

## Unit A1 – Health, safety and security

### What is this unit about?

Helping learners to understand the principles of health and safety and how to put this into practice in the workplace to ensure their own safety and that of others when working in agriculture and production horticulture.

Agriculture continues to be one of the most dangerous industries in terms of injury and fatal accidents. It is therefore essential that everyone understands their role in maintaining and promoting health and safety in the workplace.

The aim of this unit is to provide the learner with the knowledge, understanding and skills needed to maintain a healthy and safe working environment under minimal guidance or direction. Learners should be familiar with the health and safety policy of their business and understand their responsibilities under that policy.

### Learning outcomes

	Learning outcome	Topic
1	Maintain health, safety and security in the workplace	<p>1.1) Identify health and safety risks in relation to the workplace, covering the following:</p> <ul style="list-style-type: none"><li>• People</li><li>• Equipment and materials</li><li>• Work area</li></ul> <p>1.2) Carry out specified measures to control risks and keep the appropriate people fully informed</p> <p>1.3) Seek guidance on measures to control unfamiliar risks arising from non-routine work situations</p> <p>1.4) Relay health and safety information to others in an understandable manner</p> <p>1.5) Dispose of hazardous and non-hazardous waste safely and appropriately</p> <p>1.6) Maintain the security of the workplace in accordance with organisational requirements</p>
2	Use equipment and materials safely	<p>2.1) Use equipment and materials in accordance with manufacturers' instructions and any training provided</p> <p>2.2) Safely transport equipment and materials and store them correctly at an approved location when not in use</p>
3	Know and follow the systems and procedures for maintaining health, safety and security	<p>3.1) State the organisational requirements for ensuring the security of the workplace</p> <p>3.2) Know and follow roles and responsibilities for health and safety</p>

		<p>in the workplace under organisational policy and legislation</p> <p>3.3) State why inadequate measures to control risks should be reported</p> <p>3.4) Describe procedures for different types of emergencies, appropriate to the relevant industry</p> <p>3.5) Understand how the procedures for specific emergencies may be affected by location</p> <p>3.6) Describe the different types of fire extinguishers and their use, relevant to the work area</p> <p>3.7) Describe the different forms of waste and appropriate methods of disposal</p> <p>3.8) Explain the relationship between security and safety within the workplace</p> <p>3.9) List any specific risks relevant to child safety in the workplace</p> <p>3.10) State why accidents should be reported and to whom</p>
4	Safely transport and store equipment	4.1) Explain how to transport and store equipment and materials safely
5	Follow manufacturers' and organisational guidance and training	5.1) State the importance of following manufacturers' and organisational training instructions and the potential consequences and risks of not doing so
6	Maintain good standards of health and safety for self and for others	<p>6.1) Supply the necessary personal medical information in accordance with organisational requirements</p> <p>6.2) Use and care for the correct personal protective equipment (PPE) and clothing for work</p> <p>6.3) Use an approved method of handling when moving and lifting items</p> <p>6.4) Use the appropriate personal and workplace hygiene at all times</p> <p>6.5) Provide accurate information about location so that contact can be made if necessary</p> <p>6.6) Work in a way that minimises risk to self, others and the environment</p> <p>6.7) State why it is important to report accidents without delay and complete records accurately and legibly</p>
7	Maintain the health and safety of self and others	7.1) Explain own roles in maintaining health and safety

		<p>7.2) Explain the reasons for leaving information about location when working in isolation or in remote areas</p> <p>7.3) Explain why accidents should be reported without delay and recorded in the appropriate document</p> <p>7.4) Explain the methods of minimising environmental damage during work</p>
8	Know how to maintain health and safety	<p>8.1) Describe the reasons for maintaining good personal and workplace hygiene</p> <p>8.2) State own limitations in dealing with health and safety emergencies</p> <p>8.3) Describe basic emergency first aid procedures</p> <p>8.4) Describe the types of personal protective equipment (PPE) and clothing suitable for the tasks and how they must be used, cleaned, stored, inspected and replaced</p>

## Learning outcome 1: Maintain health, safety and security in the workplace

### Topic 1.1 Identify health and safety risks in relation to the workplace, covering the following:

- **People** – consider injuries; slips, trips and falls; manual handling injuries; hazardous substances, including dust and chemicals; and noise
- **Equipment and materials** – risks associated with using machinery, industrial injuries, ensuring proper operator training, using the correct tools for the task, having appropriate checks in place, Control of Substances Hazardous to Health (COSHH)
- **Work area** – moving vehicles, underground and overhead services (e.g. electricity, gas, water), confined spaces and ground conditions

### Topic 1.2 Carry out specified measures to control risks and keep the appropriate people fully informed

May include involving other team members, departments or organisations and gaining permissions or authorisations to undertake tasks

### Topic 1.3 Seek guidance on measures to control unfamiliar risks arising from non-routine work situations

Know and understand risk assessments, understand and follow instructions and guidance from the person in charge of the workplace (e.g. a supervisor).

### Topic 1.4 Relay health and safety information to others in an understandable manner

Be able to relay information to others in the workplace. Ensure that information is passed on in a timely manner and within the regulations and policies of the organisation, ensuring safety and legal compliance.

Take the appropriate action, without delay, as soon as an emergency is suspected – act according to the company policy and within current health and safety guidelines; e.g. alert colleagues, report to an appropriate person, alert emergency services.

### **Topic 1.5 Dispose of hazardous and non-hazardous waste safely and appropriately**

Identify organic and inorganic waste and dispose of in the correct manner.

Use appropriate personal protective equipment (PPE) for the task.

Store waste in correct, suitable containers. Use licensed/specialist carriers where appropriate.

### **Topic 1.6 Maintain the security of the workplace in accordance with organisational requirements**

For example: accompany visitors to the site, ensure that boundary protection is intact, store all tools safely and securely, lock and secure vehicles and buildings. Be familiar with and follow the organisation's security policies and procedures.

## **Learning outcome 2: Use equipment and materials safely**

### **Topic 2.1 Use equipment and materials in accordance with manufacturers' instructions and any training provided**

Follow manufacturers' instructions and use equipment correctly, check equipment regularly, maintain and repair where necessary, use correct PPE for task, take all precautions.

### **Topic 2.2 Safely transport equipment and materials and store them correctly at an approved location when not in use**

For example: pre-transport checks: consider load, method of transportation, safe routes, no cross-contamination and undertake a Provision and Use of Work Equipment Regulations (PUWER) check.

Ensure equipment and materials are in the designated area when stored

## **Learning outcome 3: Know and follow the systems and procedures for maintaining health, safety and security**

### **Topic 3.1 State the organisational requirements for ensuring the security of the workplace**

Company policies and procedures, Management of Health and Safety at Work Regulations, Codes of Practice.

Ensure correct signage, follow lone working procedures, permit only authorised access and maintain access control systems, maintain work area boundaries.

### **Topic 3.2 Know and follow roles and responsibilities for health and safety in the workplace under organisational policy and legislation**

- Health and Safety at Work Act
- Provision and Use of Work Equipment Regulations
- Control of Substances Hazardous to Health
- Lifting Operation and Lifting Equipment Regulations
- Manual Handling Regulations

**Topic 3.3 State why inadequate measures to control risks should be reported**

Consider the safety of colleagues and visitors, maintain maximum performance of equipment and prevent damage to equipment and the environment.

**Topic 3.4 Describe procedures for different types of emergencies, appropriate to the relevant industry**

Emergencies may include fire, employee injury or power cuts. Follow company procedures, evacuate when necessary, treat casualties or call for first aiders, alert colleagues and others in the area, contact emergency services or appropriate suppliers.

**Topic 3.5 Understand how the procedures for specific emergencies may be affected by location**

For example: indoors, outdoors, weather, temperature, visibility, noise

**Topic 3.6 Describe the different types of fire extinguishers and their use, relevant to the work area**

- Types of extinguisher – water, foam, powder, carbon dioxide
- Colour coding – red, cream, blue, black
- Fire types/classification

**Topic 3.7 Describe the different forms of waste and appropriate methods of disposal**

- Forms – hazardous wastes, fallen stock, plastic, chemicals, surplus feed, slurry, spent bedding
- Methods – incineration landfill, approved contractors

**Topic 3.8 Explain the relationship between security and safety within the workplace**

Security policies and procedures ensure only authorised people visit the site, reduce the incidents of workplace violence, put systems in place to control access and monitor activity (e.g. closed-circuit television, CCTV)

**Topic 3.9 List any specific risks relevant to child safety in the workplace**

For example: inexperience of the site, inability to read signs, being carried as a passenger on farm vehicles, viewing workplace as a playground, risks from moving vehicles.

**Topic 3.10 State why accidents should be reported to and whom**

To reduce the chances of them recurring, accidents should be reported – as a legal requirement – to a supervisor or person in charge, colleagues and, in some instances, to the Health and Safety Executive under Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). Record all accidents in an accident book.

**Learning outcome 4: Understand why equipment is transported and stored safely****Topic 4.1 Explain how to transport and store equipment and materials safely**

Fulfills legal duty to protect the health and safety of everyone in the business; can help to reduce pollution, unnecessary wastage and other costs.

