REVIEW OF PHASE 2 OF FSA'S BIOSECURITY CAMPAIGN

Executive Summary

The main focus of the Food Standards Agency's strategy to control *Campylobacter* in UK produced chickens is a campaign to improve biosecurity on poultry broiler farms. The first phase (January 2004) of the campaign, a poster and leaflet mailout to farmers reminding them of the basic biosecurity measures that should be in place, was followed up by a series of meetings and seminars (Spring 2005) focussing on the messages promoted in the leaflet and poster. This phase of the campaign ended in May 2005 and, in preparation for the next phase and within the context of the Agency's new target to reduce the incidence of *Campylobacter* by half in UK produced chickens, it is timely to review the effectiveness of the campaign.

The second phase of the campaign reached over 600 farmers, a significant part of the UK poultry farming community. Over half of the farmers attending the seminars had seen the leaflet and poster issued in the first phase of the campaign, and the majority were happy to display the poster in a prominent position on the farm.

Over half of the farmers attending the seminars completed an evaluation form. They were very satisfied that the issues were adequately covered (scoring an average of 4.5 out of 5), that their views were adequately covered (4.4 out of 5), and overall that it had been a useful exercise (4.4 out of 5). A certificate of attendance proved very popular with farmers.

The overwhelming view from farmers was that the seminars had been very successful in meeting the key objectives of reinforcing basic biosecurity messages on farms and successfully updated them on research work currently being undertaken on *Campylobacter*. The Agency was praised for initiating the seminars and for going out to the regions to talk, face to face, with poultry producers. Initial follow up feedback suggests that some farmers have reviewed biosecurity on their farms (e.g. with spot checks) as a direct result of the campaign. In overall terms it was felt that the aim to raise farmers' awareness of the basic biosecurity measures had been achieved and the seminars were an excellent example of the Agency working in partnership with the industry.

The seminars were a successful forum for farmers and farm managers to discuss issues of concern. The problem of imported chicken, cross contamination of *Campylobacter* in poultry slaughterhouses from extensively reared birds, and the practice of thinning and catching crews, and the cleanliness of transport crates were raised as key concerns. The discussions have helped inform our research on thinning, transport crate washing, recently commissioned research on cross contamination with *Campylobacter* within UK poultry processing plants and Defra research on risk factors relating to the summer peak in *Campylobacter*. The discussions have also led to new research requirements, such as the recently published requirement for an investigation of practices of potential benefit to extensively reared flocks, and helped the Agency prioritise its future research needs in the poultry area. There was overwhelming support from farmers for the Agency's suggestion to extend the biosecurity seminars to catchers to remind them of their responsibilities in respect of the contribution they make to biosecurity within the poultry industry. It is recommended that the findings from currently funded research investigating thinning practices on UK broiler farms should be disseminated at these seminars and followed up with guidance on best practice as the research progresses.

The campaign had extensive coverage but there remains some gaps. It is recommended that the Agency addresses these gaps through growers meetings or an extended period of seminars. It is also recommended that FSA contact colleagues in FSA Scotland, Wales and N.Ireland to discuss how they might address gaps in their coverage.

The cost of delivering the second phase of the campaign along with supporting biosecurity material was under £60K. Given the very positive feedback from farmers and the view from farm managers that the campaign has reinforced biosecurity measures on farms, it is considered that the campaign represented very good value for money for the Agency.

Introduction

Campylobacter is the single biggest cause of foodborne illness in the UK. It accounts for over 50,000 cases of illness a year and a large proportion of these cases is thought to be foodborne. The FSA has set itself a target to reduce the incidence of foodborne disease by 20% by April 2006 and tackling *Campylobacter* is a priority for the Agency if it is to meet its target.

There is strong evidence that chicken is a significant source of *Campylobacter* in the kitchen. The Agency therefore developed a Strategy[1] to control *Campylobacter* in UK produced chickens on retail sale, and which forms part of its Foodborne Disease Strategy (FDS) to achieve the 2006 target. Activities have been targeted at those areas where it is thought the maximum benefits can be achieved. As such, a broad range of interventions are being undertaken in all food sectors, including on-farm, in the abattoir, throughout the processing and distribution chain, in retail and catering outlets, as well as in the home.

