

# **L3 Lead Examiner Report 1906**

June 2019

**L3 Qualification in Equine  
Management: Equine Diet and  
Nutrition**

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## Grade Boundaries

### What is a grade boundary?

A grade boundary is where we set the level of achievement required to obtain a certain grade for the externally assessed unit. We set grade boundaries for each grade, at Distinction, Merit and Pass.

### Setting grade boundaries

When we set grade boundaries, we look at the performance of every learner who took the external assessment. When we can see the full picture of performance, our experts are then able to decide where best to place the grade boundaries – this means that they decide what the lowest possible mark is for a particular grade.

When our experts set the grade boundaries, they make sure that learners receive grades which reflect their ability. Awarding grade boundaries is conducted to ensure learners achieve the grade they deserve to achieve, irrespective of variation in the external assessment.

### Variations in external assessments

Each external assessment we set asks different questions and may assess different parts of the unit content outlined in the specification. It would be unfair to learners if we set the same grade boundaries for each assessment, because then it would not take accessibility into account.

Grade boundaries for this, and all other papers, are on the website via this link:

<http://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html>

### Equine Diet and Nutrition Unit 2.

Grade	Unclassified	Level 3			
		N	P	M	D
Boundary Mark	0	12	22	32	43

## Introduction

This was the first series of the new specification for the Level 3 Diploma in Equine Management, and as such, the first time that this mandatory unit has been assessed via an external assessment, rather than via centre based internal assessment.

The task paper followed the format identified in the both the sample assessment material, and the additional sample assessment materials published on the Pearson website.

The paper had four activities. Learners were required to demonstrate knowledge and understanding of a range of specification topics and to apply this knowledge to the specific task scenarios. The intention was to offer as broad coverage as possible for all areas of the unit content. Activities had varying weightings attached to them and these weighting were consistent with the sample assessment materials.

There was also a focus on the use of suitable technical and vocational language and terminology within each activity response.

## Introduction to the Overall Performance of the Unit

The overall performance of the paper and standard of the work produced was good and most of the activities performed as were expected, the activities allowed for good differentiation between pass, merit and distinction candidates.

## Individual Activities

### Activity 1

This activity asked learners to talk about the management of haylage in reference to dealing with respiratory problems in horses. They were given minimal information about the number of horses moving from hay onto haylage, and that they were responsible for the management of this change.

At a basic level this activity gave learners the opportunity to show general knowledge and understanding of haylage and how it should be stored, as well as methods of feeding it to horses. Learners generally identified correct storage procedures in relation to health and safety and to prevent spoiling.

A number of learners failed to identify the beneficial properties of haylage and discussed soaking it prior to feeding to reduce the dust content. Some learners created information about stock control by fabricating diet plans to provide an estimated order size and frequency of delivery.

(8)

Haylage should be soaked before feeding to the 5 horses with respiratory problems as this can help manage the severity of the dust levels in the haylage and reduce the risk of the dust getting caught in the horse's respiratory system and making them cough.

The haylage should be stored in a cool, dry and sheltered place to avoid any excess dust particles getting stuck in the forage. An empty stable would be an ideal place. Haylage should also be kept wrapped up in the original bag to increase the lifespan and freshness of the haylage. It should be kept in direct sunlight which dries the haylage out.

Haylage should be monitored daily to ensure that the haylage hasn't become dry or gone mouldy.

When feeding the haylage it can be fed in a

haynet, a haybar, a hayrack or on the floor.  
For the 5 horses with respiratory issues, haylage should be presented ~~as~~ in a haynet. This ensures that no excess dust can reach the haylage as it would if it was on the floor or in a haybar.

For these 5 horses, the haylage should be soaked for a maximum of 2 minutes before serving. This is to soften dust particles and make the haylage easier to consume.

The above answer was **awarded 2 marks** for covering basic storage and presentation of haylage. The learner failed to show a broader understanding of the qualities of haylage compared to hay, or any thought to the transition between the two. There was no mention of a monitoring strategy for stock control, or an awareness of potential behaviour changes associated with a feed

The change of hay to haylage in all five horse's diets will need to be carried out on a gradual transition. Making this change straight the way would most likely cause for unwanted gut issues such as colic. Haylage contains different levels of nutrients so it is important that ration formulation calculations are carried out in order for the horse to be receiving the correct amount. ~~The~~ To begin with the haylage can be added and mixed with into hay for the horse's digestive system to become familiar.

change.

