

VIDA 2007

INTRODUCTION

Source of Data

The Veterinary Investigation Diagnosis Analysis database - VIDA - contains a record of every submission made to Veterinary Laboratories Agency (VLA) Regional Laboratories (RLs) and Scottish Agricultural College (SAC) Disease Surveillance Centres (DSCs) in Great Britain and has been operating since 1975. In England and Wales there are fifteen such centres that form part of the Surveillance Division of the Veterinary Laboratories Agency. In Scotland there are eight centres, administered by the Scottish Agricultural College. All twenty-three centres contributed information for inclusion in 2007. The total number of submissions received in 2007 was 98,125, of which 51,674 were received for diagnostic purposes. This includes the total number of diagnoses listed in the tables plus submissions for which no diagnosis code was recorded. It should be noted that a submission could have more than one diagnosis. As well as the production of this booklet, VIDA is also used for ad hoc investigations, and in 2007 CERA (previously called the Epidemiology Department) of the VLA Weybridge received 53 such requests for information, involving 745 individual data retrievals.

Bias in VIDA

Total numbers of submissions recorded by VIDA represent only the material submitted for investigation to VLA Regional Laboratories and SAC Disease Surveillance Centres. This bias is influenced by many factors including, for example, the particular clinical presentation of a suspected disease, the level of awareness of a disease and its perceived importance, the value of the animal or animals affected, and the general economic climate. Particular diagnoses may be affected by

improved scientific methods, and knowledge of this may also affect rates of submission; these factors will usually vary differentially with time. This bias should be considered when interpreting both individual figures, and apparent trends, from VIDA data.

VIDA diagnosis totals are intended to represent only cases of clinical disease, hence the necessity for the category “DIAGNOSIS NOT APPLICABLE” (code 991) and “SCREENING – No clinical problem” (code 980). Included under this umbrella are the results of, for example, samples sent to VLA Regional Laboratories for non-diagnostic testing, plus results of tests performed by one VLA Regional Laboratory on behalf of another (usually because of specialist facilities), when the diagnosis will be recorded by the VLA Regional Laboratory to which the sample was originally submitted. When examining annual diagnosis figures for a particular disease, it is therefore advisable to relate them not just to the total diagnoses in that year and class, but also to exclude submissions where the diagnosis is 'not applicable' and those for “screening – no clinical problem” before comparing one year with another. Total submissions excluding ‘not applicable’ and ‘screening’ are referred to as ‘diagnostic submissions’ (see Table 1).

FOOT AND MOUTH DISEASE OUTBREAK 2001

On 20th February 2001, Foot and Mouth Disease (FMD) caused by the O1 Pan Asia strain of virus was confirmed in Great Britain. A Controlled Area Order was imposed across the whole of the country on 23rd February 2001, which prohibited the movement of livestock except under official control and banned livestock markets. During the subsequent epidemic 2,026 outbreaks were confirmed. The final confirmed outbreak was on 30th September 2001. Further information about the 2001 FMD epidemic can be found on the DEFRA website

<http://defraweb/animalh/diseases/fmd/2001/index.htm>.

The FMD epidemic impacted upon surveillance in two distinct ways. Firstly, the outbreak caused significant disruption to normal farming practice with unpredictable consequences for the incidence of infection. Secondly, surveillance activities were constrained. VLA laboratories were unable to accept samples from infected areas and cattle, sheep or pig carcasses from any areas between late February 2001 and October 2001. Field visits were halted from late February 2001 but essential visits were later permitted providing strict Agency procedures were followed.

Cattle submissions to the VLA Regional Laboratories (RLs) were reduced by 36.9% in comparison to 2000 and the eight-month prohibition of any carcase movement for diagnostic purposes resulted in a 77.4% reduction in cattle carcase diagnostic submissions. Sheep submissions to the laboratories were severely restricted from the end of February for the remainder of the year, and in total there was a 64% decline in England and Wales. However, scrutiny of the January and February data shows that early year data were comparable with the previous year. Diagnostic submissions, particularly carcase submissions, were also significantly reduced in 2001 for pigs and goats.

TRENDS IN 2007: LIVESTOCK POPULATIONS AND WEATHER CONDITIONS

Changes in both the total number of animals in each category of livestock and the climatic conditions over the year may affect the overall disease situation, and thus the totals recorded in this publication. A summary of both is therefore given below.

The 2007 livestock data is taken from the June Agricultural Census figures (MAFF statistics 2007) for Great Britain. In editions of this publication prior to 1997 the livestock figures published were taken from the December agricultural census and covered the United Kingdom. Because of this difference, the livestock data presented in this and future editions of the VIDA booklet cannot be directly compared to that in editions of the book before 1997.

The information on weather conditions has been obtained from Royal Meteorological Society monthly reports for 2007.

Livestock population

Cattle

The total cattle population, including calves, in Great Britain increased to just under 8.7 million animals in 2007, a rise of 0.3% compared with 2006.

Dairy Cattle

The total dairy herd fell by 6% in 2007 compared with 2006 and currently stands at just under 1.7 million animals.

Beef Cattle

The total beef breeding herd increased by 12% in 2007 and now stands at just under 1.6 million.

Sheep

There was a decrease of 2% in the total sheep population, including lambs, in 2007 compared with 2006 and the national flock now stands at just under 32 million animals. There was also a decrease in the total adult sheep flock (3%) which now stands at just under 16.1 million.

Goats

The total goat population decreased by 3% compared with 2006 to almost 93,000 animals.

Pigs

There was a decrease of 3% in the total pig population in 2007 compared with 2006 and the national herd now stands at just under 4.5 million animals.

