Researched and independently produced by

ADAS

ANNOTATIONS TO THE FREE RANGE COSTS OF PRODUCTION AND RETURNS NOVEMBER 2026

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Free Range Cost of Production

The average cost of production and egg price are reviewed and updated independently by ADAS each month. The figures are based on a typical existing 32,000 bird unit with all eggs being sold on contract to a packer. ADAS gathers information each month from a range of different sources. Individual responses are kept confidential to ADAS and are not seen by BFREPA. Further details are provided on the BFREPA website.

Key Indicators - Financial

Feed price per tonne	£326
Pullet price (standard + additional vaccinations)	£6.41
Capital investment for existing producers (per bird)	£48.30

Key Indicators - Performance

Cycle length (weeks)	Eggs per hen housed	Feed use (g/bird/day)	Mortality (%)
16-82 weeks + 4 weeks between flocks	378	124.7	6.0

Free Range Production Costs

Cost Items	Pence per bird	Pence per dozen eggs
Feed	1822.0	57.83
Pullet – standard vaccination programme	615.0	19.52
Additional pullet vaccines	26.0	0.83
Pullet finance	48.0	1.51
Labour	447.0	14.19
Electricity (excluding renewables)	202.1	6.42
Water	28.3	0.90
Veterinary and medication	100.0	3.17
Litter	7.9	0.25
Enrichments	14.1	0.45
Range management costs	7.6	0.24
Pest control contractor	6.4	0.20
Disinfectants and biosecurity	4.1	0.13
Egg printing consumables	3.9	0.12
Dead bird disposal	7.8	0.25
House clean-down costs	62.0	1.97
Repairs and maintenance	29.2	0.93
Insurance (buildings etc.)	29.7	0.94
Insurance (disease, AI, salmonella)	116.7	3.70
Vehicle and fuel	24.0	0.76
Office expenses	5.6	0.18
Accountant fees and bank charges	21.7	0.69
Training and memberships	5.8	0.18
Land rental equivalent	15.4	0.49
Capital and interest repayments	782.0	24.83
Total Production Costs	**£44.32 per bird**	**140.69 pence per dozen**

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1 INTRODUCTION

ADAS is a consultancy company commissioned by BFREPA and BEIC to calculate the cost of production and the average price of free range eggs. Data are updated each month. This work has been ongoing now for over 10 years and at present, a small team of specialist poultry consultants, led by Jason Gittins carries out reviews and updates each month. Further information on ADAS is provided at *www.adas.co.uk*.

Production costs and egg prices are prepared by ADAS, based on information supplied by a wide range of industry stakeholders and from published sources. To maintain confidentiality, we do not share any individual information received with others, nor do we provide the names of those we gather information from. This ensures that the costs are compiled independently by ADAS.

The purpose of these annotations is to provide clarity on the basis for the calculations, a methodology for the work and an outline of the key assumptions made. These form the basis of the work and for the figures produced. Each cost item is reviewed regularly, details of the normal frequency are given in Appendix 1 but changes may be made at any time if new information is received.

Cost of production calculations are based on what is considered 'typical' for existing free range egg production, but there is substantial variation within the sector, according to the age of the unit, the degree of mechanisation, flock performance levels and other factors. It may therefore be appropriate to modify certain assumptions made here to reflect specific approaches or supply chains. Data for new houses and prospective new entrants to free range egg production will be presented separately.

Stakeholder and published data are gathered from England, Wales and Scotland and so are intended to be representative of Great Britain as a whole. Costs and prices may be different in Northern Ireland.

These costings and annotations will be updated each month and the latest versions can be found in the Members Area of the BFREPA website, *www.bfrepa.co.uk*.

Any changes made to this month's document will be highlighted in red.

Jason Gittins

These models and the costs and calculations they contain are provided for guidance only, and do not represent any commitment by BFREPA that the costs or returns involved with egg production will accord with these models.

No warranty or other representation is given by BFREPA as to the accuracy or completeness of the information contained in these models or that any transaction entered into will result in the costs or returns indicated by these models.

2 UNIT CHARACTERISTICS

Cost of production calculations are based on a typical unit of 32,000 brown free range laying hens, placed in two flocks of 16,000 birds. Information obtained from BFREPA indicates that average flock size of current membership has slightly increased over the last year, however 32,000 birds is still considered representative. Multi-tier housing is now most common in the sector and this is generally assumed in the figures, although there are still some single tier (flat deck) systems in use.

Key unit assumptions are as follows:

- Laying hens are brought in as pullets from a separate rearing site at 16 weeks of age and are kept in production until 82 weeks of age.

- The unit is part of the BEIC Lion Code of Practice and is also part of the RSPCA assurance scheme. Participation in these assurance schemes is voluntary but close to universal.

- All eggs are sold on contract to a separate egg packing company. No allowance is included for any eggs being sold locally (i.e. not to the egg packer) although this may sometimes be permitted, according to the terms of the contract.

A unit of 32,000 birds is below the threshold for environmental permitting legislation and so no costs for this have been included here. Units with over 40,000 bird places would require an environmental permit to operate.

3 FLOCK PERFORMANCE ASSUMPTIONS

3.1 EGG PRODUCTION

For egg production, ADAS uses an average of published targets for three different strains of brown bird, namely the Lohmann Brown, Hyline Brown and Bovans Brown in free range or alternative systems. Hyline present a target range for egg numbers and in this case, the lowest figure has been used. The values are based on cumulative egg numbers per hen housed to 82 weeks of age. This is calculated as follows:

- (Number of eggs produced by flock to 82 weeks) / (the number of birds housed at 16 weeks)

Brown bird strain	Average eggs per hen housed
Lohmann Brown[1]	373.2
Hyline Brown[2]	375.8
Bovans Brown[3]	385.0
Average	**378.0**

Not all producers will consistently reach this performance level. Our costings assume that achieving it requires (for example), modern housing, a comprehensive vaccination programme during rearing, high levels of labour input, regular veterinary involvement and thorough clean-out between flocks to ensure good biosecurity. The assumptions made for these inputs (and others) are set out in more detail within this document.

1 This is based on data from the Lohmann GB website and the data shown for the Lohmann Brown Classic at https://www.lohmanngb.co.uk/uploadedfiles/ebooks/LB_FreeRange_Manual_v23/index.html

2 The value used is the lower end of the HHA breed target at 82 weeks. See also: https://www.hyline.co.uk/uploadedfiles/1623667568-hlb_alternative_guide_2021_uk_updated_6-3-21.pdf

3 The value used is based on the Bovans Brown HHA target at 82 weeks. See also: https://www.joiceandhill.co.uk/documents/2509/Bovans_Brown_Management_Guide_2026.pdf

3.2 EGG WEIGHT AND EGG GRADE PERCENTAGES

Eggs are graded according to class, based on their physical characteristics. The criteria for Class A require eggs to be clean, intact and normal in appearance. Class B eggs include those with intact but unclean shells. Class C is for eggs that fail to meet Class A or B criteria and this typically includes eggs with cracked shells (membrane intact, so not 'leaking' eggs) and various other shell faults.