Haylage should be stored suitably to avoid being spoilt. Haylage is already in a 'damp' condition and so is not suitable to be stored with no cover as it would cause potentially

for nutritional value to be lost. Ideally the storage environment is to be in a dry space (feed barn) and situated off of the floor (situated on pallets.) This way of storage will allow for the best possible lasting of the forage. Monitoring the haylage will be vital to know when more bales will need to be ordered, considerations will be taken into account of how quickly it's being used, is it financially affordable, etc.

Horses will be fed forage in many forms and it is quite dependant on the specific horse. However feeding from the floor for these horses with respiratory problems will benefit them as they will be exhibiting natural eating behaviours. This form of feeding is not beneficial on the financial as the haylage can be dragged into the bedding, wastage is caused. Alternatively feeding from a hay rack or net will reduce the amount of waste.



The above answer was **awarded 8 marks**. This answer fully covered the process of changing horses from hay to haylage. The learner has referred to a gradual forage change, showing a good understanding of the horses' needs. They discuss rationing, with an awareness of the calorific values being increased with haylage. They give reference to monitoring bale usage to prevent running out and the financial implications of changing to haylage. There is a solid awareness of correct storage and detailed information of how they would feed a horse with a respiratory problem.

## Activity 1 marking grid

### Indicative content

Answers will be credited according to the learner's demonstration of knowledge and understanding using the indicative content and levels descriptors below. The indicative content that follows is not prescriptive and answers should be rewarded for other relevant content.

- Why you would feed haylage to meet the demands of the horses respiratory problems
- Storage: hygiene, security, vermin, e.g. reference to correct stacking procedures and restricting access to maintain health and safety, avoiding damage to the plastic wrapping from vermin or other animals/people and dust contamination
- Problems associated with incorrect storage and damaged wrapping, e.g. haylage going off, dust, mould, decrease in nutritional content, potential ill health, wastage
- Sensible bale size for number of horses eating, for storage and handling purposes and to prevent spoiling
- Feed records and resourcing, e.g. order history, feed charts and feeding boards, revised feeding weights
- Awareness of potential behavioural changes due to forage change
- Gradual change of forage, mixing hay and haylage initially over 7–10 days
- Appraisal and selection, e.g. reference to availability, quality, cost, palatability
- Preparation and presentation, haylage nets with smaller holes to promote slower eating, the use of hay bars to promote natural feeding

<b>Mark scheme – refer to the guidance on the cover of the document for how to apply levels-based mark schemes *</b>		
<b>Level 0</b>	<b>0</b>	No rewardable material.
<b>Level 1</b>	<b>1–2</b>	<ul style="list-style-type: none"> <li>• Demonstrates isolated knowledge and understanding of principles and practices of feed management.</li> <li>• Provides limited consideration of variables affecting feed management.</li> <li>• Generic statements may be presented rather than connections being made so that lines of reasoning are unclear.</li> </ul>
<b>Level 2</b>	<b>3–5</b>	<ul style="list-style-type: none"> <li>• Demonstrates mostly accurate knowledge and understanding of principles and practices of feed management.</li> <li>• Provides partial consideration of variables affecting feed management.</li> <li>• Discussion evidences connections being made so that lines of reasoning are clear.</li> </ul>
<b>Level 3</b>	<b>6–8</b>	<ul style="list-style-type: none"> <li>• Demonstrates detailed knowledge and understanding of principles and practices of feed management.</li> <li>• Provides detailed consideration of variables affecting feed management.</li> <li>• Discussion evidences connections being made so that lines of reasoning are detailed and clear.</li> </ul>

## Activity 2

The activity asked learners to evaluate the suitability of a given diet in relation to the stated workload and lifestyle of a horse.

In general calculations were accurate, highlighting the horse is receiving slightly less MCal per day than the stated recommendation. Many learners came to this conclusion by calculating the total weight of feed the horse should receive per day from the weight given and work load. Whilst this gave them the correct calculated answer the expectation was for learners to use the values provided in the data table (DE/MCal) Learners were awarded for either (correct) calculation.

The information stated the horse was an ideal weight and had been so for the past two years, therefore no diet modifications were really needed. Many learners became focused on increasing the feed for the horse due to the shortfall in their sums. This activity highlighted the fact that feeding calculations and ratios are to be used as a guide, with each horse to be monitored and rations changed according to lifestyle, work expectations and behaviour.