## **Learning outcome 5: Follow manufacturers' and organisational guidance and training**

### **Topic 5.1 Understand the importance of following manufacturers; and organisational training instructions and the potential consequences and risks of not doing so**

Following instructions beyond capability could lead to accidents, including injury to personnel or damage to property, equipment or the environment.

## **Learning outcome 6: Maintain good standards of health and safety for self and for others**

### **Topic 6.1 Supply the necessary personal medical information in accordance with organisational requirements**

As requested, supply the results of any health screening, allergies, etc.

### **Topic 6.2 Use and care for the correct personal protective equipment (PPE) and clothing for work**

Store PPE correctly, undertake regular checks to ensure compliance and functionality, report any damage or faults to the appropriate person in charge, keep clean and ready for use.

### **Topic 6.3 Use an approved method of handling when moving and lifting items**

Decide whether an object needs to be moved or lifted, carry out a risk assessment, employ correct methods, undertake training and keep updated, select the correct aids and equipment to reduce manual handling.

Describe the safe methods for moving and lifting items.

### **Topic 6.4 Use the appropriate personal and workplace hygiene at all times**

Wash hands before and after contact with animals and footbaths, cleaning contaminated PPE and equipment, etc.

### **Topic 6.5 Provide accurate information about location so contact can be made if necessary**

Inform supervisor and colleagues of work plans, emergency plans and mobile phone number – following a lone working policy, if applicable.

### **Topic 6.6 Work in a way that minimises risk to self, others and the environment**

Follow instructions, undertake risk assessments, be aware of hazards to self and others, ensure equipment is maintained in line with manufacturers' instructions, follow company procedures, stop work if any unsafe act is seen, inform supervisor of unsafe equipment and work practices.

### **Topic 6.7 State why it is important to report accidents without delay and complete records accurately and legibly**

Accident reporting is a legal requirement that helps to stop accidents recurring; completing records promptly ensures information is accurate. Written records will be read by others so must be completed legibly.

## Learning outcome 7: Maintain health and safety of self and others

### Topic 7.1 Explain own roles in maintaining health and safety

Responsible for own health and safety and that of colleagues and visitors. Must follow company procedures and policies and undertake training.

### Topic 7.2 Explain the reasons for leaving information about location when working in isolation or in remote areas

Lone workers are at greater risk. Ensure that others know your whereabouts and movements, report in at agreed times, ensure your location is known to others so that the emergency services can arrive on site quickly if an accident occurs.

### Topic 7.3 Explain why accidents should be reported without delay and recorded in the appropriate document

As in Topic 6.7 above: accident reporting is a legal requirement that helps to stop accidents recurring; completing records promptly ensures information is accurate. Written records will be read by others so must be completed legibly.

### Topic 7.4 Explain the methods of minimising environmental damage during work

Correct equipment must be used; preventative measures put in place; waste disposed of in the correct manner; use of spill mats, absorbent cloths, drip trays, etc. Refer to Topic 1.5.

## Learning outcome 8: Know how to maintain health and safety

### Topic 8.1 Describe the reasons for maintaining good personal and workplace hygiene

Good hygiene is important for human and animal health; it reduces the risk of zoonoses and cross-contamination and is good practice.

**Topic 8.2 State own limitations in dealing with health and safety emergencies** Own limitations could include a lack of training, risk of injury to self or others if acting beyond own capability and knowledge, risk of further environmental damage.

### Topic 8.3 Describe basic emergency first aid procedures

Assess the situation – do not put yourself in danger; make the area safe; assess all casualties and attend first to any unconscious casualties; send for help – do not delay.

### Topic 8.4 Describe the types of personal protective equipment (PPE) and clothing suitable for the tasks and how they must be used, cleaned, stored, inspected and replaced

Items of PPE may include gloves, overalls, protective boots, goggles, face masks, etc.

Follow manufacturers' instructions and use equipment correctly, check equipment regularly, maintain and repair where necessary, use the correct PPE for the task, take all precautions.

Store PPE correctly, carry out regular checks to ensure compliance and functionality, report any damage or faults to the appropriate person in charge, keep clean and ready for use

## Unit A2 – Use appropriate technology to support your role

### What is this unit about?

The purpose of this unit is to help learners understand the ways technology is applied within the land based industries.

Learners will understand how the use of technology appropriate to their role can improve productivity, quality and value for money. At the same time, learners may consider how science has been used and how it could be used in the future to provide more innovative, sustainable and environmentally friendly solutions to the challenges in the industry.

### Learning outcomes

	Learning outcome	Topic
1	Understand how technology affects your role	1.1) Roles of technology 1.2) Management of technology in the livestock sector
2	Understand the variety of technologies used to support your role	2.1) Appropriate technology and design features

### Learning outcome 1: Understand how technology affects your role

#### Topic 1.1 Roles of technology

Technology may be used, for example:

- To manage processes
- To provide an acceptable solution to production problems
- To provide access to remote areas within the industry
- To improve animal health and well-being
- To improve processes within the business, including record-keeping and stock management
- To monitor and control business operations

#### Topic 1.2 Management of technology in the livestock sector

Factors determining the appropriateness of technology for your role may include:

- Cost
- Value for money
- Where the technology will be used – climate, geography, weather conditions
- Nature of the business concerned
- Flexibility and ease of use
- Operational restrictions – age, skill level and training required by staff
- Health and safety
- Industry/insurance regulation restrictions on activity



## **Learning outcome 2: Understand the variety of technologies used to support your role**

### **Topic 2.1 Appropriate technology and design features**

The following is not a definitive list, but is indicative of the variety of technologies available.

#### **Key considerations:**

- Varied design of technology
- Differentiated within all aspects of the land based industries

#### **Appropriate technology will take in to account relationships between:**

- The sector
- The application
- Types of technology
- Key design variations

Factors such as cost, design and operational restrictions affect the role that technology plays in the management of businesses and will affect the design and appropriateness of any piece of technology used.

#### **Types of technology that may be used:**

- Automated livestock and plant systems (including feeding, recording, communicating, producing, regulating and monitoring plant and livestock movement)
- Bulk feed handling, mixing and control systems
- Electronic animal recognition and monitoring
- Drones
- Pregnancy testing
- Information technology, hardware and software

#### **Technology that will affect animal health and welfare:**

- Building climate control
- Ultrasound pregnancy testing equipment
- DNA fingerprinting
- Animal cloning
- Semen preservation
- Medical and veterinary advances
- Heart rate/temperature monitoring equipment

## Unit A3 – Keep accurate records relevant to job role

### What is this unit about?

This standard is about effective record-keeping and the management and accurate storage of information.

Most workplaces use computers to store and maintain records, but paper-based systems are still used.

Records could include those required by law and those maintained to aid the efficient running of the business. In terms of personal information, you will need to ensure that only necessary information is held and that it is kept only for as long as is needed.

### Learning outcomes

	Learning outcome	Topic
1	Maintain and store records within the workplace	<ul style="list-style-type: none"><li>1.1) Identify records and check they are suitable for their intended purpose</li><li>1.2) Make entries into records that are accurate and complete</li><li>1.3) Transfer records where appropriate and accurately record information as necessary</li><li>1.4) Store confidential records in a safe location, in accordance with organisational and legislative requirements</li><li>1.5) Re-file records correctly after use, where applicable</li><li>1.6) Where necessary, take the appropriate action to resolve any errors or mistakes discovered in the records</li></ul>
2	Know how to maintain and store records within the workplace	<ul style="list-style-type: none"><li>2.1) Know the different types of records and systems used for record-keeping within the industry</li><li>2.2) Know how to maintain, handle and store records under current legislation</li><li>2.3) Know which records are confidential or commercially sensitive and how to deal with these</li><li>2.4) Know the correct way of completing records within the industry and the language in which they must be completed</li><li>2.5) Understand the importance of accurate record-keeping for production purposes and organisational effectiveness</li><li>2.6) Understand and follow the procedures for transferring records</li><li>2.7) Know the problems that may occur during the maintenance of records and how these should be resolved</li></ul>

## Learning outcome 1: Maintain and store records within the workplace

### **Topic 1.1 Identify records and check they are suitable for their intended purpose**

Records will include personnel records, stock records, invoices, order records, machinery repair and service records, health and safety assessments, other risk assessments, planting plans and cropping patterns.

The three main types of storage are physical (paper), electronic (computer, disk, USB stick, etc.) and online (website and cloud-based systems). All should be kept securely under lock and key, or password-protected where appropriate.

Personnel and other confidential records should only be accessed by appropriate people.

### **Topic 1.2 Make entries into records that are accurate and complete**

Ensure entries are complete and accurate and in chronological order; avoid jargon, abbreviations and slang; complete records as soon as possible after the event has taken place; ensure records are dated and signed to create an audit trail.

### **Topic 1.3 Transfer records where appropriate and accurately record information as necessary**

Transfer records in ways that ensure the security and confidentiality of the record; personnel and financial records must only be transferred by appropriate and authorised people.