Only Class A eggs (also referred to as 'first quality') are sold in shell by retailers to consumers. Class B and C eggs ('second quality') are usually diverted to egg processors for pasteurisation for use in food manufacture. Alternatively, these eggs may be used for commercial boiling and subsequent sale in product form.

Class A eggs are graded individually by weight at the packing centre, according to egg marketing legislation. The following categories and terms apply:

Very Large	Eggs over 73g
Large	Between 63 and 73g
Medium	Between 53 and 63g
Small	Eggs below 53g

A small amount of weight loss occurs during egg storage because the shell is porous and some moisture is lost. The weights referred to are at the time of grading. By weight an egg is approximately 31% yolk, 58% albumen (white) and 11% shell.

Egg packers typically pay a stated price for each weight category of Class A eggs. The price is highest for the heaviest weight categories, with lower prices for smaller eggs. Separate prices are paid by packers for second quality eggs and usually different prices are offered depending on whether seconds are identified and sorted on the farm (farm seconds) or at the packing centre (graded seconds). The price for farm seconds is generally higher, acting as an incentive for farmers to identify seconds before transport to a packer. Eggs which fail to meet the 'Class C' criteria e.g. because they are damaged, with contents leaking from the egg are normally considered a waste and have no value.

For average egg price calculations, we assume the following egg weight categories and classes over the lifetime of a flock (16 to 82 weeks).

Weight or category	Class	Percentage of total
Very Large	Class A eggs (94.5%)	3.5%
Large		42.0%
Medium		46.0%
Small		3.0%
Farm seconds	Class B and C eggs (5.5%)	2.5%
Graded seconds		3.0%

The percentages shown above are based on egg packers' previous views of what is typical of flocks to 80 weeks of age. They represent a rounded average of the responses obtained. This is being reviewed given the recent two week increase in cycle length. Additionally, any changes to the percentage of seconds resulting from the new Egg Quality Standards Guidance[4] will be taken into account when reviewing the figure.

4 https://assets.publishing.service.gov.uk/media/69a810df3b5b78231d1a9b83/Egg_quality_standards_guidance.pdf

3.3 FEED USE

For feed use, we have referred to published production targets for the same three bird strains (Lohmann Brown, Hyline Brown and Bovans Brown) in free range or alternative systems.

The values, based on grams of feed per bird per day from 16 to 82 weeks of age are shown below.

Brown bird strain	Average feed consumption (grams/bird/day)
Lohmann Brown	130
Hyline Brown	120
Bovans Brown	124
Average	**124.7**

Views on average feed use have also been gathered recently by ADAS from a range of industry stakeholders to check the average figure above. This is because commercial practice may be influenced by a range of other factors, including the specification of the feed used. Responses received were in a range from 123 to 126g average and therefore the calculated figure above is considered representative and has therefore been assumed as 'typical'.

3.4 WATER CONSUMPTION

For water consumption, ADAS uses published production targets for Lohmann Brown and Hyline Brown in free range or alternative systems. The values are based on millilitres per bird per day.

Brown bird strain	Water consumption (ml/bird/day)
Lohmann Brown	210
Hyline Brown	211
Average	**210.5**

3.5 FLOCK MORTALITY

For flock mortality, ADAS uses the average of published production targets for three different brown bird strains (Lohmann Brown, Hyline Brown and Bovans Brown) kept in free range or alternative systems.

The values are based on total mortality as a percentage of hens housed to 82 weeks of age.

Brown bird strain	Mortality (%)
Lohmann Brown	7.00%
Hyline Brown	5.23%
Bovans Brown	5.90%
Average	**6.04%**

For calculation purposes, this figure has been rounded to 6.0%.

4 PRODUCTION COST ITEMS

4.1 AVERAGE COMPOUND FEED PRICE

It is assumed that feed is purchased from a feed compounder, since this is considered typical for the sector at present. It should be noted though that some farms mix their own feeds on-farm and the costs for this type of operation are likely to be different.

A specific diet for a mid-production free range flock at 42 week old is now used as a basis for calculating the average current feed price. The feed used at this age is considered typical for the laying cycle as a whole and the specification has been prepared for ADAS by a Premier Nutrition (March 2026). Details are shown in Figure 1.

This specification is provided by ADAS to a range of feed compounders who are asked each month to provide a current price per tonne. Regional differences in feed prices are accepted and the aim is to identify a typical average.

The price to be provided is inclusive of raw materials, manufacturing costs, typical delivery and margin. If any general supplements or additives are included in the feed (i.e. in more than 50% of the feed produced by a compounder), the cost of this should be added to the price provided. This excludes any products that require veterinary certification, which are considered elsewhere. A range of supplements (additives) can be used, adding to feed costs, but presumably also providing some return. Based on our current procedures, we ask whether additives are needed to achieve the target egg output stated, given all the other inputs assumed e.g. modern housing, thorough vaccination, comprehensive veterinary inputs, high levels of labour input etc. At present, we do not include additives as an additional cost.

All responses from feed compounders are reviewed by ADAS so that a monthly average feed price can be calculated. Please note that there is inevitably a gap between feed quotes being provided and publication of the Ranger and compound feed prices may change in that period.

Figure 1 Typical feed specification for free range production for a flock at 42 weeks of age (BFREPA Post Peak (42 week layer diet)

	Energy (MJ/kg)	11.60
		Minimum (%) unless stated
	Protein	16.0
	Fibre	4.50
Digestible Amino Acids	Lysine	0.75
	Methionine	0.39
	Methionine & Cysteine	0.65
	Tryptophan	0.16
	Threonine	0.50
	Isoleucine	0.59
	Valine	0.65
	Arginine	0.80
	Linoleic	1.50
	Added Oil	1.00

Figure 1 Typical feed specification for free range production for a flock at 42 weeks of age (BFREPA Post Peak (42 week layer diet)

		Minimum (%) unless stated
Minerals	Calcium	3.80
	Dig Phosphorous	0.33
	Salt	
	Sodium	0.18
	Chloride	0.24 (Max)
		IU
Vitamins	A	6,000
	D3	3,200
Other	DSM Yolk Colour Fan	11 (nature identical)

The average compound feed price at present is £326 per tonne, an increase of £1 from last month. On this basis, the following costs are calculated:-

- With average feed intake at 124.7g, each bird eats 57.61 kg from 16 to 82 weeks;
- This is reduced by 3% to account for half of the total mortality i.e. the average flock size over the laying cycle (55.88 kg);
- The feed cost per bird is calculated as £18.22;

Based on 378 eggs (hen housed average), the feed cost is calculated this month as 57.83 pence per dozen, an increase of 0.17p per dozen from last month.

4.2 PULLET COST

Prices for 16 week old pullets are gathered from a range of specialist pullet rearing companies each month. It is common practice for egg producers to buy-in pullets, although some have their own rearing facilities.

A comprehensive vaccination program is essential during rearing since this helps to ensure the health and welfare of birds throughout their lives. Vaccines provide protection against common and serious diseases of poultry and a broadly standard vaccination programme is followed as a base. Within this though, there are variations in terms of the products used, timing and frequency. In addition, extra vaccines can be used according to veterinary advice, depending on disease risks on the farm and within the local area. As laying units become older, disease challenges typically increase and so boosting infectious bronchitis (IB) protection for example during the rearing period may become more important, so increasing pullet cost.