A good number of learners did relate the shortfall of MCal/day to the stated correct weight, and correctly discussed breed type and workload. Some also suggested the time the horse was turned out could make up the shortfall or to add a balancer to the feed to ensure the horse was getting all the required nutrients. There was also good reference to forage being given throughout the day to maintain a healthy digestive system.

Some learners became focused on information not given to them in the activity, this distracted them from answering the question correctly. The information for them to give a comprehensive answer will be given in the scenario, and the focus must be on information available, they may make reference to additional information which could be helpful but it should not be the focus.

Sue -  $0.02 \times 550 \text{ kg} = 11 \text{ kg}$  (appetite)

Sue's appetite is 11kg and she gets fed 3kg hay in the morning and at lunch as well as 4kg in the evening and 0.5kg of horse and pony nuts which all adds up to 10.5kg. There is still ~~half~~ 0.5kg in which she could be fed. I would say that Sue is in medium work which means her diet should be 70% forage and 30% concentrates. I would

contains too much forage and not enough concentrates.

~~Sue's DE =  $0.0303 \times 550 \text{ kg} = 16.665 \text{ kcal}$~~

Sue is being fed at good times with enough feed as she would have feed pretty much all day which is important for trickle feeders.

Sue could have more than one hour a day turnout because there is still enough space for more food such as grass. It is also high in vitamins and minerals and also high in water.

This is important for keeping the horse hydrated and making sure they get enough nutrients. It is also recommended that you feed your horse one succulent a day such as an apple or a carrot. Carrots are good as they contain vitamin A and helps prevent night blindness. This wouldn't affect her way of going so she would still be useful for beginners.

$$DE = 0.0303 \times 550 \text{kg} \times 1.4 = \leftarrow (\text{Medium work})$$

$$23.331 \text{Mcal/day}$$

70% /	\ 30%
16.3317Mcalz	6.9993Mcalz

It says that she is getting roughly 20Mcal/day from her feed and she only needs 16Mcal/day according to her workload.

The above response has **scored 2 marks**; it is displaying a limited grasp on the principles of feeding for purpose. You can see the learner has been caught up in trying to feed the horse more feed despite being told the horse is used for beginners, also forgetting it is at an ideal weight and has been so for the past two years. They have incorrectly evaluated the workload to be medium and therefore trying to increase the concentrate levels and reduce the forage. They have recognised the volume of forage the horse is fed is good for her

digestive system. This learner has also used the word "appetite" instead of "ration" to describe the horse's daily intake of feed.

$$\text{Appetite} = 0.02 \times 550 = 11 \text{ kg}$$

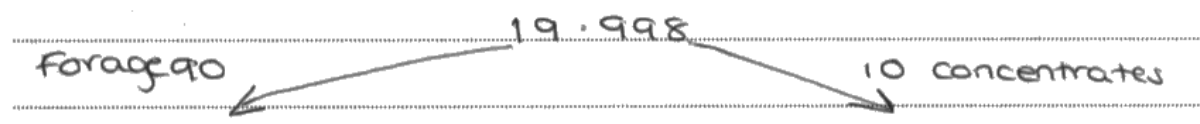
$$\begin{array}{r} 90 \\ 90\% \times 11 = \\ \hline 9.9 \text{ kg} \end{array}$$

$$\begin{array}{r} 10 \\ 10\% \times 11 = \\ \hline 1.1 \text{ kg} \end{array}$$

$$\begin{array}{r} 3 \\ 4 \\ 0.5 \\ \hline 10.5 \end{array}$$

$$0.0303 \times 550 = 16.665 \times 1.2 = 19.998$$

19.998 mcals



$$0.9 \times 19.998 = 17.9982$$

$$0.1 \times 19.998 = 1.9998$$

Sue is currently being fed 0.5 kg under her ideal appetite for her weight, this could be corrected by feeding her 1kg of pony nuts a day instead of 0.5 kg or by feeding her 10.5 kg of hay instead of 10 kg a day. Due to Sue being used for ~~beginners~~ beginners and nervous riders a low energy feed and forage is perfect for her, also cob types which Sue is can put on weight very quickly so a low

energy diet is perfect for her. By turning

Sue out everyday it is letting her relax and do natural horse behaviours which is good for her. ~~The~~

The timings in which Sue is fed ensures she has got forage throughout the whole day, the haynet ensures she doesn't eat it all ~~as~~ fast as most horses would if the forage was loose on the floor.

