

VIDA 2005

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 2005. The total number of submissions received in 2005 was 124,024. This includes the total number of diagnoses given in the tables and 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 2005 CERA (previously called the Epidemiology Department) of the VLA Weybridge received 41 such requests for information, involving 696 individual data retrievals.

Disease and species code changes in VIDA in 2005

There were 14 new disease code changes made in 2005, twelve in birds, one in small ruminants and one in pigs. These are shown in more detail below.

New codes for small ruminants

Group	Code Number	Diagnosis
Group 3 – Respiratory diseases	169	Pneumonia due to <i>Mycoplasma ovipneumoniae</i>

New codes for pigs

Group	Code Number	Diagnosis
Group 2 – Digestive diseases	186	<i>Clostridium perfringens</i> necrotic enteritis

New codes for birds

Group	Code Number	Diagnosis
Group 1 – Systemic diseases	121	Colibacillosis
	293	Finch oesophagitis
	627	Cardiomyopathy and heart failure NOS
Group 2 – Digestive diseases	255	Turkey poult viral enteritis NOS
	256	Ulcerative enteritis (<i>C. colinum</i>)
	258	Avian intestinal spirochaetosis
	268	Gizzard erosion due to adenovirus
	269	Gizzard erosion NOS
Group 3 – Respiratory diseases	737	<i>Ornithobacterium rhinotracheale</i> (ORT)
	748	Infectious sinusitis NOS
Group 7 – Skin diseases	374	Red Mite
	375	Northern Fowl Mite

Bias in VIDA

Total numbers of submissions recorded by VIDA represent only the material submitted to VLA Regional Laboratories and SAC DSCs for investigation. 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 20 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 23 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 30 September 2001.

FMD was controlled by the slaughter of infected animals and animals that were judged to be dangerous contacts. More than three million

sheep, 500,000 cattle and 140,000 pigs were killed, from more than nine thousand holdings. Approximately two million additional animals were slaughtered under the Livestock Welfare Disposal Scheme, bringing the total to more than 6 million animals. On the basis that no cases of FMD had occurred for three months and extensive statistically based serological surveys, every administrative area in Great Britain had achieved FMD free status by 14 January 2002 – three and a half months after the last outbreak was confirmed. The European Commission recognised Great Britain's FMD-free status through Commission Decision 2002/153/EC of 20 February 2002 which repealed requirements to provide FMD related certification for intra-community trade. Further information about the 2001 FMD epidemic can be found on the DEFRA website <http://defraweb/footandmouth>.

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 carcass movement for diagnostic purposes resulted in a 77.4% reduction in cattle carcass 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 notes that early year data was comparable with the previous year. Diagnostic submissions, particularly carcass submissions, were also significantly reduced in 2001 for pigs and goats.

TRENDS IN 2005: 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 2005 livestock data is taken from the June Agricultural Census figures (MAFF statistics 2005) for Great Britain. In editions of this booklet before 1997 the livestock figures published were taken from the December census and have covered 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 prior to 1997.

The information on weather conditions has been obtained from Royal Meteorological Society monthly reports for 2005.

Livestock population

Cattle

The total cattle population, including calves, in Great Britain decreased by slightly (2.02%) in 2005 to just over 8.7 million animals.

Dairy Cattle

The total dairy herd fell by 3.5% in 2005 and currently stands at just under 2 million animals.

Beef Cattle

There was an increase of 0.92% in the total beef breeding herd in 2005 to just over 1.5 million.

Sheep

There was a small decrease (0.92%) in the total sheep population including lambs in 2005 and the national flock now stands at just under 34 million animals. The total adult sheep flock also decreased (by 3.2%) and now stands at just over 16.9 million.

Goats

The total goat population increased by 7.9% in 2005 to almost 96,000 animals.

Pigs

There was a decrease of 5.9% in the total pig population in 2005, which now stands at just under 4.5 million animals.

Poultry

The number of laying fowls for eating egg production increased slightly by 0.12% to just over 28.63 million. There was a decrease in the number of broilers and other table fowls (5.7%) to just under 99 million birds.

Meteorological data

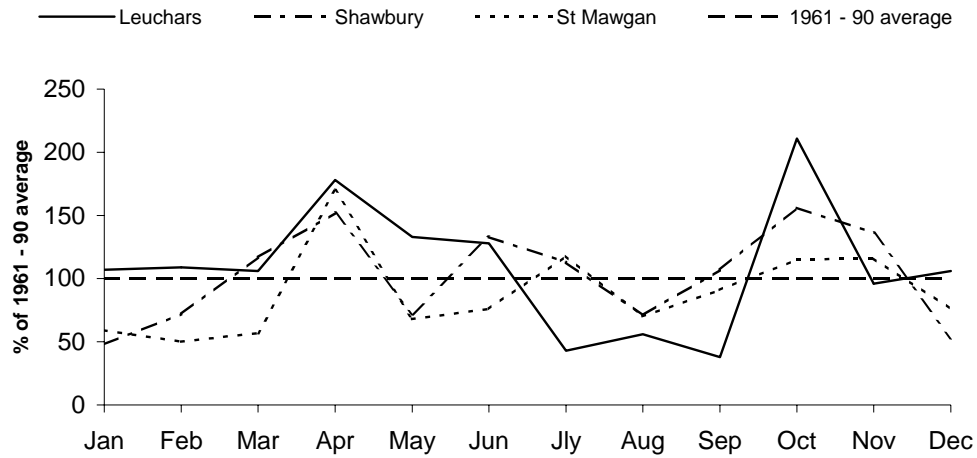
For the location of the weather stations referred to in Figures 1 and 2 please see the map inside the back cover.

January 2005 was the warmest since 1990, with the mean temperature 1.5 - 2.5°C above average. It was very dry in eastern, central and southern England whilst northern and western England, Wales and Scotland were all wet and windy, with some areas having twice the average rainfall for January.

February was a month of contrasts. The first half of the month was mild, whilst the second half was the coldest since February 1986. The month began dry and mostly cloudy, but after a few days persistent rain spread over the country and there was widespread fog over England. During the middle of the month a depression brought snow and hail showers to most areas with localised thunder. These wintery showers continued for approximately one week before it turned very cold with prolonged snow which lasted for the remainder of the month.

The cold weather continued for the first half of March, and it was the coldest March since 1996. Temperatures then rose throughout the country and the second half of March was the warmest since 1938. The cold conditions during the first half of the month were accompanied by both wintery showers and outbreaks of heavy snow and there was frequent hail and thunder. From the 15th of March warm, moist air covered the country bringing rain to the upland areas of Scotland, Wales and northern England and warm, foggy conditions to the south and west of England. During the last week of March it turned cloudier and colder and there were localised thunderstorms reported. The last day of the month was largely dry and this continued into the first few days of April. Overall, the weather during April was very changeable with belts of heavy rain or snow followed by dry, bright days. Parts of southern Scotland, northern England and the West Country reported more than twice their usual rainfall for April, whilst other areas of the reported a lower than average rainfall, and in some cases half that expected.

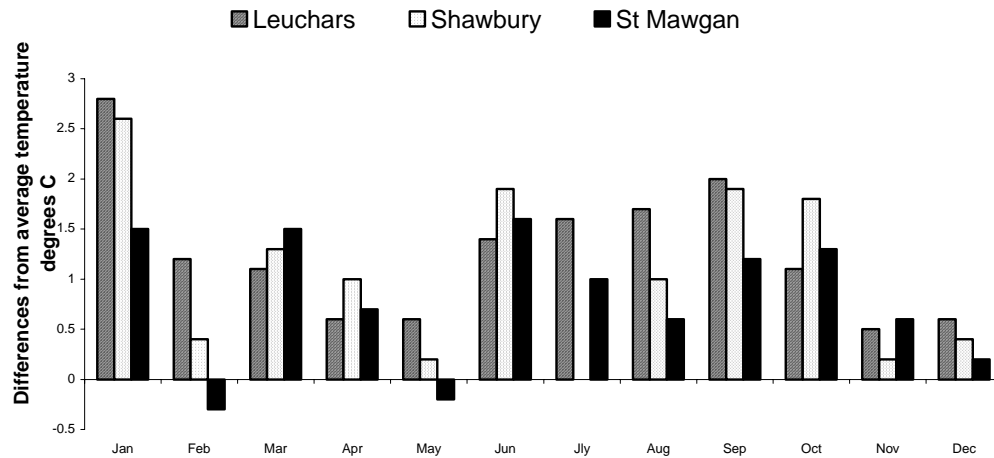
Fig 1: Rainfall as a percentage of the 1961 - 90 average at three places in Britain in 2005



Overall, it was the coolest May since 1996 with notable differences in temperature between the first and second half of the month. For the first ten days there were widespread thunderstorms, some accompanied by hail and thunder, with occasional sunny spells and overnight ground frost. After a few days of snow showers and further night frosts it became warm and humid with showers, particularly over England and Wales and there were several small tornados in East Anglia. Rainfall during May was above average in Scotland and some parts England, but there was less than half the normal amount in southern England. During June the rain continued to fall over Scotland and although there was heavy rain in eastern England, the Midlands and the West Country during the last week of the month, it remained dry in the South East of England – the eight dry month in succession. Temperatures during June varied dramatically between the first and second halves of the month. The first half was the coolest June (with 2001) for ten years, but the second half was the warmest since 1976. Overall, it was the 7th warmest June in the last 100 years.

Apart from a hot spell during the second week, July was cool, dull and unsettled. All areas had occasional rain and, during the last week of the month, there was widespread rain and thunderstorms, with tornadoes in the Midlands and East Anglia. Heavy isolated showers continued for the first few days of August followed by more showery conditions. During the middle of the month there was heavy rain with thunderstorms and flooding in several areas. Overall it was the coolest August for six years, however the last day of the month was fine and very warm.

Fig 2: Differences in temperature from the 1961 - 90 average at three places in Britain in 2005



The warm weather continued into September, and it was the fifth warmest September in the last 100 years with the period from 1st – 10th giving England and Wales its warmest start to September since 1949. After a dry first week, rain, which was often heavy, spread over much of the country for the remainder of the month and there was also thunder in many areas. Despite the unsettled weather, rainfall was below normal in all areas except parts of northern and western Scotland, north-east England and East Anglia. October too was warm, amongst the four warmest Octobers on record. It was cloudy over most of the country, and as a whole was the dullest October since 1982.