Poultry

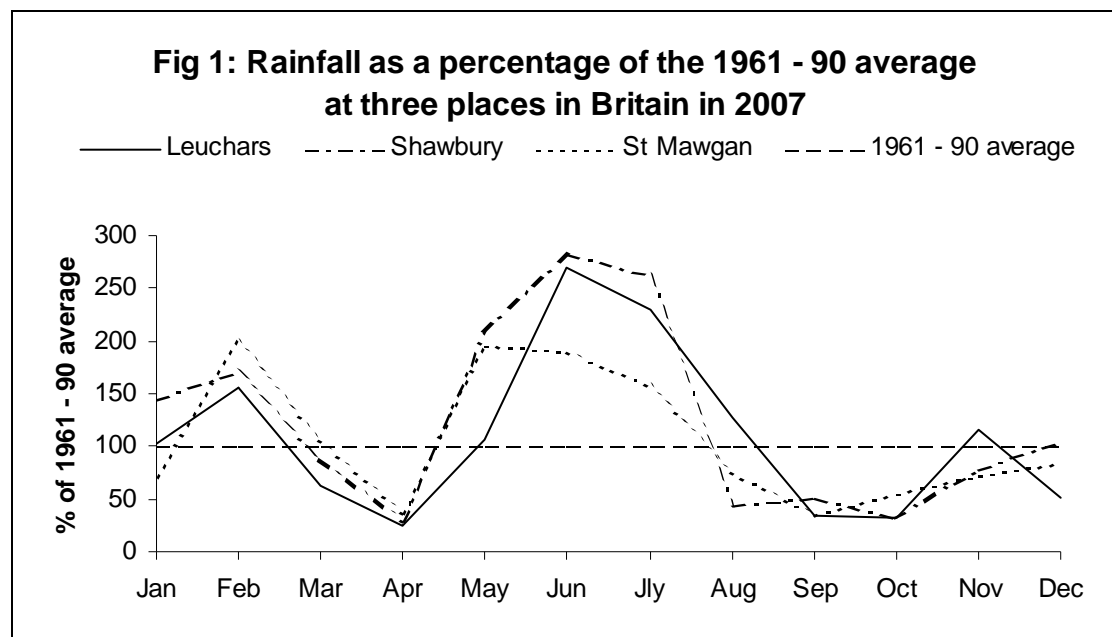
The number of laying fowls producing eggs for human consumption decreased by 6% in 2007 compared with 2006 and now stands at just under 25 million. There was also small decrease (0.4%) in the number of broilers and other table fowls to just under 97 million birds.

Meteorological data

For the location of the weather stations referred to in Figures 1 and 2 please see the map inside the back cover.

January 2007 was wet, windy and exceptionally mild; it was the fifth warmest January on record. The wind was strong and blustery over most of the country throughout much of the month and in some areas severe gales were reported. These strong winds decreased during the last ten days of the month although there were still lengthy periods of heavy rain.

Rainfall during February was below normal almost everywhere and it was generally the warmest February since 2002. The first week of the month was exceptionally sunny but thereafter sunshine levels were low and it was unsettled with substantial amounts of rain in many areas.

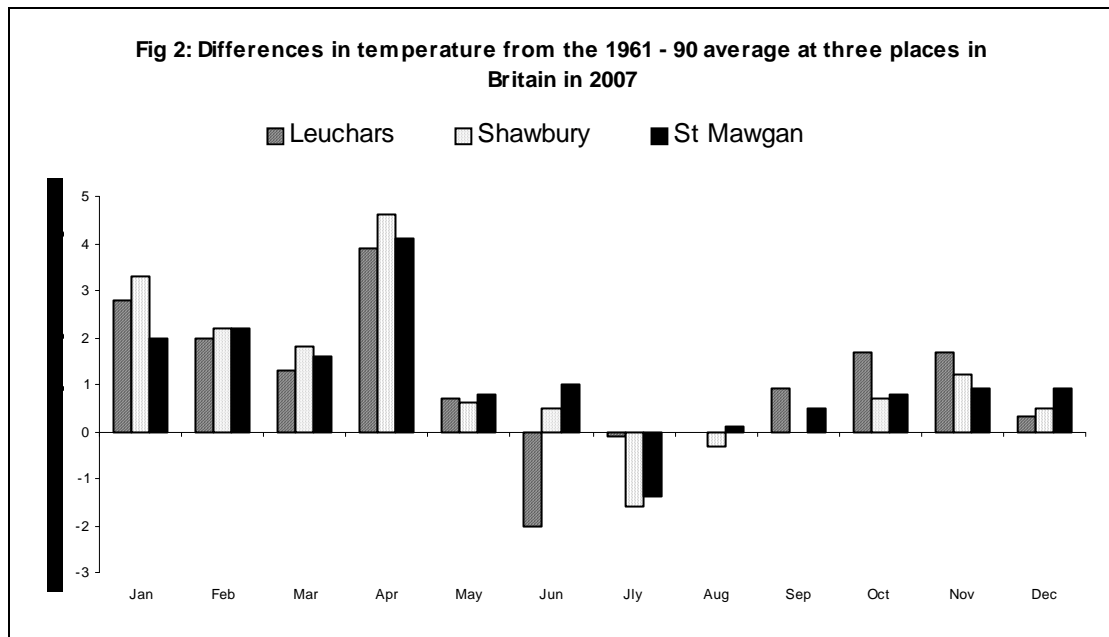


February's rain continued into the first week of March, but thereafter it was mainly dry and sunshine levels were above average in many places. The middle weeks of the month were warm in central, southern and eastern England and at times, in Scotland too. These warm

conditions were followed by cold and dull weather with drizzle and widespread hill fog. By contrast, April was very dry and sunny and it was the warmest April since before 1659, although there were night frosts in most areas during the first half of the month. Large parts of the country had no significant rain and in a small number of places there was no rain at all during April.

May was very dull in eastern and central England, and in some places it was the dullest May since 1932. After a mainly dry first week, rain spread across the whole country, locally accompanied by hail and thunder. It was exceptionally wet at times with flooding in some areas. Towards the end of the month strong northerly winds caused power outages and trees to be uprooted. The first half of June was dry with mist and low cloud along eastern coasts and fair, warm weather in the west and south. During the second half of the month most places, with the exception of Scotland, had rain every day and heavy downpours in some areas resulted in dramatic and long-lasting flooding. The month's average rainfall for England and Wales was over twice the long-term average and it was the wettest June since 1860.

Heavy, prolonged rain and serious flooding were a feature of July's weather and, averaged nationally, it was the wettest July since 1936. During the first week of the month there were frequent and heavy showers accompanied with hail, thunder and squally winds. This was followed by a short period of drier, sunnier weather with local ground frost at night. Widespread, heavy and prolonged rain fell during the second half of July and there was immediate short-lived surface flooding followed by severe flooding in some places. Temperatures throughout the month were below average and it was the coolest July since 1993.



August was cool, the coolest since 1993 with above average rainfall many areas. Sunshine levels varied from below normal in parts of Scotland, Northern Ireland, north-west England, East Anglia and Kent to locally 25% above average in north-east England, the Midlands and the West Country. There were scattered showers and local thunderstorms in places and heavy, frequent rain in others. The first half of September 2007 was very dry throughout most of the country with variable amounts of sunshine. Rain then returned to many areas with occasional severe squalls causing widespread damage. A number of minor tornadoes were also reported.

October was the coolest reported since 2004. Rainfall was below normal almost everywhere and averaged over England and Wales it was the driest October since 1995. Sunshine levels were variable with Scotland and Northern Ireland having more than normal whilst the Midlands and the South-East were mostly cloudy. The dry conditions continued into the first week of November accompanied by warmer than average temperatures. Thereafter most of the country became much colder with widespread night frosts. Towards the end of the month

there was widespread, daily rain and on one day, there was snow over much of the Midlands, Wales and northern England.