We ask our panel of pullet rearers each month for their current price for a pullet on a standard vaccination program, for delivery at 16 weeks of age in the current month. We also include the typical cost of additional vaccines.

4.2.1 Standard vaccination program

Vaccine protection is generally provided against the same range of diseases, but standard programs vary and different vaccines may be used. The most common are set out in the table below. The program was reviewed and updated earlier this year.

Diseases	Common vaccines (not all may be used)
Mareks Disease	Rispens + THV
Infectious Bronchitis	IB primer, Ma5, IB 4-91 (variant)
Salmonella Enteritidis & Typhimurium	Avipro Duo (three administrations)
Newcastle Disease	Avishield ND (three administrations), Clone 30
Gumboro	Mainly Bursine 2, Gumboro CW, Avipro Precise
Infectious Laryngotracheitis	Poulvac ILT
Coccidiosis	Evalon, Paracox
Epidemic Tremors	Poulvac AE or Avipro AE
ART	Nemovac
E.coli (not standard for all)	Poulvac e.coli (two administrations)

The standard vaccination program includes a multi-vaccine injection at transfer, which typically includes Nobilis RT, IB Multi, Gumboro and Newcastle Disease.

Based on recent discussions with rearers, the average pullet price with a standard vaccination programme is £6.15 this month, a 7 pence increase since last month.

4.2.2 Additional vaccines

Typical costs of additional vaccines used to provide protection against other diseases or extra protection against those listed above are set out below. Costs have been reviewed in early 2026.

Additional vaccines	Vaccine cost
E.Coli	This is considered a standard vaccine by some pullet rearers but 'additional' by others. The typical cost is around three pence per bird for one treatment.
Erysipelas	This is considered standard in some parts of the country, with two doses (at 12 weeks and at transfer) given at a cost of around 9 pence each time. Birds have to be picked up for the first of these and total cost is around 31 pence per bird in total.
Mycoplasmas (gallisepticum and synoviae)	For MG, two injections at 12 and 16 weeks are typical, at a cost of 9p per dose, a live vaccine alternative is around 8p per dose. For MS, two doses at 12p each time is typical. Bird handling costs are additional to these figures.
Autogenous vaccines	These can be used as an alternative to the 'additional vaccines' listed above. They are site-specific and likely to be considered a veterinary cost. These vaccines are typically administered at 12 and 15 weeks of age and 38 pence per bird is considered a reasonable total fee.

Information gathered from the rearing sector indicates that the average cost of 'additional' vaccines is 26 pence per bird over and above the cost of a pullet with a standard program. Additional vaccine cost is currently under review. Whilst some of these additional vaccines are used for less than 50% of all pullets, others are used for the vast majority.

4.3 PULLET FINANCE

Pullet rearers normally require payment for pullets delivered shortly after arrival and this represents a substantial 'up-front' cost for egg producers. We understand that at present, a significant percentage of producers pay for finance arrangements for the pullets, which are then re-paid over the life of the flock, as financial returns are made from egg production. Finance for pullets may be provided by banks, by a small number of companies specialising in this area or arranged by an egg packer.

Pullet finance is generally based on 11 monthly payments, the first payment being required two months after delivery, i.e. when the birds are around 24 weeks of age. The typical cost of finance is known to vary, and is 47.6 pence per bird for free range.

4.4 LABOUR

Calculation of labour cost is based on the amount of labour needed for a typical existing unit of 32,000 birds and the cost of that labour to the business. In practice, some (or even all) of the labour needed may be provided by the business owners and their families on some sites. Where that is the case, these calculations assume that this is costed as equivalent to employed staff.

4.4.1 Labour inputs

The various tasks that must be undertaken have been listed individually in the Table below, together with their frequency and an estimate of the time needed for each one. In some cases, the frequency of inputs is specified in legislation or in assurance scheme requirements.

Time estimates were first drafted by ADAS and then discussed with a range of industry stakeholders to ensure that they are as 'typical' as possible for a 32,000 bird unit of the type set out in section 2. Where changes were suggested, these have been included at ADAS discretion. It is recognised that in practice, labour inputs will vary depending upon the site and the people involved and on the amount of automation and mechanisation in place at the unit.

In practice, staff may be able to combine certain daily tasks listed, undertaking them at the same time. For this reason, an overall reduction of one hour per day is currently applied to the individual time estimates set out in the Table.

Typical Labour Inputs For Free Range Egg Production

Key assumptions:
32,000 birds in 2 x 16,000 bird houses
Production cycle from 16 to 82 weeks
Clean-out by contractors (at separate cost)
Rodent pest control by contractor (at separate cost)
On-farm incineration of carcasses (time for farm staff included here)
Egg collection using a farm packer, with tray stacking by hand (i.e. not fully mechanised)

Daily inputs	Man hours per day
Bird inspections (3)	3
Routine cleaning (inc. pophole management)	1.5
Egg collection & packing	8
Nest box inspection (inc. floor eggs)	1.5
Equipment inspection	0.5
Time saving by combining daily tasks	-1
Total for daily inputs	**13.5**

Weekly inputs	Man hours per week
Alarm and back-up check	0.25
Footbath replacement	0.5
Litter management	1
Manure cleanout	2
Carcass disposal	1
Out of hours plus sanitising, vaccines etc. (average)	2
Total for weekly inputs	**6.75**

Other inputs	Time needed (hours)
Pullet unloading	Once per cycle, 6 hours, 8 people
Additional time in house - early lay	Extra 2 hours daily for 8 weeks
Salmonella testing	Six times per flock, 2 hours each time
Official salmonella test	Annual, 1 hour
BEIC Lion Code self-audit	Every 6 months, 3 hours
BEIC Lion Code external audit	Annual, 4 hours
RSPCA and APHA inspections	Annual, 8 hours total
Liaison with suppliers, packer and training	Monthly, 2 hours per month
Feather cover check	Monthly, 2 hours each time
Old hen depopulation - oversee	Once per cycle, 6 hours
Inputs when house is empty (exc. house clean-out)	Five days a week, 4 weeks, 2 hours per day

Record keeping	Time needed (hours)
Production, welfare, environment, eggs	Daily, 0.5 hours
Feed deliveries / recording	Weekly, 0.5 hours
Feather cover	Monthly, 0.5 hours
Nestboxes and floor eggs	Daily, 0.25 hours
Depopulation plans	Every flock, 2 hours
Biosecurity plan	Every flock, 2 hours
Lion passport	Every flock, 1 hour
Crisis management document	Every flock, 1 hour
Site plan and range plan	Every flock, 2 hours
Emergencies plan	Every flock, 1 hour
Salmonella results	Six times per flock, 1 hour each time
Veterinary health plan (in conjunction with vet)	Every flock, 2 hours

Based on these inputs, the total labour time required for 32,000 birds was calculated in a separate spreadsheet and a summary is provided below.