One of the key aims of the Agency's new strategic plan (2005-2010) is to reduce foodborne illness further. This will require all sectors of the food chain to play their part in preventing harmful microorganisms from contaminating food and we will be working with agriculture departments to reduce contamination at source.

To help achieve this target, the Agency has set a series of milestones in the primary production sector, one of which is the challenging target of working with industry to achieve a 50% reduction in the incidence of UK produced chickens that test positive for *Campylobacter* by 2010. The Agency's strategy to control *Campylobacter* in UK produced chickens on retail sale will be reviewed in light of this target and we will work with the poultry industry to establish an appropriate baseline against which the target is measured. A consultation on the baseline was issued in August 2005[2]. It is therefore timely to review the second phase of the biosecurity campaign.

The main focus of the Agency's Strategy is action on the broiler farm but potential options for control at the slaughterhouse would also be considered. The Agency's commissioned studies for the *Campylobacter* Strategy showed that although biosecurity standards across the industry are generally high, some of the most basic hygiene measures were not always followed on many farms and not all farmers were following best practice. A campaign to improve biosecurity on the broiler farm therefore formed the main focus of the strategy to control *Campylobacter*.

The first phase of the campaign was launched in January 2004 and involved a direct mailing of a poster and leaflet to farmers highlighting the main biosecurity messages and promoting good biosecurity as a foundation for *Campylobacter* control. Broiler farmers and other stakeholders were closely involved in developing the material for the campaign. Information from a telephone survey informed the initial development stages and potential material was tested in farmer focus groups and with other stakeholders.

Phase 2 began in October 2004 with a series of meetings and seminars focussing on the messages promoted in the leaflet and poster. FSA worked closely with the poultry

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[1] Food Standards Agency Strategy for the Control of *Campylobacter* in Chickens (1993) **www.food.gov.uk**

[2] http://www.food.gov.uk/foodindustry/Consultations/ukwideconsults/camplobactertarget

industry to ensure the content of the seminars was appropriate for farmers and to secure their involvement in the campaign. The Agency was invited to participate in poultry growers meetings in autumn 2004 and between March and May 2005 organised, through ADAS, 20 regional seminars. This paper will review this phase of the campaign and Annex A considers options for the next phase.

Preparations for the Campaign

Stakeholders confirmed the Agency's view that Phase 2 of the campaign should involve face-to-face contact with the farmer. The Agency proposed achieving this through technical seminars for farmers and the Knowledge Transfer Sub Group proved to be a very useful forum for fine tuning the plan. The plan was revised to allow the Agency to work more closely with the poultry industry and promote the campaign messages at growers meetings in the first instance and then to follow this with a small number of regional seminars.

As we worked with the industry to implement the plan it became apparent that farmers would prefer to attend events that were restricted to their company rather than larger events open to all. This was an important change to the plan which helped ensure good attendance at the events.

Industry coverage

FSA contacted a number of major poultry companies to engage them in Phase 2 of the campaign. We met with the companies and they were very supportive and interested in inviting us to their growers meetings. We participated in growers meetings for 2 companies, and all but one of the remainder took part in our seminars.

Smaller producers were contacted initially by FSA and then by ADAS, who organised the regional seminars. Contact by telephone proved an effective means of communication rather than written invitation alone. We had a particular aim to target non-ACP accredited companies and reached 3 of these companies. A number of Halal producers were contacted but they were not persuaded to participate in the events.

The seminars were regional, covering most of the UK. FSA colleagues in N.Ireland, Scotland and Wales were contacted to assist in organising their own events. Two companies participated in the N.Ireland events and they were keen to invite the Agency back for more extensive coverage of their farmers. We have covered parts of Wales but have not yet participated in events in Scotland.

ADAS were very successful in liaising with the industry and securing their attendance at the seminars. The seminars were successfully organised. We had originally envisaged about 6 large seminars but expanded this to 20 smaller events which were taken to individual companies. This approach worked very well for the industry and the number of events reflects the popularity of the seminars.

