisms ‘through the net’ enabling a degree of host immunity to build up. In addition, there are two synthetic chemicals that play a vital role in conjunction with the ionophores, allowing practitioners to rotate the products from crop to crop, or use shuttle programmes to gain the best control whilst minimising resistance development.

Through their consistent control of the disease and positive effect on feed conversion, the coccidiostats also have a significant impact on the environment by minimizing feed wastage and
the effect this has in manure output. It has been estimated that EU-wide, poor control of
coccidiosis could result in approximately 500,000 metric tonnes of wasted feed and a significant
increase in manure output due to feed spillage.

1.5 Vaccines
Commercial use of coccidiosis vaccines began in 1992 with the introduction of a vaccine for
replacement breeders and laying pullets, followed in 2000 by a vaccine for commercial broilers.
Currently vaccines are used as the primary method for coccidiosis prevention in breeding flocks
and to some extent in laying hens and broiler chickens, since they help induce immunity.
Presently, two vaccines are available EU-wide (Paracox® and Paracox® 5) and one other
(Livacox® T) is available in a limited number of countries (Czeck Republic, Italy, Latvia and
Slovak Republic).

Vaccines have proved to be a valid addition to coccidiosis control in commercial broilers as well.
They complement the present range of in-feed anticoccidials and in some specific situations,
where the climatic and challenge conditions are ideal, they are used on their own. It is estimated
that approximately 12% of the commercial broilers produced in Europe rely for coccidiosis control
on vaccines alone, much of this being in the Southern Europe where season and climate favours a
lower coccidiosis challenge.

1.6 Alternatives – herbal products
Herbal extracts under controlled disease challenge have not been shown to provide measurable
coccidiosis prevention. The limited published research by independent institutes such as ITAVI
(3) shows no difference between an herbal product and an infected negative control in mortality,
litter score, live weight gain and feed conversion index.

No authorization for an herbal product or herbal extract with a coccidiostat indication has been
granted in Europe up to this date. Therefore, no consumer safety data and no manufacturing data
have been reviewed for these products.

Herbal products do not represent an alternative to feed additive coccidiostats.

2. Impact of a possible phase-out of coccidiostat products

2.1 Animal health and welfare
Absence of effective coccidiostats would, within months, lead to unacceptable animal health and
welfare problems on an EU-wide scale due coccidiosis outbreaks on most farms.

Coccidiosis has a huge impact on animal welfare through the morbidity and mortality associated
both directly with the disease and indirectly via secondary diseases following coccidiosis
infection. In chickens and less frequently in turkeys, a mortality of 5-6% up to 12-15% and a
morbidity up to 100% might be recorded during severe outbreaks of clinical coccidiosis (4, 12, 15,
20). Mortality and morbidity are also worsened when coccidiosis acts synergistically with
immunosuppressive diseases, such as Marek’s and infectious bursal diseases (14). Morbidity
affects bird welfare directly through the suffering due to disease but also through the fact that
diseased birds become more “timid” and as a result suffer from lack of access to feed and water
through competition with more healthy birds (10).

Wet litter favours the occurrence of other welfare insults by affecting the environmental
conditions in which birds are living (5, 11). Diarrhoea is a primary cause of wet litter and
coccidiosis is one of the most frequent infections responsible for this digestive disorder (14). By
damaging the epithelial lining of the intestinal tract, coccidiosis facilitates the occurrence of other
diseases, such as necrotic enteritis (Clostridium perfringens) and salmonellosis (e.g. Salmonella
typhimurium)(14). These secondary infections will compound the diarrhoea resulting from the
coccidial infection. Wet litter has been shown to impair animal health by favouring parasites and bacterial multiplication but also by constituting a degrading environmental condition for the birds (2, 10, 19, 20). Coccidiosis and wet litter establish a vicious cycle. The spread of coccidiosis is favoured by the humidity in the wet litter, which in turn becomes further dampened by the occurrence of the diarrhoea produced by the birds and caused by the parasite.