In conclusion, I think Sue's diet is very suitable as she is only in light work so doesn't need any high energy feeds, she's turned out for an hour everyday to allow her to blow off some steam and get some nutrients and energy from the grass and she is being fed by a haynet which will help slow her down and she has always got hay.

The above response **scored 17 marks**. Whilst the learner has used their own calculations to determine the theoretical feed ration for the horse, rather than the given values, they have reached the correct conclusion. They do initially suggest increasing the concentrate feed but go on to confirm the horse is used for beginners and is in light work so increasing the current feed is not necessary. They also cover the turnout and make reference to good forage provision to aid a healthy digestive system. This learner has also used the word "appetite" in place of feed "ration".



## Activity 2 marking grid

### Indicative content

Answers will be credited according to the learner's demonstration of knowledge and understanding using the indicative content and levels descriptors below. The indicative content that follows is not prescriptive and answers should be rewarded for other relevant content. In their evaluation learners may refer to:

- calculations performed to check energy provided by feed
- calculation would suggest additional energy may be required, however the feeding ration has worked well for a sustained period of time so no change needed
- extra energy provided by grass during turn out
- analysis of data in relation to nutrient requirements
- diet appropriate to life stage, e.g. not feeding for growth as Sue is fully mature
- due to the type of work it is important that Sue does not get fed feed with too high an energy content
- reference to vitamin and mineral requirements, e.g. provided in horse and pony nuts but full details not given on label
- a stable-kept horse's diet is not ideally suited to the horse's digestive system
- Sue's forage is well managed throughout the day with three feeds
- little wastage of forage due to use of hay nets
- always needs access to clean water, especially during hot weather

Learners may conclude that:

- rations are slightly low based on analysis of the data table but Sue is an ideal weight so her diet is correct for her and her level of work
- necessary calories are provided through forage and pony nuts
- all nutrients are provided through horse and pony nuts and forage
- presentation of feed prevents wastage but does not simulate natural feeding
- hay being fed three times per day is good practice
- alternative feed strategies are not needed, however the horse and pony nuts could be divided into am and pm feeds

**Mark scheme – refer to the guidance on the cover of the document for how to apply levels-based mark schemes \***

<b>Level 0</b>	<b>0</b>	No rewardable material.
<b>Level 1</b>	<b>1–5</b>	<ul style="list-style-type: none"> <li>• Demonstrates isolated knowledge and understanding, there will be major gaps or misconceptions.</li> <li>• Attempts to break the scenario and data into component parts, with limited or arbitrary selection of factors.</li> <li>• Makes generic assertions rather than interrelationships or linkages.</li> <li>• Limited evaluation with conclusions that are superficial or unsupported.</li> </ul>
<b>Level 2</b>	<b>6–10</b>	<ul style="list-style-type: none"> <li>• Demonstrates some accurate knowledge and understanding, with occasional significant gaps or misconceptions.</li> <li>• Breaks the scenario and data into component parts identifying some relevant factors.</li> <li>• Some interrelationships or linkages are considered but lines of reasoning are not always sustained.</li> <li>• Partially developed evaluation with conclusions that are occasionally supported with reference to the scenario and data.</li> </ul>
<b>Level 3</b>	<b>11–15</b>	<ul style="list-style-type: none"> <li>• Demonstrates mostly accurate and knowledge and understanding, any gaps or omissions are minor.</li> <li>• Breaks the scenario and data into component parts identifying most of the relevant factors.</li> <li>• Interrelationships and linkages are generally sound, with logical and generally sustained lines of reasoning.</li> <li>• Mostly developed evaluation with conclusions that are generally supported with reference to the scenario and data.</li> </ul>
<b>Level 4</b>	<b>16–20</b>	<ul style="list-style-type: none"> <li>• Demonstrates accurate and detailed knowledge and understanding.</li> <li>• Breaks the scenario and data into component parts, distinguishing the importance of relevant factors.</li> <li>• Interrelationships and linkages are well-developed and secure lines of reasoning are sustained throughout.</li> <li>• Comprehensive evaluation with conclusions that are fully supported with reference to the scenario and data.</li> </ul>

### Activity 3

The activity asks learners to plan a more suitable diet for a horse. They were given the horse's current diet plan and work load and told it is losing weight. If the learner works out how much the horse's daily ration is from his given weight, they will see he is being fed as he should, but still losing weight. The suggested modification was generally to change the pony nuts for a more conditioning feed and correctly continue to monitor weight and behaviour.