Inputs	Total man hours for a cycle of 70 weeks (includes four week clean-out period)
Daily (houses stocked)	6,237
Weekly (houses stocked)	446
Other (including turnaround)	207
Record keeping (70 weeks)	406
Total (70 week cycle)	**7,296**

If the calculated total man hours required (7,296 hours) are divided by the full cycle length in days, which includes a four week clean-out period in addition to a 66 week laying cycle (490 days in total), the average requirement is rounded to 15 hours per day for 32,000 birds.

4.4.2 Labour cost

Assessing the typical rate of pay for staff on free range egg production units is complex for the following two main reasons:

- The work is likely to be undertaken by people with different levels of skills and responsibilities who are likely to be paid at different rates.

- Availability of people to work on free range egg production units varies according to location and it is likely that there are significant regional differences. This impacts upon the rates of pay needed to attract and to retain suitable staff.

In assessing a typical hourly rate of pay, we bear in mind national living wage rates increase by 4.1% in April 2026 from £12.21 per hour to £12.71 for workers aged 21 and over.

We have increased the pay rate we use from £14.67 to £15.27 per hour to match the percentage increase in the living wage from April 2026. This covers seven days each week (including weekend staff) when birds are in the house. We also assume that National Insurance and pension contributions are paid in respect of all workers but in practice, this may not always be the case e.g. for part-time workers.

To calculate total labour cost for a business, holiday cover and contributions for pensions and National Insurance are also considered as set out below. These take account employer National Insurance contributions (15.0%) and threshold (£5,000).

- Annual salary per person is £29,777
- This is based on £15.27 per hour, 7.5 hours per day (half of the total requirement), five days a week and for 52 weeks;
- Add 3% for employer's pension contribution on earnings above £6,240 per annum;
- This is calculated as £706 per annum;
- Add 15% for National Insurance on earnings above £5,000 per annum;
- This is calculated as £3,716 per annum;
- Total employment cost per person per annum is therefore £34,199 (29,777 + 706 + 3,716).
- Assume two employees (2 x 7.5 hours) for 32,000 birds, so 2 x 34,199 = £68,398.
- Add 11% to cover for holidays = £75,922;
- Multiply by 7/5 to cover 7 days = £106,291;
- For full cycle, multiply by 70/52 = £143,084 (including period when the houses are empty).

For 32,000 birds, the calculated total cost is £4.47 per bird (i.e. 143,084 /32,000). No allowance has been made for costs associated with absence due to sickness.

4.5 ELECTRICITY (EXCLUDING RENEWABLES)

Modern free range systems use a considerable amount of electricity, mainly to provide powered ventilation and lighting, to deliver feed, for mechanical egg collection and for belt manure removal in multi-tier systems.

The electricity cost here is based on mains supply from the national grid and pricing is based on a current unit price and a daily standing charge. With recent price volatility, account has been taken of any available government support in the form of price caps if appropriate.

In recent years, some free range egg producers have invested in solar power systems, either on the roofs of poultry houses or as free-standing installations on the range. This can provide a significant reduction in electricity costs compared to the use of mains supply alone. At present, this is estimated not to be typical for the 32,000 bird unit and therefore it has not been included in the costings data.

There is higher electricity use in multi-tier systems and the average is now estimated to be around 6.2 kwh per bird over the whole production cycle. The electricity unit price for businesses and the daily standing charge are sourced from a price comparison website[5]. The current source of daily standing charge and unit rate are currently under review.

The average electricity unit cost and standing charges reported in October 2026 are 31.8 pence per unit and 319.7 pence per day respectively. On this basis, the average cost is £2.02 per bird, an increase of £0.14 from last month. This is calculated as follows:

Cost of electricity usage = 6.2 Kwh/bird x 31.8 pence per unit = 197.2p

Standing charge = (319.7p x (7 days x70 weeks))/ 32,000 = 4.9p

Per bird cost = 197.2 + 4.9p =202.1 pence (£2.02).

5 For example see www.loveenergysavings.com

4.6 WATER

This category includes water used by the birds during the production cycle, the amount used for house clean out at the end of production and the cost of dirty water disposal. Mains water supply is assumed although using a local source e.g. a borehole can result in lower costs for some units.

Based on the quantities required per bird as set out in section 3.4, the average water use for a full cycle has been calculated as follows:

- An average of 210.5ml per bird per day, therefore 97.3 litres per bird to 82 weeks;
- Reduce by 3.0% to account for mortality (half of the total mortality for the flock, 6.0%), so 94.4 litres per bird place for the cycle.

For water use during clean-out, we have considered technical articles (e.g. it has been assumed that 700 litres of water is used per hour[6]) and information received from producers and others. In practice, the quantity of water used at clean-out is likely to vary for many reasons e.g. the time allowed, the extent of dry cleaning beforehand to remove physical contamination, the pressure of the washing system, water temperature and the surface / equipment type being washed.

We currently base our costs on an average of 160,000 litres of water used at clean-out for a 32,000 bird unit, equivalent to 5 litres per bird place. On this basis, total water use is 99.4 litres per bird for the cycle, with water for clean-out representing around 5% of the total. This percentage is broadly consistent with the findings of previous Defra research studies.

An average business rate cost is calculated from the most recent published figures from nine suppliers in England[7]. The average price calculated is £2.70 per cubic metre. Based on 99.4 litres per bird, the total cost is 26.9 pence per bird.

An additional cost is likely in respect of dirty water removal which may be collected for disposal or spread to land, with little or no value. Based on the same nine suppliers (see above) the average cost of water disposal reported is £2.88 per cubic metre and so for 160 cubic metres (160,000 litres), the cost is £460.80 or 1.4 pence per bird.

On this basis, the total for all water use and for disposal of dirty water is 28.3 pence per bird.

6 https://www.fwi.co.uk/livestock/housing/advice-cleaning-free-range-poultry-sheds
7 https://www.aquaswitch.co.uk/business-water-rates/

4.7 VETERINARY INPUTS AND MEDICATION

The assumption of average veterinary and medication costs has been based upon typical estimates provided mainly by industry veterinary professionals who specialise in poultry. In practice, there is likely to be considerable variation between units and therefore we have included what is considered typical to maintain target flock performance levels on a modern unit. The main inputs included here are listed below. Costs have been reviewed in early 2026 and adjustments have been made as necessary.

- Veterinary visits – two visits per flock are assumed to be typical. An allocation of £720 per unit has been included, which includes the preparation of a veterinary health plan and miscellaneous inputs over the laying cycle;

- Fees for in-feed wormers which require veterinary prescription. These are based on an average of six treatments per flock (every 10 weeks) at a cost each time of £1,680 (5.3p per bird), making a total of £10,080. Water treatments may also be used. These are typically used more frequently but the cost per treatment is lower, so overall costs are likely to be similar;

- Salmonella test analyses at a cost each time of £176, so £1,056 for six tests over the laying cycle (including pre-housing) and £2,112 for two houses (32,000 birds total).

- Fees for Exzolt to control red mites. Again this requires a veterinary prescription and an average of two treatments per flock is assumed. The current price is around 18 pence per bird for each treatment, so a total of £11,520 is included for 32,000 birds.