Wet litter is the primary cause of air humidity and ammonia emissions. They are the two most serious environmental factors aggravating bird suffering with the occurrence, for example, of footpad dermatitis and respiratory diseases (6, 9, 18). Footpad dermatitis is caused by a combination of moisture and chemical irritants present in the litter and may be observed as mild to severe inflammatory lesions with hyperkeratosis and discolouration to deep swelling and ulcerative lesions causing severe pain. The average flock prevalence of this condition has been reported to be between 5 and 10%, with a range of between 0 and 100% in different flocks (2). Foot pad dermatitis is usually associated to other contact dermatitis, such as breast blisters and hock burns (2, 13, 16, 18).

All these lesions can be a gateway for bacteria that might induce a septicaemia and arthritis, with staphylococci bacteria, etc (2, 18). Footpad dermatitis and other associated infections constitute a serious welfare issue (2, 7, 18). Indeed, it has been suggested that broilers with severe foot-pad dermatitis can suffer from pain-induced inappetance (13), leading to further welfare problems from malnutrition.

The presence of coccidiosis can also serve as one of the instigating factors for necrotic enteritis, a rapidly spreading and lethal bacterial disease which requires antibiotic treatment. Hence, there can be other significant consequences if the disease is poorly controlled.

2.2 Farmers
Poultry farmers, in the absence of effective coccidiostat control, would be unable to produce at anything like the present scale with the inevitable disastrous financial consequences. The structure of the industry would change dramatically to free range-type production on a semi-industrial scale. Consumer demand could only be met by a massive increase in imports from third countries where adequate coccidiostat control would still be available.

2.3 Production without coccidiostats
In the EU, there is as niche production of ‘drug free’ chickens with limited or no use of coccidiostats. Some control is claimed by herbal products with no proven efficacy. Those production modes suffer from a lack of adequate protection against coccidiosis. The danger exists of an increased use of therapeutic (water soluble) coccidiostats and other veterinary antibiotics to treat secondary bacterial infections such as necrotic enteritis. Since the parasitic infestation remains present, those producers continue to rely on sporadic use of in-feed coccidiostats or therapeutic use of chemical coccidiostat products. EU-wide reliance on the limited number of chemical therapeutic products would rapidly lead to resistance and lack of efficacy of the available compounds. Large scale attempts by commercial producers to replace coccidiostats by chemical therapeutic treatment programs so far have failed.

2.4 Coccidiostats authorized as Veterinary Medicines
A limited number of chemicals are approved for veterinary application under Directive 2001/82/EC, as amended by Dir. 2004/28/EC. These can be effectively used in case of sporadic coccidiosis outbreaks which may occur in absence of a coccidiostat in the feed, or in the case of resistance development, or even the ineffective use of a vaccine. The veterinary alternatives are very sensitive to resistance build up and cannot be relied upon for standard coccidiostat control programs.

Due to the nature of the disease it is more appropriate to prevent the occurrence of the disease rather than to treat it. Prevention avoids major animal welfare problems since clinical signs
(reduced feed intake, diarrhea, mortality, etc) only occur when the *Eimeria* species are in a late stage of development and the oocysts are largely excreted, thereby infecting other birds.

### 2.5 Large scale Imports

A phase-out of coccidiostats in Europe would lead to a large scale downsizing of EU production and a further massive increase of poultry imports.

If the EU were to phase out in-feed coccidiostats, the relevant institutions could well require equal standards to apply to imported meat, i.e. to be produced without use of coccidiostats, although this may lead to WTO challenges. This would be a logical measure to assure consumers that the imported meat was produced to the same standards as that produced locally.

Then, the same arguments would apply. In those non-EU producing countries, the production without coccidiostats is not an option for the same reasons mentioned above.