### **Topic 1.4 Store confidential records in a safe location, in accordance with organisational and legislative requirements**

Staff and finance records should be stored under lock and key or be password-protected. All personal and sensitive records must be stored in accordance with General Data Protection Regulation requirements. Business-sensitive information must be stored securely and only be accessible by authorised personnel.

### **Topic 1.5 Re-file records correctly after use, where applicable**

Place files back in the correct position and appropriate folders. Back up all computer files/records.

### **Topic 1.6 Where necessary, take the appropriate action to resolve any errors or mistakes discovered in the records**

Where errors are found, confirm with other staff before adjusting. Confirm stock errors by making a physical count, if necessary.

## Learning outcome 2: Legal responsibilities

### **Topic 2.1 Know the different types of records and systems used for record-keeping within the industry**

Records will include personnel records, stock records, invoices, order records, machinery repair and service records, health and safety assessments, other risk assessments, planting plans and cropping patterns.

### **Topic 2.2 Know how to maintain, handle and store records under current legislation**

Ensure entries are complete and accurate and in chronological order; avoid jargon, abbreviations and slang; complete records as soon as possible after the event has taken place; ensure records are dated and signed to create an audit trail.

Transfer records in ways that ensure their security and confidentiality.

All personal and sensitive records must be stored in accordance with General Data Protection Regulation requirements. Business-sensitive information must be stored securely and only be accessible by authorised personnel.

**Topic 2.3 Know which records are confidential or commercially sensitive and how to deal with these**

Staff and finance, business and commercially sensitive data. Keep secure under lock and key or password protection.

**Topic 2.4 Know the correct way of completing records within the industry and the language in which they must be completed**

Avoid jargon and slang. Avoid abbreviations. Use suitable variety and trade names where appropriate.

**Topic 2.5 Understand the importance of accurate record-keeping for production purposes and organisational effectiveness**

Understand how accurate and timely record-keeping allows audit trails to be established. Keep records simple and factual. Avoid offensive statements, speculation and guesswork.

**Topic 2.6 Understand and follow the procedures for transferring records**

Always have authority to move records. Never leave records unattended. Do not move personnel or financial records that you are not authorised to move.

**Topic 2.7 Know the problems that may occur during the maintenance of records and how these should be resolved**

Problems may include incorrect re-filing of records, misplaced decimal points, figures transposed incorrectly, wrong locations given for stock, incorrect or out of date stock figures, incorrect varieties on planting plans, lack of dates and signatures. These problems may be resolved by checking with other staff where necessary, raising issues with line managers, physical checks, checking against labels, etc.

## Unit A4 – Prepare and operate machinery and other equipment for safe and efficient use

### What is this unit about?

This unit aims to provide general principles and information on the preparation and operation of farm vehicle machinery and other equipment and how this can be put into practice.

Learners will understand the purpose and operation of land based machinery, how it is prepared and what personal protective equipment (PPE) is necessary. Learners will also develop knowledge of legislation and industry best practice guidance for land based machinery and other equipment.

Finally, learners will discover how to prepare and safely use machinery and consider the conditions in which machinery might operate.

### Learning outcomes

	Learning outcome	Topic
1	Understand the purpose and operation of land based machinery	1.1) Know current legislation and industry guidance relating to machinery 1.2) State the purpose and operation of farm vehicle machines
2	Prepare machinery for use in the land based sector (at least three machines)	2.1) Prepare selected land based machinery in line with manufacturers' instructions 2.2) Carry out pre-use checks for selected machinery in line with manufacturers' recommendations 2.3) Identify common faults and suggest appropriate remedial action 2.4) Check and report on the safety requirements for selected machinery, in accordance with manufacturers' guidance
3	Operate land based machinery	3.1) Carry out risk assessments 3.2) Identify ways to reduce the environmental impact of using selected land based machinery 3.3) Operate land based machinery 3.4) Carry out post-operation procedures

## Learning outcome 1: Understand the purpose and operation of land based machinery

### Topic 1.1 Know current legislation and industry guidance relating to machinery

Learners should know and understand the importance of legislation and industry best practice relating to the purpose and operation of land based machinery. These may include:

- Provision and Use of Work Equipment Regulations (PUWER) 1998
- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations
- Control of Substances Hazardous to Health (COSHH) Regulations 2002
- Personal Protection Equipment (PPE) at Work Regulations 1992
- Environmental Protection Act 1990
- Wildlife and Countryside Act 1981
- Control of Noise at Work Regulations 2005
- Control of Vibration at Work Regulations 2005
- Lifting Operations and Lifting Equipment Regulations 1998

### Topic 1.2 State the purpose and operation of land based machines

The purpose, operation and working principles/limitations of selected land based machinery may include knowledge of:

- Whether the machinery is self-propelled, trailed, tractor-mounted, purpose-built or pedestrian
- Power source (electric, battery, spark or compression ignition, PTO, hydraulic)
- Drive and transmission systems
- Cutting mechanisms
- Loading capacity
- Range
- Terrain suitability
- Safety features

## Learning outcome 2: Prepare machinery for use in the land based sector

The learner will be able to show the ability to prepare for work machines specific to their area of study. Manufacturer's instructions, user manuals or machinery handbooks must be available for learners. Learners should be able to do this for three different machines.

### Topic 2.1 Prepare selected land based machinery in line with manufacturers' instructions

Working in accordance with manufacturers' instructions, user manuals or machinery handbooks, prepare selected land based machinery for work.

### Topic 2.2 Carry out pre-use checks for selected machinery in line with manufacturers' recommendations

Working in accordance with manufacturers' instructions, user manuals or machinery handbooks, carry out pre-use checks on selected land based machinery.

### Topic 2.3: Identify common faults and suggest appropriate remedial action

Common problems that might be identified include:

- Fuel issues – incorrect, polluted, insufficient
- Blocked filters
- Oil pressure issues

- Damaged components
- Damaged or blunt blades
- Fouled or incorrectly set up spark plugs
- Blocked mechanisms
- Starter recoil tension

**Topic 2.4: Check and report on safety requirements for selected machinery, in accordance with manufacturers' guidance**

Working in accordance with manufacturers' instructions, user manuals or machinery handbooks, check and report on the safety requirements for the selected equipment.

Know where and to whom to report problems.

### Learning outcome 3: Operate land based machinery

Delivery of this unit should be through supervised practical training, which should reflect use in a realistic work environment. Assessment should only take place after the learner has had sufficient time to develop the necessary operational skills. While the learner is not required to transport machinery, they should be aware of any transport requirements.

**Topic 3.1: Carry out risk assessments**

Undertake a risk assessment for the machinery in accordance with the Health and Safety at Work Act 1974.

**Topic 3.2: Identify ways to reduce the environmental impact of using selected land based machinery**

Learners will be able to show how to minimise environmental damage/impact in relation to:

- Fuel and oil spillages
- Emissions
- Soil stability
- Protected species
- Appropriate waste disposal
- Watercourses

**Topic 3.3: Operate land based machinery**

Safely and efficiently operate specialist land based machinery and show the following:

- Appropriate risk assessment
- Adherence to safety guidance
- Evidence of following the operator's manual
- Ability to monitor machinery performance
- Effective communication
- Ability to clear any blockages
- Ability to convert between work and storage positions (where appropriate)
- Safe, efficient and economic operation

**Topic 3.4: Carry out post-operation procedures**

Learners will carry out post-use operations, including:

- Cleaning
- Inspecting for and reporting any damage or defects
- Lubrication
- Storage
- Security

## Unit B1 – Maintain the cleanliness and biosecurity of the working environment

### What is this unit about?

The aim of this unit is to help the learner demonstrate the knowledge and skills they need to undertake routine cleaning using the equipment and materials that are normally used within the workplace.

Good hygiene and biosecurity arrangements are essential to the successful operation of any business within the livestock sector. The precise arrangements for maintaining hygiene and biosecurity will depend upon the environment in which you work and the activities carried out.

Cleaning is key to ensuring the health and safety of people and animals within the workplace and promoting the organisation's image to customers.

If you are working with chemicals or machinery, you must be appropriately trained in line with current legislation and hold a relevant award where appropriate.