- IB vaccination whilst the birds are in lay (1.5p per dose) is assumed ten times during the laying cycle (every 6 weeks) and is likely to cost £480 each time for 32,000 birds, so £4,800 in total for the flock.

- E.Coli at 20, 40 and 60 weeks of age costing 3p per dose, therefore 9p per bird and so £2,880 for the flock.

Based on these inputs, the estimated typical cost for existing units is as follows:

Veterinary visits	£720
In-feed wormer	£10,080
Salmonella tests	£2,112
Exzolt	£11,520
IB vaccine	£4,800
E Coli	£2,880
Total	**£32,112 (100 pence per bird)**

For very new houses with no residual disease issues, the cost would generally be lower, possibly down to approximately 40 pence per bird. In the event of a disease outbreak or significant health challenges, the fee would be higher. An in-lay salmonella vaccine is now licenced. Its use and cost will be reviewed and might be added to the costings in the future.

Note: funded biosecurity advice from vets is being made available to producers by Defra as part of the Animal Health and Welfare Pathway. The uptake of this funding opportunity and any implications for costs will be reviewed in the coming months.

4.8 LITTER

RSPCA Standards specify a litter depth of at least 5cm for the first two months after placement, with litter depth of at least 10cm thereafter.

Typically producers purchase wood shavings or chopped straw as a litter material and distribute this onto the concrete floor prior to arrival of the birds. Some additional litter may be added during the life of a flock but the quantities required are unlikely to be substantial. Based on recent discussions with producers and others, we assume the use of 280 bales of wood shavings for 32,000 birds at a price of £9 per bale, making a cost of 7.9 pence per bird.

4.9 ENRICHMENTS

Assurance scheme requirements include the need to provide environmental enrichments to the birds to meet their behavioural needs and to reduce the risk of pecking problems developing. For example, within the RSPCA scheme:

- For every 1,000 birds there must be at least two items of environmental enrichment inside the house, which must:

    a) be permanently available to the birds;

    b) include some destructible forms of enrichment.

Additional facilities, or designated existing natural elements, must be provided for dustbathing/perching/foraging or a combination of these behaviours:

    a) in at least one area per 2,000 birds

    b) in a minimum of two areas.

Examples of environmental enrichment include hanging knotted rope/string, pecking blocks, vegetables and plastic bottles and provision of dustbathing boxes, straw bales or wood shavings.

The BEIC Lion Code of Practice states that to reduce the risk of feather pecking and cannibalism, but particularly in non-beak trimmed birds, producers are recommended to be aware of and implement appropriate intervention strategies from the list produced by the Bristol University Feather Pecking Project.

We have assumed that pecking blocks and lucerne bales are used as the destructible forms of enrichment, these being priced at £22 per block and £15 per 20kg bale respectively. With one block per 800-1,000 birds and a duration of 8-10 weeks, the cost would be 17.9 pence per bird for the laying cycle (based on one block per 900 birds, replaced every nine weeks). For lucerne bales at one per 2,000 birds and replacement every 10-14 days, the price is around 24.8 pence per bird (based on replacement every two weeks). Taking an average of these two, the total comes to 21.4 pence per bird.

Assuming that non-destructible enrichments are also used (see examples above) and that these are free of charge, expenditure on destructible enrichments could be reduced. At present, we assume a 33% reduction on that basis, making a total for enrichment of 14.1 pence per bird.

4.10 RANGE MANAGEMENT COSTS

The main range management costs include grass and hedge cutting and tree and general land maintenance. In practice, these inputs may be done by farm workers or by contractors. Precise figures are difficult to obtain but costs are generally low.

Average range management costs for grass topping and hedge cutting from the latest John Nix Farm Management Pocketbook, 2026, 56th Edition[8] were used to calculate a typical figure. Published NAAC rates, updated last month with figures from the latest survey[9], were checked for comparison for hedge cutting and the costs were found to be £2.33 higher per hour than last year. An adjustment to the cost of hedge cutting has been made based on this.

Costs assume 2,000 birds per hectare of land (16 hectares in total) and a hedge running around the perimeter of a square shaped range, averaging a length of around 1,600 metres, with one cut per year for a well maintained hedge.

Based on published figures (see above), the cost of grass topping has increased from £28 per hectare to £30 per hectare (farmer), but contractor rate remains unchanged at £48 per hectare. We have assumed the higher contractor rate in these costings on the basis that this includes an allowance for other range-related work. For 16 hectares of land, the cost of grass topping is therefore £768 or 2.4 pence per bird each time. We assume that the land would be topped twice each year, thus the total cost is 4.8 pence per year. For hedge cutting, the hourly rate for a contractor is £56 and a total of five hours input is assumed, including travel to the site and an average speed of two miles per hour. The total of £280 per year is equivalent to 0.88 pence per bird per year.

The total for range management costs is therefore estimated as 5.7 pence per year, equivalent to 7.6 pence per bird per cycle.

8 John Nix Pocketbook 56th Edition
9 NAAC Contracting Prices Survey 2026 https://www.naac.co.uk/wp-content/uploads/2026/05/NAAC-Contracting-Prices-Survey-2026-Final-1.pdf

4.11 PEST CONTROL

Poultry houses and their surrounds are at risk of pest infestations because of the availability of feed and shelter. Farms also have legal and quality assurance scheme responsibilities to control pests. In some cases, suitably trained, experienced farm staff are able to undertake pest control activities but the use of a specialist contractor is considered typical and has been assumed in these costings.

Typical costs for the control of rodents (rats and mice) have been collected from contractors and producers, based on a typical contract for a 32,000 laying unit. This includes an average of one contract visit per month as part of an annual agreement. These visits would include removal and disposal of caught rodents and checking and replacing bait in traps, with costs including bait, traps, disposal and contractor time.

An average cost for a pest control contract for a 32,000 laying unit of £2,060 for a cycle was calculated based on the above assumptions and prices gathered. For a 70 week flock cycle, this is equivalent to 6.4 pence per bird.

4.12 DISINFECTANTS AND BIOSECURITY

Foot dips must be placed at the entrance to each poultry house for use when entering and leaving. These should be fitted with a lid or cover to prevent rainwater, debris or UV exposure, which affects the efficiency of the disinfectant.

We assume that for each flock of 16,000 birds, there is one foot dip for the indoor bird area and one at the access point to the range. In addition, there are two dips around the egg room, one at the farm gate and a separate vehicle wheel sprayer (equivalent to two foot dips). In total, this means nine foot dips for a unit with two flocks. It is assumed that these are replaced weekly which is the minimum Lion Code requirement.

For a typical disinfectant (e.g. Virkon S), we have assumed an average of £60 for a 5kg tub, with a dilution rate of 1g to 225ml. Assuming an average volume of 15 litres for a foot dip, one tub would provide approximately 75 refills, costing 80 pence per refill. It would cost an average of £53 for each foot dip to be refilled for a full flock cycle and an average of £477 for nine foot dips or 1.5 pence per bird.

An allowance is also included for protective clothing for staff as follows:

- Boiler suits for poultry house staff – four at £30 each;
- Wellington boots for poultry house staff – two pairs at £56 each;
- Overalls for egg collectors – four at £30 each.

