

ADAS

The UK Game Bird Industry - A short study

**Prepared for:
Andrew Slade
Head of Livestock Products Division
DEFRA
Nobel House
Smith Square
London
SW1P 3JR**

**Prepared by:
Philip Canning
Senior Consultant
ADAS Lincoln
Ceres House
Lincoln
LN2 4DW**

Contents

1.0 INTRODUCTION	1
2.0 INDUSTRY PROFILE	2
2.1 Features of the birds reared:	2
(a) Pheasants	2
(b) Red-legged partridge	3
(c) Grouse	3
2.2 Bird management	4
2.3 Shooting seasons	4
2.4 Legislation	5
2.5 Numbers reared for release	6
2.6 Source of birds	7
2.7 Rearing sites	9
2.8 Bird number reconciliation	9
3.0 REPRESENTATIVE BODIES AND SOURCES OF INFORMATION	12
4.0 GAME BIRD VALUES	15
5.0 BENEFIT TO THE LOCAL ECONOMY	16
6.0 MORE DETAIL ON REARING OPERATIONS	18
7.0 BIRD HEALTH MANAGEMENT	20
8.0 INTERIM RECOMMENDATIONS	23
9.0 SOURCES OF INFORMATION ACCESSED FOR THIS REPORT	24

1.0 INTRODUCTION

- 1.1 The Head of Livestock Products Division in the Department for Environment, Food and Rural Affairs (Defra) commissioned this study shortly after the outbreak of Newcastle Disease (Fowl Pest) in the South of England during July 2005. The terms of reference requested a report identifying and quantifying the principal components of the game bird industry, its economic structure and detail of sub-sectors within the industry. Interim recommendations were requested. The timescale was to deliver the report in 5 days as it was feared that the outbreak could spread and the information would help to inform Defra about the game sector.
- 1.2 The report will concentrate on pheasants, partridge and grouse, though reference will be made to other sub-sectors or species. Grouse are not held captive and are therefore considered to be wild birds, however they are recognised as part of the UK game industry and are therefore included in this report. Pheasants and partridge are reared specifically for shooting and so are not classed as farmed livestock. However pheasants are covered by the Protection of Animals Act 1911 (1912 in Scotland) during the early stages of the rearing and release process when they are captive. The 1911 Act covers cruelty and unnecessary suffering offences.
- 1.3 In the short timescale it has not been possible to check a full range of likely sources of information or to follow up all potential leads in the industry. The report has been compiled from information supplied by industry representatives, and through conversations with individuals working on the ground. The author would like to thank all those who contributed during the preparation of this report.

2.0 INDUSTRY PROFILE

2.1 Features of the birds reared:

(a) Pheasants

- 2.1.1 The main type is known as the Common pheasant (*Phasianus colchicus*). Males are striking, with chestnut, golden brown and black markings on the body and tail, a green head and red face. The female has paler brown, mottled plumage.
- 2.1.2 Pheasants were introduced to the British Isles in the distant past (thought to have been by the Romans) but there have been more recent additions, bringing in specific types and breeds for sport shooting.
- 2.1.3 Pheasants like a habitat that includes woodland or copses and hedgerows. There is a resident population of around 1.6 million breeding females (according to Royal Society for the Protection of Birds (RSPB) data) though this figure is felt by many to be a low estimate. Pheasants are found across the whole of England, Scotland, Wales and Ireland, except for the far north and west of Scotland and on the very high ground in England and Wales.
- 2.1.4 There are small numbers of Golden pheasants in the wild (1,000 to 2,000 adults) and only around 100 Lady Amherst's pheasant, which are concentrated in a small area including Bedfordshire. These birds are not commercially significant for the game industry but could have contact with other released birds.
- 2.1.5 There is evidence of farmed pheasant i.e. birds reared for meat in a similar way to broiler chicken production. They are reputedly difficult to rear intensively and are prone to welfare problems, such as pecking (see later section). However, there are specialist producers offering farm-reared partridge and pheasant. Birds reared specifically for meat are more attractive to some restaurants as there is no risk of diners damaging teeth on any shot left in the bird. More work is required on how many birds are reared in this way. Meat Hygiene Service (MHS) data (see below in section 2.8.9) puts the total farmed game processed between July 2004 and June 2005 at 1.6 million. Unfortunately, due to MHS collecting data as categories and not by species, the figure of 1.6 million is a combination of game birds, ground game (including rabbits).
- 2.1.6 There could be rare breeds of pheasant in small numbers in suburban and urban residential areas and at farm parks and country houses open to the public.

(b) Red-legged partridge

- 2.1.7 This bird is larger than the Grey partridge and not under threat, whilst the Grey is on the RSPB Red list of species needing urgent action to address population decline. There are thought to be only 145,000 breeding pairs of greys in the wild. The Red-legged partridge (*Alectoris rufa*) has a greyish plumage on the body and bold black stripes on both flanks and a chestnut-sided tail. It has added detail of a white throat with black bordering. Red-legged partridge are used on game shoots as they adapt well to a landscape shaped by modern agriculture and they can be reared and released with comparative ease. Indirectly, this reduces pressure being put on the indigenous population of Grey partridge.
- 2.1.8 The bird was introduced from Europe – it is found in parts of France and Spain – and can be found across most of central, southern and eastern England, and the coastal belt up the north east of England and Scotland. Birds are often found in groups in open fields and on field margins. They feed on seeds, roots, and insects. RSPB figures suggest up to 250,000 breeding pairs in the wild.
- 2.1.9 The Grey partridge is found in fewer numbers than the Red-legged. RSPB data show that it is present over most of England, south and east Scotland and much of the Republic of Ireland. It is not significant in shooting terms and most activity surrounding the Grey is aimed at its conservation, though some Greys are released.

