

Foot and Mouth disease control - can the UK learn from Argentina?

Argentina recently suffered a resurgence of foot and mouth disease, but the management of the situation by the Argentinian veterinary authorities could not have been more different from the way the disease was handled here in the UK.

Argentina has a struggling economy (as more recent events have confirmed) and the country simply could not afford the wasteful slaughter of animals which we have suffered in the UK. Had Argentina adopted this method of control, the country would not have had the resources to compulsory purchase stock for slaughter. They rightly consider pedigree genetics priceless and therefore impossible to compensate.

Argentina ceased to vaccinate against foot and mouth disease in 1998. The decision to abandon the vaccination programme, which had worked so well for the country, was largely a political move with the Government wishing to be seen as instrumental in increasing exports and moving the country towards FMD-free status.

On a recent visit to Argentina, I was fortunate to have talks with some of the people at the forefront of their fight against the disease.

The population of 35 - 40 million in Argentina consume 60 - 65kg of beef per person per year. At the present time, consumption might be even higher as cattle prices have been low which - unlike UK experience - has come through to the retail trade. Beef

and agriculture are important in Argentina as is demonstrated by the attitude towards farming and farmers.



Aberdeen-Angus breeder, Mrs Carolyn Fletcher, who lost her Barwise herd in Cumbria from foot and mouth disease, recently visited Argentina to study foot and mouth control methods in that country. She believes the UK could learn from Argentina's vaccination policy which has successfully controlled the spread of the disease.

Border closed

In 1999, the border between Argentina and Paraguay was closed as it was known that Paraguay was experiencing problems with Aftosa (the local name for foot and mouth disease). This border is extremely difficult to police as it is simply a dry riverbed. Eight months later, the disease was found in 10 cattle in Formosa, a district close to the Paraguay border.

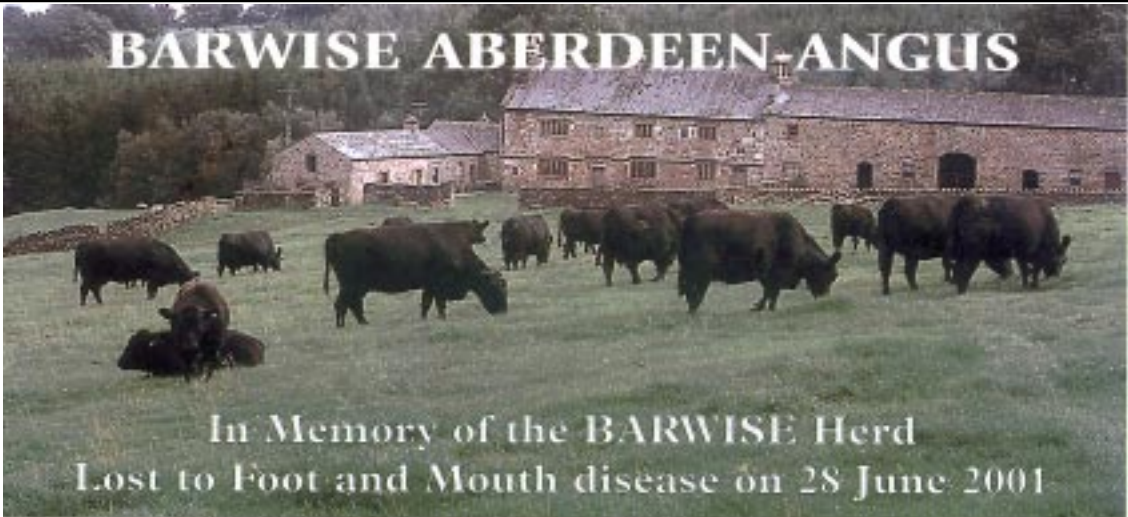
These 10 animals were slaughtered and the rest of the herd vaccinated, the

plan being that if the disease could be contained in this way, the vaccinated animals could be slaughtered at a later date and put into the food chain. It is well known there that vaccinated animals, as indeed foot and mouth disease itself, pose no threat to human health. The country could then have quickly regained its vaccination and FMD free status.

Formosa is a cattle breeding/rearing area from where cattle are sent to other areas, notably the Buenos Aries heartland, to be finished. Unfortunately, the infected cattle had been in contact with cattle which had already been sent to other areas and outbreaks of FMD started to appear in many places. It was then necessary to change the strategy.