The average attendance at the meetings was about 20 farmers, and often included farm managers and occasionally catchers and maintenance personnel. The total number of farmers reached for this phase of the campaign was in the region of 600, and the poultry industry have advised this is a significant part of the UK poultry farming community (with an estimated 2200 farm sites in the UK).

Publicity

The campaign launch was reported in *FSA News*, *Assured Chicken Production Newsletter*, *Poultry Forum* magazine. An article was submitted to *Poultry World* but was not published. ADAS manned a stand at the SouthWestern Broiler Industry Association Annual Conference which promoted interest in the seminars. FSA and VLA colleagues also presented the campaign messages at the Norfolk and Suffolk Poultry Association which promoted a lot of local interest. The organisers consider that these initiatives raised the profile of the campaign but are unlikely to have increased actual attendance to any great effect.

Format of the seminars

The growers meetings acted as a pilot for the seminars with FSA talking to farmers about *Campylobacter*, why a strategy was needed to control it, and discussed the biosecurity messages. A *Campylobacter* expert talked in detail about the sources of infection and the evidence that the biosecurity messages promoted by the Agency are effective in reducing *Campylobacter* on broiler farms. ADAS focussed on the practicalities of the measures and chaired the open discussion session. The format generally worked very well with a great deal of participation from the farmers.

Outputs from the Seminars

Farmer feedback on the leaflet and poster

Over half of the farmers attending the seminars had seen the leaflet and poster issued in the first phase of the campaign. But this varied between companies with some showing that all the farmers present had seen the poster and leaflet and others only showing that about 10% of the audience had seen them. The farmers were very positive about the poster and leaflet, the majority of those who had received them were happy to display the poster in a prominent position on the farm (e.g. the farm office). Some farmers suggested a laminated version would be helpful as this could be placed outside each poultry shed as a visual reminder of the biosecurity measures.

A Forum for farmers and farm managers

Farmers expressed their gratitude to the Agency for talking directly to them and listening to their concerns. It became apparent that this type of initiative was new to this sector of the industry and they welcomed it.

A number of farm managers mentioned that they had heard farmers raise issues that they were previously unaware of, and that perhaps the Agency's presence made farmers more willing to voice their concerns. This was very apparent on one occasion where the farmers expressed their concern that the catchers were not following the biosecurity procedures. The FSA advised that it was the farmer's role to insist that the procedures are followed, but farmers felt powerless with the result that catchers simply ignore them or leave the farm without catching the chickens. The farm manager present agreed with the FSA position and told his farmers that he would provide the support they needed to ensure the catchers followed their farm procedures.

Engaging with farmers

During the biosecurity meetings we engaged farmers' interest in wider Agency activities such as the Food Hygiene Campaign and the current consultation for the baseline against which to monitor the target to reduce *Campylobacter* by 50% by 2010. We also informed them of a forthcoming draft publication of a biosecurity booklet and asked for their feedback; we have been very encouraged by their response and feel their continued participation is as a result of attending the seminars. Industry contacts have confirmed that the face to face contact with farmers will be very important in helping change attitudes to biosecurity and encouraging farmers to implement intervention measures for *Campylobacter*.

Specific issues raised at the seminars

The farmers raised a number of recurring issues. Their main concerns are outlined below and the Agency's response to these important issues and how we might take them forward is in Annex A:

Catching/thinning – Farmers were very concerned about catching and thinning as this is largely outside of their control. They accept the difficulties associated with the process and that catching is an unpleasant job, with low pay and unsociable hours, therefore difficult to control. But farmers want catchers to follow the biosecurity rules. There is a general problem of catchers' reluctance to wear suitable boots such as wellingtons (impractical to wear for long periods, too hot, don't like to use footwear that others have used), to dip their boots (often dips are not in the right place for catchers, it is time consuming), wear protective clothing, and wash/sanitise their hands. Farmers also raised the issue of an emerging communication problem with some catchers having limited English.
One company suggested that FSA should recognise and support companies that do not thin.

Transport crates – There were very strong views about the cleanliness of crates and modules used by the catching teams and supplied by processors. There were concerns about the effectiveness of inspections at processing plants (which should ensure that equipment is properly cleaned after each use). The suggestion was made that the FSA should put pressure on the MHS to ensure that these inspections are carried out properly. Farmers felt that the priority should be to get the trailer clean. Farmers shared photographic evidence of dirty trailers, crates and modules. They felt more could be done to improve the cleaning process and felt this was a priority for research.