Rainfall was high, particularly in the west and there was hail and thunder in many areas.

It was the warmest first half of November since 1994 and the coldest second half since 1993. Most eastern and southern districts were dry, but there was higher than average rainfall in northern and western Scotland, north-west England, Cornwall and Wales. In contrast to the dull October, sunshine levels were above average almost everywhere and it was the sunniest November in records going back to 1881. Like November, December was an exceptionally sunny month. Sunshine levels were above average almost everywhere and over England and Wales it was the fourth sunniest December on record, whilst when November and December were looked at together, it was the sunniest such pairing since records began. Temperatures during December were close to average in most parts of Great Britain and rainfall was below average in all areas.

DISEASE TRENDS IN 2005

Veterinary comment on trends in VIDA diagnostic data can be found in the Quarterly Disease Surveillance Reports: (<http://www.defra.gov.uk/corporate/vla/science/science-end-survrep-qtly.htm>). There are reports for cattle, small ruminants (sheep & goats), pigs, birds (poultry & gamebirds), miscellaneous & exotic farmed species and wildlife. The reports are compiled from data collected by the VLA's Regional Laboratory network. Veterinary staff within the laboratories have a high level knowledge on current disease levels, and play a key role in animal disease surveillance.

Fig 4: Total cattle submissions in GB 1998 - 2005

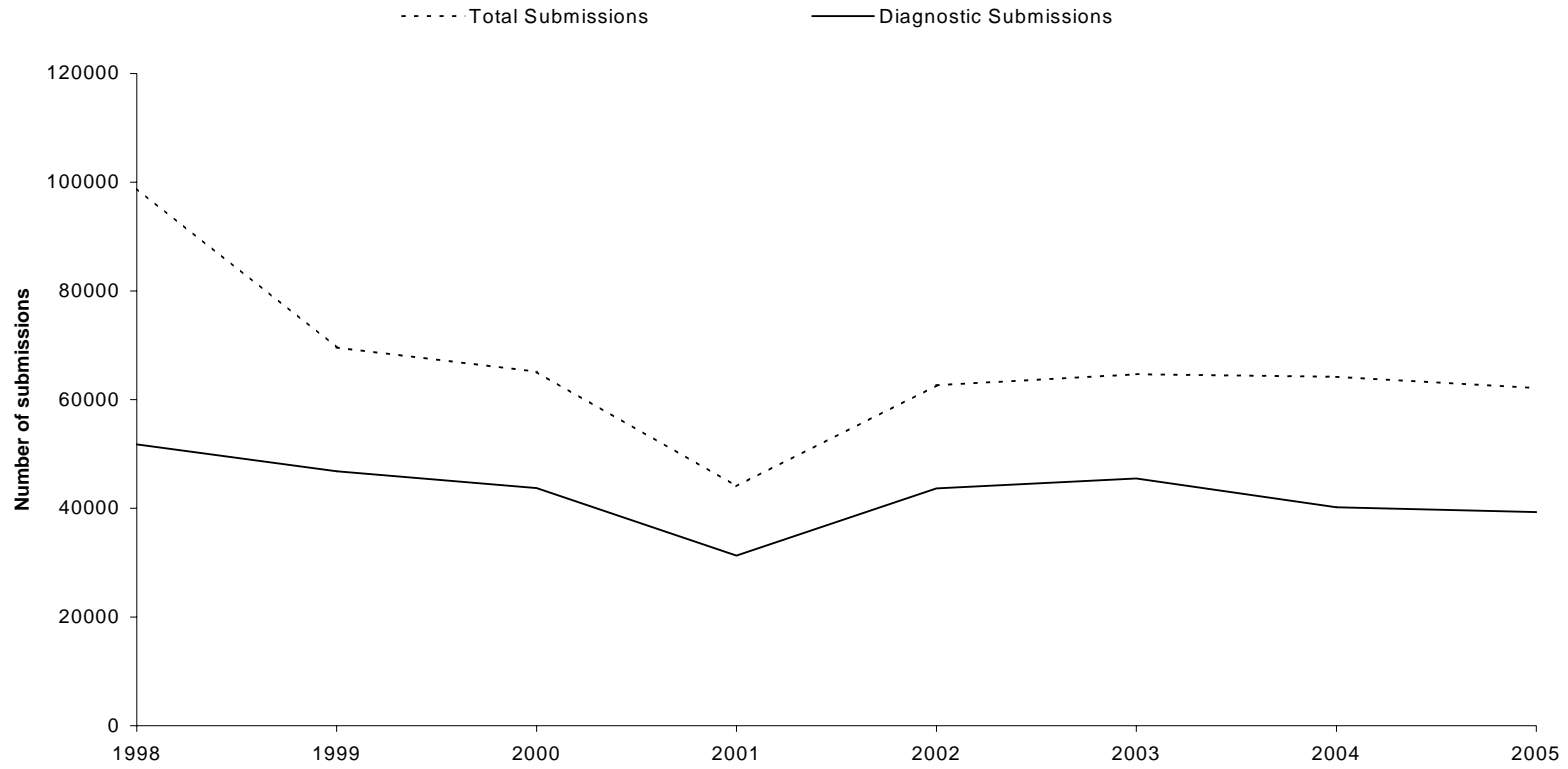


Fig 5: Diagnosis of bovine foetopathy in 2005 (excluding "foetopathy diagnosis not reached") as a percentage of all bovine foetopathy diagnoses (n=1070)

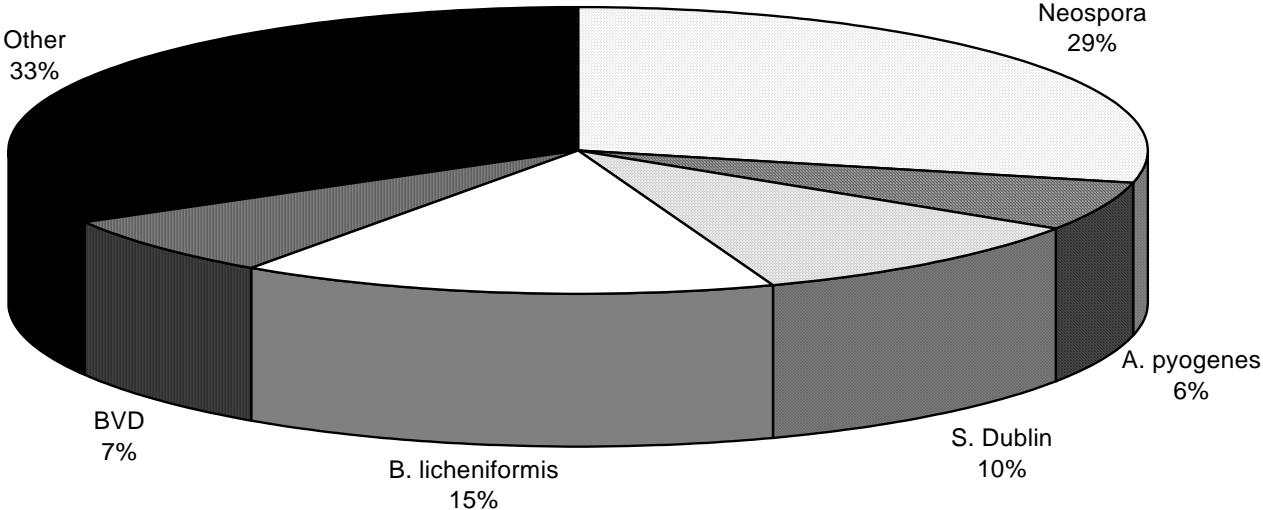


Fig 6: All incidents of salmonellosis other than foetopathy in cattle 1998 - 2005