(c) Grouse

- 2.1.10 The red grouse is the bird referred to as “grouse” for this report. It is unique to Britain, as is their habitat of heather moorland. A Black grouse is also found in parts of Britain but is considered as endangered and is on the RSPB Red list. There appears to be a voluntary shooting ban on Black grouse, though it is not clear which organisation has initiated it. It is important when shooting live quarry to only take a sustainable surplus from the population and, in the case of the Black grouse there is no surplus produced. Therefore, it is accepted that Black grouse are not shot. Fines may be levied locally by organisers of shoots if any are inadvertently shot.
- 2.1.11 The Red grouse (*Lagopus lagopus*) is a medium-sized bird with a plump body and reddish brown legs. These birds are resident all year round in the uplands and travel very little. The population fluctuates year to year (see 2.5.6) but some commentators feel that numbers are tending to decline. The loss of heather moorland is thought to be a major factor in this decline. The Game Conservancy Trust (GCT) estimate that there are around 250,000 breeding pairs at present.

2.1.12 Grouse are found across the majority of Scotland, the uplands and Pennines of Northern England and across Wales and Ireland. They rely on young heather for food. British Association for Shooting and Conservation (BASC) suggest that grouse are a short-lived species, with two thirds of birds dying within a year of hatching, regardless of the effect of shooting.

2.2 Bird management

2.2.1 Once the shooting season comes to an end, at the end of January for pheasants and partridge, the gamekeeper is working towards the next. The spring and summer months are spent rearing sufficient birds for release and in maintaining the habitat, equipment and in bird husbandry and predator control.

2.2.2 Fertile eggs are placed in incubators and, when hatched, the chicks are placed in a brooder house that provides heat, light and ventilation in controlled conditions. Heat is gradually reduced and space increased as the birds grow so that by the time their feathers have developed the birds can be given access to outside runs and become acclimatised to being outdoors.

2.2.3 Some gamekeepers by-pass this stage by buying in birds at 6-8 weeks of age so they can be placed in outdoor release pens immediately. They can save the capital outlay on brooding accommodation and hatchery equipment. Others will buy at day-old and rear on.

2.2.4 Breeding pheasants will lay eggs from early March and the last eggs are placed in incubators in the middle of June. Incubation is 24 days (23 days for partridge). The first hatch is usually in the first week of May and the last will be taken off in the first week of July (partridge are generally 2 weeks behind these times).

2.3 Shooting seasons

2.3.1 For pheasants in England, Scotland and Wales the season is from 1 October to 1 February (31 January in Northern Ireland) and for partridge it is from 1 September to 1 February (31 January in Northern Ireland). The grouse shooting season is from 12 August to 10 December (30 November in Northern Ireland). BASC advise that in practice, most shoots do not actually commence shooting until 1 November as birds reared in Britain are not normally ready to shoot until the end of October. Commercial shoots will want to maximise the number of days shooting and are more likely to start at the beginning of October. These shoots may have an incentive to buy in chicks and poults from France, as birds started in a more favourable climate are likely to be more developed by the time the shooting season begins.

2.3.2 There is a distinction to be drawn between rough shooting and driven-game shooting. Rough shooting is where shooters use their

dogs to flush game from hedgerows, woods or crops as they walk. Driven game shooting is where a group of shooters stand at given points or pegs across a piece of land and wait for game to fly up, flushed out by a team of beaters and dogs.

- 2.3.3 Shoots can be large-scale operations managed for a landowner's enjoyment or let for others for a day or a series of days. However, BASC say that more typical is the syndicate shoot where members rent the sporting rights over an area of land and manage the shooting themselves. This type of shoot has opened the sport to much wider participation and BASC see it as the most significant development in game shooting during the last century. The large commercial shoot may shoot once a week or more, moving onto different areas. A small shoot may only operate once a fortnight. Membership levels vary and it is possible to take a half or quarter gun and shoot half or a quarter of the available days. Bags are small and all consumed by the guns, beaters and local householders. Gamekeeping activities may be self-help and shared amongst the members. BASC believe this is the most common form of game shooting in the UK.

2.4 Legislation

- 2.4.1 The **Game Act of 1831** still applies in England and Wales and defines game as including pheasants, partridge and grouse. The Game (Scotland) Act of 1832 applies north of the border though parts of the 1831 Act also apply in Scotland. Section 13 of the Game Licences Act 1860 brought the provisions in the 1831 Act regarding licences to kill or take game and game dealers' licences into force in Scotland. These Acts and the Game (Scotland) Act 1772 combine to protect the birds during the close season referred to above.
- 2.4.2 A game licence is required, under the 1831 Act, in order to hunt game species. BASC suggest that only around 40,000 guns bother to buy a licence as the police rarely prosecute on a failure to have a licence alone.
- 2.4.3 New EU Food Hygiene Regulations will come into force on 1 January 2006. The Regulations cover the supply and handling of game meat and require that anyone supplying game to a registered game dealer will have had to undertake the necessary training to meet competent person status. The Game Acts referred to above will remain in place for the time being. Individual shooters will still be able to give game away to friends but it must be clean and safe to eat. Suppliers to the wider market will now be subject to inspection by the MHS. Full detail of what standards have to be reached by the game industry and the various registrations required can be obtained from the Food Standards Agency (FSA).