### Learning outcomes

	Learning outcome	Topic
1	Clean and maintain the work environment	1.1) Clean equipment in accordance with manufacturers' instructions 1.2) Select and use protective clothing, tools, equipment and cleaning materials in accordance with manufacturers'/employers' instructions 1.3) Clean at least five of the following areas in the working environment: <ul style="list-style-type: none"> <li>• Floors and walls</li> <li>• Work tables/benches</li> <li>• Washing and drying areas</li> <li>• Animal accommodation</li> <li>• Staff facilities</li> </ul> 1.4) Complete appropriate maintenance checks to identify wear and tear and accurately report to the appropriate person as soon as possible 1.5) Leave working areas in an appropriate state for the work to be undertaken 1.6) Store materials and equipment safely and correctly after use 1.7) Ensure that animal welfare, safety and security is always maintained during and after cleaning of the work environment 1.8) Provide clear and accurate information for recording purposes
2	Maintain the correct biosecurity measures on site	2.1) Encourage drivers of vehicles to use the correct hygiene procedures when entering and leaving the site 2.2) Follow organisational cleaning and hygiene measures while on the site



		<p>2.3) Follow biosecurity measures relating to the separation and isolation of animals</p> <p>2.4) Follow biosecurity measures following the buying in of animals</p> <p>2.5) Manage slurry to ensure biosecurity</p> <p>2.6) Identify and trace animals to ensure biosecurity</p>
3	Work safely and minimise environmental damage	<p>3.1) Work in a way that maintains health and safety and animal welfare and is consistent with current legislation, codes of practice and any additional requirements</p> <p>3.2) Carry out work in a manner that minimises environmental damage</p> <p>3.3) Dispose of waste safely and correctly</p>
4	Know how to clean the work environment	<p>4.1) State the potential hazards when cleaning each area of the following work environments:</p> <ul style="list-style-type: none"> <li>• Floors and walls</li> <li>• Work tables/benches</li> <li>• Washing and drying areas</li> <li>• Public areas</li> <li>• Animal accommodation</li> <li>• Staff facilities</li> </ul> <p>4.2) Assess the risks and state how they can be minimised with respect to:</p> <ul style="list-style-type: none"> <li>• The work environment</li> <li>• Animals</li> <li>• Work environment equipment</li> <li>• Cleaning materials</li> <li>• Others</li> </ul> <p>4.3) Describe the selection and use of cleaning materials in different areas of the work environment, explain why they must be correctly diluted and state the possible effects of not doing so, covering:</p> <ul style="list-style-type: none"> <li>• Particular fabrics</li> <li>• Surfaces</li> <li>• Equipment</li> </ul> <p>4.4) Describe why cleaning should minimise disruption to other staff and to animals</p> <p>4.5) Explain the contribution that good cleaning practices have on customer relations, the image of the organisation and health and biosecurity</p>
5	Know how to clean and maintain equipment in the work environment	<p>5.1) Describe the materials, equipment and cleaning methods that should be used for cleaning manual and electrical equipment and what protective clothing should be worn</p>

		<p>5.2) State why cleaning agents should be correctly diluted and the possible effects of not doing this</p> <p>5.3) Explain when sterilisation can be used, the reasons for doing it and the potential risks of not doing it correctly</p> <p>5.4) State the frequency with which different items of equipment should be cleaned and maintained</p> <p>5.5) Describe how to recognise potentially hazardous equipment and the potential effects of not reporting it</p> <p>5.6) Explain the reasons for maintaining and storing cleaning materials and equipment safely and correctly</p> <p>5.7) State why it is important to keep accurate records</p> <p>5.8) Describe how cleaning, maintenance and storage of work equipment contributes to biosecurity measures</p>
6	Know the relevant health and safety legislation and environmental good practice	<p>6.1) Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements</p> <p>6.2) Describe how environmental damage can be minimised</p> <p>6.3) Describe the correct methods for disposing of waste</p> <p>6.4) Describe the selection and use of personal protective equipment (PPE) for cleaning the work environment</p>

## Learning outcome 1: Clean and maintain the work environment

### Topic 1.1 Clean equipment in accordance with manufacturers' instructions

Clear debris from equipment, use detergent and disinfectant (always follow label recommendations, observe dilution rates and wear appropriate personal protective equipment, PPE). Thoroughly clean equipment, including all recesses, grooves, hinges, etc.

### Topic 1.2 Select and use protective clothing, tools, equipment and cleaning materials in accordance with manufacturers'/employers' instructions

Will include maintenance tools such as screwdrivers, spanners and hammers; and cleaning tools such as mops, brooms, buckets, hosepipes, brushes and sponges/cloths. Where chemicals are used, follow instructions accurately.

### Topic 1.3 Clean at least five of the following areas in the working environment:

**Floors and walls** – Sweep/vacuum debris, clean and disinfect. Use warning signs for wet floors.

**Work tables/benches** – Clear away tools and equipment, sweep and wash down, disinfect.

**Washing and drying areas** – Ensure area is uncluttered. Clean and disinfect.

**Animal accommodation** – Remove animals before cleaning accommodation; remove bedding etc. and organic debris, clean with detergent and disinfect. Follow directions for chemicals.

- **Staff facilities** – Include staff room, toilet and kitchen area. Wear appropriate PPE when cleaning these areas. Have soap/handwash available for staff to use.

### Topic 1.4 Complete appropriate maintenance checks to identify wear and tear and accurately report to the appropriate person as soon as possible

As well as wear and tear from normal usage, check for damage such as broken equipment, damaged door hinges on accommodation, broken windows, potential hazards and areas that may harbour dirt/contaminants. Mark any faults clearly for all other personnel to see and report to supervisor.

### Topic 1.5 Leave working areas in an appropriate state for the work to be undertaken

Equipment should be put away, rubbish removed and disposed of correctly, cleaned and disinfected where necessary/appropriate.

### Topic 1.6 Store materials and equipment safely and correctly after use

Undertake appropriate checks and cleaning after using equipment. Store equipment safely in the correct areas. Clean and disinfect when necessary.

### Topic 1.7 Ensure that animal welfare, safety and security is always maintained during and after cleaning of the work environment

Ensure no stress is caused to the animal; monitor during and after cleaning for signs of stress. Follow manufacturers' instructions to ensure chemicals and dilution rates are appropriate for use around animals. If necessary, remove animals from area to be cleaned.

### Topic 1.8 Provide clear and accurate information for recording purposes

Keep timely, clear and accurate records of cleaning carried out, chemicals used and date and time of cleaning. Records can be kept in written or electronic form.

## Learning outcome 2: Maintain the correct biosecurity measures on site

### Topic 2.1: Encourage drivers of vehicles to use the correct hygiene procedures when entering and leaving the site

For example:

- Clean and disinfect vehicles as soon as possible after use involving animals
- Clean wheel arches and mudflaps

### Topic 2.2: Follow organisational cleaning and hygiene measures while on the site

See Learning Outcome 1.

### Topic 2.3: Follow biosecurity measures relating to the separation and isolation of animals<sup>i</sup>

Keep new animals separate from the rest of your herd/stock until your vet is sure they carry no disease. Minimise nose-to-nose contact with neighbouring stock. Have stock proof boundaries and check boundaries regularly. If common grazings are used, try to isolate incoming stock before turning them onto common grazings. Keep visitors and their vehicles away from livestock. At the first sign of illness, isolate sick animals, with the dam if appropriate, and check all the other animals in the herd/flock, etc. Thereafter, handle isolated stock last. Newly born animals are particularly susceptible to disease, so make sure that designated calving and lambing areas are regularly cleansed and disinfected.

### Topic 2.4: Follow biosecurity measures following the buying in of animals

Be aware of which diseases pose the greatest risks; ask prospective vendors to find out the likelihood of a disease being present; consult your veterinary surgeon and develop an overall health plan; inspect animals, preferably on the farm of origin, before purchase, where possible; keep incoming animals separate from the main herd or flock for an appropriate period (see Topic 2.3 above); be aware that if you buy in disease you may put your neighbours at risk.

### Topic 2.5: Manage slurry to ensure biosecurity

Infections can survive in slurry and manure.

To reduce the risk:

Spread on arable land rather than grass for silage making or stock grazing. If this is not possible, allow a six-week gap between spreading and access by livestock; spread slurry using an inverted spreading plate; avoid using hired or shared spreaders if possible.

However, if sharing is unavoidable, ensure spreaders are thoroughly cleansed before coming on your farm and again before leaving.

### Topic 2.6: Identify and trace animals to ensure biosecurity

There are legal requirements for the registration of all livestock and premises, animal identification, breeding and movement records. Rapid traceability is important for effective disease control.

Keepers of cattle, sheep, pigs, goats, poultry and farmed deer must be registered and their animals identified in accordance with the law; even if only one animal is kept, vehicles and people can spread disease.

Veterinary investigations into notifiable disease would be greatly assisted by records of visitors and deliveries.

## Learning outcome 3: Work safely and minimise environmental damage

### Topic 3.1 Work in a way that maintains health and safety and animal welfare and is consistent with current legislation, codes of practice and any additional requirements

Legislation may include the Animal Welfare Act 2006, The Welfare of Farmed Animals (England) Regulations 2007, EU legislation governing specific animal welfare issues (e.g. calves, pigs, etc.), the Five Freedoms, Health and Safety: Personal Protective Equipment Regulations 2002, Control of Substances Hazardous to Health Regulations 2002, Reporting of Injuries, Diseases and Dangerous Occurrences 1995 and the Health and Safety at Work Act 1974.

### Topic 3.2 Carry out work in a manner that minimises environmental damage

Keep noise levels low to prevent noise pollution, use chemicals safely and at the manufacturers' recommendations, dispose of waste correctly and appropriately (see Topic 2.3 below).

### Topic 3.3 Dispose of waste safely and correctly

Dispose of waste materials following the correct procedures for clinical waste, domestic waste, industrial waste, etc. Segregate waste according to current legislation. Dispose of waste according to current legislation using licensed companies.