### 2.6 Brand Specific Approval (BSA) standard

The concept of BSA quality standards for coccidiostats as required by Regulation (EC) 1831/2003 was introduced *to ensure a greater degree of protection of animal and human health and of the environment*; in other words, to ensure that only products complying with strict quality criteria can enter the food chain and to avoid entrance of low quality products in the food chain. This is presently adhered to strictly for meat produced in the EU but not implemented on imported meat. A similar distortion by not only restricting the use of coccidiostats to BSA products but by phasing out coccidiostats, would create an impossible situation and result in the relocation of production to third countries with potentially lower food safety standards.

For this reason, the EU should consider also today to require that meat imported from third countries complies with EU quality standards, including use of coccidiostats produced in accordance EU BSA quality standards. Presently, this is not the case and non-EU producers have access to a much wider range of coccidiostat products. Some third countries still allow the use of lower quality products for their local and export production to the EU. It is only fair for EU consumers and producers to require the use of only high quality BSA approved products as used in the EU to guarantee to EU consumers the same standards and level of protection on imported meat.

### 2.7 Transfer into Veterinary legislation (Directive 2001/82/EC)

A switch from Feed Additive legislation (Regulation EC 1831/2003) into a veterinary status (Directive 2001/82/EC, as amended by Dir. 2004/28/EC) for all coccidiostat products would not achieve the objectives of reduced use or increased controls for a number of reasons:

#### 2.7.1 Use levels would remain unchanged as all broiler flocks would require adequate protection due to widespread prevalence of the disease.

#### 2.7.2 Currently we have a professionally EU harmonized system which is effectively monitored and controlled by the competent authorities. The present Regulations 1831/2003 and 183/2005 are very strict on the application of the products, limiting the use and control checks to establishments which are authorised and regulating the application within very strict use levels and withdrawal times. Variations to recommended dosage regimes are prohibited under the current system.

#### 2.7.3 Most, if not all, feed producers make use of rotation programmes in order to maintain efficacy of the coccidiostats; in other words, all farms change to other products at the same time after a certain period. This works well today. In some Member States, where veterinarians operate independently from feed manufacturers, a move to veterinary legislation and hence veterinary prescription could lead to them having the power to apply their own preferences for certain coccidiostats, consequently disturbing the rotation programmes and jeopardizing the efficacy of
the products. Of equal or greater concern would be the sheer logistics of requiring veterinary prescriptions for the production of approximately 18 million tonnes of medicated feed (see following table).

### 3. Usage of Coccidiostats by the European poultry industry

The use of coccidiostats in the EU as estimated by IFAH-Europe is summarized in the table below. The major use is in broilers and turkeys.

<table>
<thead>
<tr>
<th>Type of feed</th>
<th>Volume '000 tonnes</th>
<th>% use</th>
<th>With coccidiostat '000 tonnes</th>
<th>No coccidiostat '000 tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>coccidiostat</td>
<td>vaccine</td>
<td>blank</td>
</tr>
<tr>
<td>BROILER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broiler starter</td>
<td>3,825</td>
<td>84%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Broiler grower/finisher</td>
<td>13,515</td>
<td>84%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Broiler withdrawal</td>
<td>8,160</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Total Broiler</td>
<td>25,500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TURKEY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey starter/grower</td>
<td>2,050</td>
<td>97%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Turkey withdrawal</td>
<td>6,150</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Total Turkey</td>
<td>8,200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broiler breeder</td>
<td>2,550</td>
<td>2%</td>
<td>98%</td>
<td>0%</td>
</tr>
<tr>
<td>Replacement pullets</td>
<td>2,000</td>
<td>15%</td>
<td>50%</td>
<td>35%</td>
</tr>
<tr>
<td>Rabbit</td>
<td>2,400</td>
<td>45%</td>
<td>0%</td>
<td>55%</td>
</tr>
<tr>
<td>Total other</td>
<td>6,950</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>40,650</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Industry Data*

In the absence of effective alternatives, other than inclusion of a vaccine in a preventive rotation program, coccidiostats are widely used in broiler production; it is estimated that some 86% of all commercial broilers grown in the 27 Member States of the EU received a coccidiostat in their feed.