The above, which totals £354 for protective clothing is considered a reasonable budget for each flock and therefore equivalent to 1.1 pence per bird.

In addition, an allowance is added for disposable PPE, mainly for use by visitors and officials. This is based on a box of disposable boiler suits (50) at £84, dust masks for poultry workers (120) at £340 and over-boots (50 pairs) at £17.40. This totals £442 which again is considered a reasonable flock budget, equivalent to 1.4 pence per bird.

Adding together these three components, the total is 4.0 pence per bird. This figure excludes the cost of products used during the clean-out period which are considered separately. To include an allowance for other products such as cleaning materials for the farm packer and egg room, hand sanitisers and insect control products (such as attractant strips), this figure has been increased to 4.1 pence per bird.

4.13 EGG PRINTING CONSUMABLES

Egg printing is required to be done on farm for proof of origin, under the Egg and Chick Regulations (2009) England (SI 2009/2163) and equivalent legislation in Wales and Scotland.

For a unit with 32,000 birds, a stamping machine is assumed and based on discussions with equipment companies, the average current capital cost is around £3,606. This is estimated to last up to 10 years with regular servicing and cleaning, and it is assumed that this is included in the separate capital cost figure.

Consumables are in the form of stamping units which contain ink. The price of 12 stamps (normally bought together) is up to £259 and these are expected to be sufficient for 2.5 million eggs (208,000 dozen). This equates to a price of 3.9 pence per bird.

4.14 DEAD BIRD DISPOSAL

Dead birds may be disposed of on-farm by incineration or off-farm, via a carcass collection service. The cost of dead bird disposal has been calculated on the assumption of on-farm disposal with an approved incinerator. Incinerator prices were reviewed with a supplier this month. The typical price paid for an existing LPG-fuelled incinerator suitable for a 32,000 bird unit is estimated to be around £12,500. It is assumed that this is not included within the overall capital cost of the unit.

Supplier estimate is that the incinerator would use 7 litres of LPG fuel per hour and assuming 30kg of carcass incinerated per hour, the cost is around 8.6 pence per kg based on LPG at 37.02 pence per litre. On this basis, the cost of dead bird disposal is calculated as follows:

- Capital cost for incinerator of £12,500 over 10 years is £1,250 per year;
- For a flock cycle of 70 weeks, this is equivalent to £1,683
- At 6.0% mortality, 1,920 carcasses would be incinerated for a 32,000 bird unit;
- At an average of 1.9kg per carcass, a total of 3,648 kg is incinerated;
- The fuel cost for this is £313.73 (3,648 x 0.086);
- Adding capital cost makes a total of £1997 for the cycle (1,683 + 314);
- Annual maintenance and certification combined is estimated to add a further £500 per flock, making a total of £2,497.

The cost of on-farm dead bird disposal, spread over the initial 32,000 birds is therefore 7.8 pence per bird (2497/32,000), a 0.1 pence per bird increase. Costs for producers using a carcass collection service may differ from this and these are partly determined by farm location.

4.15 HOUSE CLEANDOWN COSTS

Terminal cleanout of houses is an important aspect of the production cycle and a vital biosecurity safeguard. For that reason, producers allow time to carry out the required work (and any necessary repairs) thoroughly. After discussions with producers and packers, we assume that an empty period of four weeks between flocks is typical but this is being kept under review given the need now for pre-housing salmonella testing.

Some producers choose to clean houses themselves, using farm staff but the majority are assumed to use a specialist contract cleaning company. In many cases, operations may be shared between farm and contract staff, with for example manure and litter removal and blow-down of dust being undertaken by farm staff. Contractors then begin with house washing operations.

Clean out costs are based mainly on averages from companies specialising in poultry house cleaning. Current information indicates an increase of around 3.3% in April 2026 due to increased costs and this results in a current cost of 62 pence per bird. This figure excludes the disposal cost of clean-out water, which is considered in section 4.6.

4.16 REPAIRS / MAINTENANCE

These costs are highly variable, generally being higher in units with older housing and equipment than in modern systems. Relevant standard figures from published sources are limited and where provided (e.g. in farm business surveys and Defra statistics) they appear not to be applicable to free range egg production.

Following discussions with the industry, we assumed that a range of items will need repairing or replacing for an existing unit (approx. 7 years old). Such items can include manure and egg belts, nest box mats, feed circuit corners, drinker pressure regulators, feed supply auger pipes, system LED lighting sticks and software upgrades. Repairs and/or replacement are assumed to be typically carried out by the farm staff, so associated labour costs are included in section 4.4. However, servicing the egg packing equipment and fire extinguishers and completing an electrical test is likely to require specialist visits at a combined cost of around £1,500 per year, inclusive of time and equipment.

On this basis, repair and maintenance costs for an existing unit are estimated to reach approximately £48,750 over 7 years. This equates to 21.7 pence per bird per year, or 29.2 pence per bird per cycle.

4.17 INSURANCE

Insurance costs are presented here in two separate sections.

4.17.1 General insurance for buildings, liability etc.

This is considered a standard item requirement for all units. Whilst prices will vary, the current average cost is assumed to have increased by 5% in April 2026 and is now 22 pence per bird per year. On a 'per cycle' basis of 70 weeks (including clean-out period) this equates to 29.7 pence per bird.

4.17.2 Insurance for disease outbreaks

This mainly provides cover for avian influenza and salmonella. Disease insurance costs are based on the level of cover recommended for a prudent approach and on the typical costs paid by an individual producer. Producers may also arrange disease insurance on a group basis, in which both the costs and the type of cover provided may vary. Disease insurance cost is currently estimated at around 86.7 pence per bird per year. On a 'per cycle' basis of 70 weeks (including clean-out period) this equates to 116.7 pence per bird.

4.18 VEHICLE AND FUEL

We assume that these costs are low on the basis that manure is collected by the recipient but that a vehicle is required for collection of goods, sample deliveries, attending meetings etc. Fuel is required for testing the generator but it is assumed that there is no long-term use of the generator (e.g. in the event of power failure).

On that basis, we have included £350 as a monthly vehicle lease cost, £918 per year for diesel fuel (based on approximately 4,000 miles per year) and £385 (annually) for insurance. In addition, an annual road tax of £200 is included. Therefore, for a 70 week cycle, the total is calculated as £7,677 equivalent to 24.0 pence per bird.

Vehicle lease £4,200 (350*12)

Fuel is calculated as 4,000 miles per year x 0.1136 litres/mile (40 miles per gallon) = 454.4 litres

Fuel price is £2.02 per litre (2.02*454.4) = £918 annually

Total annual cost £5,703 for vehicle lease plus fuel, insurance and tax = (4,200 + 918 + 385 +200)

Total cost per cycle (5703/52)*70 = £7,677, divided by number of birds (7,677/32000)= 24.0 pence per bird.

4.19 OFFICE EXPENSES

We have included the cost of business essential items here such as a computer and printer replaced every five years, office software and broadband and mobile phone contracts. Typical annual costs included are £240 for the mobile phone, computer, software and printer and a total of £40 per month for broadband and mobile contracts (£480 per year). An additional allowance is made for consumables (mainly printer ink, paper, couriers / postage) at £50 per month (£600 per year). The annual total is therefore £1,320 which equates to 5.6 pence per bird for a full cycle.