## Learning outcome 4: Know how to clean the work environment

### Topic 4.1 State the potential hazards when cleaning each area of the following work environments:

- Floors and walls
- Work tables/benches
- Washing and drying areas
- Public areas
- Animal accommodation
- Staff facilities

Hazards may include irritation/inhalation/ingestion of chemicals, slip and trip hazards, water around electricity switches/sockets, zoonotic infection, etc.

### Topic 4.2 Assess the risks and state how they can be minimised with respect to:

- **The work environment**  
Keep work surfaces and floors clear; put equipment away when finished with, put up signs where appropriate to warn others of cleaning/use of chemicals/wet floors, etc.
- **Animals**  
Ensure suitable equipment is used to restrain animals, or move animals to a safe location. Seek assistance if necessary.
- **Work environment equipment**  
Check all electrical equipment and wiring. Ensure equipment is cleaned and disinfected to prevent transmission of zoonotic disease. Check equipment is in a safe working order before use.
- **Cleaning materials**  
Read and follow product information/data sheets. Wear appropriate PPE and know what to do in the event of spillage, etc.
- **Others**  
Read relevant risk assessments. Follow business protocols and procedures accurately. Communicate/inform.

**Topic 4.3 Describe the selection and use of cleaning materials in different areas of the work environment explain why they must be correctly diluted and state the possible effects of not doing so, covering:**

- **Particular fabrics**
- **Surfaces**
- **Equipment**

Cleaning materials may include detergents, disinfectants, sponges and cloths, sterilising solutions, brushes and mops.

Chemicals must be diluted correctly following the manufacturer's instructions. Incorrect dilution can cause toxic fumes, skin irritation, or the chemical to be ineffective.

**Topic 4.4 Describe why cleaning should minimise disruption to other staff and to animals**

Ensure business continuity, minimises stress to animals.

**Topic 4.5 Explain the contribution that good cleaning practices have on customer relations, the image of the organisation and health and biosecurity**

Enhances image of business, shows professionalism, shows animals and facilities are well cared for, reduces/prevents transmission of disease between animals and between animals and people.

## **Learning outcome 5: Know how to clean and maintain equipment in the work environment**

**Topic 5.1 Describe the materials, equipment and cleaning methods that should be used for cleaning manual and electrical equipment and what protective clothing should be worn**

Equipment: detergents, disinfectants, sterilising solutions, brushes, sponges and cloths, buckets, ultrasonic cleaners, sterilising units, etc.

Protective clothing: gloves, aprons and face masks.

**Topic 5.2 State why cleaning agents should be correctly diluted and the possible effects of not doing this**

Chemicals must be diluted correctly following the manufacturers' instructions. Incorrect dilution can lead to toxic fumes, skin irritation, or cause the chemical to be ineffective.

**Topic 5.3 Explain when sterilisation can be used, the reasons for doing it and the potential risks of not doing it correctly**

Sterilisation is used to prevent the build-up of bacteria and various other diseases. Can be achieved by chemicals, steam and pressure or radiation. If not done correctly, microorganisms can multiply to a harmful level.

**Topic 5.4 State the frequency with which different items of equipment should be cleaned and maintained**

Equipment should be cleaned immediately after use or, if used all day long, e.g. work surfaces/floors, then daily. Specialised items should be cleaned and maintained according to the manufacturer's instructions.

**Topic 5.5 Describe how to recognise potentially hazardous equipment and the potential effects of not reporting it**

Hazardous equipment can include that which is contaminated, has sharp edges, cracked casing of electrical items and exposed wiring. Failure to report can result in equipment being used and causing harm to users/other people/livestock.

**Topic 5.6 Explain the reasons for maintaining and storing cleaning materials and equipment safely and correctly**

Maintaining and storing cleaning materials properly keeps them working effectively, reduces risks to health and safety and ensures they are safe, accessible and in working order for the next person.

**Topic 5.7 State why it is important to keep accurate records**

It is important so you can know when and how equipment was cleaned, serviced, repaired, etc., and so you know who undertook those procedures.

**Topic 5.8: Describe how cleaning, maintenance and storage of work equipment contributes to biosecurity measures**

Proper cleaning, maintenance and storage will ensure that microorganisms are destroyed/minimised and so reduce the risk of disease transmission.

**Learning outcome 6: Know the relevant health and safety legislation and environmental good practice**

**Topic 6.1 Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements**

Legislation will include the Animal Welfare Act 2006; the Five Freedoms; Farm Animals Act 2006; Animal Welfare Transport Legislation 2007; Control of Substances Hazardous to Health Regulations 2002; Reporting of Injuries, Diseases and Dangerous Occurrences 1995; and the Health and Safety at Work Act 1974.

**Topic 6.2 Describe how environmental damage can be minimised**

By keeping noise levels low, using chemicals safely and according to the manufacturers' recommendations, disposing of waste safely and correctly, etc.

**Topic 6.3 Describe the correct methods for disposing of waste**

See Topic 2.3 above.

**Topic 6.4 Describe the selection and use of personal protective equipment (PPE) for cleaning the work environment**

Items of PPE will include face masks, aprons and goggles when using/preparing chemicals. Steel toe-capped boots should be worn when using heavy equipment.

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<sup>i</sup> Following information from <https://www.gov.scot/publications/biosecurity-practices-for-animal-health-guidance/pages/separation-and-isolation/>

## Unit B2 – Prepare accommodation for animals

### What is this unit about?

The aim of this unit is to provide the learner with the knowledge and skills required to prepare, establish and monitor accommodation for livestock. This involves selecting and preparing the accommodation ready for use by animals, setting up suitable environmental conditions and introducing the livestock and monitoring them after introduction. The learner will be fully aware of the importance of relevant health, safety and animal welfare legislation in connection with this work.

### Learning outcomes

	Learning outcome	Topic
1	Prepare accommodation for animals	1.1) Select, prepare and maintain the necessary equipment and materials for use 1.2) Prepare accommodation in a safe, secure and clean state that maintains animal health and welfare 1.3) Identify suitable environmental conditions for the animals and adapt where possible 1.4) Identify potential hazards and take the appropriate action to remove them 1.5) Introduce animals to the accommodation in a way that maintains their health and welfare
2	Monitor the suitability of accommodation	2.1) Assess the animals' response to the accommodation 2.2) Monitor, record and/or report animals' responses to the accommodation, as required 2.3) Monitor and review suitability of accommodation 2.4) As appropriate, recommend or make changes to the accommodation
3	Work safely and in a way that maintains animal health and welfare	4.1) Work safely in a manner consistent with current legislation, codes of practice and any additional requirements and that maintains animal health and welfare
4	Know how to prepare a healthy and safe environment for the livestock	4.1) Describe the animals' accommodation needs with respect to: <ul style="list-style-type: none"><li>• Ventilation</li><li>• Light</li><li>• Structure and fittings</li><li>• Temperature</li><li>• Noise</li><li>• Siting</li></ul>



		<p>4.2) State the different animals' accommodation needs in relation to animal health and welfare, covering:</p> <ul style="list-style-type: none"> <li>• The suitability of the animal concerned</li> <li>• Allowing the necessary freedom of movement</li> <li>• Minimising animal stress</li> <li>• The intended purpose and length of stay in the accommodation</li> </ul> <p>4.3) Describe how accommodation needs could change throughout the animal's life</p>
5	Know how to introduce, establish and maintain livestock in their accommodation, promoting health and welfare	<p>5.1) State the procedures for checking whether or not the accommodation is suitable for livestock</p> <p>5.2) Describe the reasons for monitoring environmental conditions and reporting any variances</p> <p>5.3) Describe the methods of handling livestock safely</p> <p>5.4) Describe the methods of introducing livestock to accommodation that minimise their stress and optimise their acceptance</p> <p>5.5) Describe the signs of livestock stress</p> <p>5.6) Describe the problems that may occur and how these should be dealt with</p>
6	Know the relevant health and safety legislation and environmental good practice	<p>6.1) Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements</p> <p>6.2) Describe how environmental damage can be minimised</p> <p>6.3) Describe the correct methods for disposing of waste</p>

## Learning outcome 1: Prepare accommodation for animals

### Topic 1.1 Select, prepare and maintain the necessary equipment and materials for use

Materials may include cleaning agents, pressure cleaners, fencing tools, rakes and spades, transporting equipment, spanners, screwdrivers, etc.

### Topic 1.2 Prepare accommodation in a safe, secure and clean state that maintains animal health and welfare

Environment should be clean – remove wet and dirty bedding, etc. Flooring should be suitable and clean. Provide clean and dry bedding. Use clean buckets and utensils for feeding. Mend or report any damage to equipment used to Facilities.

### **Topic 1.3 Identify suitable environmental conditions for the animals and adapt where possible**

Accommodation should be well-ventilated, clean and appropriately lit (if indoors); a suitable size for the given numbers of animals and their length of stay; contain dry and plentiful bedding and have access to food and water. Accommodation may need to be changed to reduce conflict and aggression or to deal with breeding, pregnancy and birth.

### **Topic 1.4 Identify potential hazards and take the appropriate action to remove them**

Hazards may include vermin, wind and weather extremes.

A warm, draft-free, enclosed living/sleeping area is essential. Feed should be well balanced and varied and animals should have access to enough water.

Report any hazards found to the person in charge.