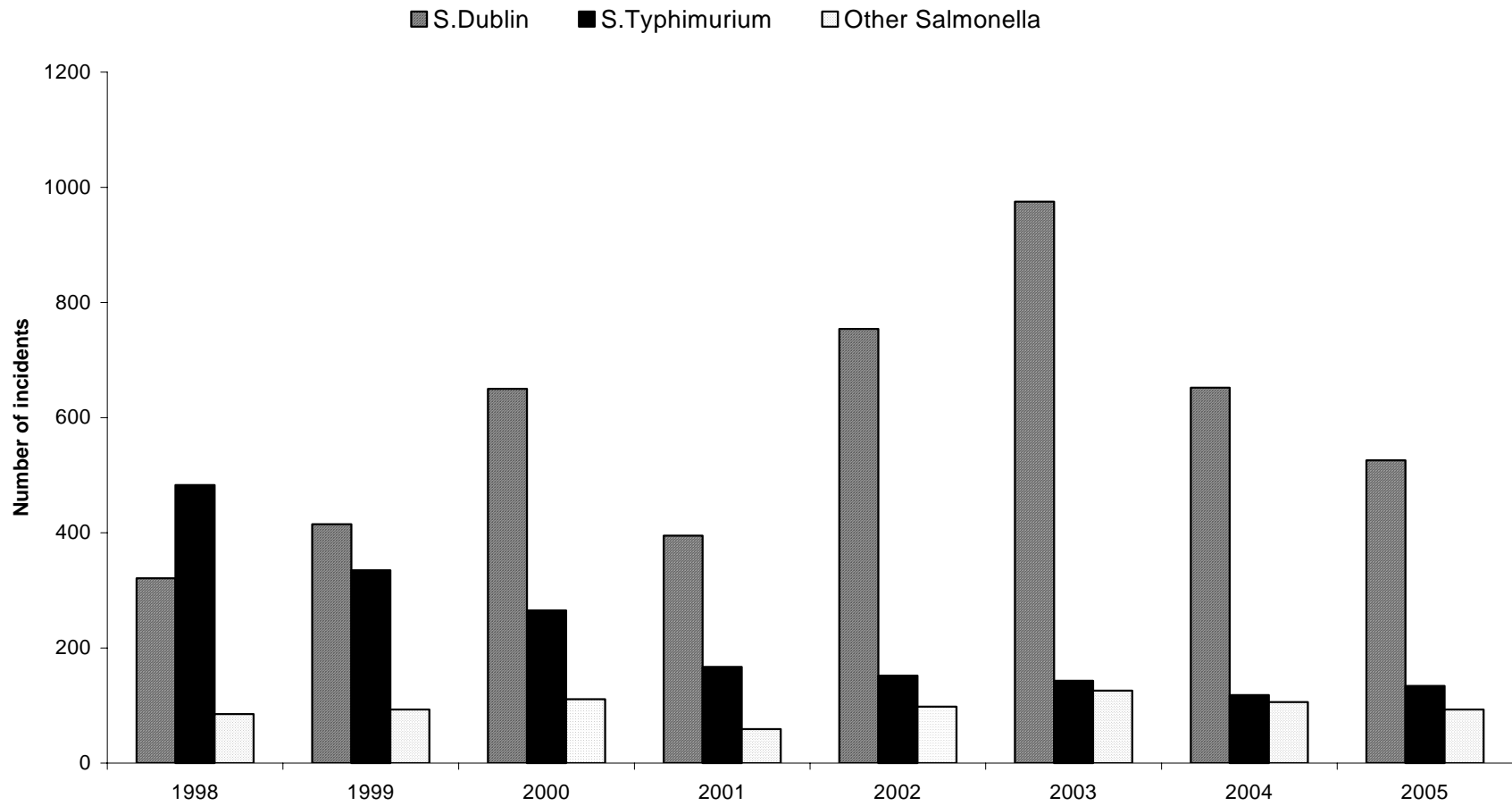


Fig 7: All incidents of fasciolosis in cattle in 1998 - 2005

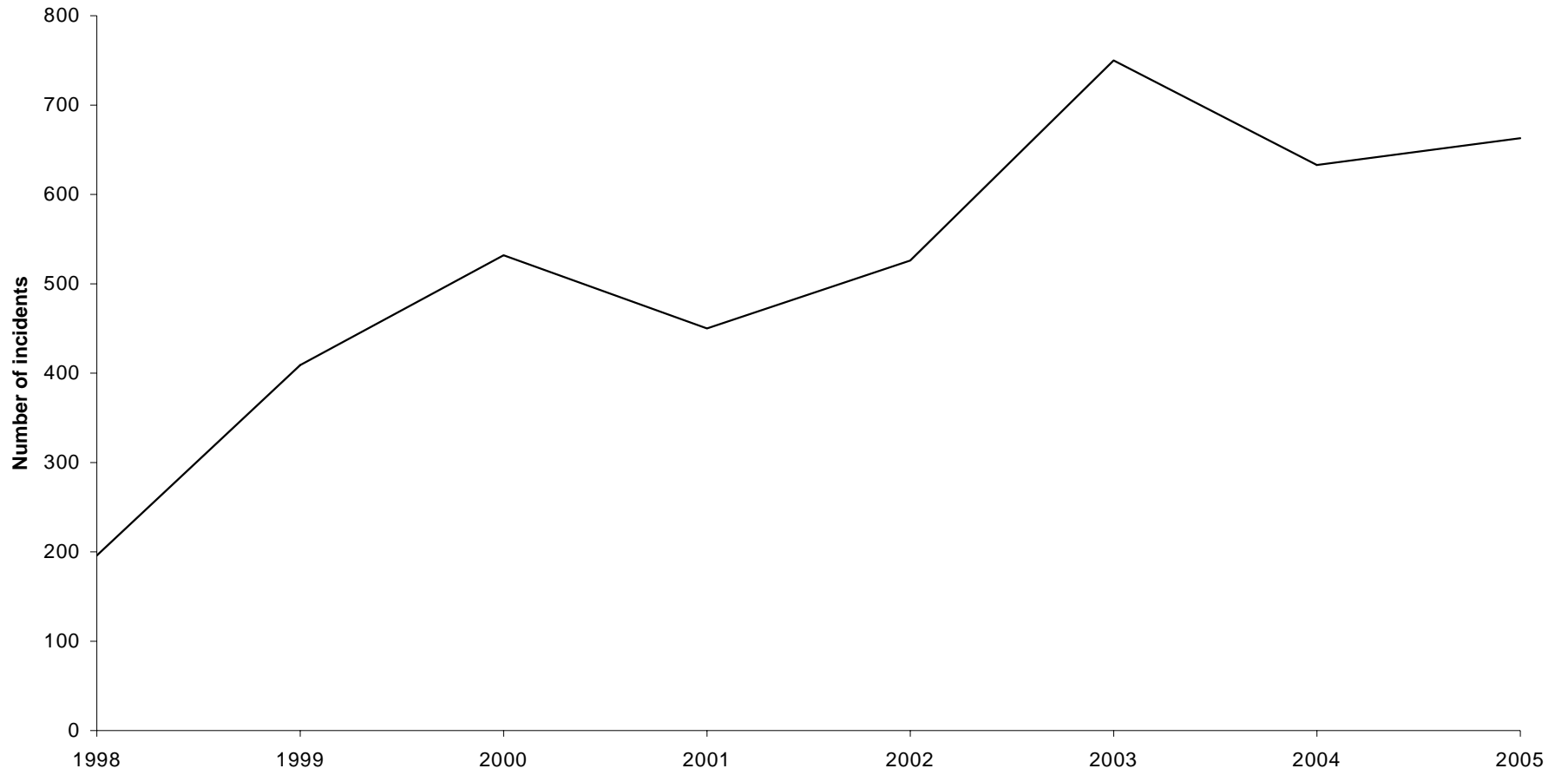


Fig 8: All incidents of BVD in cattle in 1998 - 2005

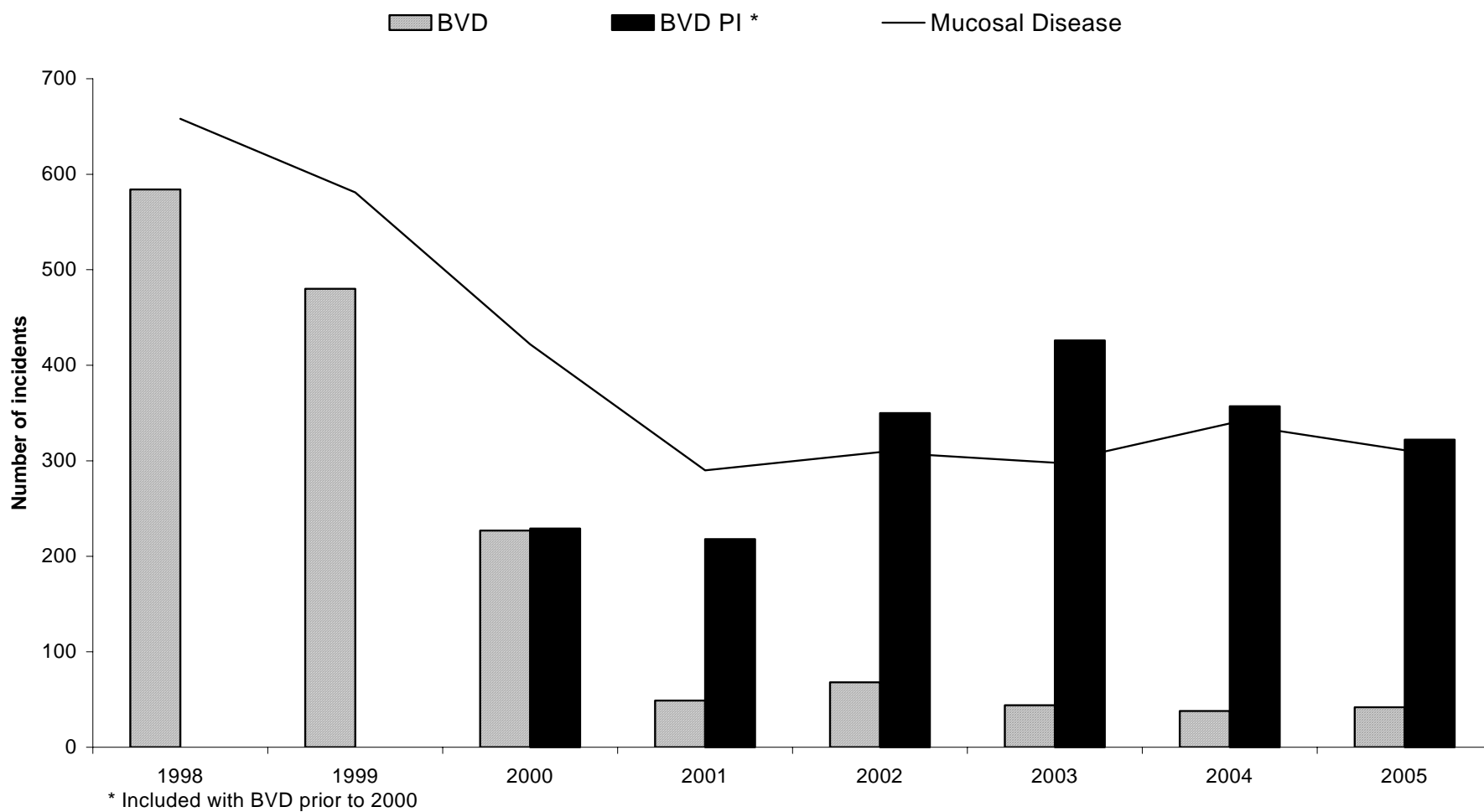


Fig 9: All incidents of Johne's Disease in cattle in GB 1998- 2005

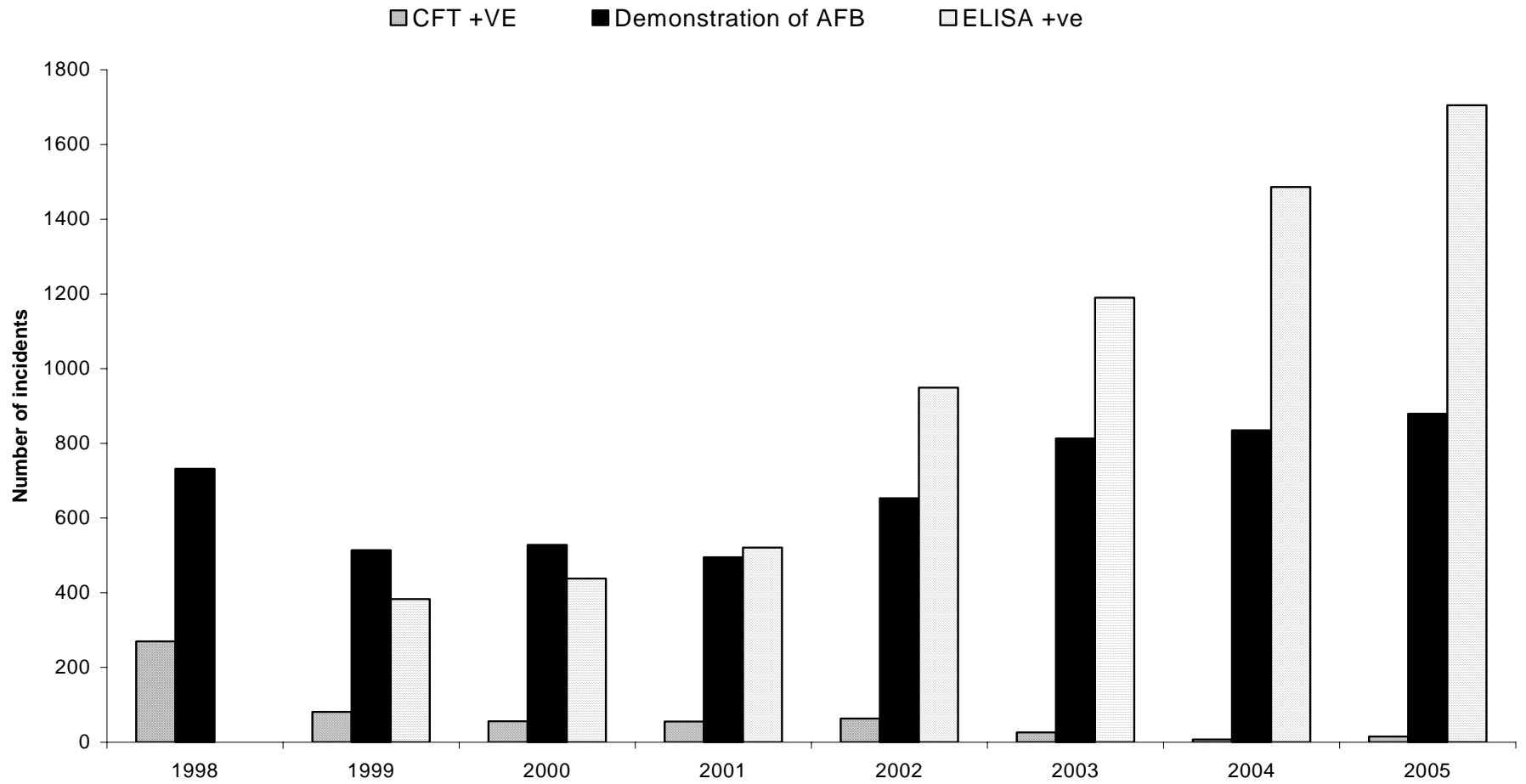
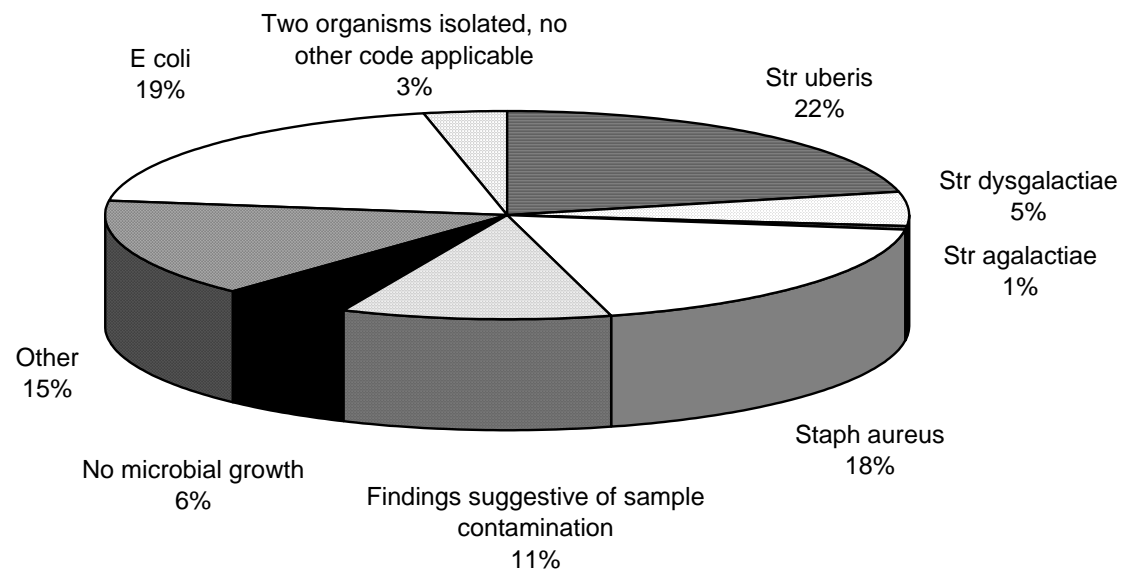
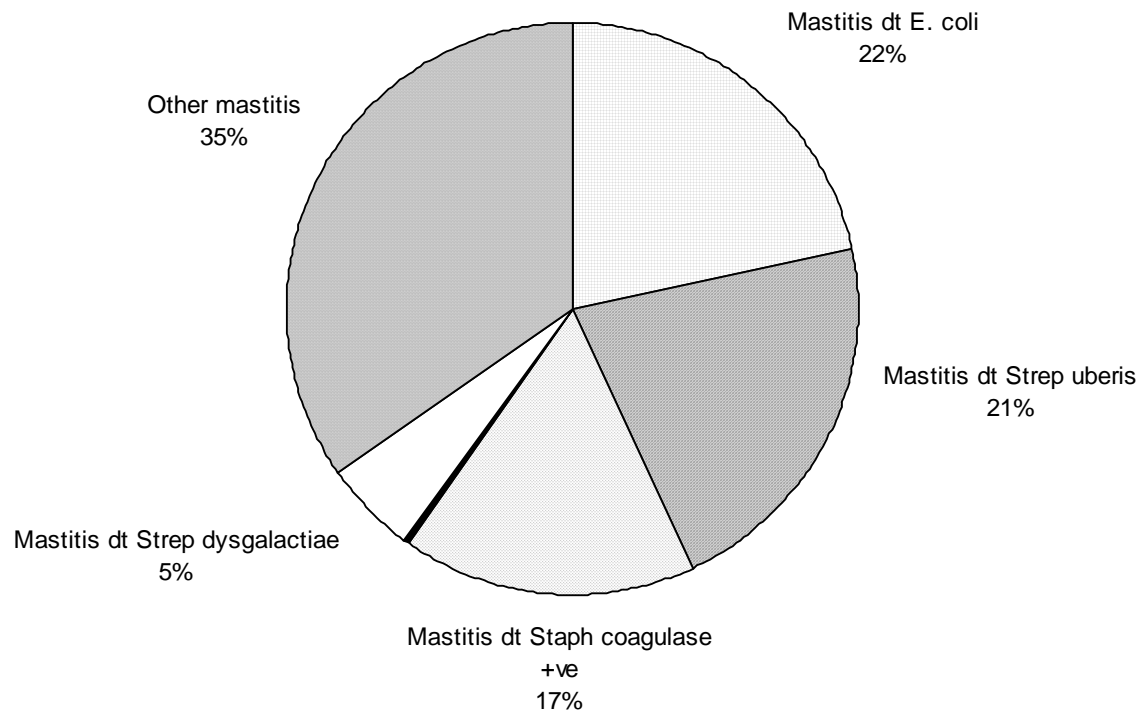


