

**Assessment Schedule – 2021****Agricultural and Horticultural Science: Demonstrate knowledge of livestock management practices (90921)****Assessment Criteria**

Achievement	Achievement with Merit	Achievement with Excellence
<b>Describes</b> how livestock management practices are carried out.	<b>Links ideas</b> and <b>explains</b> why livestock management practices, or steps within practices, are carried out.	<b>Applies knowledge</b> of livestock management practices to given situation. This may involve <b>comparing and contrasting</b> or <b>justifying</b> management practices.

**Evidence**

Question ONE	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	<ul style="list-style-type: none"> <li>Drench to treat (get rid of or eliminate) internal parasites, <u>as internal parasites can reduce the growth rate of the pig due to decreased appetite, or through the internal parasites obtaining or using the nutrients before they can enter the pig's bloodstream for use.</u></li> <li>In-feed drench is placing the drench in the pig's feed source, which means that the pig doesn't need to be handled. <u>This is beneficial as handling can cause stress to the pig, or injury to the human.</u></li> </ul>	<b>Describes</b> why growers drench pigs.	<b>Describes</b> why growers drench pigs and <b>explains</b> why an in-feed drench might be chosen, including <u>underlined</u> -type evidence.	

	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(b)	<ul style="list-style-type: none"> <li>Use of a terminal boar would mean an increased growth rate, faster to finish or to slaughter, larger carcasses, increased profitability or money received.</li> <li>A terminal boar may have <u>undesirable traits for breeding sows</u>, so would not be used <u>if the offspring are destined for replacement breeding</u>.</li> </ul>	<b>Describes</b> why a grower may or may not choose to breed from terminal boars	<b>Describes and explains</b> why a grower may or may not choose to breed from terminal boars, including <u>underlined</u> -type evidence.	
(c)	<p><b>Once daily</b> <i>Advantages</i></p> <ul style="list-style-type: none"> <li>Less labour required, so therefore cheaper, <u>and greater flexibility of feeding times</u>.</li> </ul> <p><i>Disadvantages</i></p> <ul style="list-style-type: none"> <li>There may be increased competition between piglets at feeding time, which could affect growth rates of those smaller pigs or shy feeders and <u>cause uneven growth rates within the pen</u>.</li> <li>Checking on a pig's health would be only once a day, <u>more costly if earlier intervention not done</u>.</li> </ul> <p><b>Twice daily</b> <i>Advantages</i></p> <ul style="list-style-type: none"> <li>Twice daily checks on the animal health, <u>can intervene more quickly and treat if problems arise</u>.</li> <li>Able to feed more per day, <u>better growth rate, more even growth rates</u>.</li> <li>Smaller pigs do better with more frequent feeding. <u>It suits the capacity of their stomachs</u>.</li> </ul> <p><i>Disadvantages</i></p> <ul style="list-style-type: none"> <li>Increase in labour costs.</li> </ul>	<b>Describes</b> a feeding option.	<b>Explains</b> which feeding option to recommend to a grower, including <u>underlined</u> -type evidence.	<b>Justifies</b> which feeding option to recommend to a grower by comparing and contrasting with one of the other options.

<p><b>Ad-Lib</b></p> <p><i>Advantages</i></p> <ul style="list-style-type: none"> <li>• Low labour costs.</li> <li>• Increase in growth rate due to feeding when they want, <u>get to slaughter or finished weight faster.</u></li> <li>• Less competition for smaller or shy feeders, <u>can feed at any time of the day.</u></li> </ul> <p><i>Disadvantages</i></p> <ul style="list-style-type: none"> <li>• More feed needed, <u>could go rank, or wastage could occur.</u></li> <li>• Pigs may not be well observed for animal health issues regularly, <u>more costly if earlier intervention not done.</u></li> </ul>			
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<b>N1</b>	<b>N2</b>	<b>A3</b>	<b>A4</b>	<b>M5</b>	<b>M6</b>	<b>E7</b>	<b>E8</b>
Describes ONE idea at Achievement level.	Describes TWO ideas at Achievement level.	Describes THREE ideas at Achievement level.	Describes FOUR ideas at Achievement level.	Explains THREE ideas at Merit level.	Explains FOUR ideas at Merit level.	Justifies the method chosen.	Justifies the method chosen by comparing and contrasting with another method.