Use in turkeys is also widespread and, due to absence of any alternatives for prevention, it is estimated that 97% of all starter/growing turkeys reared receive a coccidiostat for part of their life (usually the first 16 weeks, representing approximately one-third of the total feed consumed).

For both broilers and turkeys there is a minor production of so called ‘biological products’, where the animals are reared without any coccidiostat or antibiotic treatment.
Coccidiosis control is important in replacement pullets and here, like with breeding stock, vaccines are more widely used than in feed products. In the case of rabbits where there are no vaccines, roughly half the annual feed production of 2.4 million tonnes is contains a coccidiostat.

Overall, in the EU 27, of the estimated 40.65 million tonnes of feed produced annually for broilers, turkeys and rabbits, some 18.33 million tonnes is manufactured with an in-feed coccidiostat whilst the remainder, the so-called withdrawal feed, is blank.

4. Legal status

Since the 1970’s, the coccidiostats have been regulated under the Feed Additives Directive (Dir. 70/524/EEC, and amendments) which is now replaced by Regulation 1831/2003. As such, they have not been subject to veterinary prescription status, essentially since they are required routinely in the feed of commercial broilers and turkeys.

However, in practice they are administered and controlled under the responsibility of qualified personnel and with involvement of veterinarians. All major poultry integrations today retain or contract expert poultry veterinarians to make decisions on a range of health control measures.

The following points support the rationale to maintain the current legal status of the coccidiostats:

- Tried and tested system well understood and managed by feed industry and producers
- Few problems (alerts) encountered over 30 years
- Strict controls at Feed Mill level (Traceability, HACCP)
- Products undergone rigorous review by EFSA Scientists
- MRLs established or under evaluation
- Withdrawal times established as appropriate
- Responsibility lies with the producer who in turn responds to supermarket QC programmes
- No resistance issues (no human use or relation to human use molecules)
- Safe tolerances being set for carry-over; no human safety concerns
- Monitoring of existing product volumes taking place
- Contribution to animal health and welfare
- Positive environmental impact
- Change would introduce unnecessary risks, administration & costs for no tangible benefit

5. Safety of Coccidiostats

5.1 Extensive safety file in dossier for the user, consumer and environment

The safety evaluation of coccidiostats concerns studies on the target animal, the human consumer and the environment relative to drug residues in food commodities and the environment.

To determine the human consumer safety of the compound, a complete battery of toxicity testing, including short-term toxicity tests, three or more genotoxicity studies, at least two sub-chronic toxicity studies, two chronic studies, a multi – generation, reproduction study and 2 teratology studies is needed. Complete metabolism studies in the target species as well as in a laboratory animal species must be conducted. This data package is used to set an ADI (Acceptable Daily Intake) which is the maximum amount any person can consume on a daily basis over his whole lifetime.
To ensure that any residues in food are at acceptable levels there exists a regulatory process to set Maximum Residue Limits along with appropriate withdrawal times within the Feed Additive Regulation (EC) 1831/2003. Data must be provided on the amount, persistence and chemical nature of the residues. Establishing MRLs is a complex process but it is a necessary tool to provide national authorities with a means to trace and control feed additives throughout the food production chain.

The environmental safety is assessed by a thorough evaluation of the potentially toxic effects of the product against a broad range of indicator organisms (plants, soil microflora, fish, algae etc) as well as by determining the degradation and leaching capacities of the product into soil. The environmental concentration is then calculated based on use levels, excretion and storage data and the risks of the environmental concentration is then evaluated.

Overall, the safety assessment of a feed additive product is at least as extensive as for veterinary and human medicines and ensures that residues derived from coccidiostats do not have a detrimental effect on the human consumer, the user, the target species and the environment.

5.2 **No Antimicrobial Resistance issues**

Some of the coccidiostats have been used globally for more than 60 years in poultry and cattle, whilst the ionophorous coccidiostats were introduced approximately 30 years ago. During that time their safety has been reviewed extensively both at national and European levels, initially by the Scientific Committee for Animal Nutrition (SCAN) and more recently by EFSA.