Fig 10: All incidents of mastitis in cattle in Great Britain as a percentage of total mastitis diagnoses in 2005 (n=5697)



**Fig 11: Clinical mastitis in cattle by pathogen in England and Wales in 2005
(n = 3644)**



**Fig 12: Sub-clinical mastitis in cattle by pathogen in England and Wales in 2005
(n =773)**

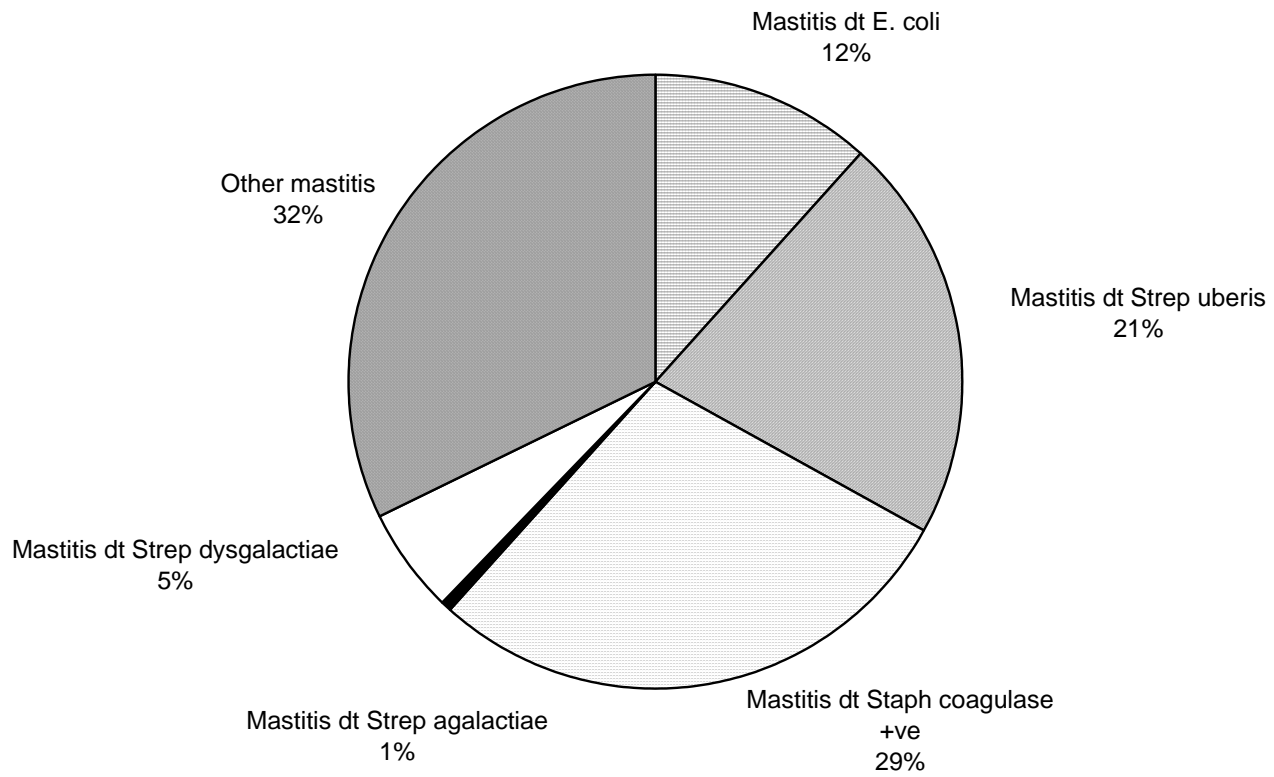


Fig 13: VIDA sheep diagnostic submissions vs total GB sheep population 1998 - 2005