2.5 Numbers reared for release

- 2.5.1 The GCT estimates that there are around 30 – 35 million game birds raised each year – roughly the same size as the UK commercial table egg production flock. The Game Farmers Association (GFA) put the figure for birds reared for release at 20-30 million, of which the majority (80%) are pheasants and most of the rest (16-17%) are Red-leg partridge. The final few percent are Grey partridge and ducks. Quoting the GCT as the source, the British Trust for Ornithology (BTO) suggest that 20-22 million pheasants are released each summer, with more than 2 million surviving until spring. Thus, there is a wide range of estimates of the size of the industry. The industry would benefit from better knowledge of itself.
- 2.5.2 It is worth pointing out that there are a small number shoots in lowland Britain where the wild pheasant population is managed for shooting. In this scenario no birds are brought in and a considerable area of habitat can be managed to yield a limited number of shooting days. An example of this practice can be seen on the Sandringham Estate in Norfolk.
- 2.5.3 There is a small market for export of eggs and day old chicks to Ireland. There are 20-30 “big shoots” in Ireland (North and South) but the GCT estimate that there are only around 1 million pheasant and partridge in Ireland. There is no commercial grouse shooting.
- 2.5.4 Grouse are wild birds and are distributed on heather moorland. Success is achieved by careful control of predators on the range and on management of the heather by controlled burning. The bird population is managed by manipulation of the natural environment rather than direct bird husbandry. The birds are wild and there is no rearing and release of birds by man.
- 2.5.5 There is no trade in live birds and a shoot has to manage the wild population. Bird numbers can vary from year to year and there is a cyclical “boom and bust” element to the population, said to be a 5-7 year natural cycle. Disease, parasites, weather and lack of food can all affect numbers from year to year. This can mean that in some years they are present in abundance, whilst in other years, there are not enough birds to shoot at all. In other words, it is not that there are no birds present, it is that there are not enough surplus birds to shoot. Thus, it is important to have good years as surplus revenue from these good years helps to continue moorland management etc. during the lean years.
- 2.5.6 In July each year grouse are counted to see if there are sufficient numbers to shoot. The threshold for driven shooting is 200 grouse/km², above which shooting can proceed during the season

beyond 12 August. For the North Pennines and North Yorkshire, 2004 was a record year, according to a Moorland Association (MA) survey.

2.6 Source of birds

- 2.6.1 According to GFA data, around 40% of pheasants reared come from France, either eggs or as day-old chicks (the transport limit is 24 hours providing it is completed within 72 hours after hatching). The high level of imports is largely due to the competitive pricing of the French stock and the belief in some quarters that the French birds give “better sport”. There is also a small trade in 6-8-week old poults from France. This is likely to be no more than 1-2% of the pheasants reared. The maximum journey time of 12 hours for these birds makes much of the UK out of range for many French game farms, thus limiting this particular trade, providing transport regulations are followed.
- 2.6.2 Eggs are delivered from France in standard cardboard boxes used for egg transport. Chicks, however, can be delivered in either plastic trays (as the broiler industry) or cardboard. Cardboard is preferred by some gamekeepers as they can be burned (good biosecurity) and the plastic have to be washed and returned. Controlled environment vehicles are used for the deliveries. The 6-8 week old poults are delivered, it seems, in crates on the back of lorries in the same way that egg-laying pullets are moved from farm to farm in Britain. Nobody spoken to whilst researching the report has seen birds delivered at this age, though BASC suggest that some shoots buy French birds to “top-up” their shoots during the season, in breach of the Code of Good Shooting Practice.
- 2.6.3 Imports from France appear not to be routed through a few key importers. It seems that anyone can order direct from French suppliers, whether they are a large game farm owner or a part-time gamekeeper on a small estate. This will make it more difficult to monitor the trade.
- 2.6.4 In the case of Red-legged partridge around 90% are imported, the majority coming from France, though Spain and Poland also supply. They come in as fertile eggs or as day-olds in roughly a 50:50 ratio. The National Gamekeepers Organisation (NGO) suggest that around 3% come in as part-grown poults.
- 2.6.5 Of the eggs laid in the UK, around 50% come from over-wintered stocks of parent birds (i.e. stocks not released but kept penned over the winter period) and 50% from parent birds caught up from the wild.
- 2.6.6 Partridge are paired up and placed in a laying box for a maximum of three years as the same pair. They have been found to lay better in this system. Pheasants are caught up from the locality and penned in large groups at the ratio of 1 cock to 7-10 hens. Many are released

each year when they have finished laying, though some are kept back for 2 or 3 years for breeding.