In general, there was a good response to this question. Some learners did bring the calculations from activity 2 across this activity which confused the answer as specific nutritional values of the feed were not given. Learners then went on to use guideline feed ratios between forage and concentrate as immobile values resulting in reducing the feed of the horse, which is incorrect. They also discussed the information not available to them which became more of the focus than what they were given.

(12)

current daily intake

↓

$2 + 2 + 4 \text{ kg of hay} = 8 \text{ kg hay}$

$1 + 1 \text{ kg of pony nuts} = 2 \text{ kg pony nuts}$

$0.5 + 0.5 \text{ chaff} = 1 \text{ kg chaff}$

$8 + 2 + 1 = 11 \text{ kg/day}$

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IDEAL daily intake

✕

$2\% \times 520 \text{ kg} = 10.4 \text{ kg/day}$

light work = 80% forage, 20% concentrate

### Evaluation:

his current diet actually matches the kg requirements, in addition to 1kg more of chaff. This is fine if they wish him to stay at the same weight, but because he is underweight it is recommended they feed him more than his current appetite. 1kg of chaff is not really going to add anything, so I will look at the DE to see what energy he is getting / day and whether it is enough.

### IDEAL DE



$$0.0303 \times 1.2 \times 520 = 18.9072 \text{ Mcal / day}$$

light work = 80% roughage, 20% concentrates

$$18.9072 \times 0.8 = 15.12576 \\ = 15.1 \text{ Mcal}$$

$$18.9072 \times 0.2 = 3.78144 \\ = 3.8 \text{ Mcal}$$

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### CURRENT DE

$$8 \times 1.7 = 13.6 \text{ Mcal / day of roughage}$$

$$2 \times 2.2 = 4.4 \text{ Mcal / day of concentrates}$$

$$13.6 + 4.4 = 18 \text{ Mcal / day}$$

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Evaluation:

So the current diet doesn't have enough kcal for his current workload. He needs 18 a day, and more because he is underweight, and he is only getting 18/day. Because his appetite is good, I wouldn't increase the amount

of food too much. If we were to switch his hay to haylage, he would have far too much energy, which would result in him losing even more weight. He needs slightly more energy/day, but not from concentrates. In fact, he is getting too much energy from concentrates. It should be 3.8, but he is getting 4.4 kcal. Because of this, I want to make the current changes:

- add 1kg more of hay per day
- take away <sup>0.5kg</sup> 0.5 pony nuts/day
- ~~add 1kg more of chaff, to help increase weight.~~

The reason I have made these decisions is to help with his energy. If he has 1kg more of hay per day, he will be having  $(13.6 + 1.7 = 15.3)$  15.3 meal of forage per day, and if I take away 0.5kg of his pony nuts, he will be having  $(1.5 \times 2.2 = 3.3)$  3.3 meal / day of concentrates. Not only is it closer to the energy requirements from his DE,  $(15.3 + 3.3 = 18.6)$  but he will also be getting more long lasting energy, resulting in less fat to burn & weight. In a diet, he will be eating an extra kg of ~~food~~<sup>hay</sup> per day, which is in total 1.5kg extra food per day. This will also help him gain weight. I would continue with this diet plan, until he is the right weight, then reevaluate his appetite and DE to make a suitable diet to maintain that weight.

The above response is a good example of nutritional values being used that were not given in the scenario and **scored 3** out of a possible 12 marks. The learner has discussed possible ways to modify the diet by changing from hay to haylage, this could increase the calorie intake but probably not enough to manage the horse in this scenario. They then proceed to disregard this as an option as it may make the horse too excitable, despite it being ridden by the more advanced riders. The overall conclusion was too incorrect to take away some of the concentrate and give more hay.

He gets worked around 12 - 18 hours per week.

His current appetite is  $0.02 \times 520 = 10.4$  kg per

day he is currently receiving 11 kg per day.

His diet should be around 70% forage and 30% concentrates.

He should be receiving 7.28 kg of forage and 3.12 kg of concentrates however he is currently ~~receiving~~ <sup>receiving</sup> 8 kg of forage and 2 kg of concentrated feed.

He needs to be fed more concentrated feed and less forage.