A 5km ring was instantly drawn around each outbreak. Every farm even touched by the ring became completely included. With farms tending to be very large, the "ring" could extend to many more km. All livestock movements were instantly stopped and all animals vaccinated, working from the outside of the "ring" inwards, with vaccinators having no contact with infected animals which had not been vaccinated.

Infected animals do not necessarily have to be slaughtered but can be nursed back to health. The animal's temperature is only slightly raised with 'flu-like symptoms, the mouth lesions being the most distressing aspect. But even these heal within a few days with the simple strategy of moving infected



BARWISE ABERDEEN-ANGUS


In Memory of the BARWISE Herd
Lost to Foot and Mouth disease on 28 June 2001

These much loved and missed cattle will never be forgotten, but the herd will start again with as many links to the past bloodlines as possible. Some excellent animals already found and waiting with their considerate owners until it is deemed safe to bring them here.

I would like to express my thanks to all who have given so much support through these dreadful times and for all the letters and telephone calls of sympathy which have been much appreciated

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animals to a stress-free and, if possible, sheltered environment and giving them water to which a small amount of disinfectant has been added.

The animal soon regains condition and there is no notable economic loss in extensively reared cattle. Economic loss would be greater in animals reared in an intensive grain-fed environment. Natural mortality from the disease is no more than 2-3% and only seen in young calves, where the virus attacks the heart, and older animals whose immune systems are already challenged.

A limited slaughter policy, slaughtering infected animals, is adopted only in isolated outbreaks occurring in a hitherto uninfected area. This is a very selective and special-case procedure, with the vaccination regime then being implemented.

Cattle herds are large but in each outbreak of the disease only a small number of animals become infected and show clinical symptoms. This is underlined by the fact that from the cattle population of 55 million, only 3000 were slaughtered due to foot and mouth disease throughout the duration of the outbreak.

Vaccination programme

The next step taken in the fight against the disease was to implement a countrywide vaccination programme. This programme was Government-funded and organised. Prior to the cessation of vaccination in 1998, the very well-organised local farmers' groups implemented vaccination, paid for by the farmers themselves. By the beginning of October, 55 million cattle had been vaccinated once, one million twice and 100,000 three times.

Dr Jose La Torre, director of CEVAN, the National Research Council of Argentina's animal virology centre, states that the veterinary profession in Argentina has every confidence in the vaccine, which is oil-based and gives immunity for six months in cattle vaccinated once and more than one year (sometimes several years) in those vaccinated twice or more.

The virus mutates fairly quickly but the biochemists, veterinarians, biologists and biotechnologists working at CEVAN, with the support of SENASA (Central Official Veterinary Laboratory), have the skill and

resources to alter the vaccine easily and in a short time.

Dr La Torre explained that Argentina has for two years had an accurate test, developed in the country, to determine cattle which are carrying antibodies from natural infection, and those carrying antibodies from vaccination. This test, called the ELISA 3ABC, detects the non-structural protein, P3ABC, which is present in antibodies caused by infection but not in antibodies caused by vaccination.

It appears that there are other strengths which Argentina has in its fight against FMD, one of which is the united approach of farmers, government and scientists. Another is the strong non-political, non-profit making farmers' groups of which there are 320 covering the whole country. Every livestock farmer belongs to the group in his locality. In normal times, these groups handle, among other roles, the purchase of vaccine and oversee the administration of the vaccination programme.

They also have a role to play in biosecurity and are the first port of call for any farmer requiring livestock movement licences. The group is

responsible for verifying that animals to be moved belong to the applicant and that the farm's vaccination programme is up-to-date. The group's local knowledge is valuable in preventing illegal livestock movements. By forming these groups, farmers have taken back much control of their industry from government hands.

From the evidence seen of the effectiveness of the Argentine methods of handling the FMD epidemic, it would be showing extreme arrogance if the scientific and Government organisations looking into the future handling of foot and mouth disease in the UK and Europe, did not seek to learn from the experience of Argentina. I believe Argentina has proved herself

“light years” ahead of the UK in the handling of FMD and their scientists and Government are to be congratulated.

Farmers in the UK should be united in calling for in-depth discussions between farmers' organisations, scientists and government bodies to evaluate future programmes for disease control in this country.



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