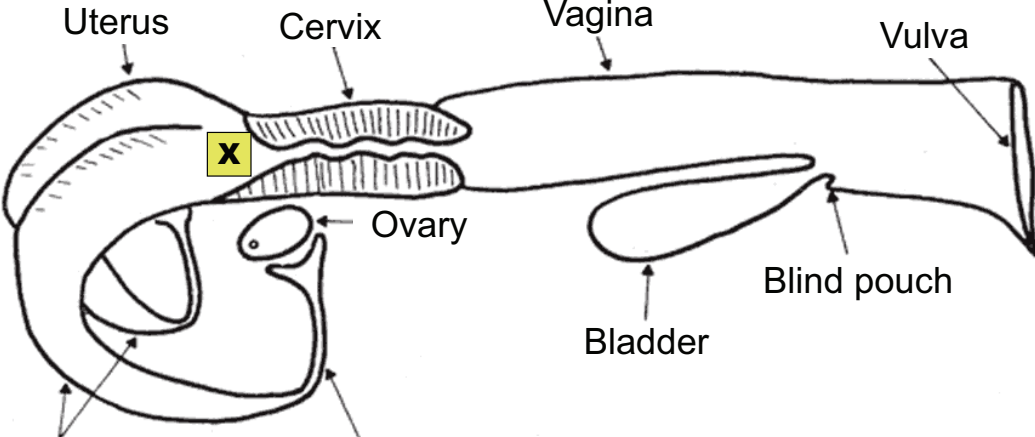
**N0** = No response; no relevant evidence.

Question TWO	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	<ul style="list-style-type: none"> <li>The vaccination is a dead or a denatured version of the disease, which is injected. <u>Provides antibodies to the lamb via the colostrum for the first eight weeks of the lamb's life.</u></li> <li>It is done before lambing, as their bodies are about to enter a stressful time <u>and will be more susceptible to getting diseases.</u></li> <li>It provides long-term protection (one year) to the ewe.</li> <li>Vaccinating management practice is broken up between ewes and lambs; <u>this spreads the labour requirements.</u></li> </ul>	<b>Describes</b> when pre-lamb vaccination is done.	<b>Describes</b> when pre-lamb vaccination is done and <b>explains</b> why a farmer would choose to do this at this time.	
(b)	<ul style="list-style-type: none"> <li>The oesophageal groove allows milk to go directly into the abomasum. <u>The oesophageal groove shuts or closes off the entrance to the rumen as liquid starts to go down the lamb's oesophagus due to suckling action.</u></li> <li>The abomasum is larger, as the lamb needs to digest large quantities of milk in the early weeks of life. <u>Grass or pasture is started to be eaten when lambs are between 1 – 2 weeks old.</u></li> <li>Micro-organisms in the rumen would not be able to digest the milk, or acid <u>digestion found in the abomasum is needed for (protein) breakdown.</u></li> </ul>	<b>Describes</b> the oesophageal groove.	<b>Describes</b> the oesophageal groove and <b>explains</b> its purpose, including <u>underlined</u> -type evidence.	
(c)	<p><i>Advantages</i></p> <ul style="list-style-type: none"> <li>Can select ram values or traits <u>to increase genetic gain in flock, or meat traits to have more profitable offspring.</u></li> <li>One ram to 80 ewes (ratio), <u>cheaper than buying replacement ewes as you would need more ewes.</u></li> <li>In the long term, no shearing would be required, <u>which is a cost and labour saving, while wool prices are low.</u></li> </ul>	<b>Describes</b> why a farmer would introduce the Wiltshire breed into their Romney flock to achieve a self-shedding flock.	<b>Explains</b> why a farmer would introduce the Wiltshire breed into their Romney flock to achieve a self-shedding flock, including <u>underlined</u> -type evidence.	<p><b>Justifies</b> why a farmer would introduce the Wiltshire breed into their Romney flock to achieve a self-shedding flock.</p> <p><b>Note:</b> for E7/E8 candidates must consider costs and effectiveness, as well as short- and long-term effects on production in relation to the change to different breed.</p>