As he isn't gaining enough / maintaining his weight then he needs to be fed feed which

is higher in ~~fat~~ protein, fibre and sugar.

If his lunchtime <sup>hay</sup> feed was reduced to 1 kg of hay but he was given an additional feed at lunch time he might be able to gain more weight.

He could be fed on competition mix instead of pony nuts as it is higher in energy, fibre and protein as it contains maize, barley and corn etc which are all high in fibre or protein and sugar. This would help provide him with more energy and more nutrients, vitamins and minerals he needs to help him gain weight and ensure that he has enough energy to be ridden by the more advanced riders who would be encouraging him to engage his hind quarters and use more of his muscles. If he is being fed just pony nuts he isn't as able to build and engage the correct muscles.

He could also be fed alfa beet which is high in fibre and low in sugar, this will help build the correct muscles and help him gain weight where he needs to.



He <sup>needs</sup> ~~is going~~ to be fed 3 times a day, morning, lunch and evening. Then he ~~still~~ needs to be fed 1 kg of competition mix in ~~am~~ 3 pm feeds with half a scoop of alpha beet and a handful of chaff to prevent him from choking. ~~At~~ At lunchtime he should be fed 1/2 kg of comp mix, 1/4 scoop of alpha beet and a handful of chaff and only fed 1 kg of hay at lunchtime, this should help him gain weight & muscle where he needs it and ensure he has enough energy to survive. ~~work~~

~~working~~ He will also be able to work better when being ridden as he will be able to build his ~~muscles~~ muscles and perform better.

The above response is a good example of a learner using their knowledge and applying it to the given scenario. **This scored 11** out of a possible 12 marks and shows a good understanding of feeding for purpose. The learner correctly works out the daily feed ration and recognises they can modify the concentrate by changing to a higher energy feed, and they can also substitute some hay at lunchtime for an additional feed. For full marks to be awarded here I would have liked to see a clear understanding that any feed changes should be made gradually with condition and behaviour monitored.

### Activity 3 marking grid

#### Indicative content

Answers will be credited according to the learner's demonstration of knowledge and understanding using the indicative content and levels descriptors below. The indicative content that follows is not prescriptive and answers should be rewarded for other relevant content.

- Review levels of concentrates in the diet
- Review the quality of the forage
- Adapting diet content, e.g. to increase nutritional content of forage, change horse and pony nuts to build-up cubes to increase nutritional content of the feed without having to increase the weight of the ration
- Review of diet planning, e.g. additional concentrate feeds added, oil added as a supplement, additional forage
- References to data tables/nutritional composition of feeds
- Check Socks is not being used too much as a popular horse in the riding school
- Increased energy requirement based on the amount of advanced work Socks is doing
- Increase hours of turn out to allow Socks to gain energy from grazing, increase quality of grazing
- Enrichment to alleviate boredom
- Have Socks checked by vet to rule out pain

**Mark scheme – refer to the guidance on the cover of the document for how to apply levels-based mark schemes \***

<b>Level 0</b>	<b>0</b>	No rewardable material.
<b>Level 1</b>	<b>1–3</b>	<ul style="list-style-type: none"><li>• Limited knowledge and understanding of diet issue evident in the context.</li><li>• Limited accuracy in suggested solutions.</li><li>• Limited justification of recommendations for changes to diet.</li></ul>
<b>Level 2</b>	<b>4–8</b>	<ul style="list-style-type: none"><li>• Partial knowledge and understanding of diet issue evident in the context.</li><li>• Partial accuracy in suggested solutions.</li><li>• Partial justification of recommendations for changes to diet.</li></ul>
<b>Level 3</b>	<b>9–12</b>	<ul style="list-style-type: none"><li>• Detailed knowledge and understanding of diet issue evident in the context.</li><li>• General accuracy in suggested solutions.</li><li>• Well-reasoned justification of recommendations for changes to diet.</li></ul>

#### Activity 4

In this activity learners were given a short scenario of a horse's behaviour who has been displaying signs related to equine gastric ulcer syndrome, this has been diagnosed by a vet. They were then asked to discuss the management of the horse's diet to help improve this feed related disorder.

Learners answered this question exceptionally well, there were often comprehensive descriptions of the digestive system and its function as well as the usual location of stomach ulcers and why they form. They discussed further diagnoses and treatments which scored high marks. Many learners digressed away from discussing actual diet modifications and different feeds available to use with this condition.