Organic/free range birds – Farmers are very concerned about the high prevalence of *Campylobacter* and the potential to cross contaminate at slaughter. Many considered the practice of slaughtering organic/free range birds first could contribute to negative broiler flocks becoming positive at slaughter. Some suggested that organic birds should be slaughtered on farm, or they should be sent to a dedicated slaughterhouse separate from broiler birds. There were strong views that the FSA should tackle the *Campylobacter* problem in organic/free range birds and they should inform consumers of the extent of the problem.

Other Issues of Concern

Imports – many felt very strongly about the quality of the imports coming into the UK and were very concerned about sufficient controls being in place to protect the UK flock against diseases such as avian flu. The Agency has no direct responsibility for non-UK produced chickens. However, the control measures identified in the *Campylobacter* Strategy will be equally applicable to those birds and the Agency would expect those businesses involved in the production and sale of such chickens to seek, as far as possible, the same level of *Campylobacter* control as that being put in place in the UK. The Agency discussed with farmers the findings of the 2001 survey of retail chicken which showed that the frequency of *Campylobacter* contamination was higher in UK-produced chicken than in non-UK chicken. This difference was largely accounted for by whole chicken (61% UK and 55% non-UK for fresh whole chicken, 54% UK and 31% non-UK for frozen whole chicken), as there was little difference in terms of fresh or frozen chicken portions. However, the survey was not designed to specifically compare imported chicken with UK produced chicken and the findings should be treated with caution. Farmers were also informed that Defra has lead responsibility for animal health and there are controls in place to protect the UK flock from diseases such as avian flu. Also Defra had recently issued a contingency plan for avian flu.

Dedicated footwear – The use of hygiene barriers and dedicated boots varied depending on the company. Some companies had them in place for over 10 years and found them easy to use and practical. The main driver for dedicated footwear appears to be the retailer. Other companies who used boot dips only were reluctant to use dedicated footwear as it was viewed as impractical (a number of boots needed in each shed), time consuming (especially where there are a lot of sheds) and costly. Hygiene barriers were also considered by some to be a safety hazard. Some companies had very strict protocols for the use of foot dips and held the view that where operated properly do provide an alternative to dedicated boots. The Agency agreed, but stressed that boot dips needed to be managed properly if they are to be effective. The practicalities of managing foot dips were discussed in detail and farmers will find further guidance in the forth-coming booklet "*Biosecurity on the Broiler Farm*". Hygiene barriers, with the use of dedicated footwear inside the barrier, are arguably less prone to error and for that reason the Agency promotes them as best practice. If dedicated footwear is used a boot dip is still required at the entrance to the building and it is beneficial to have a boot dip at the door into the bird area also.

Maintenance teams – There was a good awareness of biosecurity, with the general aim to do maintenance work before the chicks arrive but emergency maintenance during the cycle was an accepted necessity. Generally, maintenance personnel will wear protective clothing if asked to do so by the farmer. Overboots were considered a health and safety hazard when climbing ladders, as well as dipping boots before using ladders. Carrying toolboxes from farm to farm was recognised as a potential problem. Farmers suggested a dedicated toolbox on each site or placing toolboxes on ladders to avoid contact with the shed floor. Some used a house-dedicated bucket to carry tools. Maintenance workers were present at some of the meetings and those attending indicated it would be useful to provide seminars for the maintenance teams.

Turnaround time – Farmers are concerned that pressures on the industry to maintain a profit is reducing the turnaround time between flock clearance and arrival of new chicks. The Agency will consider this issue further with its stakeholders.