December was mild and wet at the beginning and end of the month with an interlude of dry, cold weather during the second and third weeks. Rainfall was above average in some upland areas but below average everywhere else and much of the country was sunnier than average.

DISEASE TRENDS IN 2007

Veterinary comment on trends in VIDA diagnostic data can be found in the Quarterly and Annual reports of the VLA Species Groups: (<http://vla43/index/corp-science-programmes/prog-end-intro/prog-end-species-groups.htm>). There are reports for cattle, small ruminants (sheep & goats), pigs, birds (poultry & game birds), miscellaneous & exotic farmed species and wildlife. The Species Groups are made up of specialist VLA vets and scientists who have expertise in a particular species together with colleagues from the Scottish Agricultural Colleges Veterinary Science Division and veterinary surgeons from the specialist BVA Divisions. The Species Groups take the lead in the investigation of new & emerging diseases identified by VLA scanning surveillance activities.

Fig 4: Total cattle submissions in GB 2000 - 2007

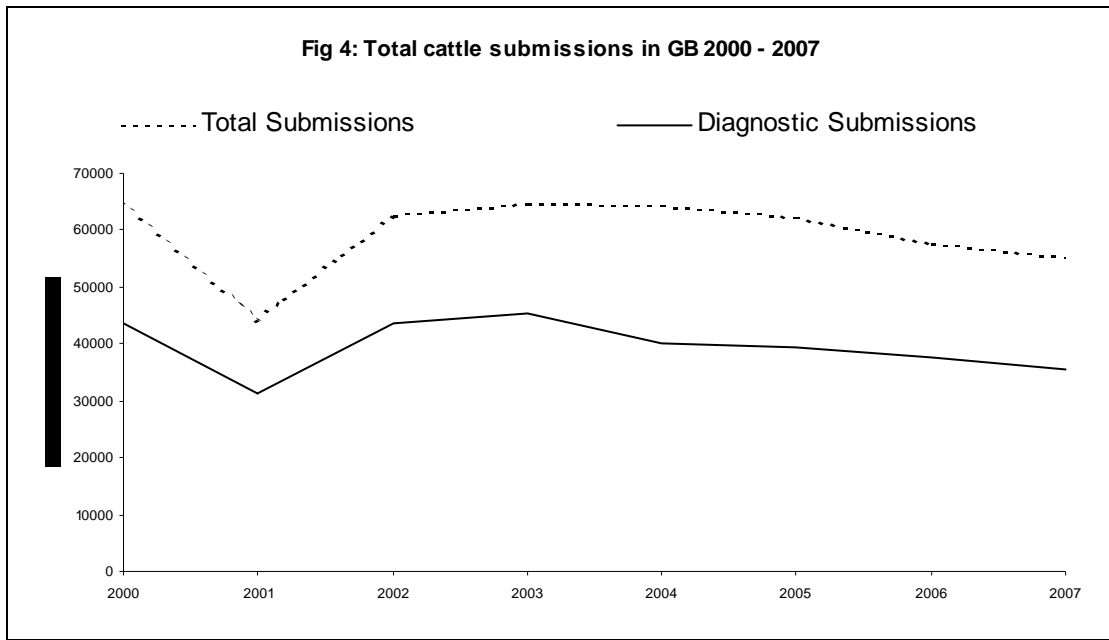


Fig 5: Diagnosis of bovine fetopathy in 2007 (excluding "fetopathy diagnosis not reached") as a percentage of all bovine fetopathy diagnoses (n=1092)

