



Agricultural Science Past Exam Questions

Grassland

Higher Level

2013 – Question 6 – Part (a)

(a) Because of the prolonged rainfall in June and July 2012, farmers were advised to raise the cutting height of silage from 5 cm to 10 cm.

- (i) Suggest a scientific reason for this advice.
- (ii) What are the negative effects of making silage in such weather conditions?

2011 – Question 3 – Option 2

- (a) Describe **four** grassland management practices used to achieve high quality silage.
- (b)
 - (i) Explain why a young animal should receive colostrum in the first day of life.
 - (ii) List **three** benefits of colostrum to the young animal.
- (c)
 - (i) Outline the main features of strip-grazing.
 - (ii) Give **two** advantages and **two** disadvantages of strip grazing in the feeding of fodder roots to sheep.

(48 marks)

2010 – Question 6

- (a) List **four** components of a blight control programme for maincrop potatoes.
- (b) Give **four** reasons why scutch grass (*Agropyron repens*) is considered by tillage farmers to be a troublesome weed.
- (c) Explain the following terms:
 - (i) plough pan
 - (ii) nitrogen fixation.
- (d) Describe how you would calculate the 1000 grain weight of a cereal.

(48 marks)

2009 – Question 1 – Part (j)

(j) Name any **two** plant species or varieties of herbage to be included in a grass-seed mixture for the production of a permanent pasture.

2008 – Question 1 – Part (j)

(j) State the benefits of using hybrid ryegrasses over the use of Italian ryegrass on its own.

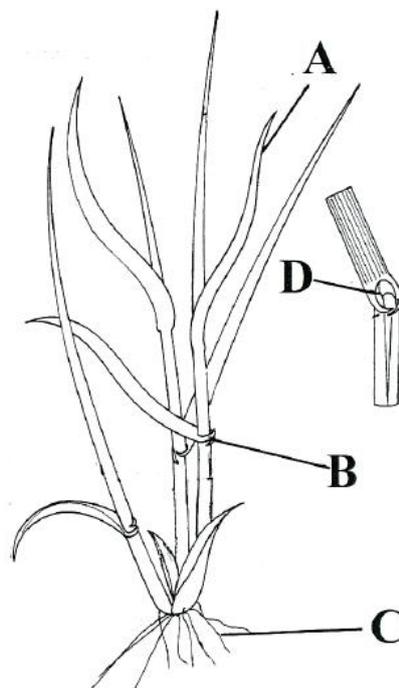
2008 – Question 3 – Option 2

- (a)
- (i) Give **one** benefit of reseeding grassland.
 - (ii) Explain the term tillering.
 - (iii) Mention **two** ways by which the farmer can encourage the tillering process.
 - (iv) Give **two** reasons for the process of “topping” grassland during the grazing season.
- (b)
- (i) Explain the “leader- follower” grazing system and give **two** reasons why it is used by farmers.
 - (ii) Give **two** reasons for including clover in a seed-mixture for pasture.
- (c) Outline how a farmer can provide the optimal conditions for bacteria to produce high quality silage.

(48 marks)

2007 – Question 5

(a) The diagram below is of a generalised grass plant. Name the parts labelled A, B, C and D as shown on the diagram.



- (b) Discuss **two** advantages of including grass as a crop in an arable crop rotation.
- (c) Describe the characteristics of a grass plant at the ideal stage of growth for grazing.
- (d) Compare the feeding quality of silage (cut in May) and hay (cut in July).

Give typical values to illustrate your answer.

(48 marks)

2006 – Question 3 – Part (c) – Option 1

(c) Describe how each of the following factors influences the production of a grazed sward:

- (i) Soil type
- (ii) Management practices
- (iii) Season.

2006 – Question 6 – Part (a)

- (a) (i) Identify **three** characteristics which could be used to determine the merit of an individual species of grass in agriculture.
- (ii) Describe an experiment that could be used to determine one of the characteristics mentioned in part (i).