It has been well established that there is no potential for humans to acquire bacterial infections that cannot be appropriately treated with antibiotics as a result of eating meat from poultry given coccidiostats. Those having an antibacterial effect achieve this through a mode of action that is very different from that of other antibiotics. Coccidiostats are not important in human medicine; these agents are not and never will be used in the clinic to treat human bacterial infections.

In conclusion, there is no microbiological hazard or risk associated with the use of coccidiostats in poultry.

6. **Safety Assurance and Traceability via Feed Industry**

To produce safe food for human use a production quality program is needed to assure the quality standard for the animal feed chain. The focus on animal feed safety as a component of overall food safety is needed. In addition to the safety, the nutritional quality of food is a vital concern within this common quality policy.

The goal of this program is to produce and supply animal feeds, which are safe for consumers of animal products, for the animals and the environment in a way that engenders confidence in all stakeholders, the partners in the supply chain, consumers and legislators. This has to be repeatable and transparent at all times.

An important part is the Good Manufacturing Practices implemented at feed mill level on the basis of European Feed Manufacturers Guides (EFMC) positively assessed by the Standing Committee in January 2007 (23). This EFMC sets out the requirements for the company to comply with the Feed Hygiene regulation (183/2005) and to establish an internal quality system on the basis of the relevant ISO standards as well as a number of additional generic control measures for the production of, trade in and transport of animal feed materials, focusing on additives, undesirable substances and microbiological aspects like Salmonella spp using qualified people.
The recent crises, relating to feed and food (BSE and Dioxin) provided a strong signal for enhancing this program. This enhancement resulted first in the integration of HACCP into the quality standard and secondly the upstream extension of quality assurance to all suppliers of feed ingredients. This extra measurement underlines the fact that animal feed is part of the food chain.

The main points of the program are:

- Food safety seen in a global aspect (even outside EU)
- The animal feed industry, including the additive, other ingredient suppliers and the transport sector are part of the food chain and remain responsible for the safety of its products
- Repeatable and transparent (tracking and tracing) following the quality assurance as “a license to produce”
- Prescribed minimum frequencies for inspection
- The early Warning system providing quick information in case of a possible threat to feed safety
- HACCP as a proactive approach, which links the animal feed chain to the food chain.
- Quality control of feed materials and additives is of mutual concern to suppliers and users in the animal feed chain
- Shared responsibility between trade and industry is needed to obtain the required product safety
- In compliance with the Feed Hygiene Directive EU 183/2005.

All these points result in a better and guided control system. This is achieved by integrating the different quality programs used in animal feed production to avoid safety concerns in food production.

7. Monitoring programmes

Safety and efficacy during commercial use of the coccidiostats is the joint responsibility of feed manufacturers, producers and their nutritional and veterinary advisors. Possible toxicity issues and residue violations are reported into the Rapid Alert System across Europe as well as directly to the supplier of the coccidiostat. Full investigations are carried out and, in the case of potential residue violations, the birds concerned will be withheld from the food chain until an investigation is able to clear them as suitable for human consumption.

In practice, the level of adverse reports across Europe is minor.

Manufacturers of coccidiostats work closely with the poultry industry to ensure continued efficacy of their products. In the event of queries, sensitivity tests will be conducted on the strains concerned along with close investigation (lesion scoring) on a sample of the birds reported to be affected.

8. Recommendation

Use of coccidiostats as a preventive measure for the control of coccidiosis in modern poultry production is essential. The practice is a major contributor to both animal health and welfare by the prevention of a disease present on all farms. Production without coccidiostats is not viable economically and the impact would be to deprive EU consumers access to meat produced under EU safety standards which are generally considered as the highest in the world.
Regulation 1831/2003 proposes a re-evaluation with a view to a phase-out of coccidiostats or advice for new legislative initiatives, if appropriate.

The original Directive 70/524 had already been subject to many improvements. The present Regulation 1831/2005 is the result of major initiatives taken by the EU Commission and Member States resulting in a strictly controlled regulatory framework assuring highest safety standards for consumers.

