

Leaving Certificate Higher Level Pig Production Questions

2012

1. (j) (i) Indicate the average *litter size* **and** the target number of *bonhams weaned per annum* for a sow.
(ii) Suggest **two** ways by which the number of bonhams weaned per annum could be increased.

9. Give a scientific explanation for ... the following:
(e) The locating of boars in dry sow houses.

[Marking Scheme2012](#)

2011

Option One

3. (c) Food Conversion Efficiency (FCE) decreases with age in farm animals.
 - (i) Explain the underlined term **and** give an example of FCE for a **named** farm animal.
 - (ii) Explain why FCE decreases with age in an animal.
 - (iii) Explain how a farmer might improve the FCE of his herd.

8. (a) Describe the husbandry practices involved in preparing a sow at the end of gestation for transfer from the dry-sow house to the farrowing house.

9. Give a scientific explanation for ... the following:
(e) The fact that the creep area for bonhams is kept at a higher temperature than the rest of the farrowing house.

[Marking Scheme2011](#)

2010

1. (g) In the case of the pig, state
 - (i) the length of gestation
 - (ii) the length of the oestrus cycle.

8. (c) Highlight the main differences between the members of ... the following pair:
 - (i) *farrowing house* and *fattening house* in pig production

9. Give a scientific explanation for ... the following:
(d) the addition of soya bean meal to cereals in pig rations.

[2010Marking Scheme](#)

2008

1. (h) Give the approximate value of each of the following for pigs;
 - (i) weight at birth (kilograms),
 - (ii) age at puberty (months),
 - (iii) length of oestrus cycle (days),
 - (iv) length of gestation period (days),
 - (v) recommended temperature for farrowing unit ($^{\circ}\text{C}$)

[2008Marking Scheme](#)

2007

1. (g) Write out the dental formula for an adult pig.

9. Give a scientific explanation for ... the following:
 - (e) The practice of housing a boar near sows and the double-serving of sows in pig breeding enterprise.

[2007Marking Scheme](#)

2006

1. (j) Most of the bacon pigs produced in Ireland are reared in integrated pig production units. Explain the underlined term and give **two** advantages of these units.

[2006Marking Scheme](#)

2005

1. (c) Explain the term critical temperature in the context of the rearing of pigs.

6. (b) Describe the management of bonhams **or** lambs from birth to weaning.

[2005Marking Scheme](#)

2003

Option One

3. (a) Discuss the management of a sow (1) during late pregnancy and (2) after the birth of the bonhams.

[2003Marking Scheme](#)

2002

Option One

3. (a) Write brief notes to explain ... the following, using examples where appropriate.
 - (2) Food conversion ratio

5. (b) Explain, using relevant examples, why minerals and vitamins are an essential component of the diet of young pigs.

8. (c) Explain why the normal diet of a pig differs from that of a sheep in quantity, quality and variety of food nutrients.

[2002Marking Scheme](#)

2001

Option Two

3. (c) Distinguish between the treatments used to improve the digestibility of cereal grains used as foodstuff for (i) cows (ii) pigs.

[2001Marking Scheme](#)

2000

5. (c) Explain how management and environmental factors may influence the growth and development of pigs **or** sheep in an enterprise with which you are familiar.

1999

Option Two

3. (a) Write notes on .. the following:
- (i) Optimum environmental conditions in a pig farrowing unit.

 - (b) Explain how the Food Conversion Ratio (FCR) in a pig production unit is influenced by each of the following;
 - (i) breed
 - (ii) diet

 - (c) Distinguish between the management and feeding practices used for weaners and for fatteners in a pig production unit.

1998

8. (a) Describe the environmental conditions and feeding practices involved in rearing bonhams from birth to weaning stage.
9. Give a scientific explanation for ... the following:
- (a) Maintaining a constant temperature in a pig farrowing unit.

1997

1. (g) Describe three bodily characteristics that are important in the selection of breeding sows
8. (a) Discuss the management principles and environmental conditions that are desirable in a successful pig rearing enterprise.

1996

8. (a) Explain how a farmer should manage the internal environment of a housing unit to optimise the growth rate of pigs or sheep in an enterprise.

2012 Marking Scheme

1. (j) (i) Average litter size: 11.5 (10-12)
Target number: 2 x 3m
9. (e) Presence of boar stimulates sow's oestrous cycle / used to detect sows in heat /
can detect pheromones / used for double serving 4 x (4m+4m+4m)

2011 Marking Scheme

Option One

3. (c) (i) FCE; how efficiently an animal converts food consumed into weight gained /
food to flesh / can be expressed as ratio e.g. pigs 1.75-3.25:1 cattle/sheep 8:1,
poultry 2:1 (accept first number) 4m+4m
- (ii) Body tissues develop in order / nerve-bone-muscle-fat / fat deposition increases
with age / eg 24 months on cattle / depends on breed / the younger the animal the
less fat it forms and more lean / fat less efficiently produced 4m
- (iii) Improve FCE; changing high quality diet / increase concentrates / less roughage /
buy in new animals / breeding / disease control / housing / high temperature for pigs 4m
8. (a) One week before farrowing date / around day 108 / wash sow / delouse / dose /
for endo parasites (worms) / vaccinate sows / against erysipelas / clean out
farrowing pen area / put sow in farrowing crate / with adequate food or water /
temp 20 degrees 6 x 4m
9. (e) To attract bonhams away from sow / and avoid being crushed / higher temp
too hot for sows / bonhams small lose heat easily / farrowing house 20°C for sows /
up to 30° in creep area / to attract them to feed. 4 x (4m+4m+4m)