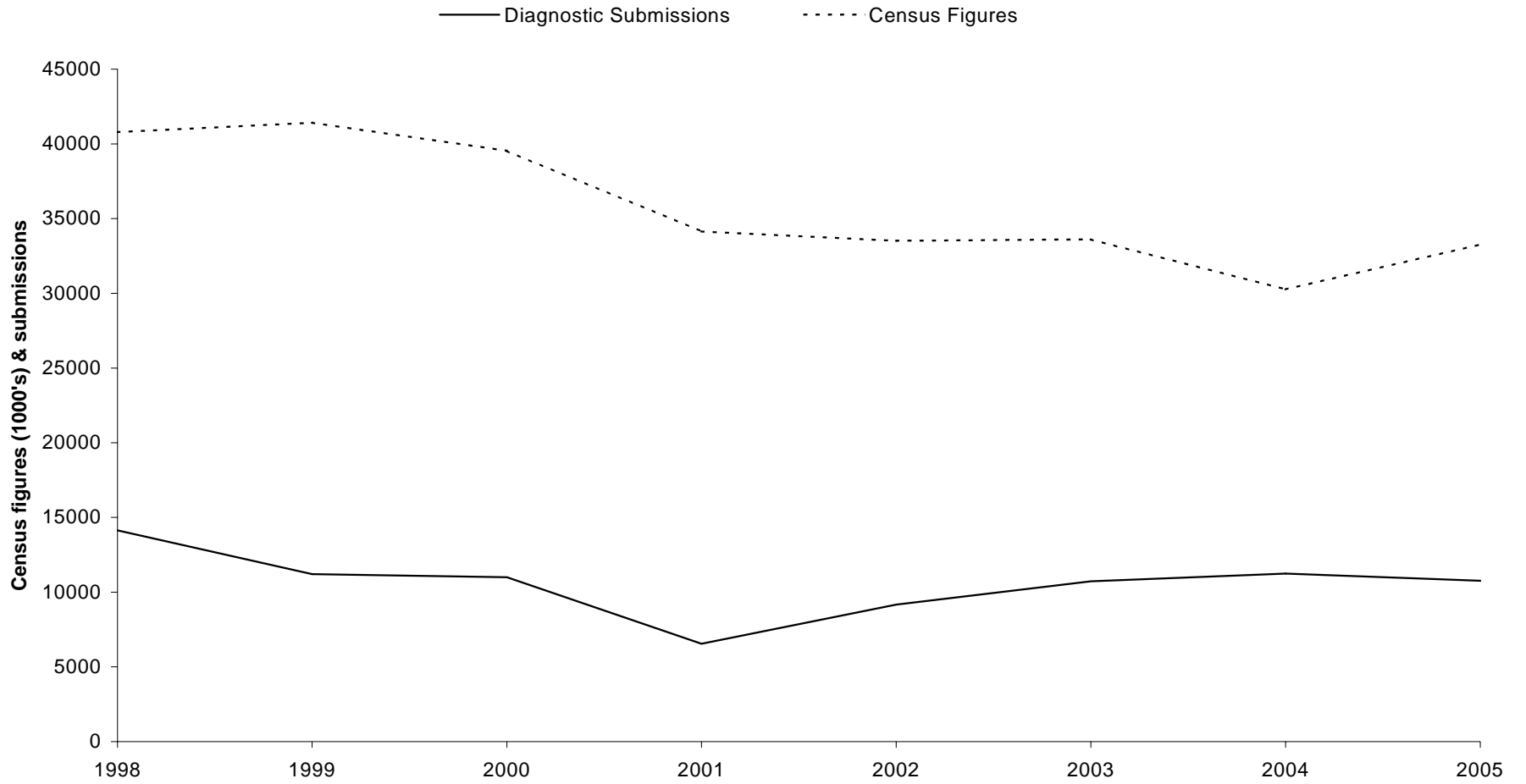


Fig 14: All incidents of fasciolosis in sheep in 1998 - 2005

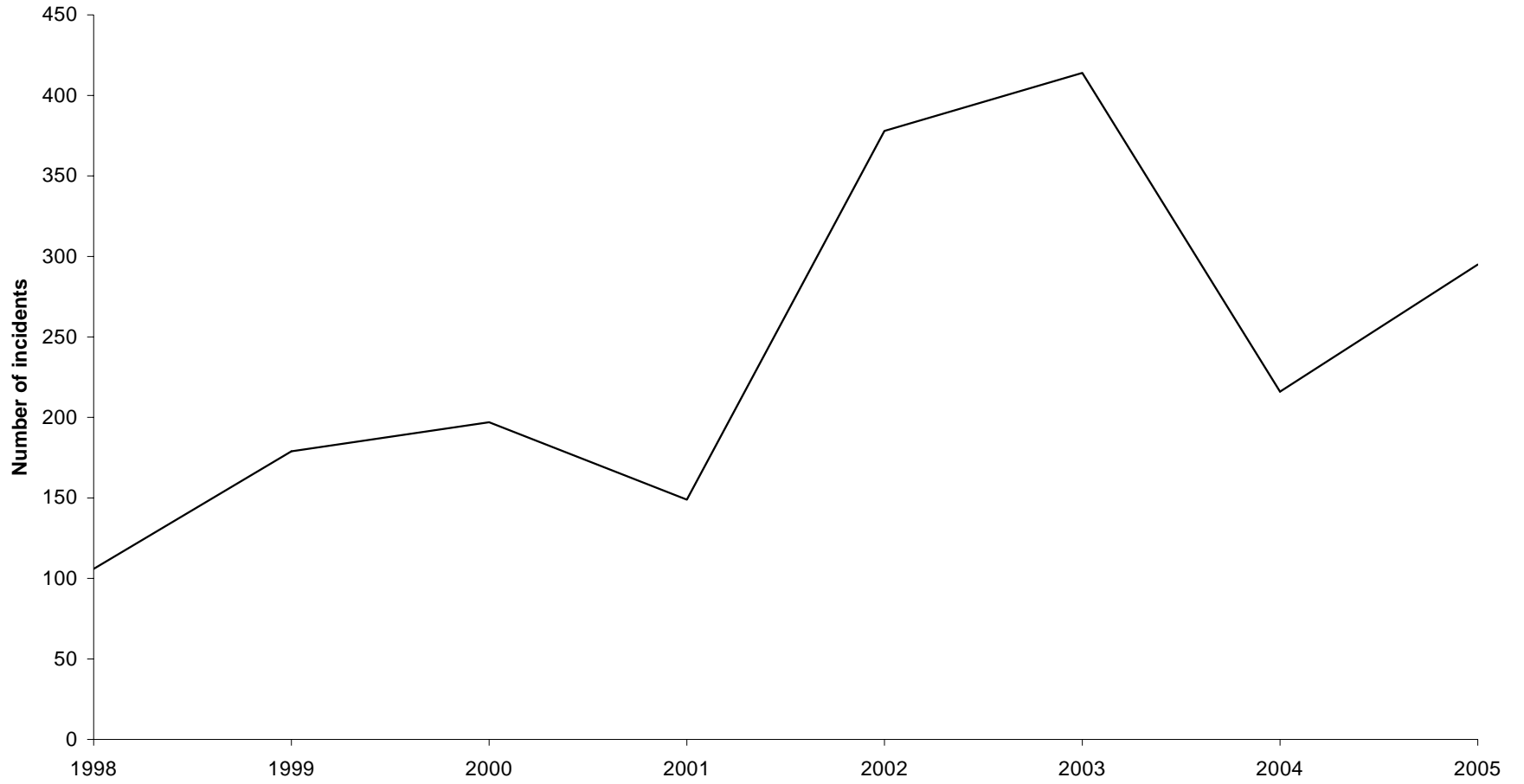


Fig 15: All incidents of PGE - including haemonchosis, nematodiriasis and not otherwise specified in sheep 2003 - 2005