### **Topic 1.5 Introduce animals to the accommodation in a way that maintains their health and welfare**

According to the Five Freedoms, animals must have a suitable environment (place to live), a suitable diet, be able to exhibit normal behaviour, be housed with suitable mates and be protected from stress, pain, injury and disease.

## **Learning outcome 2: Monitor the suitability of accommodation**

### **Topic 2.1 Assess the animals' response to the accommodation**

Observe body language, behaviours and interactions with other animals. Ensure that livestock are eating and drinking following a move to new accommodation.

### **Topic 2.2 Monitor, record and/or report animals' responses to the accommodation, as required**

As required, report any issues to the person in charge. Reports can be verbal, written or electronic.

### **Topic 2.3 Monitor and review suitability of accommodation**

Continually monitor livestock to ensure that accommodation remains suitable. Needs and behaviours may change depending on the time of year, weather conditions, etc.

### **Topic 2.4 As appropriate, recommend or make changes to the accommodation**

Recommend or implement any changes required to deal with issues identified affecting livestock health and welfare (as appropriate to your role).

## **Learning outcome 3: Work safely and in a way that maintains animal health and welfare**

### **Topic 3.1 Work safely in a manner consistent with current legislation, codes of practice and any additional requirements and that maintains animal health and welfare**

Understand that you are responsible for keeping yourself and colleagues safe and for reducing the risks by working safely (Health and Safety at Work Act).

Also reduce the risks to the animals concerned. Use risk assessments to highlight each hazard.

Legislation may include Animal Health Acts, Health and Safety at Work Act, Provision and Use of Work Equipment Regulations, Environmental Protection Acts and Codes of Practices, as applicable.

In accordance with environmental legislation, animal waste, including feed, should be removed and disposed of correctly in a muck heap or allocated container. Waste water should be disposed of in a dirty water system.

Do not give animals contaminated feed.

## Learning outcome 4: Know how to prepare a healthy and safe environment for the livestock

### Topic 4.1 Describe the animals' accommodation needs with respect to:

- **Ventilation**  
Should be well-ventilated but not draughty/cold.
- **Light**  
Should be appropriate to animals' needs, sufficient for inspections and welfare checks and allow animals to exhibit normal behaviours. Enhanced light levels may be appropriate to stimulate milk production, for example.
- **Structure and fittings**  
Must be safe and suitable, e.g. no sharp edges, correctly sized entrances and exits, feeding bowls and equipment.
- **Temperature**  
Animals should be housed within temperature and humidity ranges appropriate for the species, to which they can adapt with minimal stress.
- **Noise**  
Keep background noise to a minimum, avoid sudden bangs and loud noises that may cause stress and fright.
- **Siting**  
Site animals away from draughts, fumes, dust and noise, allowing shelter from the sun and rain.

### Topic 4.2 State the different animals' accommodation needs in relation to animal health and welfare, covering:

- **The suitability of the animal concerned**  
Ensure accommodation is the correct size, constructed using safe materials, maintains comfortable temperatures, is away from draughts and is fit for purpose.
- **Allowing the necessary freedom of movement**  
This allows livestock to exhibit normal behaviours, e.g. lie down, etc.
- **Minimising animal stress**  
Consider noise, draughts, extremes of temperature, etc.
- **The intended purpose and length of stay in the accommodation**

### Topic 4.3 Describe how accommodation needs could change throughout the animal's life

For example, cattle that are calving, weaning, or sick should be primarily housed indoors.

Gilts and dry sows have different housing needs pregnant sows have differing needs again. There is also the demand for farrowing areas and the weaning and finishing houses for piglets.

## Learning outcome 5: Know how to introduce, establish and maintain livestock in their accommodation, promoting health and welfare.

### **Topic 5.1 State the procedures for checking whether or not the accommodation is suitable for livestock**

Check materials, fittings, cleanliness, environmental conditions (e.g. ventilation, light, temperature, noise), ability of animals to exhibit normal behaviours and keep fit and healthy.

### **Topic 5.2 Describe the reasons for monitoring the environmental conditions and reporting any variances**

See Topic 1.2. Monitoring the environmental conditions will ensure that livestock are housed in optimal conditions, which in turn will ensure their well-being. Any variance should be reported and remedied.

### **Topic 5.3 Describe the methods of handling livestock safely**

Where animals are not restrained, always check that there is somewhere safe you can easily get to if an animal becomes aggressive. Work out an escape route or refuge before working with cattle. Make sure you have the right equipment.

Think about the animals you are working with. The risk is increased if the animals have not been handled frequently.

Bulls and recently calved cows also need particular care. Keep animals calm; agitated or stressed animals are more likely to be dangerous.

Remember to think about others who may be hurt: family, employees or visitors such as vets.

### **Topic 5.4 Describe the methods of introducing livestock to accommodation that minimise their stress and optimise their acceptance**

See Topic 1.5. Ensure new accommodation is suitable and allows animals to exhibit normal behaviour. Ensure that food and water is readily available.

### **Topic 5.5 Describe the signs of livestock stress**

These may include decreased activity, refusal to lie down, open mouth and laboured breathing, sweating and excessive drooling, reduced food intake, agitation and restlessness, isolation, constant movement and unusual vocalisation.

### **Topic 5.6 Describe the problems that may occur and how these should be dealt with**

Check for hazards and risks in new housing; changes in the health and well-being of animals moving; and health and safety requirements.

Report problems; make recommendations for changes or improvements.

## Learning outcome 6: Know the relevant health and safety legislation and environmental good practice

### **Topic 6.1 Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements**

Legislation may include the Animal Health Acts, Health and Safety at Work Act, Provision and Use of Work Equipment Regulations, Environmental Protection Acts or Codes of Practices, as applicable

**Topic 6.2 Describe how environmental damage can be minimised**

Deal with slurry correctly, avoid overflow, keep clean and dirty water separate, dispose of sheep dip and other chemicals safely and correctly, minimise rubbish, reduce plastic use, bund fuel tanks, recycle waste wherever possible, monitor water use.

**Topic 6.3 Describe the correct methods for disposing of waste**

In accordance with environmental legislations, animal waste, including feed, should be removed and disposed of correctly, in a muck heap or allocated container. Waste water should be disposed of in a dirty water system.

## Unit B3 – Monitor and maintain the health and welfare of livestock

### What is this unit about?

This unit will ensure that learners know how to maintain the health and welfare of livestock in their care.

It covers the maintenance of the health and well-being of livestock. In this instance, the term 'well-being' is used to cover a variety of welfare issues, such as minimising stress and the potential for injury and ensuring the livestock have appropriate environmental conditions and sufficient feed and water.

The unit also encourages learners to look for and recognise signs of poor health in the livestock and take the appropriate action.

### Learning outcomes

	Learning outcome	Topic
1	Maintain the health and welfare of animals	<p>1.1) Treat animals in a way that is consistent with relevant legislation, minimises the likelihood of stress and injury and maintains their health and welfare</p> <p>1.2) Provide animals with sufficient and effective opportunities to move and maintain physical functioning</p> <p>1.3) Monitor and report the animals' physical condition and behaviour at suitable intervals, to include the following:</p> <ul style="list-style-type: none"><li>• Appearance</li><li>• Posture and movement</li><li>• Behaviour</li><li>• Bodily functioning</li><li>• Social interaction</li></ul> <p>1.4) Identify, record and report five abnormal signs that might indicate the following:</p> <ul style="list-style-type: none"><li>• Disease</li><li>• Disability</li><li>• Disorders</li><li>• Pest infestation</li><li>• Trauma</li><li>• Stress</li></ul> <p>1.5) Carry out two of the following procedures to promote animals' health and welfare correctly and at a suitable time for the animals concerned:</p> <ul style="list-style-type: none"><li>• Preventative care</li><li>• Environmental adjustment</li><li>• Changing feed or water provision</li></ul> <p>1.6) Record and report animals' reactions to specific procedures</p> <p>1.7) Seek immediate assistance for any animal's health or welfare</p>

		emergency and initiate action as appropriate to the situation
2	Work safely	<p>2.1) Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>2.2) Dispose of waste safely and correctly</p>
3	Maintain accurate records	3.1) Provide clear and accurate information for recording purposes
4	Know how to promote and maintain the health and welfare of animals	<p>4.1) Identify the purpose for which the animals are being kept</p> <p>4.2) Describe how to promote the health and general welfare of animals and minimise any stress or injury for at least two animal species</p> <p>4.3) Describe why animals need exercise and how the type and amount varies at different stages of an animal's life</p> <p>4.4) Provide examples of how two different animal species maintain their own physical condition and appearance</p> <p>4.5) Describe all the visual signs indicating the following potential problems with an animal's health and welfare:</p> <ul style="list-style-type: none"> <li>• Disease</li> <li>• Disability</li> <li>• Disorders</li> <li>• Pest infestation</li> <li>• Trauma</li> <li>• Stress</li> </ul> <p>4.6) Describe two types of preventative care used to maintain the health and welfare of animals</p> <p>4.7) State the importance of providing an adequate supply of feed and water</p>
5	Know the relevant health and safety legislation and environmental good practice	5.1) Outline the current health and safety regulations, animal welfare legislation, codes of practice and any additional requirements
6	Know how to maintain accurate records	6.1) Identify the types of records required and explain the importance of accurate record-keeping

## Learning outcome 1: Maintain the health and welfare of animals

### Topic 1.1 Treat animals in a way that is consistent with relevant legislation, minimises the likelihood of stress and injury and maintains their health and welfare

Follow legislation and codes of practice.