- 2.6.7 Metal laying cages from France are being tried for both pheasants and partridge. Pheasant cages are for 8 hens and 1 cock. Partridge are caged in pairs and normally stocked at one pair per partridge box but four pairs are placed in a quartered raised cage. These cages are relatively new and indications are that production for both species is improved because they are raised off the ground and reduce the risk of disease. It is not known how widely they are used in the industry. BASC suggests that only 5 or 6 UK game farms (5% of the industry?) are using the cages. BASC say that on the evidence seen so far they believe that battery-type cage laying systems for pheasants and partridge are incompatible with their core values for production. Efforts are being made to work with other organisations to establish acceptable standards for egg production.
- 2.6.8 Use of these cages in France helps to give French producers a competitive edge over British producers on price, further exacerbated by the relative strength of sterling.
- 2.6.9 The world of game shooting is split to some degree in its views on importing birds. Many large commercially-run shoots, particularly in the southern counties of England, opt for French stock. They require large numbers of birds and price is an issue as they are competing in the top class world of corporate entertainment and recreation where margins are slim. The more traditional approach to game shooting is for release of moderate numbers of birds from locally sourced eggs. This system is less price-competitive, gives a degree of in-built biosecurity and could be viewed as being more sustainable. The diversity of the gene pool of these locally sourced stocks can be enhanced by introduction of fresh, healthy cock birds from, for example, the big estates referred to in 2.5.2.
- 2.6.10 The types and strains of pheasant used in the UK can be split into two groups. One group comprises the larger, heavier types, such as Ring Necked, Black Necked and Melanistics or "French Blacks". The second group is of smaller, lighter types, such as Scandinavian, Fen pheasants and Michigan Blue Backs. Comments made earlier in this section on the belief that French birds give better sport is likely to be more to do with the bird's bodyweight than its origin. The larger the bird the less time it likes to spend airborne. The smaller types seem to fly better in flatter terrain but the larger birds are hardier and more suited to rolling countryside. There is, however, much debate about this and opinions differ as to whether bird weight *per se* is a key factor in this regard.
- 2.6.11 There seems to be less variation in types of Red-legged partridges. Instead, they are more consistent in body size and flight behaviour.

2.7 Rearing sites

- 2.7.1 The GFA suggests that around 50% of birds are reared on recognised game farms. It is thought that this is on around 300 farms. The Association has 200 members and the remaining game farms are non-members.
- 2.7.2 It is thought that the other 50% are reared by gamekeepers for their own estates, though they may also buy or sell to make up numbers or to pass on a surplus of chicks. It is estimated that there are between 1,000 and 2,000 gamekeepers operating on this basis. Gamekeepers will buy mostly at day-old from a hatchery. Inter-trading between gamekeepers could be from day-old upwards according to local market demands.
- 2.7.3 The NGO estimates that between 80 and 90% of all gamekeepers are members and that there may be up to 5,000 people acting in a gamekeeping capacity, though they also have other work – they may be part time agricultural workers, for example. The BASC also quote a figure of 5,000, though, according to the NGO there are only 3,000 full-time gamekeepers in the UK.

The Gamekeepers Association of Britain and Northern Ireland was incorporated into BASC in 1975. BASC has 5,500 gamekeeper members, the majority of whom, it suggests, will also be members of the NGO. In addition, 75% of its 122,000 members are actively involved in game shooting and land management.

- 2.7.4 A recent BASC survey showed that gamekeepers manage around 7.3 million hectares of land in the UK – an area almost the size of Scotland. The GCT estimates that there is in excess of 10,000 holdings where pheasants are reared. The NGO, however, believe this figure is too high.
- 2.7.5 Farmed pheasant and partridge for meat production are reared in barn systems.

2.8 Bird number reconciliation

- 2.8.1 In 2.7 above, it was stated that estimates of birds reared and released vary considerably. This could be due to the lack of any proper recording systems in place. In their report for Defra (Project CRO281 – Provision of bag statistics for huntable birds, 2003) the authors (from the Central Science Laboratory and The Game Conservancy Trust) note that there are no compulsory schemes collecting national statistics on birds shot. They made recommendations for the registration of all hunters and shooting estates and to issue various questionnaires during the season to collect relevant data from both shooters and estates. There is no direct evidence that these recommendations have yet been acted upon.