Mary should have a constant supply of soaked hay as it is very important to keep her stomach lined, if she's reluctant to eat the soaked hay then she could live out if the riding school allowed it and put soaked hay in the paddock with her so she has an option of what to eat. With Mary living out it would also help decrease her liveliness as she would be always on the move in the field. If Mary has been tacked up and worked on an empty stomach it would cause the acid in her stomach to splash around creating and irritating the ulcers.

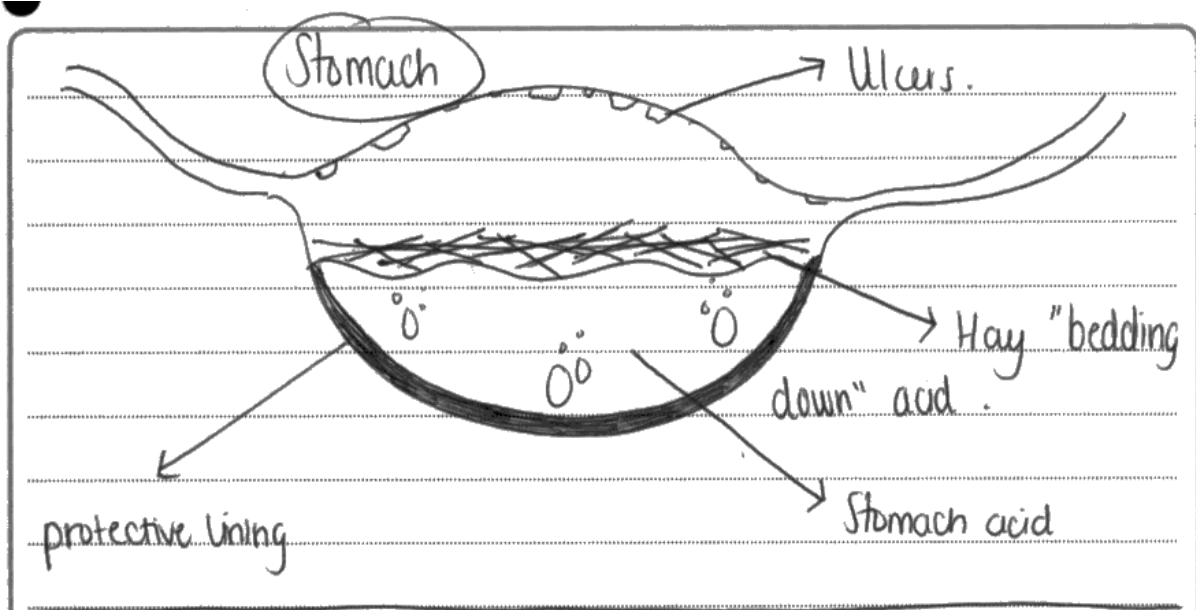
Another way of monitoring her feeding could be by feeding her little but often, this way she could have a few small chaff based feeds a day to line her stomach and soaked hay ~~re~~ replenished each time she finishes it all.

Also to help her settle she should be put in a strict routine.

The above response has **scored 6** out of a possible 20. The learner has displayed some knowledge of the condition and given simplified suggestions on management. This answer has a good basic structure but much more depth is needed alongside detailed structure of the digestive system, linking all the behaviour to the condition / pain related.

The horses ~~stomach is the size of a rugby ball~~ stomach is filled with stomach acid, which contains catalysts that are tiny enzymes that break down food to release nutrients into the body. Stomach acid ~~is~~ has a high PH, so can be irritable. The bottom half of the horse's stomach has a protective lining to prevent irritation occurring; ~~and~~ A high fibre diet helps this lining perform and maintain its status.

The upper half of the Stomach doesn't have a protective lining and remains vulnerable to irritation from the Stomach acid. When the horse is being ridden or in motion, the stomach acid can splash up and irritate the top half of the Stomach, causing stomach ulcers.



A diet lacking sufficient amounts of fibre can be the cause of gastric ulcers, as fibre, such as hay and chaff, can "bed down" the acid and prevent it from splashing up to the top of the stomach. Horses prone to gastric ulcers are race horses and eventers, as they usually have a 50:50 or 60:40 feeding ratio, with not enough fibre.

These type of horses also provoke the acid to splash up due to the nature of ~~they~~ their job which includes a lot of jumping.