Thus, IFAH-Europe, supported by other stakeholders such as FEFAC and AVEC insist that the present Feed Additive Regulation is the preferred option for controlling the use of the coccidiostat products since it ensures the following critical points:

- Strict use criteria, including dosage and period of use, with no deviations possible
- Restricted distribution through approved establishments, facilitating control by authorities
- Adoption of MRLs for coccidiostats, facilitating inspections and consumer protection
- Monitoring programs on the use of coccidiostats
- Full traceability on the use of coccidiostats
- Good Manufacturing Practices in production, use and distribution under the framework of the Feed Hygiene Regulation 183/2005, including the HACCP principles
- Strict compliance of all partners in the food chain to the Regulatory framework (e.g. responsibility of farmers under the Food Hygiene Regulation 852/2004 Annex 1).

Similarly IFAH-Europe, supported by AVEC and FEFAC, recommends maintaining the current feed additive status for histomonostats, in spite of the fact that no compound is currently authorised in the European Union for that application.

The existing regulatory framework assures EU consumers of adequate protection of public health for meat produced in the EU; a change in the status would not contribute to higher safety standards.

It is the recommendation of the industry to explore regulatory initiatives that require similar standards for production to be applied to imported meat thus offering EU producers equal competitive standards and delivering to EU consumers the same safety standards as applied for the EU produced meat.
9. References

http://www.apd.rdg.ac.uk/AgEcon/livestockdisease/poultry/coccidia.htm


Position paper of the working group anticoccidials of the PVSG concerning the phasing out of anticoccidials as mentioned in EU Regulation 1831/2003.
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Introduction

Coccidiosis is an infection of the intestinal tract caused by a single cell parasite. All livestock species, as well as wild animals, can be infected and it is especially prevalent when animals or birds are grouped together in significant numbers. However it can occur in less intensively managed situations, including in outdoor flocks.

The disease is characterised by an invasion of the intestinal wall by the parasite. The parasite then undergoes several stages of growth and multiplication, during which there is damage to the mucosal and submucosal tissues. Severe haemorrhage may result and mortality in an unprotected poultry flock may be extensive. For this reason, it is essential in most poultry rearing situations to use an anticoccidial agent during the rearing period to prevent illness and control infections.

Coccidiosis in poultry aggravates a multitude of other diseases like reoviral infections, Gumboro disease, Marek’s disease and clostridiosis, furthermore it is a factor leading to dysbacteriosis in the gut which results in diarrhoea causing poor performance, wet litter and welfare problems (breast blisters, foot pad burns).

Concerns over resistance of bacteria have caused the phasing out of antimicrobial growth promotors. Although approved as production enhancers, a number of these products had the side effect of controlling clostridiosis and dysbacteriosis. Management practices and feed composition have had to be altered because of this. Although these changes have helped there are still more problems than before.

Anticoccidials in feed not only affect coccidiosis, they also indirectly help control dysbacteriosis and secondary clostridial enteritis

If anticoccidials were to be phased out like the antimicrobial growth promotors we expect more coccidiosis, clostridiosis and dysbacteriosis. Different management practices and alterations to feed composition will not be sufficient to control this. Since no equally effective alternatives are available, the result will be lower performance, lower quality of meat produced, higher mortality, poor welfare, more use of antibiotics and problems with withdrawal periods of antibiotics.

We therefore strongly advise that it is necessary to retain anticoccidials as possible tools to combat coccidiosis and its complications.
Problem

Regulation EU 1831/2003 includes the option to reconsider the future of anticoccidials with the view to phase out anticoccidials as feed additives by December 2012. As a consequence of additional experience gained over the past few years by the specialized poultry veterinarians of the PVSG of the EU the actual situation strongly points to the fact that there is a continued need for anticoccidial products to ensure competitive poultry meat production in the EU. Since effective alternatives for broilers and turkeys are not available, a phase-out of anticoccidial feed additives is not realistic and would have very negative effects on animal health, welfare, quality of poultry meat and a severe negative impact on economic results.
Veterinary considerations

- **Coccidiosis – Impact on poultry health:**
  Without treatment, the effect on poultry health ranges from mild intestinal inflammation with depressed feed intake and poor weight gain to haemorrhagic diarrhoea and death. Morbidity is up to 100 % and mortality depends on the severity of the infection and the Eimeria species involved (6 main species for poultry and 2 for turkeys) and can easily reach 5 -10 % within hours.