- 2.8.2 The nature of the way birds are reared in large groups and released into the wild does not lend itself to good record keeping. Even if the gamekeeper has an accurate record of the number of chicks or 6 week old poults he buys, it may not be apparent what losses have been incurred once the birds leave the confines of a rearing or release pen. Predators can remove all traces of the bird. Even in broiler chicken production, it is possible to find a discrepancy between the birds the site manager thinks may be present, through careful record keeping, and the number removed by the processor at the end of the crop.
- 2.8.3 It is understood that hatchability is around 75% for pheasant and partridge eggs. Estimates suggest that around 5% of chicks die in the first 2 weeks and a further 5% die prior to being placed in the release pens. These figures can vary from year to year, and between estates, in any given year. Weather conditions, bird health and egg hygiene will all contribute to the variation.
- 2.8.4 The GFA estimate that around 5-10% of the birds placed into release pens die between release and shooting. The GCT puts the figure nearer 25%. Birds can perish from starvation, exposure, disease, predation, natural causes or under the wheels of motor vehicles as they begin to range further. Most of the predation of adult birds is by foxes, but mink can be a problem in some parts of the country.
- 2.8.5 In a recent study, the GCT found that 16% of pheasants survived until after the shooting season.
- 2.8.6 The number of pheasants released per unit area has increased since the 1960s, but the rate of increase has slowed from over 5% p.a. before 1960, to under 2% p.a. since. This may be an indication that landowners are making efforts to develop their wild stocks alongside releasing. Sandringham has been given as an example of an estate relying only on a wild stock of pheasant, and there are others, though they may be absorbing some released birds from nearby shoots that have wandered away.
- 2.8.7 The MA say there are 160 estates where driven grouse shooting occurs, covering an estimated area of 2,750km² (ranging from several hundred hectares, to many thousand ha per estate). The BASC say there are 259 grouse moors covering 1.5m ha.
- 2.8.8 The number of grouse shot in a season can vary due to a range of factors covered elsewhere in this report. The MA suggests that the number of birds shot in a season will average around 200,000. The League Against Cruel Sports (LACS) put this figure at 500,000 per year.
- 2.8.9 MHS data for the period July 2004 to June 2005 suggests that 1.6 million carcasses are processed under the category of small game

(game birds, ground game and rabbits). There is no further breakdown of this data into species. The total can be sub-divided, however, by MHS Region, as follows:

<i>MHS Region</i>	<i>Number processed</i>
North	394,854
Central	897,159
South and West	271,212
Wales*	81,201
Total	1,644,426

* includes parts of England

2.8.10 It is unclear whether the pheasants and partridge included in 2.8.9 above would be included in industry estimates of birds reared given earlier in the report. Further investigation is required to establish what is and what is not included in this data. The number of rabbits is unknown and may be a significant proportion of the total. The NGO suggest that the wild game meat market could be 20-25 million birds per year.

3.0 REPRESENTATIVE BODIES AND SOURCES OF INFORMATION

- 3.1 The Game Farmers Association (GFA) is a trade organisation dedicated to the production of quality game birds for the UK shooting industry. The Association was founded over 80 years ago and now has more than 200 members. The Association represents the interests of their members as well as encouraging everyone rearing game to pursue high standards. The GFA Code of Practice has been produced as a charter for good game rearing and is the accepted industry standard.

The Game Farmers' Association
Colnbrook
Withington
Cheltenham
GL54 4BW
Telephone: 01242 890372

- 3.2 The **National Gamekeepers Organisation** (NGO) was founded in 1997 by a group of gamekeepers who felt that their profession was threatened by public misunderstanding and poor representation. The organisation has over 7000 gamekeeper and supporter members. They aim to “provide proper national representation of the game keeping profession” through political lobbying, training, working with the media and through funding research.

The National Gamekeepers' Organisation
PO Box 107
Bishop Auckland
DL14 9YW
Telephone: 01388 665899
Email: ngo.enquiries@btopenworld.com

- 3.3 The **British Association for Shooting and Conservation** (BASC) mission is to “promote and protect sporting and shooting and the well-being of the countryside throughout the UK and overseas.” They aim to achieve this through building political support, ensuring a balanced view in the media, ensuring opportunity for shooting, recruiting a strong membership and by demonstrating shooting as a net asset for society.
- 3.4 Elected members of the Council are drawn from the ranks of ordinary shooters (around 122,000 members). The chair and vice-chair are elected from Council members each year, as are the chairs of the 11 advisory committees. The British Association for Shooting and Conservation is the country's largest country sports body.
- 3.5 The president of the British Association for Shooting and Conservation is The Earl of Lichfield and the Chairman is John Graham (both contactable through Vivienne Jasper at the British Association for

Shooting and Conservation head office). John Swift is the Chief Executive.

The British Association for Shooting and Conservation
Marford Mill,
Rossett
Wrexham
LL12 0HL
Telephone: 01244 573000
Email: webqueries@basc.org.uk

- 3.6 The **Game Conservancy Trust** (GCT) was registered as a charity in 1980. Previously, the organisation was known as the Game Conservancy Council, which was the name given to the new organisation following the merger in 1969 of the Game Research Association and the Eley Game Advisory Service.
- 3.7 The GCT employ 94 staff, including 44 who are scientists. It has an annual income of £5.1 million derived mostly of subscriptions from its 22,000 members. The Trust's main areas of interest include farmland, moorland and woodland conservation, river and habitat restoration, disease, predator control and education. The GCT runs 25 educational courses, conferences and seminars each year. It works with many other countryside organisations including government departments and agencies. 6 staff provide on-farm game management and conservancy advice throughout the country.
- 3.8 The Chairman of the GCT is Andrew Christie-Miller and the Chief Executive is Teresa Dent.

The Game Conservancy Trust
Burgate Manor
Fordingbridge
Hampshire
SP6 1EF
Telephone: 01425 652381
Email: initial followed by surname@gct.org.uk

- 3.9 (The GCT has a smaller base near Perth, Scotland and research stations in the Scottish Highlands, in the Northern Pennines and a farm in Leicestershire).
- 3.10 The **Game Feed Trade Association** (GFTA) is a loose association of people in the feed trade with an interest in the game market. No official membership is required. Anyone is welcome to attend their occasional meetings to discuss topical issues. The chairman is David Grylls, based in Cheshire. The Association has no data of its own of the size of the game industry, though collectively the feed trade will supply all of the pheasant and partridge rearers at some point in the bird's life.