Ensure all livestock animals have a suitable place to live and environment to exhibit natural behaviours, including safe grazing/feeding areas, safe bedding, shelter and indoor accommodation, where appropriate.

Avoid extremes of heat/cold and other stresses.

Handle appropriately to avoid harming the animal or causing stress.

Ensure that veterinary procedures are made available when necessary.

Know and apply the Five Freedoms:

- Freedom from hunger and thirst
- Freedom from discomfort
- Freedom from pain, injury or disease
- Freedom to express normal behaviour
- Freedom from fear and distress

### Topic 1.2 Provide animals with sufficient and effective opportunities to move and maintain physical functioning

Including exercise, grooming, licking, eating, drinking and so on, appropriate to age, species, usual living conditions (e.g. indoor, outdoor, at grass, etc.)

### Topic 1.3 Monitor and report the animals' physical condition and behaviour at suitable intervals, to include the following:

- **Appearance**  
Normal feeding habits, breathing, vocalisation, bright eyes and no sign of deformities/injuries
- **Posture and movement**  
Standing and moving correctly, even weight distribution, no sign of limping or lameness
- **Behaviour**  
As noted above, eating, drinking, licking, scratching, smelling, looking and reacting to stimuli
- **Bodily functioning**  
Normal temperature, heart and breathing rate, urination and defecation
- **Social interaction**  
For example, interacting or failing to interact with people or other livestock

### Topic 1.4 Identify, record and report five abnormal signs that might indicate the following:

- **Disease**  
Can be indicated by changes in behaviour, lameness, rapid breathing, poor coat, sunken eyes, dry nose, etc.
- **Disability**  
Lameness, blindness, etc.
- **Disorders**  
Incorrect bodily functions
- **Pest infestation**  
Itching, scratching, biting, weight loss, etc.



- **Trauma**  
For example, lameness, incorrect vocalising indicating pain, blood, cuts
- **Stress**  
Environmental: too hot, too cold, too dry, too wet, lack of or too much food, etc.  
External factors: people, unusual noises and violent occurrences

**Topic 1.5 Carry out two of the following procedures to promote animals' health and welfare correctly and at a suitable time for the animals concerned:**

- **Preventative care**  
For example, vaccination, care of newborn animals, parasite control
- **Environmental adjustment**  
Feed and pasture management, ventilation in housing, management of bedding, appropriate stocking densities, waste management, etc.
- **Changing feed or water provision**  
Provide correct feed and access to safe water

**Topic 1.6 Record and report animals' reactions to specific procedures**

Record date, time, outcome. All treatments with medicines should be cleared beforehand with a person in charge and recorded in the medicine record.

**Topic 1.7 Seek immediate assistance for any animal's health or welfare emergency and initiate action as appropriate to the situation**

Know where to find help. Any emergency or unusual signs must be reported to the person in charge as soon as possible so that appropriate help – including veterinary help – can be summoned.

## Learning outcome 2: Work safely

**Topic 2.1 Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements**

Understand relevant the Animal Health Acts, Environmental Protection Acts and codes of practice, including Responsible Use of Medicines in Animals (RUMA).

Also be aware of own responsibilities under Health and Safety Acts, including Provision and Use of Work Equipment Regulations (PUWER), Manual Handling Regulations and Working at Heights. Be aware of the dangers of working with animals, including the risk of zoonoses.

Understand workplace policies and the importance of risk assessments to manage health and safety.

**Topic 2.2 Dispose of waste safely and correctly**

Identify organic and inorganic waste and dispose of in the correct manner.

Use appropriate personal protective equipment (PPE) for the task.

Store waste in the correct, suitable containers. Use licensed/specialist carriers where appropriate.

## Learning outcome 3: Maintain accurate records

### Topic 3.1 Provide clear and accurate information for recording purposes

Understand and follow business procedures for recording animal health and welfare issues. Retain records for waste disposal. Using the correct format, record relevant details in an animal medicine book, animal record book, herd record, medicine record, waste disposal records and diary.

## Learning outcome 4: Know how to promote and maintain the health and welfare of animals

### Topic 4.1 Identify the purpose for which the animals are being kept

For example, food, dairy, breeding, fattening.

### Topic 4.2 Describe how to promote the health and general welfare of animals and minimise any stress or injury for at least two animal species

- **Cattle** – Have a written health and welfare plan, which (as a minimum) looks at biosecurity arrangements on farm; purchased stock procedures; any specific disease programmes, such as leptospirosis, Johne's disease, salmonella, bovine viral diarrhoea and tuberculosis; vaccination policy and timing; isolation procedures; external and internal parasite control; lungworm control; lameness monitoring and foot care; routine procedures, such as ear tagging; mastitis control.<sup>1</sup>
- **Sheep** – Be competent in a variety of health and welfare skills, which should include vaccination; drenching; prevention of footrot and treatment of lame sheep; prevention and treatment of internal and external parasites, including scab and fly strike; tail docking and castration. A written health and welfare programme should be prepared for all animals in each flock. The programme should include (as a minimum) vaccination policy and timing, control of external and internal parasites and foot care. Pasture management should form an integral part of disease control, especially in cases of internal parasites and footrot.<sup>2</sup>
- **Pigs** – Measures to protect health include good hygiene, good husbandry and effective ventilation (for indoor pigs). Vaccinations against certain diseases may be appropriate. Useful information on the health status of the herd can be obtained from feedback at meat inspection in the abattoir. The written health and welfare plan should (as a minimum) look at biosecurity arrangements, both on farm and during transport; purchased stock procedures; any specific disease control programmes, such as salmonella, erysipelas, Escherichia coli, mycoplasma and parvo virus; vaccination policy and timing; isolation procedures; mixing and grouping of pigs; external and internal parasite control; lameness monitoring and foot care; routine procedures, such as ear tagging; and prevention and control of vices, such as tail biting. Ensure that animals receive any necessary medical treatment at the correct time and at the correct dose.<sup>3</sup>

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<sup>1</sup> Code of Recommendations for the Welfare of Livestock: Cattle (Defra, 2003)

<sup>2</sup> Code of Recommendations for the Welfare of Livestock: Sheep (Defra 2003)

<sup>3</sup> Code of Recommendations for the Welfare of Livestock: Pigs (Defra 2003)

**Topic 4.3 Describe why animals need exercise and how the type and amount varies at different stages in an animal's life**

Young animals need play/exercise to develop strong bones and muscles.

Animals at grass obtain their exercise naturally.

Feeding and finishing livestock need less exercise to promote the laying down of muscle and correct body condition.

Pregnant animals need sufficient exercise to keep them fit and healthy so they are able to give birth more easily.

**Topic 4.4 Provide examples of how two different species of animals maintain their own physical condition and appearance**

- **Cows** – grazing, cuddling, ruminating, engaging in natural herd behaviours
- **Sheep** – forming flocks, seeking shelter from weather extremes, grazing, “camping” behaviours
- **Pigs** – rooting and foraging, nest building, wallowing to keep cool, forming small family groups, maintaining clean bedding

**Topic 4.5 Describe all the visual signs indicating the following potential problems with an animal's health and welfare:**

- **Disease** – Fever, blisters, skin discolouration, coughing, wheezing, loss of weight, staggering, loss of “condition”
- **Disability** – Lameness, obvious pain or discomfort
- **Disorders** – Increased thirst, nervousness
- **Pest infestation** – Itchiness, scabs, inflammation, avoidance behaviours in the host
- **Trauma** – Reduced feed intake, reduced milk yield, abdominal pain, reluctance to move, shallow breathing, moaning, temperature increase
- **Stress** – Decreased activity, seeking shade, refusal to lie down, increased respiratory rate, laboured breathing, sweating and excessive drooling, reduced food intake, agitation and restlessness

**Topic 4.6 Describe two types of preventative care used to maintain the health and welfare of animals**

Vaccination, care of newborn animals, parasite control, providing adequate food and water, ensuring bedding is clean and dry.

**Topic 4.8 State the importance of providing an adequate supply of feed and water**

All animals need the correct amounts of feed and water to stay healthy. Amounts may vary with the animal's specific role. Animals on a submaintenance diet will eventually die, but submaintenance diets may be used for short periods to reduce obesity or prevent birth problems, for example.

## **Learning outcome 5: Know the relevant health and safety legislation and environmental good practice**

### **Topic 5.1 Outline the current health and safety regulations, animal welfare legislation, codes of practice and any additional requirements**

For example, the Health and Safety at Work Act 1974, Control of Substances Hazardous to Health (COSHH) 1991, Provision and Use of Work Equipment Regulations (PUWER) 1998.

Animal Welfare Act 2006, Transport of Animals Order 2006.