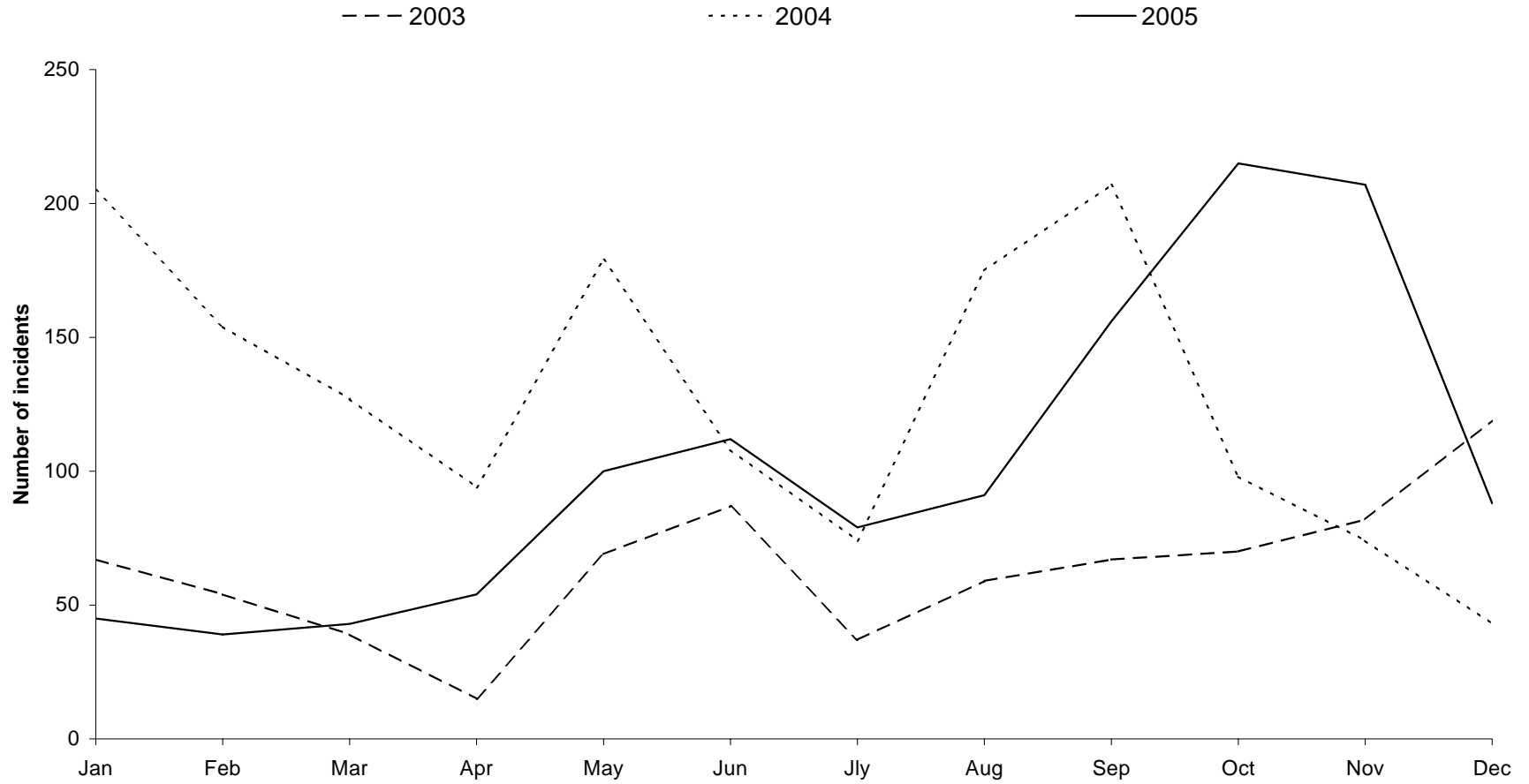


Fig 16: Goat diagnostic submissions vs total goat population in Great Britain 1998 - 2005

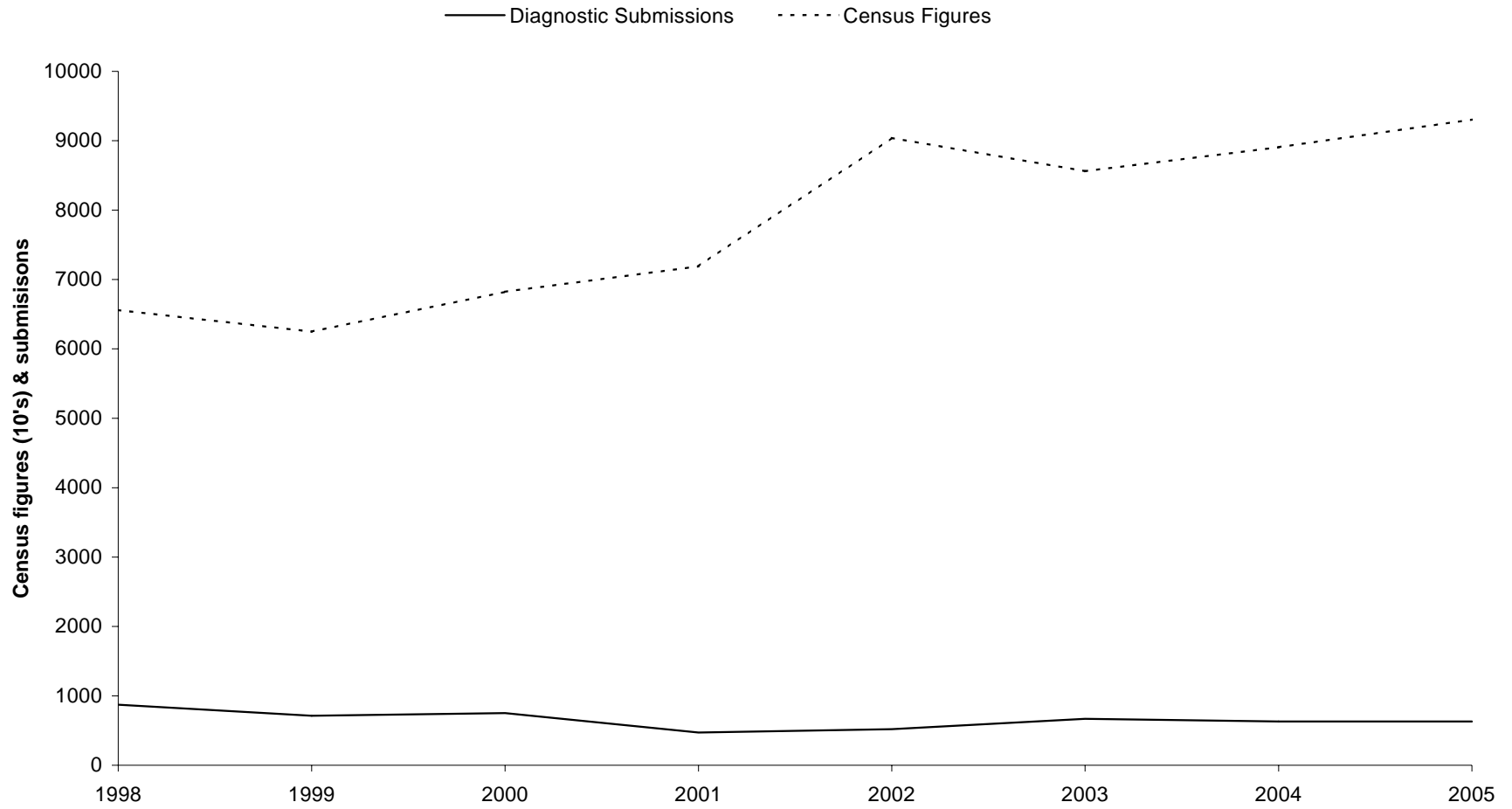


Fig 17: All incidents in goats in Great Britain as a percentage of total diagnostic submissions 2002 - 2005