Hand washing – Farmers are happy to wash and/or sanitise hands in the farm office but suggest it is not practical to do both in every shed. Farmers prefer to sanitise only in the sheds, and this is a viable alternative. The FSA made farmers aware that where hands are visibly dirty sanitising will be less effective and, in such cases, hand washing is more effective

Seasonal peak – There was much discussion on the factors that may be related to the higher incidence of *Campylobacter* in summer including: increased temperatures in sheds (related to bird stress), increased ventilation and dust, dry litter, flies (not recognised as a particular problem by the farmers), grass cutting, and lapses in biosecurity (e.g. too hot for the farmer or catcher to use boots so uses trainers that cannot be dipped). Many farmers raised the issue of litter beetles as an emergent problem as the recommended insecticides do not kill them and questioned whether this may be relevant to the seasonal peak. The researchers attending the meetings noted this and agreed to consider litter beetles as part of research investigating risk factors related to the summer peak.

Hygiene in the home – Farmers were informed of the Agency's Food Hygiene Campaign (see Annex A) but they still felt greater emphasis should be placed on educating the consumer on good kitchen hygiene and more could be done to educate school children. There was support for the FSA TV commercials but criticism that the focus tends to be on chicken.

Role of the retailers – Strong views that retailers could do more to support poultry farmers. There was support for bonus schemes for producing negative flocks. Farmers also questioned supermarket practices and the potential for cross contamination from chicken packages onto other foods in the shopping basket or the conveyor belt. The FSA is aware that the packaging around chickens can be contaminated with *Campylobacter*. Research studies have shown that from 3-8% of outer chicken packaging sold at retail is contaminated with *Campylobacter*. In one study the packaging of the 140 chickens was examined and *Campylobacter* was isolated from the outside of the packaging in 6% of the chickens[3].

In one company, farmers questioned retailers' demand for the "blueprint bird". This is where the retailer specifies a specific size of bird, e.g. 2KG, then the producer must supply 2KG or more (not less). Because the producer does not get paid for anything above 2kg this leads to potential losses. It also involves a huge amount of planning to send catchers to farms at the exactly right time (weight wise). The retailers have this policy, as they believe the consumer wants a bird of a certain size e.g. paying a standard £2.50 for a small bird and £4.00 for a large bird. The farmers questioned this policy by the retailers and the resulting pressure on the industry.

Farmers' evaluation of the seminars

Over half (52%) of the farmers attending the seminars completed an evaluation form, with one company choosing to complete their own assessment form. The return rate was very good as it was tied in to requests for a certificate of attendance, which proved very popular with the farmers. The farmers were very satisfied that the issues were adequately covered (scoring an average of 4.5 out of 5), that their views were adequately covered (scoring an average of 4.4 out of 5), and overall that it had been a useful exercise (scoring an average of 4.4 out of 5).

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[3] Jorgensen *et al*. 2002. Prevalence and numbers of *Salmonella* and *Campylobacter* spp. on raw, whole chickens in relation to sampling methods. *Int. J. Food Microbiol.* 2002 Jun 5;76(1-2):151-64.

Follow-up feedback

Following the biosecurity seminars, ADAS sought comments from the seminar co-ordinators within the individual poultry companies on how successful and helpful they felt the seminars had been. The overwhelming view was that the seminars had been very successful in meeting the key objectives of reinforcing basic biosecurity messages on farms, and updating poultry farmers on research work currently being undertaken on *Campylobacter*. Comments were received praising the FSA for initiating the seminars and for going out to the regions to talk, face to face, with poultry producers.

Some of the co-ordinators stated that since the seminars, they had received calls from several growers who had been encouraged to improve biosecurity standards on their own farms. In one case, the company involved catchers, electricians, plumbers, carpenters, etc. in the seminars. In addition to providing these workers with a better understanding of the need for biosecurity, they had subsequently devised a range of novel ideas on how to reduce the risks. Examples of this included different types of footwear, and measures for reducing the amount of traffic on farms (both vehicles and people). Another company reported that the seminars had already led to some farms making substantial improvements in their biosecurity measures.

One company took the opportunity to re-iterate their concerns over the biosecurity risks associated with improperly washed crates / modules brought back onto farms during the depopulation process. Concern was raised by a company with a relatively large proportion of their production coming from more extensive systems, that the targeted reduction in *Campylobacter* is unrealistic for those farms that provide access to range areas for their birds. Another said that their growers lost interest quite quickly with the section of seminar that described what the Agency was doing on the food hygiene campaign.