No time is included here for labour since this is considered elsewhere e.g. in record keeping and in accountancy costs.

4.20 ACCOUNTANT FEES AND BANK CHARGES

Accountancy fees are very dependent on the size and structure of a business. Generally, fees are lower for sole traders and partnerships than for limited companies. Considering the increase in National Living Wage, a 4.1% increase in accountant fees was estimated in April 2026. Therefore, the annual accountancy cost is £5,040 for typical on-going inputs for a unit of 32,000 birds, which includes annual accounts and tax-related issues. This could be reduced if more on-farm input is assumed but no allowance is currently included for the time needed for this or for the purchase of accountancy software.

We have assumed a basic annual bank charge of £120 per year (although in some cases, this may be higher) and together this makes an annual total of £5,160. This is equivalent to 21.7 pence per bird for a full cycle.

4.21 TRAINING AND MEMBERSHIPS

The costings assume that all workers are members of the Lion Training Passport scheme. Annual membership for the Lion Training Passport costs £20 per person. The scheme training requirements differ depending on role.

Under Lion Code requirements, all personnel working on egg production sites must hold a current food safety / hygiene certificate, which must be renewed every three years. Other training requirements may include biosecurity, poultry health and welfare, health and safety, and modern slavery awareness. It is expected that personnel will take one training course a year until all training is completed and renewed as required. Training courses typically cost approximately £50 depending on the training provider; therefore, the costings assume an annual cost of £70 per person (£20 + £50) and a total of four people, making an annual total of £280.

Additionally, the Lion Code requires at least one designated staff member on site to have an Emergency First Aid at Work or First Aid at work certificate. The cost of an Emergency First Aid at Work training is around £200, and has to be renewed every three years. This represents a cost of £67 per year.

Where there is little turnover of staff, the cost is therefore modest but where new staff are frequently employed, this becomes a larger consideration. A nominal time allowance for training activities is included in the labour calculations.

The annual cost for RSPCA Assured membership for a 32,000 free range farm is included at £641 although in some cases, it is understood that this is paid by the packer rather than the producer. Membership of BFREPA is included at £399 for a unit of 32,000 birds.

The total annual cost for this category is therefore £1,387 (£280 + £67 + £641 + 399), equivalent to 5.8 pence per bird for a full cycle.

4.22 LAND RENTAL EQUIVALENT

A land rental equivalent figure is normally included in costings such as these to indicate the income that may be obtained if the land required for free range production was instead rented for other purposes.

Rental values vary greatly according to land type, location and other factors and a published figure[10] of £229 per hectare has been used to calculate the annual land rental equivalent. This is based on Defra statistics on actual average farm rents in England. Explanatory notes provided with this value recognise that some land is likely to be let at below competitive rates and so the quoted figure may be lower than rents for newly-let or reviewed land.

Based on 2,000 hens per hectare, 16 hectares of land are needed for 32,000 birds. The annual rental value (£3,664) is therefore equivalent to 15.4 pence per bird per cycle.

10 John Nix Pocketbook 56th Edition

5 CAPITAL REPAYMENT AND INTEREST COSTS FOR BUILDINGS AND EQUIPMENT

5.1 EXISTING UNITS

Since this costing is for existing rather than planned new units, the current new-build price has not been used here. Typical capital cost for existing units is determined mainly by their age, which in turn indicates the likely design and levels of automation. No allowance is included here for the purchase price of the land required for the enterprise.

The average capital cost for existing units is difficult to estimate because of the range of building ages and specifications. A further issue is that in some cases, existing houses have been re-equipped internally following the removal of the original equipment. In some cases, very old existing units may have been built at comparatively low cost but compared to our estimates, more resource may now be spent on repairs and maintenance and on veterinary inputs, in order to maintain performance.

The capital cost we use is intended to reflect existing houses that are modern and therefore able to produce breed standard performance e.g. for egg numbers, feed intake, mortality etc. We currently assume the typical existing house to be up to 9 years old, so built from 2017.

The average capital cost was reviewed and updated in May 2026 to take account of the higher cost of new free range units built between 2017 and the end of 2025. Based on a typical figure of £63 per bird for new developments in 2025, we use the Bank of England inflation calculator[11] to estimate the likely capital cost in previous years. This is designed to take account of annual rates of inflation each year. Whilst price changes due to inflation that are most relevant to poultry systems may differ from the norm, this approach has the benefit of using a published source.

We have used published and industry data to calculate percentage increases in free range housing capacity (where applicable) for each year since 2017. Where figures are provided at UK level, growth in Northern Ireland must be discounted, since these costings are for Great Britain only.

For each year (2017 to 2025), the percentage increase in GB housing capacity and the assumed new-build cost per bird in that year is factored into the calculation of the average capital cost for the year. This means that new free range units recently added at higher cost are reflected within the average capital cost per bird, resulting in a gradual increase.

Based on a capital cost of £63 per bird in 2025, the Bank of England calculator shows a figure of around £46 in 2017. Our calculated average capital cost is now £48.30 per bird, based on the above methodology.

To calculate capital and interest repayment costs, it is assumed that buildings are repaid over 20 years and account for 37% of the investment. Equipment is repaid over 10 years and accounts for the remaining 63%. The current Bank of England interest rate plus 3% is used as a basis for calculating interest charges. The interest rate is 3.75%[12], unchanged since last month, making a total of 6.75%. Interest rates are next scheduled for review on 5 November 2026.

11 https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator
12 https://www.bankofengland.co.uk/monetary-policy/the-interest-rate-bank-rate

An amortisation table and loan calculator is used to determine costs on a 'per bird' basis.

This is done in the following stages:

- Assume a capital cost of £48.30 per bird and a current interest rate of 6.75%;
- Repayment cost of buildings at £17.87 per bird (37% of total) over 20 years is 89 pence per year or £1.20 per production cycle (70 weeks);
- Repayment cost of equipment at £30.43 per bird (63% of total) over 10 years is £3.04 per year or £4.08 per cycle.
- The total interest cost for building investment is £14.74 over 20 years, equivalent to 74 pence per year or 99 pence per cycle;
- The total interest cost for equipment investment is £11.50 over 10 years, equivalent to £1.15 per year or £1.54 per cycle.

The overall total per bird for the whole cycle is therefore as follows:

Building repayment	£1.20
Equipment repayment	£4.08
Building interest	£0.99
Equipment interest	£1.54
Total per bird per cycle	**£7.82**

Since capital cost per bird and interest rates vary, the following table shows the effect that changed assumptions would have on the total cost per bird (per cycle). The current assumption of £48.30 capital cost and 6.75% interest is highlighted (£7.82 per cycle).