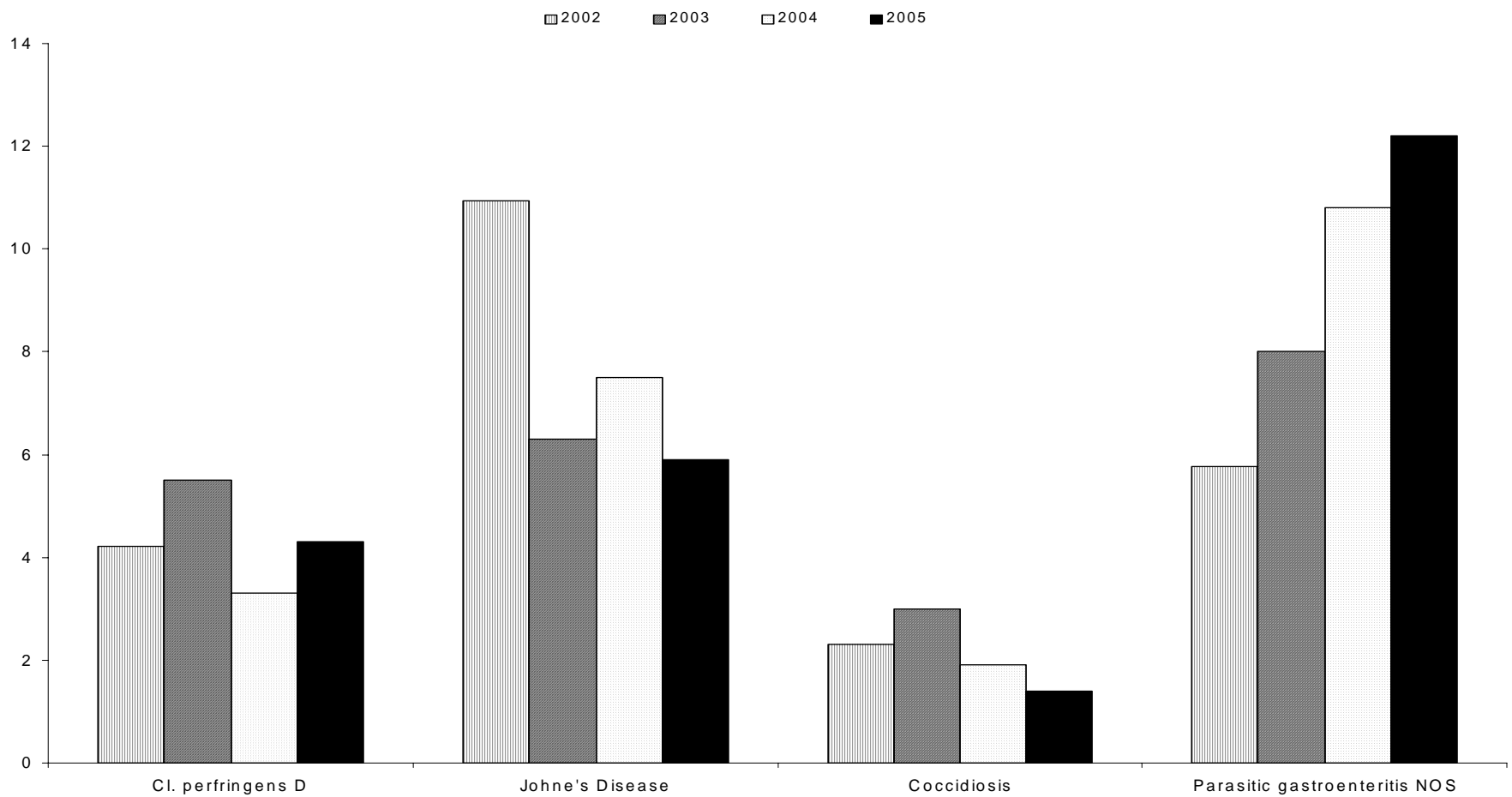
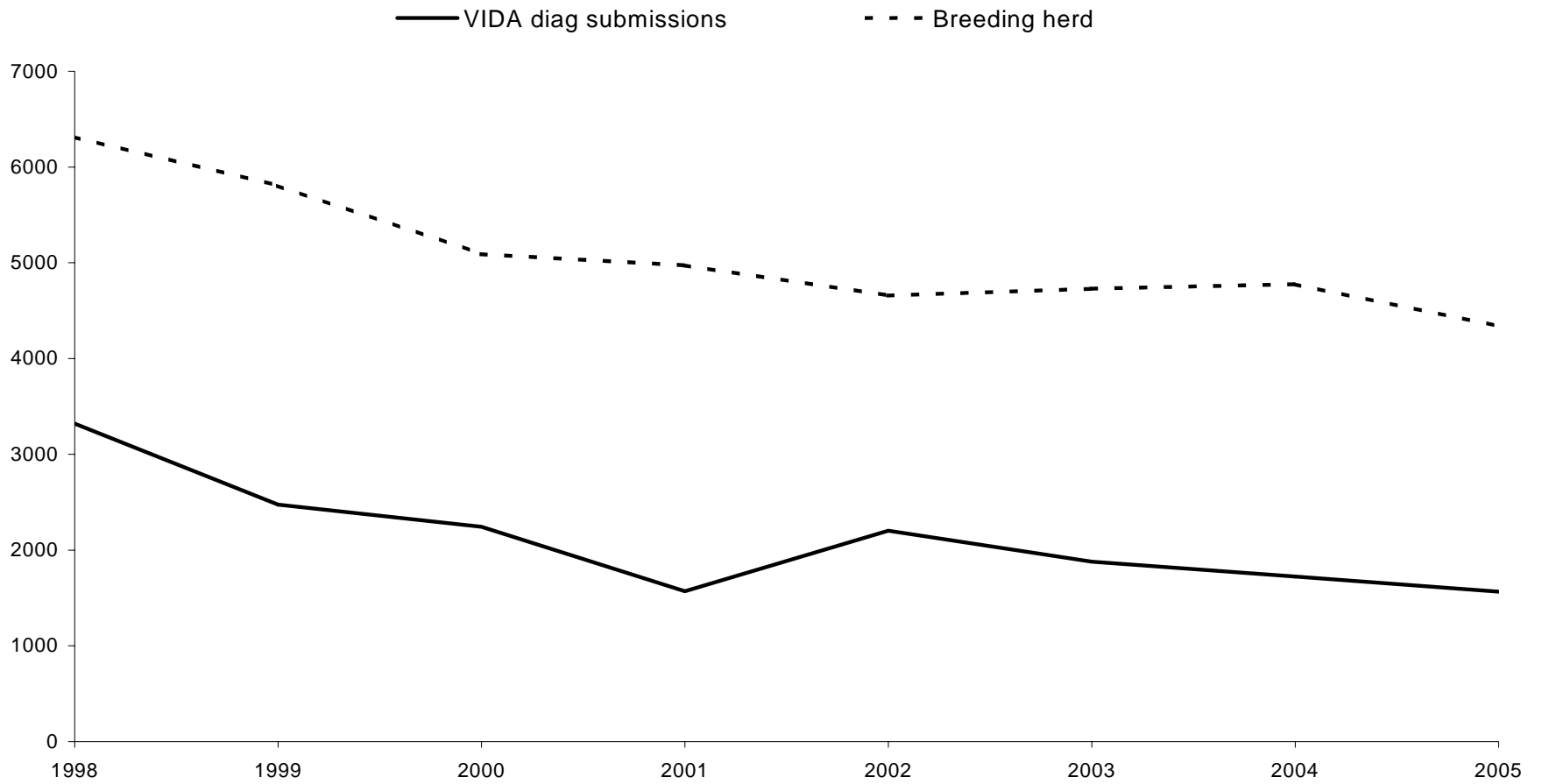