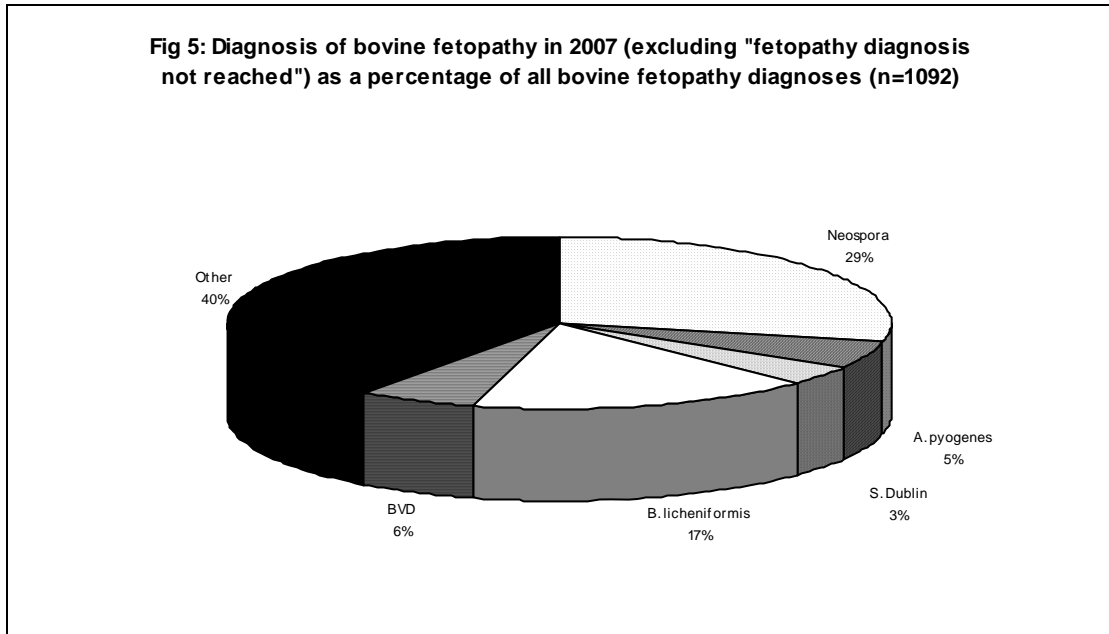


Fig 6: All incidents of salmonellosis other than fetopathy in cattle 2000 - 2007

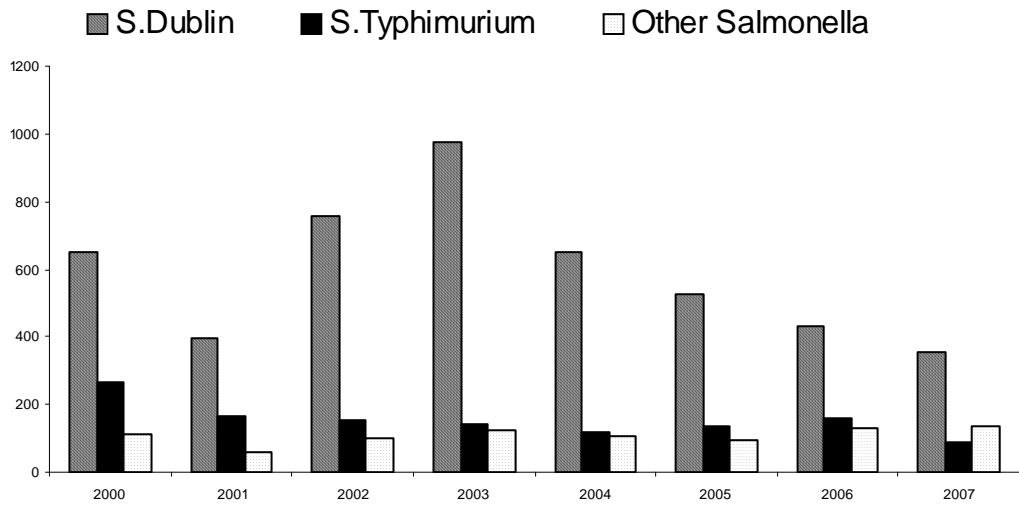


Fig 7: All incidents of fasciolosis in cattle in 2000 - 2007

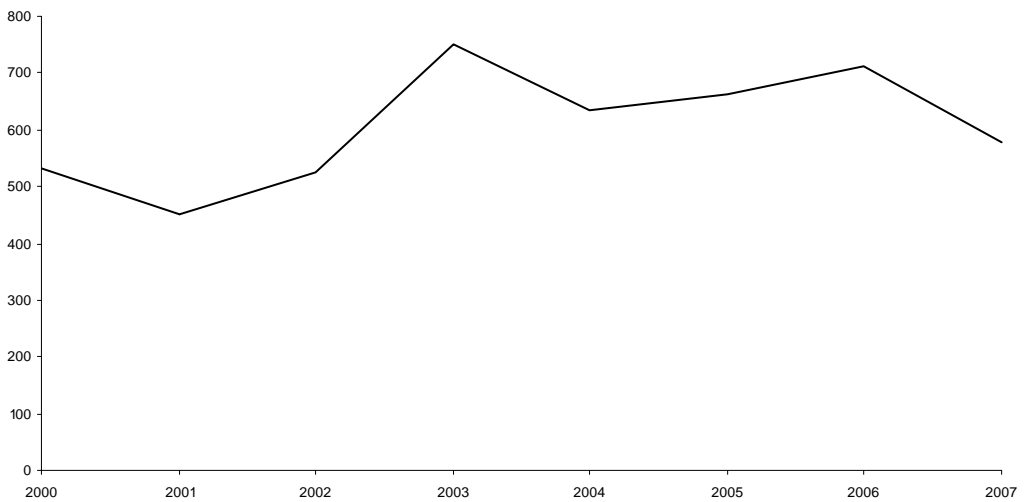


Fig 8: All incidents of BVD in cattle in 2000 - 2007

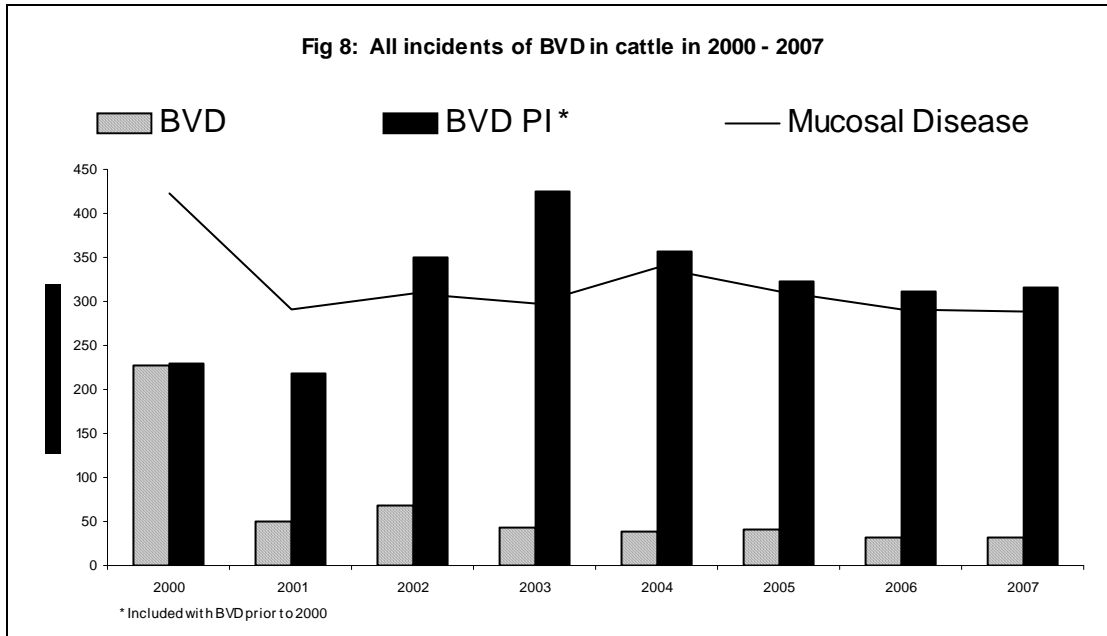


Fig 9: All incidents of Johne's Disease in cattle in GB 2000- 2007

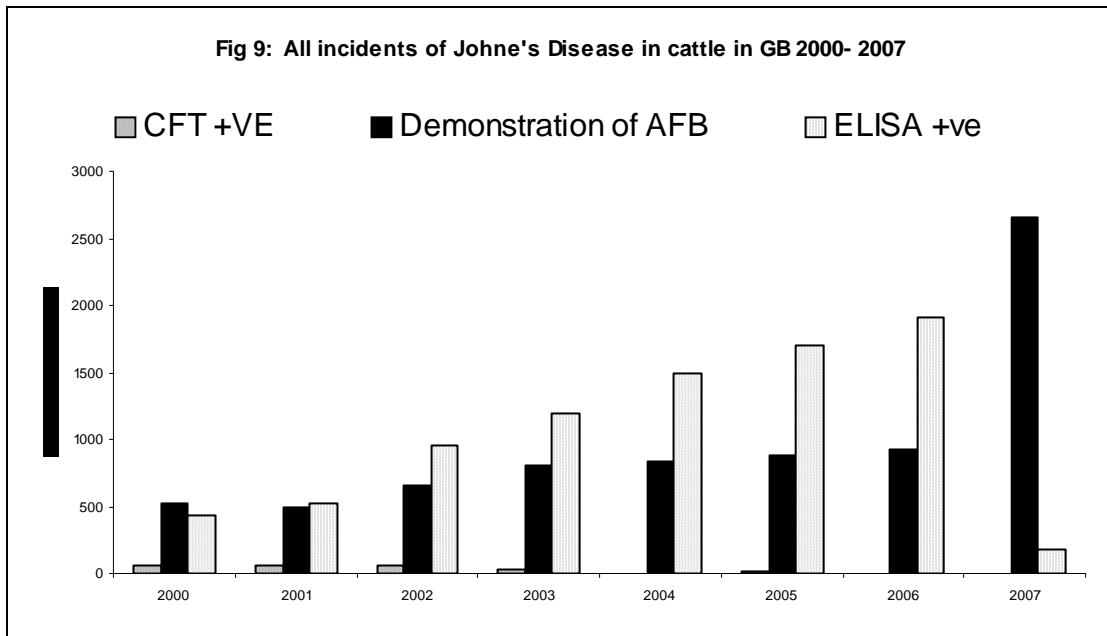


Fig 10: All incidents of mastitis in cattle in Great Britain as a percentage of total mastitis diagnoses in 2007 (n=3705)