  Uncontrolled field infections promote other secondary infections and ‘open the door’ for dysbacteriosis, and, in particular clostridial infections: The large intestine is the normal site of colonisation for these bacteria. However, field infection with Eimeria promotes the localisation of pathogenic clostridia in the small intestine. This mechanism is one of the major causes of Necrotic Enteritis in poultry and secondary effects are diarrhoea and wet litter and in many cases as a consequence of that a higher incidence of contact dermatitis like pododermatitis, breast blisters or hock burns. As main welfare indicators, these lesions must be controlled to achieve normal poultry health and this would be impossible without anticoccidials.

  Economic losses are caused by unevenness, mortality, rejects and increased feed conversion and also by the need of costly treatments with antibiotics. Such antimicrobials can belong to categories used for human therapy (with their associated resistance concerns).

- **Alternatives**
  - **Cleaning and disinfecting**
    The organism is widespread, present in all poultry farms, can be carried in its resting form in the environment and is very tolerant to normal chemical disinfectants. This makes it impossible to eradicate the infection. The only chemical disinfectants which destroy the resting oocysts in the environment are ammonia and cresols. Cresol disinfectants are well known as products which can damage sources of drinking water if spread in the environment directly or by residues with wash fluids. Therefore in some areas and Ms it’s forbidden to use these products. Another effective way to destroy oocysts is to heat the infected surface by direct flaming. Success is limited by the kind of the surface and only floors can be treated with that method. Strict hygiene and biosecurity methods are of limited effect: In commercial production. Facilities cleaning and disinfection can reduce but not eradicate and it is important to realize that coccidiosis is present in all poultry farms, even in the presence of high sanitary standards due to the highly infectious and highly tolerant nature of the organism. In fact it can even occur in SPF production.
Vaccination

Presently vaccines are available EU-wide only for rearing flocks (breeding and laying chickens) and broilers. There is no vaccine registered for turkeys. For that reason vaccination is not a solution for turkeys now. In breeding/laying flocks in rear vaccination is very common and the major way which is used to protect breeders or layers effectively by immunization. In broilers vaccination is limited by the length of the fattening cycle: To immunize effectively it is necessary to have 3 multiplication cycles in the intestine. That needs about 18 to 21 days and may involve some reactions in the intestine to develop a stable immunity. Under normal production conditions the life of a fast growing broiler is too short to be the method to protect chickens in an acceptable way against coccidiosis. On the other hand vaccination may stimulate dysbacteriosis in the same way as field infection and lead to the same negative effects.

Currently vaccination is widely practised in rearing breeders, layers, and, also in some forms of broiler production, in particular those characterised by relatively long growth cycles. However in-feed anticoccidials are still sometimes of benefit in such systems. Further research is required to help achieve optimal health and productivity with both approaches, and to ensure that all forms of poultry production have the appropriate tools for prevention of this important disease.

Treatment (long withdrawal periods)

Due to the long withdrawal periods where products are available and the fact that effective products are not registered for all species, possibilities for treatment are very limited. Disease in broilers and sometimes turkeys normally happens at an age at which, due to the long withdrawal period, treatment is not possible. This is comparable to the impossibility of the treatment of histomoniasis cases which led to unacceptable conditions of disease control.

In the case of no protection from feed additives the result will be an increased use of therapeutics for coccidiosis and also necrotic enteritis. Reliance on the limited numbers of therapeutic products could rapidly lead to resistance and lack of efficacy of available compounds.

Alternative treatments (acids, herbs, feed etc.)