Symptoms that a horse with gastric ulcers include:

- grumpiness when girthing up.
- general sensitivity in the stomach region.
- reluctance to jump or move forwards
- Eating straw bed.

Managing and treatment of gastric ulcers is usually a case of putting the horse on a high forage and high fibre diet to "bed down" the acid.

Calcium supplements can also be given to soothe the ulcers as they decrease in size.

The above response **scored 17** out of a possible 20 marks. The learner has begun very well with some detail about how stomach ulcers occur. They have shown solid learning of this subject and included a diagram to aid their answer. To achieve higher or top marks this learner needed to discuss feeding strategies in more detail and where possible current medication which would be used in conjunction with the horse's diet to aid recovery



#### Activity 4 marking grid

##### Indicative content

Answers will be credited according to the learner's demonstration of knowledge and understanding using the indicative content and levels descriptors below. The indicative content that follows is not prescriptive and answers should be rewarded for other relevant content.

- Equine diet is suited to constant grazing as horses are hindgut fermenters
- Stomach constantly secretes hydrochloric acid so gaps in the mucosa lead to breakdown of the stomach lining – ulcers
- Signs include pain, poor appetite, weight loss, behavioural changes, poor body condition, rough hair coat
- Pain management could control grumpy behaviour and bucking may need a rest from advanced work until pain and condition are under control
- Common in stabled competition horses, as they are often unable to graze constantly and so periods of fasting cause bouts of increased acidity
- Need to know Mary's body condition score, current health and age to plan her diet effectively
- Feed according to the horse's temperament as it will impact the type, amount and frequency of feed given
- Mary should ideally receive long times of turnout/and or ad lib forage, particularly alfalfa hay
- Mary's diet should avoid being cereal based, and feeds should be fed in small amounts at regular intervals throughout the day
- Some medications to reduce gastric acid secretion are available in the form of pastes, injections and feed supplements. Pastes should be administered orally on an empty stomach and before exercise. Medication should always be administered as directed by a vet

**Mark scheme – refer to the guidance on the cover of the document for how to apply levels-based mark schemes \***

<b>Level 0</b>	<b>0</b>	No rewardable material.
<b>Level 1</b>	<b>1–5</b>	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of knowledge and understanding, there will be major gaps or misconceptions</li> <li>• Few of the points made will be relevant to the context in the question</li> <li>• Limited discussion which contains generic assertions rather than considering different aspects and the relationship between them.</li> </ul>
<b>Level 2</b>	<b>6–10</b>	<ul style="list-style-type: none"> <li>• Demonstrates some accurate knowledge and understanding, with occasional significant gaps or misconceptions</li> <li>• Some of the points made will be relevant, but the link to the context in the question will not always be clear</li> <li>• A partially developed discussion which considers some different aspects, with occasional consideration of how they interrelate.</li> </ul>
<b>Level 3</b>	<b>11–15</b>	<ul style="list-style-type: none"> <li>• Demonstrates mostly accurate knowledge and understanding with only minor gaps or omissions</li> <li>• Most of the points made will be relevant, and there will be clear links to the context in the question.</li> <li>• A developed discussion which considers a range of different aspects and considers how they interrelate in a generally sustained way.</li> </ul>
<b>Level 4</b>	<b>16–20</b>	<ul style="list-style-type: none"> <li>• Demonstrates accurate and detailed knowledge and understanding.</li> <li>• Points made will be highly relevant, and there will be secure links to the context in the question.</li> <li>• A comprehensive, well-developed and logical discussion which considers a broad range of different aspects and how they interrelate in a sustained way.</li> </ul>

## Summary

Based on the performance of this paper learners should be able to:

- Discuss feed management associated with feeding haylage for horses with respiratory problems.
- Understand its storage to maintain a safe working environment and to prevent spoiling.
- Show an awareness that feed changes should be gradual to prevent digestive and behaviour issues.
- Evaluate the suitability of a given diet plan using the nutritional data provide. They should show an awareness of the work levels horses can be in and to show an understanding of feeding for purpose.
- Recognise feeding rations, calculations and ratios should be used as a guide, with a focus on monitoring condition and behaviour.
- Modify a given diet plan to increase the calorie intake of a horse who is fed the correct amount but still losing weight.
- Know the main diet related disorders and discuss equine gastric ulcers syndrome covering cause, treatment and future prevention.

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Welsh Assembly Government