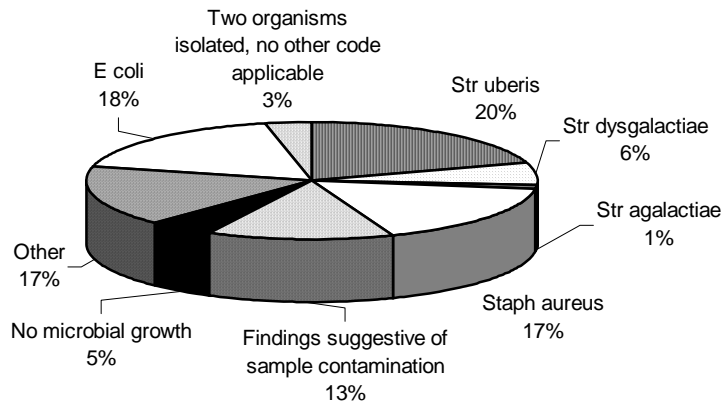
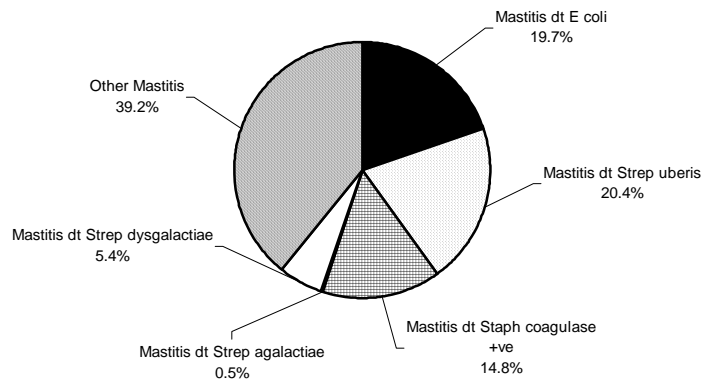


Fig 11: Clinical mastitis in cattle by pathogen in 2007 (Jan-Dec) (n = 2157) (VLA diagnoses only)



**Fig 12: Sub-clinical mastitis in cattle by pathogen in 2007(Jan-Dec) (n =581)
(VLA diagnoses only)**

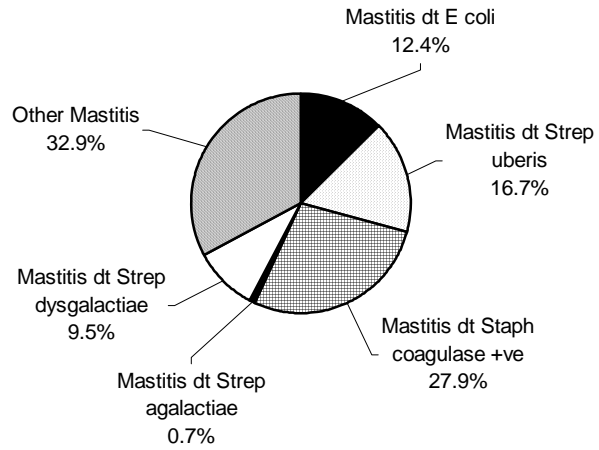


Fig 13: VIDA sheep diagnostic submissions vs total GB sheep population 2000 - 2007