2010 Marking Scheme

1. (g) (i) 114 DAYS (112-116 days), 3 months 3 weeks 3 days (not outside range)
(ii) 21 DAYS (19-23days) (not outside range) 6m+4m
8. (c) (i) FARROWING
house 20 degrees/ first house for a pig or where litter is born/ sows + piglets
here for 4-7 weeks/ infra red lamps/ creep area/ farrowing crate
FATTENER
house 22 degrees/ last house before slaughter or finishing house/ room to
walk about/ lower density/ ad lib feeding 2 (2m+2m)
Two points from each alternative

9. (d) protein rich/ increases muscle growth/ cereals are low in protein/ meat +bone meal no longer available/ cereals and soya complement each other/ because each has the amino acid lacking in the other/ soya is high in lysine (essential amino acid)/ which pigs cannot manufacture/ and low in methionine/ cereals are the reverse any three 3 (4m)

2008 Marking Scheme

1. (h) (i) 1-1.5 2m
 (ii) 5-6 2m
 (iii) 19-23 2m
 (iv) 112-116/ 3 months, 3 weeks, 3 days 2m
 (v) 20-22 2m

2007 Marking Scheme

1. (g) 3 1 4 3 5m
 3 1 4 3 5m

9. (e) presence of boar brings on heat/ pheromones/ increased conception rates/ increased litter size 6m+3m+3m

2006 Marking Scheme

1. (j) Breeding and rearing unit and fattening unit on one farm 4m
 Lessens risk of disease entry/ eliminates transport stress/ can select own breeding stock any two 3m+3m

2005 Marking Scheme

1. (c) air (house) temperature (or correct temperature)/ at (or above) which animal can maintain body temperature without weight loss (or need for extra food) OR food FCR 4m+6m
6. (b) bonhams – suckling of sow/ colostrums/ creep feeding/ water available/ iron injection/ correct ambient temperature/ breaking teeth/ Infra-red lamp/ castration/ cutting tails any four 2(3m)+2(6m)

2003 Marking Scheme

- Option One
 3. (a) (1) During late pregnancy

- dry sow house/ fed once daily (2.5kg meals)/ final 3-4 weeks fed extra (0.5kg) daily/ 1 week before moved to farrowing house/ sow is washed or deloused or disinfected/ vaccinated/ put in farrowing unit/ temperature maintained at 20°C/ if problems farrowing call vet any four 4 (2m)
- (2) After birth of bonhams
left in farrowing crate/ to prevent injury to bonhams/ suckles for 5-6 weeks/ fed suckling ration (1.8kg + 0.5kg per bonham)/ supply of water/ post weaning sow moved back to dry sow house/ disease prevention/ in oestrus within 5-7 days any four 4 (2m)

2002 Marking Scheme

Option One

3. (a) (2) *Food conversion Ratio*

Ratio of food consumed to live weight gain/ e.g. FCR of 2.0 means that for every 2.0kg of food eaten and animal gains 1kg of live weight/ low FCR values means good feed efficiency/ improved feed efficiency means higher profits (low FCR)/ housing influence = heat results in most of the food consumed put to flesh/ balanced rations (diet)/ breed and cross of the animal/ affected by health/ management

e.g. in pigs (weaners = 1.75/ fatteners = 3.25

e.g. in poultry (FCR = 2:1

Or other valid example

Maximum of one example awarded marks

2m+2m+1m

5. (b) *Mineral and vitamins essential for the diet of young pigs*

One named mineral and One named vitamin

5m+5m

One stated deficiency for each mineral and vitamin

3m+3m

Anaemia in Bonham's = sows milk lacks adequate amounts of iron/ outdoor system not a problem sufficient iron from rooting in soil/ to prevent deficiency all Bonham's given a single intra-muscular of a soluble iron component in the first week of life.

Rickets/ Bone formation = housed indoors lack of Vitamin D/ fed as a supplement in food

Night-Blindness = housed indoor not enough Vitamin A/ fed as a supplement in food

8. (c) *Diet of Pigs differs from sheep in quantity, quality & variety of food nutrients*

PIGS	SHEEP
Non-ruminant	Ruminant
Non-roughage	Roughage
Balanced ration supplied indoors-	Sheep graze outdoors – eat grass
Example of a balanced ration – higher protein (Lysine), Vit (A,D) and minerals (iron)	Grass is a complete food
Wide variety of materials in ration to make up concentrated ration	Less variety

4 (6m) (3m+3m)

2001 Marking Scheme

Option Two

3. (c) (ii) Cows

Roll barley/ break husk/ cow can now digest as it is a ruminant 2 (4m)

Pigs

grind/ small particles/ digestive enzyme breakdown/ non-ruminant 2 (4m)