Wash-up and Conclusions

A wash-up meeting was held in June 2005 with colleagues involved in phase 2 of the campaign. It was concluded that the events were very successful and this is supported by the very positive feedback from farmers and farm managers. The outputs from the seminars were discussed and have been reported as part of this review. In overall terms it was felt that the aim to raise farmers' awareness of the basic biosecurity measures had been achieved and the seminars were an excellent example of partnership with the industry.

The campaign had extensive coverage but there remains gaps that should be addressed in the short term. In particular, it was suggested that the Agency should expand the campaign and encourage those companies not previously included to participate. It was also concluded that FSA should contact colleagues in FSA Scotland, Wales and N.Ireland to discuss how they might address gaps in their coverage.

The cost of delivering Phase 2 of the campaign (growers meetings and seminars) was £53K. In addition we published a biosecurity booklet providing farmers with the practical details in relation to the measures we promoted in this phase of the campaign; this cost £6.5K. Given the very positive feedback from farmers and the view from farm managers that the campaign has reinforced biosecurity measures on farms, we consider the campaign costs as very good value for money.

ANNEX A

AGENCY RESPONSE TO ISSUES RAISED – WHAT NEXT

The farmers raised a number of recurring issues outlined above which the Agency will carefully consider in its review of the *Campylobacter* Strategy. This section outlines the Agency's response to those key concerns and possible options for addressing them.

Thinning Flocks

The FSA recognises that the practice of thinning flocks is a high risk factor for *Campylobacter* in broilers and poses a particular challenge to biosecurity; this has been confirmed by research studies. We have therefore commissioned research to investigate current thinning practices on UK broiler farms and produce recommendations for best practice, including any practical intervention measures that could be adopted by the industry. The project will include visual audits of farms and microbiological sampling at the time of depopulation. All stages of the process will be assessed for possible risk factors (i.e. pre-thin, during thin and post thin), and the time taken for flock to become colonised after thinning and numbers of *Campylobacter* in the caeca at slaughter will be determined. The research was discussed in detail with the farmers and their comments have helped refine the research plan. The Agency has noted the farmers concerns that risks of catchers introducing *Campylobacter* into previously negative flocks may be even higher when they have been catching extensive birds which are more likely to be infected with *Campylobacter* earlier in the day. We are aware that one company is moving towards dedicated catching teams for extensive birds. Others are trying to reduce the risk from thinning/catching by catching the youngest birds first which are least likely to be infected with *Campylobacter* and move through the farms according to age, finishing with the oldest.

The next phase will be to engage with catching teams and there was overwhelming support from farmers for the Agency's suggestion to extend the biosecurity seminars to catchers. The findings from the thinning research could be disseminated at these seminars and followed up with guidance on best practice as the research progresses. Annex A outlines a timetable for taking forward this next phase of the biosecurity campaign.

The visual nature of the campaign material should help overcome language barriers but to improve communication where language may be a barrier, the Agency could also investigate alternative means of making the information available. This may include translating some of the campaign material into key languages, producing a video with limited dialogue, or producing audio tapes with the campaign messages.

Crate Cleaning and Disinfection

The FSA recognises that poultry crates can be a factor in breaking biosecurity of housed birds. Although it may not be possible to eliminate *Campylobacter*, improvements to the cleaning and disinfection process can reduce levels that will reduce the risk during the thinning process on broiler farms. We have funded a study investigating how to improve current poultry crate washing practices. The research demonstrated that current crate washing and disinfection regimes are ineffective in respect to producing crates that are free from *Campylobacter*. Using hotter water with a detergent and brushing to remove the debris followed by a larger amount of

disinfectant or sonication did significantly reduce *Campylobacter* levels on crates, however elimination appears not possible with current systems. This is further complicated by the location of crate washers which are often near the live bird hang-on area, and clean crate storage areas situated in the open allowing recontamination of cleaned crates. The project has produced information on what might be considered as best practice and this would be discussed with industry during 2005. It has also highlighted that the catchers and transport crate modules may be even more important than previously thought in terms of risk reduction.

Cross Contamination in the slaughterhouse

Research has shown that *Campylobacter*-free flocks entering the slaughterhouse can be contaminated by *Campylobacter* by the end of the slaughter process. This is a concern with all flocks but farmers were particularly concerned about cross contamination from extensive flocks slaughtered earlier in the day as these are more likely to be infected with *Campylobacter*.