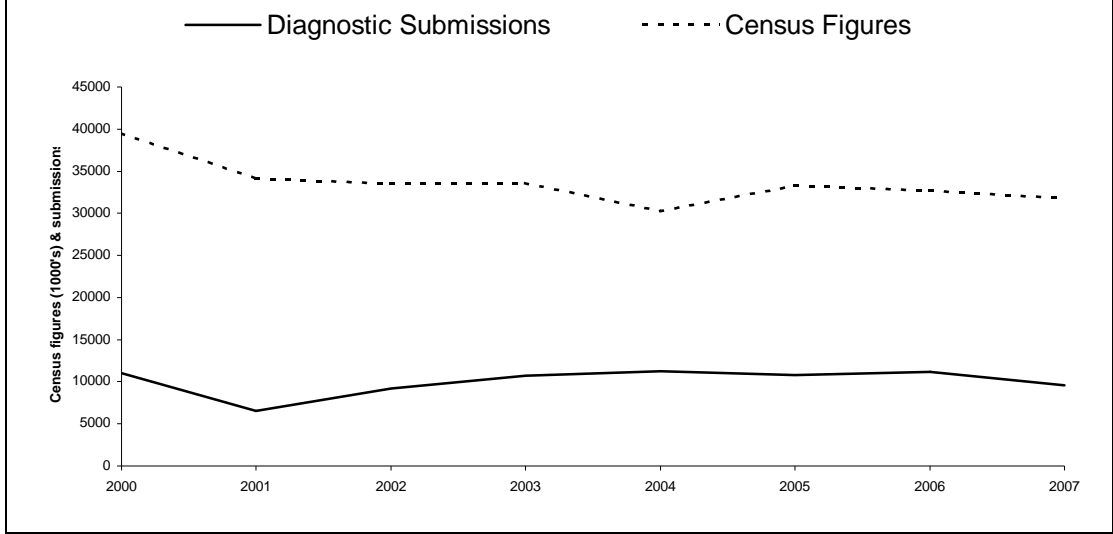


Fig 14: All incidents of fasciolosis in sheep in 2000 - 2007

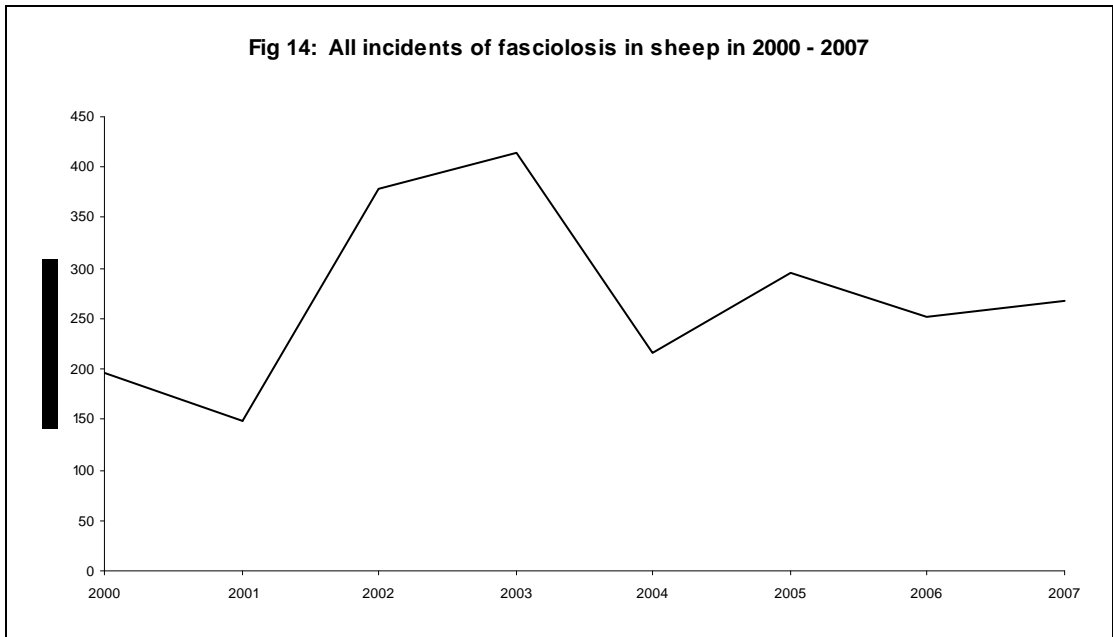


Fig 15: All incidents of PGE - including haemonchosis, nematodiriasis and not otherwise specified in sheep 2005 - 2007

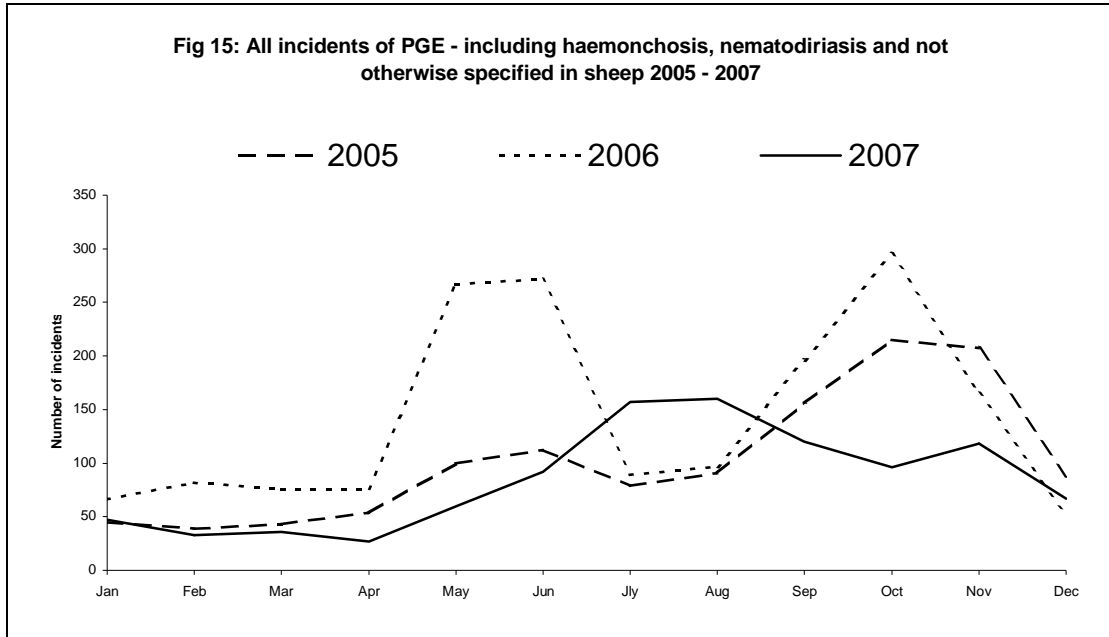


Fig 16: Goat diagnostic submissions vs total goat population in Great Britain 2000 - 2007

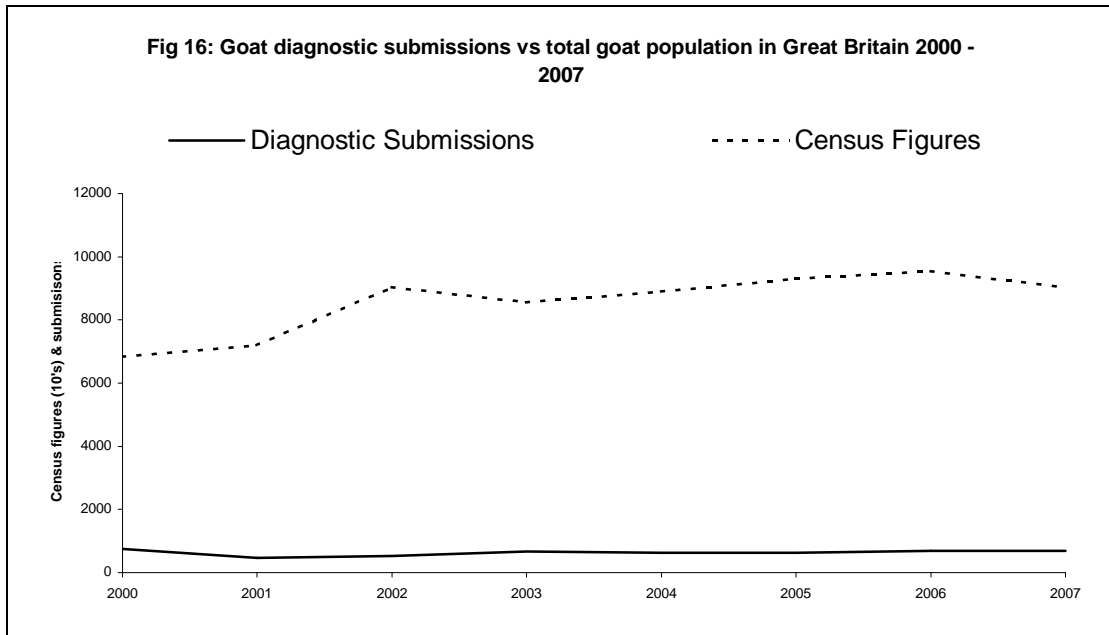


Fig 17: All incidents in goats in Great Britain as a percentage of total diagnostic submissions 2004 - 2007