- 3.11 The **World Pheasant Association** (WPA) is a charity, founded in 1975, which aims to develop and promote the conservation of all the species within the order of the Galliformes, which are, broadly speaking, the gamebirds of the world. This group, including pheasants, grouse, partridges, quail, francolins, megapodes and cracids, contains some of the most beautiful, and threatened in the world.

World Pheasant Association
7/9 Shaftesbury Street
FORDINGBRIDGE
Hampshire
SP6 1JF
Lo-call number for UK: 0845 2410929
Tel: +44 (0) 1425 657129
Fax: +44 (0) 1425 658053
Email: office@pheasant.org.uk

4.0 GAME BIRD VALUES

- 4.1 The following figures are a composite of information provided by various contacts.
- 4.2 The cost of eggs, day-old chicks and eight-week old poults are very similar for pheasants and red-leg partridge. Fertile (hatching) eggs are around 40p each. Day old chicks currently cost between 60p and £1.00. Six to seven week-old poults are £3.50 each for pheasants and up to £4 for partridge. There is also a limited market for 10 (or so) week old growers (i.e. out of the release pens) with prices ranging between £6.50 and £7 each. Prices will vary with demand and quantities traded.
- 4.3 The shot pheasant is worth only around 50p. The market is driven by the sale of the actual shooting. Costs for a shoot can vary enormously. One day's shooting can be between £25 and £35 per bird shot. The cost of a day's shooting varies between £100/gun for a smaller shoot, to £1000s/gun on a larger shoot. BASC suggest that on smaller syndicates a full gun can be less than £350 for the season.
- 4.4 Initial start-up costs have been calculated by ADAS to be 105.65p on day one of the bird's life. This figure is comprised of the day old poult price (80p), gas/oil (1p), electricity (1p), litter (1.35p), medication (0.25p), water (0.1p), feed (1.9p), and site preparation, including casual labour (20p).
- 4.5 Breeding partridge can be worth approximately £10 each prior to lay (i.e. when caught up) and pheasants around £3-5 each.
- 4.6 The wholesale price of a brace of pheasants is around 50p to 60p/brace. A box of 8 oven-ready vacuum packed, pheasants would cost around £38.50.
- 4.7 The value of grouse is realised when they are shot. At the shoot a young grouse will be £7-9 but an old bird only £2-3. However, the normal rate for driven grouse shooting can be between £60 and £150 per brace (i.e. £30 to £75 each). A day's bag (number of birds shot) per shooter can be up to 75 brace but would average 5 brace to each gun, though this can vary from season to season.
- 4.8 The BASC state that 80% of birds shot in the UK are exported to the Continent. Efforts are being made to increase domestic consumption, through, for example *Game-to-Eat*, a promotional body for the sector, which provides information and recipes to the public and is supported by a celebrity chef. There appears to be no Standard International Trade Classification (SITC) for game. The nearest are for eggs (type and source not specified) and poultry meat (including guinea fowl but nothing else beyond chicken, turkey and duck) so trade figures have been difficult to locate in the time available.

5.0 BENEFIT TO THE LOCAL ECONOMY

- 5.1 The MA suggest that a good year's grouse shooting can put £12.5 million into the economy of England and Wales in a year when shooting takes place. They point out, however, that shooting may only take place in 3-4 years out of 5-7. No shooting means no revenue. It is likely that grouse shooting will be more valuable to the Scottish economy than it is to England and Wales. However, no data was made available to corroborate the hypothesis.
- 5.2 It is estimated that there are around 280 gamekeepers employed on grouse moors in England and Wales, meaning 2 keepers per moor. The wage bill for these is around £3.6m per year. A driven shoot will employ around 25 beaters on the day. Typically they receive £25 per day.
- 5.3 Hotels, restaurants, local service industries, contractors etc all benefit from shooting activities. The report *Countryside sports: their economic and conservation significance* produced by Cobham Resource Consultants in 1997 estimated that shooting introduced £600 million into the rural economy each year and supported more than 40,000 full time jobs at that time. A new investigation into the economic value of the industry has been commissioned but will not be available until 2006 (see 5.7 below).
- 5.4 The BASC (in *Aim of the Game*) highlight the following sections of the economy and the benefit provided by a shoot:
- Landowner – rent
 - Gamekeeper (and underkeeper, casual staff) – employment
 - Pubs, hotels, landowners – hospitality
 - Local suppliers and contractors – materials and equipment, seed, services
 - Garages – vehicles, fuel, maintenance
 - Game farm and supplies – stock, feed, rearing equipment
 - Gunsmiths, outfitters – shooting kit
 - Game dealers and retail outlets - food
- 5.5 The Cobham Report suggests that up to a third of all participants come from overseas. For a stay of 14 days they could easily spend up to £2,000 each (i.e. 14 x £140 per day).
- 5.6 On the assumption that there are 35 million pheasants and partridge reared per year, with a 40% recovery rate, (i.e. birds shot as a percentage of those placed) and an average of £25 per bird shot, total revenue would be £350 million for the birds alone without taking account of benefit to hotels, restaurants etc.
- 5.7 It is clear that these figures are simply estimates based on what may be unreliable assumptions and averages. For this reason, there may

be a need for a more detailed review of these figures. Work under way by consultants (PACEC) commissioned by the Country Land and Business Association, BASC and the Countryside Alliance to update the Cobham Report may provide the clarity required on this point. Their report will be available early in 2006.