Fig 18: VIDA diagnostic pig submissions vs pig breeding herd 1998 - 2005



**Fig 19: All incidents of *Salmonella* Typhimurium and *Salmonella* Choleraesuis in pigs
1998 -2005**

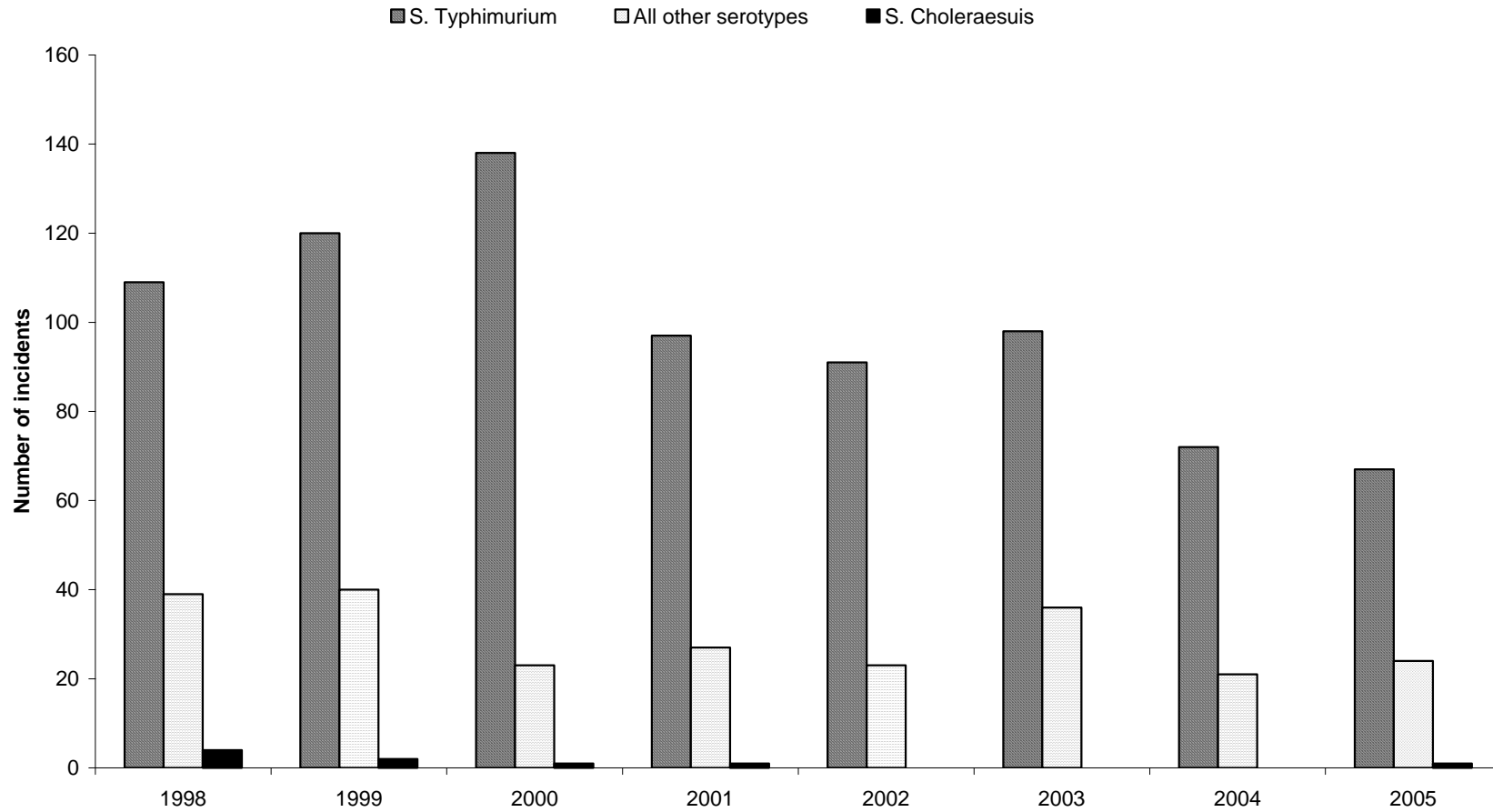


Fig 20: Total bird submissions in GB 1998 - 2005

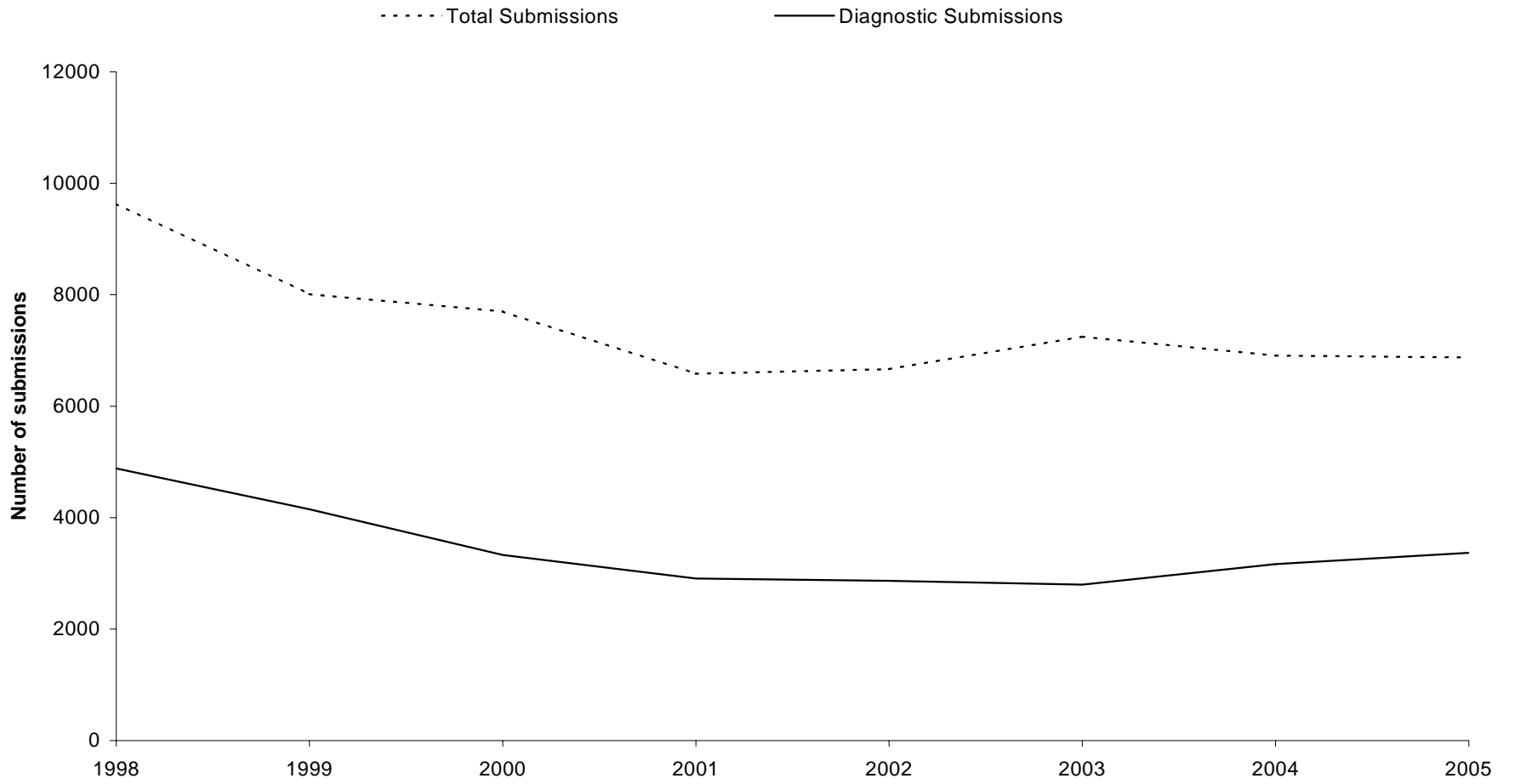
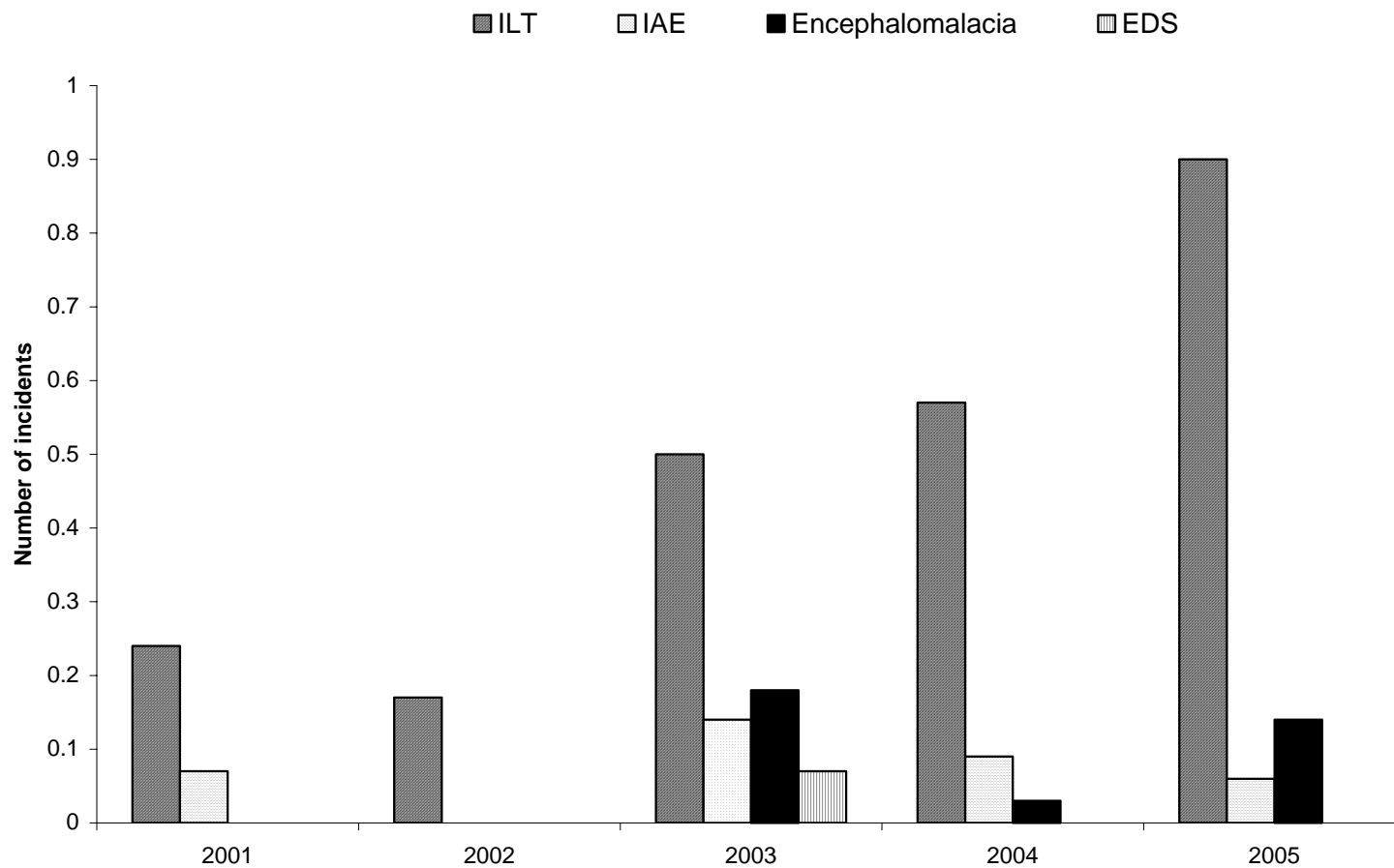
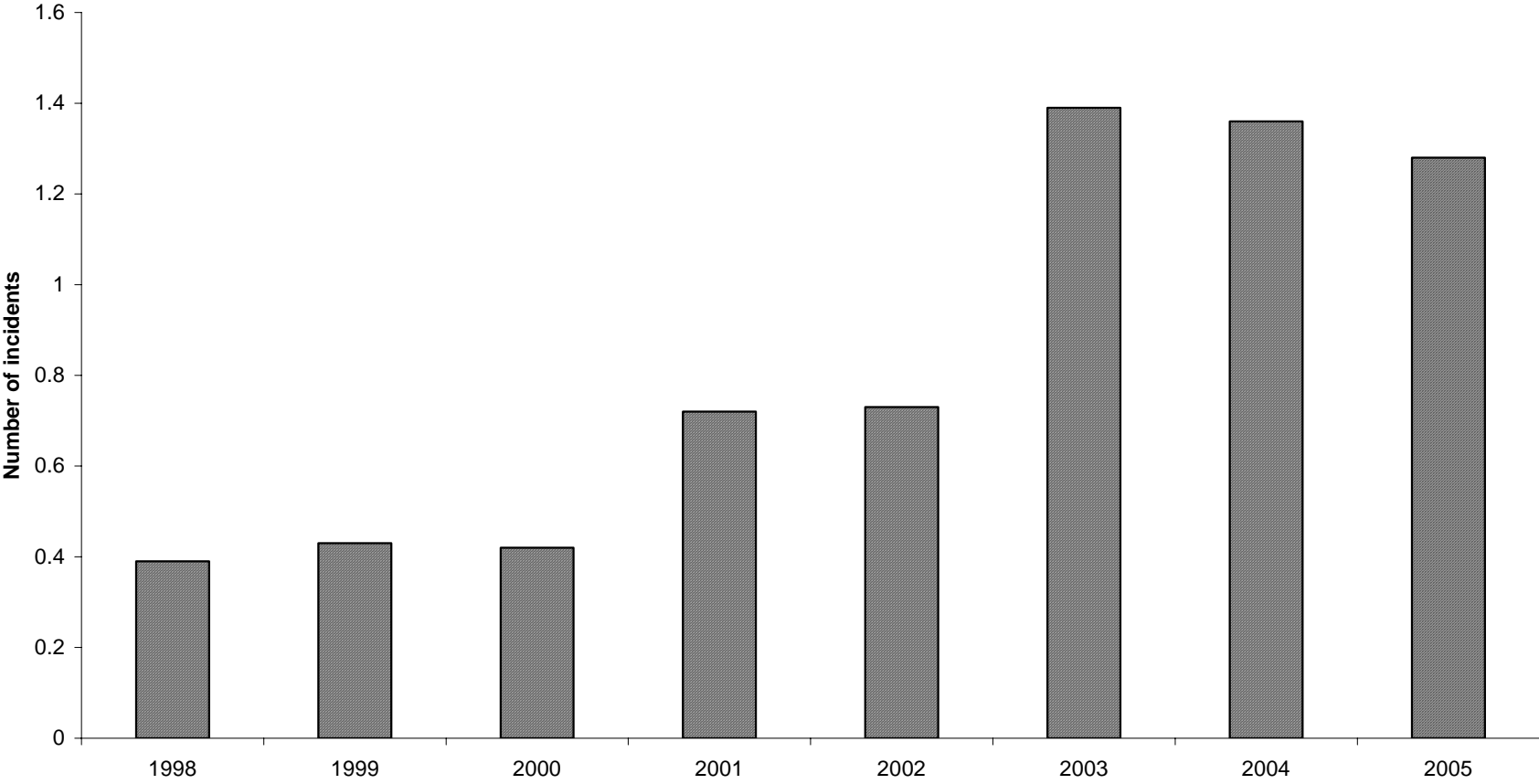


Fig 21: All incidents in birds in Great Britain as a percentage of diagnostic bird submissions 2001 - 2005



**Fig 22: All incidents of blackhead as a percentage of diagnostic bird submissions in Great Britain
1998 - 2005**



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:

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