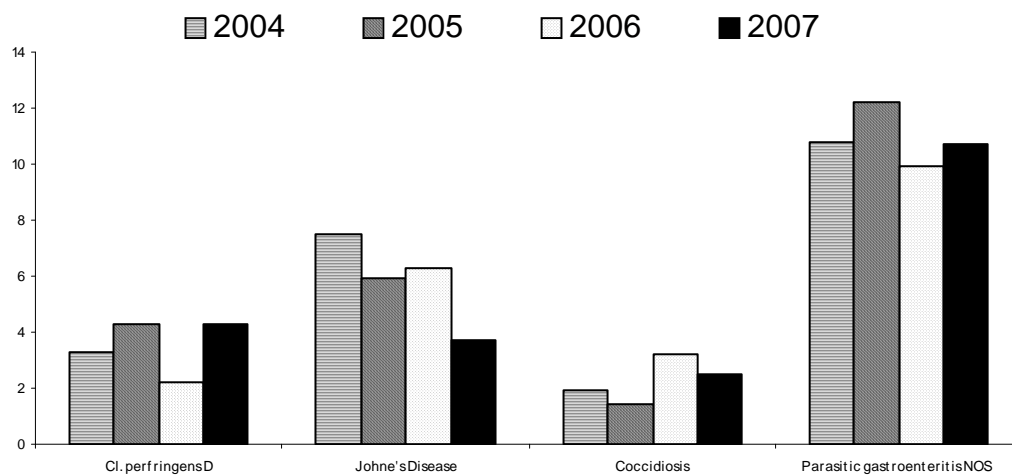


Fig 18: VIDA diagnostic pig submissions 2000 - 2007

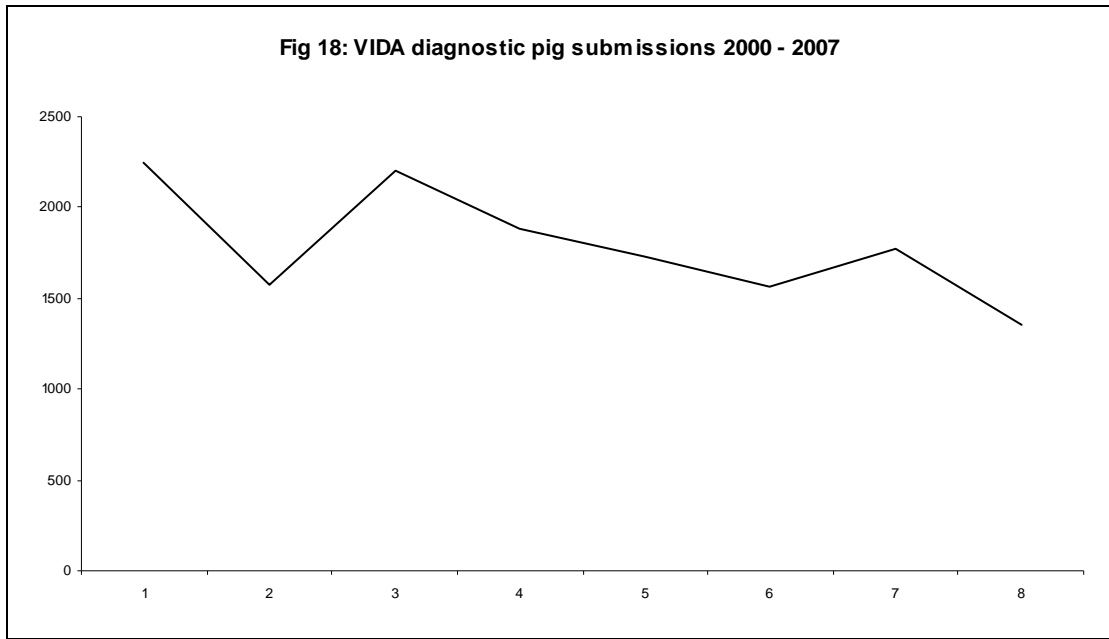


Fig 19: All incidents of Salmonella Typhimurium and Salmonella Choleraesuis in pigs 2000 - 2007