- 5.8 After the guns have taken home a brace of pheasant, partridge or grouse following the day's shoot, beaters may be offered the chance to buy some. The practice of charging beaters for birds taken only appears to happen on the small number of big shoots. The remainder are sold direct to local pubs, butchers or to game dealers to supply larger markets, such as retail butchers. As stated above, the majority of birds are exported, however, with Belgium a key market. It has been reported that dealers take birds across the Channel with birds in feather in chilled lorries.
- 5.9 The BASC suggest that all grouse shot will be eaten, as with all other game that is shot

6.0 MORE DETAIL ON REARING OPERATIONS

6.1 The GFA has produced a Code of Practice for game rearing that is regarded as an industry standard. The Code deals with all aspects of game rearing but also offers 5 Golden Rules for the entire rearing process, to be followed by all those involved.

Pheasant can be reared in several different ways:

- Home grown – hens are usually caught up from those left from the previous season, though some breeding stock may have been overwintered, and used for egg production. Chicks are hatched from these eggs, reared and then released.
- Home grown and wild – resident stock are left to breed on the farm or estate and rear chicks in the wild
- Bought-in poults – either as day olds or 6-8 weeks old
- Eggs bought-in – hatched and reared on the shoot or game farm

6.2 Day old poults would be reared under heat for the first 3 weeks. They would then be moved to small, enclosed pens until they are fully feathered and ready to be moved to larger release pens.

6.3 Birds purchased at older ages would either go into the small, enclosed pens or directly into the larger release pens depending upon their age, growth stage and hardiness of the birds. Feed and water are provided in the pens and birds quickly find these and disperse around the pen. Feeders are provided at a ratio of around 8 to 600 birds though numbers can vary according to their size. Grit is also provided.

6.4 Release pens allow for some management of the birds to monitor illness, provide food and water and protect the welfare of the birds in a semi-controlled, semi-natural environment. Pens can be large, with a wire netting barrier. The fence is usually secured at the base to discourage predators from burrowing into the pen. Also, an electric wire can be placed about a foot from the netting (on the outside) to prevent foxes leaping onto the netting and climbing over.

6.5 It is common practice for the pheasant to have the chick flight feathers of one wing clipped before they are turned out into the release pens. This helps the gamekeeper to retain a large proportion of the pheasants in the pens so that the bird can mature and receive food and water.

6.6 Once the adult feathers have replaced the chick feathers at about 8 weeks of age, the birds will move freely in and out of the pens. Re-entry grids are used to allow birds to move freely into and out of the pen. Bars prevent predator access. To ensure that the birds are kept within the vicinity of the shoot, the birds would continue to be fed both in the pens and in the surrounding woodland.

- 6.7 All young pheasants and partridge will be fed on compound feed very similar to that given to poultry. The price of game feed will be higher than that for poultry and currently averages around £190 to £200 per tonne (starter ration could be up to £320 per tonne). Young will be started on crumbs and will graduate to pellets usually containing a coccidiostat to prevent the birds being affected by coccidiosis. They will continue to receive pellets until they are around 10 weeks of age. Over the next 4 weeks whole wheat is introduced so they are only being fed wheat by 14 weeks of age.
- 6.8 Cover crops provide natural shelter for released birds and a source of food. Corners of fields or strips near woodland may be planted with kale, maize, sunflowers or other plants. Birds will be driven through these crops.

7.0 BIRD HEALTH MANAGEMENT

- 7.1 The main diseases affecting game birds are Hexamitiasis, Trichomonas and rotavirus (in chicks), coccidiosis and parasitic worms. Flubanvet is used to control worms.
- 7.2 The loss of the drug Emtryl (DMZ) to control parasitic diseases caused by Hexamita and Trichomonas has emphasised the need for management of gamebirds to be of the highest standards if outbreaks of disease are to be minimised. These parasitic diseases can kill or seriously incapacitate the birds. Reductions in stocking density during rear will reduce the likelihood of other birds picking up excreted gut parasites. There may still be stocks of Emtryl being used during 2005 but gamekeepers have been trying to get used to not having it in their armoury. Stocks of Emtryl became illegal after July 2005. The GCT issued information to gamekeepers last year about management methods that could assist in maintaining bird health. For example, they encouraged the increase in the size of pens to lower stocking density and reduce stress and contact between birds.
- 7.3 Good housing and heating are required to provide steady temperature control in the first few weeks. Stressors that can affect the bird's ability to fight parasitic infections include rapid variations in housing temperature, problems with the water or food quality, other disease conditions such as bacterial enteritis, and competition from other birds in the pen.
- 7.4 Biosecurity is recognised as an important management tool and the better sites do try to adopt good biosecurity. Problems can arise when workloads are at their peak and standards may slip in trying to keep on top of the tasks in hand. One gamekeeper interviewed for this report suggested that, for him, biosecurity is the key to success. He tries to make sure buildings are scrupulously clean before birds are housed (pressure washing and Virkon S), footdips are placed outside each building and hands are cleaned between buildings and pens. Also, as he alone works with the birds there is less chance of introducing anything to the site. These standards may not be replicated across the entire industry though are generally adhered to.
- 7.5 Birds are usually moved from rearing accommodation to release pens in crates. These crates are washed before and after use. Birds may receive a probiotic treatment for the first 10 days or so. They are "bitted" at 2.5 weeks of age and receive multivitamins before and after to help them over the stress of that. 'Bits' are small plastic c-shaped clips fitted to the beak to prevent feather pecking and cannibalism, which can be a serious problem in non-bitted flocks. Bits are removed before birds are released.