There are no alternative control methods with proven efficacy. Some control is claimed by herbal products with no proven efficacy up to now. There are no registered products available with proven efficacy to replace anticoccidials in the feed. That means no alternatives are known under verified scientific conditions and further research is necessary.
- Non existing alternative: anticoccidials under veterinary prescription

If anticoccidials were to be used as medicinal products under veterinary prescription there would be a number of consequences, most of them would be negative, some might be positive.

**Negative:**
- New costly registration required
- Needed higher purity of product very costly
- Different veterinarians might use different prescribed dosages, shuttle programs to avoid resistance and this would be difficult to arrange
- Use of different products in the feed mill at the same time would not be manageable (e.g. carry over)

**Positive:**
- Veterinary control would be better insured (e.g. Swedish control program)
Position and recommendations

1. There is no direct need for anticoccidials as feed additive to control coccidiosis in rearing breeders, layers and alternative broiler production like organic chickens or free range chickens according conditions described in the EU regulation: Vaccination is the first choice in these kinds of poultry production, the choice for anticoccidials would only be necessary in case of non-availability of vaccine and in case of lack of efficacy of the vaccine.

2. In turkeys there is no proven alternative to anticoccidials available.

3. In conventional broilers there are no proven alternatives available.

4. For the kinds of production in which we have no proven alternatives, anticoccidials as feed additives are the first choice to control coccidiosis and must remain as they are placed now.

5. There is no danger that they will cause resistance in humans: Mode of action and the non-use of associated substances in humans provide that there is no hazard or risk associated with the use of anticoccidials as feed additives.

6. There is no need to cease with anticoccidials as feed additives under scientific based verifications and we see little benefit in requiring that anticoccidials are subject to veterinary prescription as a medicated feed. The use of a control program looking into efficacy, resistance, programs would be advisable (e.g. Swedish program).

7. Phase-out of anticoccidials would have a very big impact on animal welfare and international competition. Therefore it is necessary to include investigation of socio-economic aspects and the consequences for the whole production chain within the MS.

8. We as PVSGEU incorporate almost 100 % of poultry veterinary experience within the EU would prefer and recommend that anticoccidials remain as safe and proven feed additives as the only effective and recommendable system currently available. We have no verified alternative, nor expect one in the near future.

9. The requirement to provide data to establish MRL's under brand specific approval has already brought the existing anticoccidials in line with medicines in this key aspect of product safety. In some cases this led to a shortening of the withdrawal period, suggesting that there was already a valid science-based safety assessment under the feed additives regulations, which, if anything, erred on the side of caution.
References


Addendum

The “Poultry Veterinary Study Group of the EU” (PVSG) exists since 1965 and is a study group of about 80 European specialised poultry vets. The members are mostly working as private practitioners or are sometimes working for a company (breeding companies, integrations, hatcheries, pharmaceutical companies). Government veterinarians are not eligible for membership. The membership is only by invitation.

Two times a year (spring and autumn) a two-day symposium is held. The main topic during these symposia is the current health status of commercial poultry in the European member states. In this way the members are offered a quick way to update their knowledge. Because of the structure and the knowledge of the PVSG the PVSG is on speaking terms with several committees of the EU.

At this moment the following 20 countries are represented in the PVSG: Belgium, Denmark, Germany, Finland, France, Great Britain, Hungary, Ireland, Italy, Netherlands, Norway, Austria, Poland, Portugal, Spain, Sweden, Swiss, Latvia, Estonia, and Lithuania.

The working group anticoccidials has 7 members:
R. Aleson Sans (Spain)
J. Bachmeier (Germany)
M. Claeskens (Belgium)
P. McMullin (United Kingdom)
J. Lindblad (Sweden)
B. Robineau (France)
A. Scolari (Italy)
P. Wijnen (Netherlands, chairman)

For further information see our website www.pvsgeu.org.

Contact address:
P. Wijnen
Vrochterdijk 10
7244 PN Barchem
The Netherlands
Tel. 0031 654713948
e-mail: p.wijnen@ppda.nl