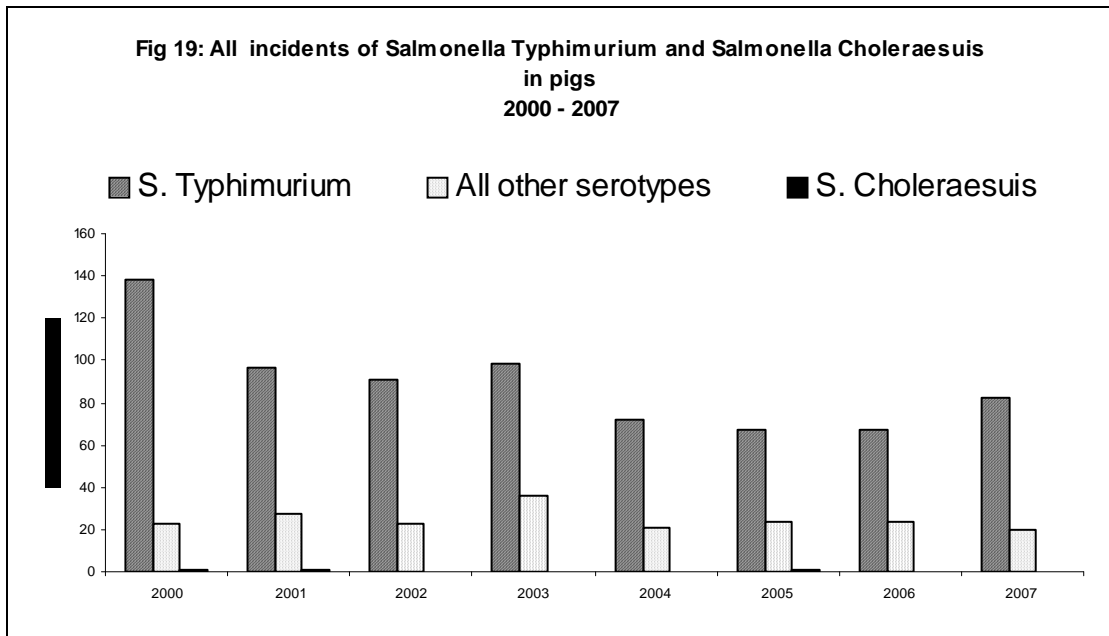


Fig 20: Total bird submissions in GB 2000 - 2007

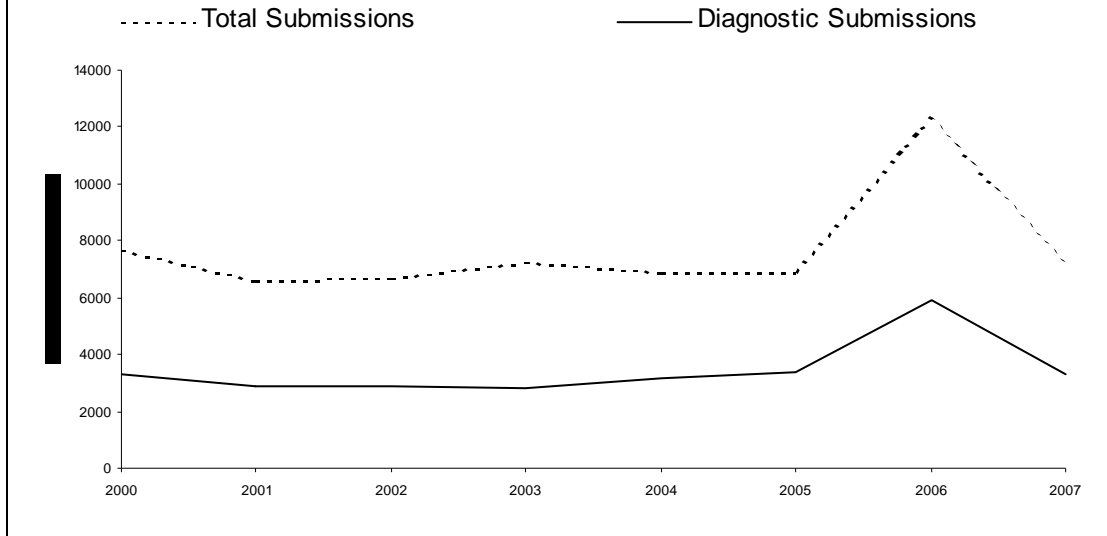


Fig 21: All incidents in birds in Great Britain as a percentage of diagnostic bird submissions 2002 - 2007

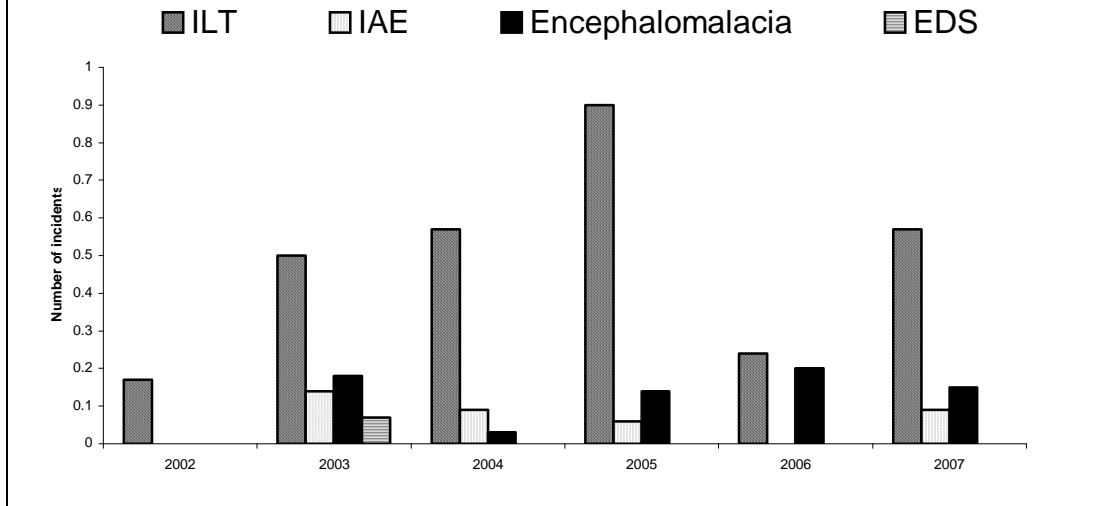
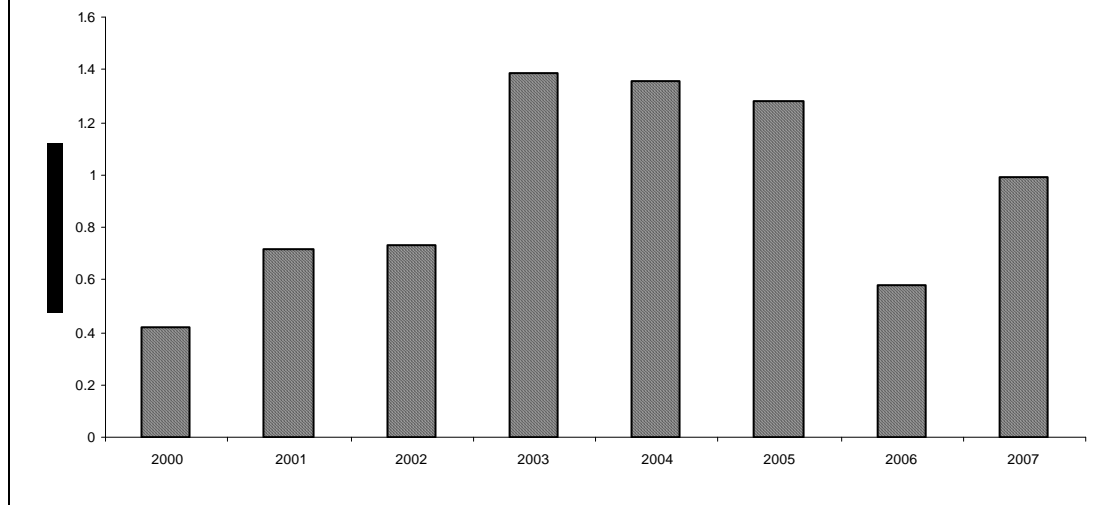


Fig 22: All incidents of blackhead as a percentage of diagnostic bird submissions in Great Britain 2000 - 2007



TABULATED DATA

As well as the information published in the annual VIDA book, there is a customised data retrieval service from the extensive VIDA database. Information can be retrieved for any number of years from 1975 to the current year, for cattle, sheep, pigs, birds, goats, horses, rabbits, fish, dogs and cats, and since 1990 for deer and badgers. Birds can be classified into a large number of different categories. Other variables include age, diagnosis from a specific sample type, and county of origin.

Further details of customised ad hoc retrievals, including a cost quotation are available from:

VIDA Section
Centre for Epidemiology and Risk Analysis
Veterinary Laboratories Agency
New Haw
Addlestone
Surrey
KT15 3NB

Telephone: +44 (0)1789 750212 or +44 (0)1932 357622
Fax: +44 (0)1789 750281
E-mail vida@vla.defra.gsi.gov.uk