- 7.6 Birds are often challenged by coccidiosis at around 4 weeks of age and so receive treatment for that. Feed may contain a coccidiostat to treat the condition. Estates usually retain a veterinary practice and involve the vet in preparing a bird health plan for the year. However, some gamekeepers will involve the vet only if they have to.
- 7.7 Game birds are not vaccinated for any condition or disease. Comments from the industry indicate that physically administering a vaccine may not be a problem if it was early in the bird's life, whilst it is confined. If it was via water, the effectiveness of take-up by the bird could be variable due to the type of drinker used, how clean it is and whether all birds drink from it within a given period. Injections would be very labour intensive and difficult to achieve with birds loose in large pens. Birds could be highly stressed during this operation.
- 7.8 Whilst it may be good practice to move rearing pens each year they may not always be moved every year due to the cost of doing so. Efforts are made to keep down predator populations around release pens but game birds inevitably are in contact with wildlife, which may compromise their health status. Bits are removed from birds placed in release pens.
- 7.9 Release pens are opened gradually to allow birds to wander during the day but to return at night. Once birds are fully released the aim is to spread the birds throughout the wood to minimise contact between them. Most pheasants will stay in the locality though many will wander, some for considerable distances. A practice called "dogging in" is employed here, whereby the perimeter of the intended range (wood, copse etc) is patrolled with a dog to encourage the birds to stay put. Despite this practice some birds are still lost. Keepers continue to feed wheat after release, partly to keep the birds in the area and to discourage wandering.
- 7.10 Over-wintering pens used for birds selected to become breeding stock for the next season are very similar in construction to release pens. They are not moved regularly but are rested during the summer period. Tape brailes (straps) are fitted to one wing to limit flying ability and to keep birds in the pen.
- 7.11 Predator control is important. Foxes will be controlled by shooting (at night, using a lamp to locate them) and snaring. Corvids (the crow family) are either shot or caught in Larsen traps and then humanely destroyed. Rats are routinely poisoned.
- 7.12 Release of partridge is slightly different. Birds are placed in pens in fields with good cover, provided by maize or other crops. These pens can be around 20ft x 30ft, netted over the top and containing 150 to 200 birds. Food and water are provided in the pens. Birds are released in groups of around 20, enough to form a natural covey. Food continues to be provided after release.

- 7.13 On grouse moors gamekeepers will control predators, in particular, foxes, crows and stoats. Up to a third of revenue from shooting is spent on moorland management with activities such as bracken control, heather re-seeding, fencing, maintenance of shooting butts (hide/shelter on moor) etc being the main factors in addition to predator control.
- 7.14 The LASC claim that gamekeepers are responsible for the demise of many species of predatory birds and animals claimed to be a threat to game birds as a result of their pest control activities.

8.0 INTERIM RECOMMENDATIONS

- 8.1 There is a clear need to improve the collection of statistics from all aspects of the game industry with regard to pheasants and partridge. Representative bodies need to work together with Defra to construct a method of recording birds reared, birds shot and birds maintained for breeding.

- 8.2 Another improvement would be some form of registration of game farmers, estates and/or gamekeepers. This would enable interested parties to know where pheasants and partridge are being reared (admittedly there is a security issue here) and be able to check on factors such as bird welfare. Where there is the threat of a disease outbreak, or the spread of disease to a wider area, the State Veterinary Service need to act quickly. The ability to communicate directly to stakeholders could aid their efforts to contain an outbreak. This would be in everyone's interest.

9.0 SOURCES OF INFORMATION ACCESSED FOR THIS REPORT

Game Conservancy Trust – personal contact, reports via library searches and web site. Also, “*Nature’s gain – How gamebird management has influenced wildlife conservation*”

British Association for Shooting and Conservation – “*Aim of the game – driven game shooting in Britain today*”, web site and individual documents

Internal Defra reports and briefings

ADAS data

SEERAD – personal contact and trade figures

Moorland Association – personal contact and information supplied

National Gamekeepers Organisation – personal contact

Game Farmers Association – personal contact

Food Standards Association – personal contact and information supplied

Royal Society for the Protection of Birds – web site

British Trust for Ornithology – web site

Individual estates and gamekeepers

English Tourist Board and various regional tourist boards – personal contact

Sainsbury Supermarkets – personal contact and information supplied

Game Feed Trade Association – personal contact

Feed manufacturer – personal contact

Defra SVS – personal contact