Agency funded research is continuing into methods to reduce levels of *Campylobacter* on poultry carcasses in the slaughterhouse. Uptake of any practical control strategies arising from this research should contribute to the Agency's target for reducing *Campylobacter* in poultry. These studies may offer options for the future, but their effectiveness may be limited if the number of positive birds entering the slaughterhouse is not reduced. The FSA has recently commissioned research to determine how quantitative and persistent cross contamination with *Campylobacter* is within UK poultry processing plants and what are the effective within-production and between-production cleaning methods. The 2-year study will end in June 2007.

This research will build on the legal requirement for all slaughterhouses to have procedures based on HACCP principles in place. *Campylobacter* will be identified as a hazard in poultry meat plants and although no specific control measures currently exist, the general improvement of hygiene expected with HACCP implementation should contribute to its control.

Extensive flocks

Discussions with farmers have suggested that there may be practices which could help reduce *Campylobacter* colonisation of extensively reared flocks. The Agency is funding some research to investigate controls in the sector and FSA has published a research requirement to investigate the production of extensive flocks and make recommendations for good practice for *Campylobacter* control. Research proposals are currently being appraised and it is expected that the work will start in 2006.

Food Hygiene

The Agency has established a Food Hygiene Campaign that is part of a wide-ranging programme of work being carried out over a five-year period. The Campaign aims to raise awareness and increase understanding of food hygiene in commercial and domestic kitchens and how poor food hygiene leads to food poisoning, as a precursor to achieving changes in behaviour and improvements in hygiene standards.

The key message for people is that can food poisoning can be prevented by taking the following four simple precautionary measures based on the 4 Cs:

- Wash your hands, work surfaces and utensils properly and keep them **Clean**
- **Cook** food properly
- **Chill** food properly
- Avoid **Cross-contamination**

The latest phase of the Campaign, launched in July 2005, reinforced food hygiene messages about how to avoid cross-contamination in the home by targeting young consumers. Under the banner “Germs love to travel” the TV and other media advertising focused on how easily cross-contamination of germs from chicken to ready-to-eat foods occurs and how easily it can be prevented.

As part of the Agency’s new Strategic Plan 2005-2010, a new strategy to promote the safe handling of food in the home will be developed. The strategy will use the 4Cs food hygiene messages and focus on working with schools and supporting local initiatives. Stakeholders will be involved and consulted on the new strategy.

Further dissemination of the biosecurity campaign messages

The campaign material (leaflet, poster and booklet) could be incorporated into agricultural training courses, National Vocational Qualifications, and other training or auditing programmes for farmers. As a first step we have contacted Assured Chicken Production who have agreed to add the material to their recommended reading list.

And finally, the Agency could follow-up the excellent suggestion by one farmer to laminate the biosecurity poster so farmers can place them outside their sheds as a constant reminder of the basis biosecurity measures that should be in place.

ANNEX B

IMPLEMENTING THE *CAMPYLOBACTER* STRATEGY (PHASE 3) ACTION PLAN

MILESTONE	TARGET DATE	MILESTONE TITLE
01.01	November 2004	Start date for thinning research (2 year study)
01.02	Sept 2006	Preliminary dissemination of thinning research findings to catchers
01.03	October 2006	Final report of thinning research submitted Recommendations for thinning procedures and suitable intervention measures
02.01	Month 1	Advertise tender for FSA seminars for catchers and maintenance personnel
02.02	Month 2	Appraise tenders
02.03	Month 3	Advise contractors of outcome of tender
02.04	Month 4	Meet with contractor to discuss seminars
02.05	Autumn 2006 - spring 2007	Launch of FSA seminars for catchers
02.06	Summer 2007	Phase 3 evaluation
03.01	Ongoing	FSA to seek opportunities to promote biosecurity messages and engage those companies and regions not already covered by Phase 2 of the campaign
04.01	September - March 2006	Appraise proposals and commission research on extensive flocks
05.01	October – March 2006	Review the current research programme and establish the research priorities for *Campylobacter* in poultry