	<p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> <li>• In the short term a farmer would still need to shear <u>in terms of animal welfare to reduce flystrike, cast and / or heat stress, shearing costs are expensive, may get less money for the wool due to clip being part Wiltshire.</u></li> <li>• <u>It takes at least three generations to achieve a non-shedding flock.</u></li> <li>• Increased labour costs <u>due to monitoring and selecting replacements to enter the flock from the offspring born.</u></li> <li>• Rams will need to be purchased annually <u>to avoid inbreeding with the replacement offspring.</u></li> </ul>			
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N1	N2	A3	A4	M5	M6	E7	E8
Describes ONE idea at Achievement level.	Describes TWO ideas at Achievement level.	Describes THREE ideas at Achievement level.	Describes FOUR ideas at Achievement level.	Explains TWO ideas at Merit level.	Explains THREE ideas at Merit level.	Justifies the given method.	Fully justifies the given method.

**N0** = No response; no relevant evidence.

Question THREE	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	 <ul style="list-style-type: none"> <li>• Semen is deposited just past the cervix, in uterine body (X).</li> <li>• <u>This ensures that the sperm travels down both uterine horns for good distribution, increasing the chance of fertilisation.</u></li> <li>• <u>If it is placed more than 3 cm through the cervix, then all the semen will be deposited in only one horn. This could reduce the chance of the cow getting pregnant as it could be deposited in the horn in which the oviduct has not released an egg.</u></li> </ul>	Correctly marks where the pipette should be released.	Correctly marks where the pipette should be released, and <b>explains</b> the reason for the chosen release site in the cow's reproductive tract, including <u>underlined</u> -type evidence.	

(b)	<ul style="list-style-type: none"> <li>• Body condition scoring (BCS) takes into account the size and bone structure of the animal <u>and is therefore more reflective of the animal's production capability. It is conducted prior to mating, as a lower BCS animal will be less fertile and so have less chance of getting pregnant.</u></li> <li>• <u>Training is needed to use BCS accurately.</u></li> <li>• BCS allows for better feed management, as it allows for feed to <u>be allocated based on the condition of the animal, particularly those animals that are of a lower BCS. They are able to be preferentially fed,</u> weighing for animal health, e.g. drenching.</li> <li>• BCS does not require equipment <u>and is less stressful for the animal.</u></li> <li>• BCS is more time efficient, <u>as more animals can be done in a shorter space of time due to not needing to go through scales individually.</u></li> </ul>	<b>Describes</b> the advantages of body condition scoring in general terms.	<b>Explains</b> the advantages of body condition scoring and <b>explains</b> why body condition scoring would be used instead of weighing, including <u>underlined-type</u> evidence.	
(c)	<ul style="list-style-type: none"> <li>• There is pasture surplus during spring, and deficit in winter and summer. The surplus feed will be made into a supplementary feed, hay, silage, baleage, <u>so it can be fed out during times of deficit.</u></li> <li>• Calving in winter will need supplementary feed, <u>as the requirement increases during the last trimester of gestation. Lactation is the most energy demanding and is the cow's highest nutritional requirement.</u></li> <li>• When the cow is dry, the nutritional requirement is the lowest, <u>and she can be fed a maintenance feed.</u></li> <li>• <u>Nutritional value of the supplementary feed needs to be high in protein and metabolisable energy (ME).</u></li> <li>• Supplementary feed needs to be given when there is a pasture deficiency because otherwise the cow will not be able to eat enough to maintain her weight and body condition, <u>and this will have an effect on her production.</u></li> </ul>	<b>Describes</b> when and why a farmer would give cows supplementary feed in general terms.	<b>Explains</b> when and why a farmer would give cows supplementary feed and makes links, including <u>underlined-type</u> evidence.	<b>Justifies</b> when and why a farmer would give cows supplementary feed.  <i><b>Note:</b> for E7/E8 candidates must consider the feed requirements of cows, and why they change throughout the year, as well as the nutritional value of supplementary feed when justifying a farmer's choice.</i>

<b>N1</b>	<b>N2</b>	<b>A3</b>	<b>A4</b>	<b>M5</b>	<b>M6</b>	<b>E7</b>	<b>E8</b>
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**N0** = No response; no relevant evidence.

### Cut Scores

<b>Not Achieved</b>	<b>Achievement</b>	<b>Achievement with Merit</b>	<b>Achievement with Excellence</b>
0 – 6	7 – 12	13 – 18	19 – 24