Capital cost (£ per bird)	**Interest rate (%)**			
	2.75	**4.75**	**6.75**	**8.75**
42.3	5.31	5.96	6.85	7.39
45.3	5.68	6.38	7.33	7.92
48.3	6.06	6.80	**7.82**	8.44
51.3	6.44	7.22	8.30	8.96
54.3	6.81	7.64	8.79	9.49

5.2 NEW BUILD COSTS

The capital cost for new buildings and equipment has increased significantly in recent years, due to increases in materials, manufacturing and labour costs.

The typical cost for a new-build development in 2026 is believed to be in the region of at least £67 per bird for a 32,000 bird free range house. This figure is inclusive of the following main cost items:

- Planning application and associated professional fees;
- Ground work and site preparation;
- Electricity and water supply;
- Building construction;
- Poultry house internal equipment;
- Egg collection and packing equipment;
- Electrical work;
- Generator;
- Fencing and other range work.

Note that the cost of an incinerator is excluded here but included within the 'dead bird disposal' category in section 4.14. Some of the costs listed above (such as gaining planning consent) are very variable and site-specific.

Capital and interest repayment costs for a new-build unit costing £67 per bird are calculated below, using the same methodology as in section 5.1 (existing units).

- Assume a capital cost of £67 per bird and a current interest rate of 6.75%;
- Repayment cost of buildings at £24.79 per bird (37% of total) over 20 years is £1.24 per year or £1.62 per production cycle (70 weeks);
- Repayment cost of equipment at £42.21 per bird (63% of total) over 10 years is £4.22 per year or £5.50 per cycle.
- The total interest cost for building investment is £20.45 over 20 years, equivalent to £1.02 per year or £1.33 per cycle;
- The total interest cost for equipment investment is £15.95 over 10 years, equivalent to £1.60 per year or £2.08 per cycle.

The overall total per cycle is therefore as follows:

Building repayment	£1.62
Equipment repayment	£5.50
Building interest	£1.33
Equipment interest	£2.08
Total per bird per cycle	**£10.53**

The difference between this figure for a new unit (£10.53) and the equivalent one for an existing unit costing £48.30 per bird (£7.82) is £2.71 per bird per cycle. Assuming the same 'breed target' egg production of 378 eggs per bird (31.5 dozen eggs) and that all other costs stay the same, this would add 8.60 pence per dozen to the cost of production for a new build unit. It should be noted though that some costs for new and existing buildings are likely to be different.

6 FINANCIAL RETURNS

6.1 REVENUE FROM EGGS

An average free range egg price is calculated by ADAS each month. This is based on all eggs being sold on contract to an egg packing centre, with no local sales included. The price is based on discussions held each month with industry contacts. As far as possible, the same ones are used each time so that there is consistency from one month to the next and trends can be identified.

The responses provide information on the current prices being paid by a range of different egg packers and these are then 'weighted' according to the approximate throughput of free range eggs for each packer. Certain speciality lines are excluded from the calculations, so that the average is for standard brown free range eggs.

The average egg price calculated this month is 160.7 pence per dozen, a 0.3 p increase since last month. It is important to note that this is an average for all free range units, irrespective of their scale. Higher prices may be paid to some new units, reflecting the higher production costs noted in section 5.2 above.

Periodically BFREPA undertakes a separate survey of free range egg prices, based on voluntary responses from members. When this is done, we can compare results from two different methodologies to check for consistency.

6.2 REVENUE FROM THE SALE OF END OF LAY HENS

End of lay prices are gathered from a range of companies processing old hens in GB each month.

The EOL price included in the costings is for a hen at the end of lay (82 weeks and 1.9 kg liveweight).

The average payment for end of lay hen is 19 pence per bird, a 1p decrease since last month. The calculated flock value includes an allowance for mortality during the production cycle.

6.3 VALUE OF POULTRY MANURE

Over the course of a 66 week laying cycle, a flock of laying hens will produce a substantial amount of poultry manure. In free range systems, this consists of a mix of solid manure (collected on belts in multi-tier systems and within a mini-pit for flat deck systems) and used litter (a mix of manure and wood shavings or chopped straw etc.). The total weight depends on moisture content which in turn varies according to the feed and due to the amount of spillage of water from drinking systems.

Poultry manure is not considered a waste in legislation and there are controls in place to determine the way in which it is stored and utilised. The most common means of utilisation is spreading onto agricultural land but some manure and used litter also goes for other uses e.g. for fuel production in anaerobic digestion.

Free range egg producers who have additional land available (outside the range area) typically utilise poultry manure on their own land as an important source of nutrients, reducing the need for bought-in fertilisers. Those without additional land may provide poultry manure as a fertiliser for neighbouring farmers.

The theoretical value of poultry manure can be calculated based on its nutrient content of nitrogen, phosphorus and potassium and the current purchase of bagged fertilisers containing these nutrients. The value has been re-calculated this month and is estimated at £41 per tonne based on a dry matter of 50%.

In practice, poultry farmers do not receive this calculated price, partly because manure may need to be collected and then stored until it can be used. Regional variations are also likely with more demand for poultry manure in arable than in grassland areas. Dry matter content also impacts on the value of manure.

Nevertheless, poultry farmers may receive some value from manure, particularly if it goes to their other farming operations. At present, we assume a value of £5 per tonne, based on collection from the farm by the recipient.

Based on a typical output of 115 kg of fresh manure produced each day by 1,000 birds, the total for a 66 week production cycle is 53.13 kg per bird. Data from the UK Inventory of Ammonia Emissions from Agriculture[13], currently indicates that this should be reduced by 10% to account for manure deposited directly onto the range land. The amount available is therefore around 47.8 kg per bird and the value is given as 23.9 pence per bird per cycle.

13 https://uk-air.defra.gov.uk/assets/documents/reports/cat07/2509190841_UK_Agriculture_Ammonia_Emission_Report_1990-2023_26062025_Final.pdf

Appendix 1 – Cost items routine update frequency

Unit characteristics and flock performance	
Flock size	Annually
Egg grading assumptions	Quarterly
Performance (egg numbers, feed intake, water intake, mortality)	Quarterly
Cost items	
Feed	Monthly
Pullet – standard vaccination programme	Price (monthly) Quarterly (standard vaccinations)
Additional pullet vaccines	Quarterly
Pullet finance	Quarterly
Labour	Every 6 months (and in line with any government changes to wages)
Electricity	Monthly
Water	Quarterly
Veterinary and medication	Quarterly Every 6 months (Vet charges)
Litter	Quarterly
Enrichments	Every 6 months
Range management costs	Every 6 months
Pest control contractor	Every 6 months
Disinfectants and biosecurity	Every 6 months
Egg printing	Every 6 months
Dead bird disposal	Every 6 months Monthly (Gas cost)
House clean-down costs	Every 6 months
Repairs and maintenance	Every 6 months
Insurance (buildings etc.)	Every 6 months
Insurance (disease, AI, salmonella)	Annually
Vehicle and fuel	Quarterly
Office expenses	Annually
Accountant fees and bank charges	Annually
Training and memberships	Annually
Land rental equivalent	Annually
Capital and interest repayments	Reviewed monthly in response to any changes in bank interest rates
Income items	
Egg price	Monthly
End of lay hen	Monthly
Manure price	Annually

Researched and independently produced by ADAS for the British Free Range Egg Producers Association.







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