Be aware of how animals may be hurt by, for example, biting, scratching, kicking or butting, crushing and zoonosis.

## **Learning outcome 6: Know how to maintain accurate records**

### **Topic 6.1 Identify the types of records required and explain the importance of accurate record-keeping**

Know that, in many industries, legislation is in place to ensure that correct records are kept for traceability purposes. These records may include livestock health plans, biosecurity plans, movement records and identity tags. It is important that these records are used to promote the future health and well-being of animals.

## Unit B4 – Deliver basic treatments to animals

### What is this unit about?

This unit will provide the learner with the knowledge and skills required to deliver basic healthcare treatments to livestock animals.

In this instance, the term 'treatments' is used in its broadest sense to include cleaning and hygiene procedures; basic healthcare treatments and other routine procedures; and administering medicines, such as vaccines.

### Learning outcomes

	Learning outcome	Topic
1	Be able to deliver basic treatments to animals	1.1) Use the correct technique to give the specified treatment at the correct time, including: <ul style="list-style-type: none"><li>• Cleaning and hygiene procedures</li><li>• Basic healthcare treatments</li><li>• Routine procedures</li></ul> 1.2) Immediately seek assistance when it is not possible to carry out the treatment 1.3) Ensure records of the treatment are accurate, legible and complete and comply with any legislative requirements 1.4) Observe animals after treatments and immediately report any unusual signs
2	Be able to provide prescribed medication	2.1) Provide the following current and uncontaminated prescribed medication only for the intended animal: <ul style="list-style-type: none"><li>• Preventative</li><li>• Prescriptive</li></ul> 2.2) Use and store drugs, medications and equipment in accordance with veterinary instructions and organisational policy
3	Be able to work safely and minimise environmental damage	3.1) Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements 3.2) Dispose of waste safely and correctly
4	Know how to deliver basic treatments to animals	4.1) Describe the equipment to select for each treatment 4.2) Describe how to administer prescribed basic healthcare treatments

		<p>4.3) State the importance of keeping to instructions for basic healthcare treatments</p> <p>4.4) Describe the potential consequences of not keeping to instructions and procedures for carrying out treatments</p> <p>4.5) Describe how to use restraint techniques</p> <p>4.6) State the reasons and legislative requirements for 'withdrawal periods' for animals</p> <p>4.7) Outline the reasons for personal hygiene and safety precautions (e.g. communicable diseases between animals and humans)</p> <p>4.8) Describe the changes in the condition of the animal that may occur after treatment</p> <p>4.9) State why it is necessary to monitor the behaviour of animals after treatment and report unusual signs</p> <p>4.10) Identify the types of records required and explain the importance of accurate record-keeping</p>
5	Know how to provide prescribed medication to animals	<p>5.1) State the significance of expiry dates on drugs and medications</p> <p>5.2) Describe the possible sources of contamination to medication and how to identify damage</p>
6	Know the relevant health and safety and animal welfare legislation	<p>6.1) Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements</p> <p>6.2) Describe the correct methods for disposing of waste</p>

## Learning outcome 1: Be able to deliver basic treatments to animals

### Topic 1.1 Use the correct technique to give the specified treatment at the correct time, including:

- **Cleaning and hygiene procedures** – Washing, grooming, cleaning, dental care, foot care
- **Basic healthcare treatments** – Worming, flea treatments, medication under direction of veterinarian
- **Routine procedures** – Follow instructions and health plan

### Topic 1.2 Immediately seek assistance when it is not possible to carry out the treatment

Assistance may be sought from colleagues, supervisors, managers, etc.

### **Topic 1.3 Ensure records of the treatment are accurate, legible and complete and comply with any legislative requirements**

Ensure records are completed as soon as possible after the treatment is carried out. Records can be verbal, written or electronic, but should be clear and accurate.

For medicines, records should include at least the following:

- Name of the product
- Batch number
- Date of acquisition
- Quantity acquired
- Name and address of the supplier
- Date of administration
- Quantity administered
- Withdrawal period
- Identification of the animals treated

### **Topic 1.4 Observe animals after treatments and immediately report any unusual signs**

Watch for signs of stress or reactions. Unusual signs may include panting, vomiting, vocalisation, increased or decreased pulse and or respiratory rates. Report signs to a supervisor and complete a written record.

Report any harmful or unintended reactions to animal medicines that you observe in your animals to your veterinary surgeon. Also report cases in which it appears that the medicine has not worked as expected, or any reactions in people exposed to animal medicines, either directly or by handling treated animals.

## **Learning outcome 2: Be able to provide prescribed medication**

### **Topic 2.1 Provide the following current and uncontaminated prescribed medication only for the intended animal:**

- **Preventative** – Prophylactic treatments such as flea treatment, wormers.
- **Prescriptive** – Follow the prescription accurately on all prescribed medications. Decide which of the variety of authorised treatments is most effective in preventing or controlling the condition in animals but that poses the least risk to people and the environment. Use less hazardous products if possible.

### **Topic 2.2 Use and store drugs, medications and equipment in accordance with veterinary instructions and organisational policy**

Medicines should only be handled and administered by someone competent to do so or under their supervision. Some medicines must be administered only under the direct supervision of a veterinary surgeon or according to a veterinary surgeon's prescription. Care should be taken when handling the feeding stuffs of a medicated animal.

Store drugs appropriately on shelves, in a refrigerator or in locked cabinets, as appropriate.

Ensure equipment is stored in its correct location and is clean and ready for use.

## Learning outcome 3: Be able to work safely and minimise environmental damage

### Topic 3.1 Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements

Good husbandry practices, such as good hygiene, good ventilation, access to clean water, effective biosecurity and good herd health planning (including suitable quarantine of stock and appropriate vaccination strategies), will all help to reduce the disease challenge and the need to use medicines.

Follow good practice when working with animals. Restrain them appropriately, where necessary, to reduce the risk of injury.

Wear appropriate personal protective equipment (PPE) when handling veterinary medicines and medicated feeding stuffs.

Consider whether it is necessary to administer veterinary medicines.

Some products contain hazardous substances that may be harmful to human health or pollute the environment if misused. The product label, package leaflet or safety data sheet (available from your supplier or the manufacturer) should provide you with this information.

### Topic 3.2 Dispose of waste safely and correctly

When you finish the treatment for which they were intended, safely dispose of unused or out-of-date medicines, as well as containers and application equipment (including needles to a sharps container).

When disposing of animal medicines, other than by treating an animal, the following must be recorded:

- The date of disposal
- The quantity of the product involved
- How and where the product was disposed of

Your veterinary surgeon may be able to supply you with containers for the safe disposal of medicines.

## Learning outcome 4: Know how to deliver basic treatments to animals

### Topic 4.1 Describe the equipment to select for each treatment

Equipment may include needles, syringes, appropriate PPE, pill givers, etc.

### Topic 4.2 Describe how to administer prescribed basic healthcare treatments

- **Animal handling equipment** – for example, poultry tables/frames, cattle crushes, animal restraints.
- **Administering equipment** – For example, needles, needle shrouds, automatic needle guns, disinfectant reservoirs.
- **PPE** – For example, aprons, gloves, protective suits, face shields, finger guards, respiratory equipment.

### Topic 4.3 State the importance of keeping to instructions for basic healthcare treatments.

To ensure that the correct treatments are given to the correct animals. To ensure that doses are not repeated or missed.



#### **Topic 4.4 Describe the potential consequences of not keeping to instructions and procedures for carrying out treatments**

Animals not being treated correctly. Risk to staff. Animals not responding to treatment as anticipated.

#### **Topic 4.5 Describe how to use restraint techniques**

- **Cattle** – Crush or halter. Keep calm. Calm the animal. Move slowly to avoid stressing the animal. Be aware of the animal's flight zone. Work with a colleague.
- **Sheep** – Tipping and tying. Never pull on fleece. Work with a colleague. Raise head and push down on hind quarters. Never use baler twine to tie a sheep.
- **Pigs** – Using pig boards to guide animal. Let the pig move at its own pace. Apply knee pressure to hold pig down.

#### **Topic 4.6 State the reasons and legislative requirements for 'withdrawal periods' for animals**

To ensure that animals entering the food chain have had time to metabolise a drug and that the drug is reduced to a "safe" level in tissues.

#### **Topic 4.7 Outline the reasons for personal hygiene and safety precautions (e.g. communicable diseases between animals and humans)**

To avoid cross-contamination between animals and also the transfer of zoonoses.

#### **Topic 4.8 Describe the changes in the condition of the animal that may occur after treatment**

General improvement in health, return to normal behaviours after successful treatment.

#### **Topic 4.9 State why it is necessary to monitor the behaviour of animals after treatment and report unusual signs**

To ensure that the treatment has been successful, that there are no adverse reactions to drugs and that the welfare of the animal is maintained during treatment.

#### **Topic 4.10 Identify the types of records required and explain the importance of accurate record-keeping**

Written, verbal or electronic. May be particular records needed where prescribed medicines have been used. Records detailing use and disposal of medications.

### **Learning outcome 5: Know how to provide prescribed medication to animals**

#### **Topic 5.1 State the significance of expiry dates on drugs and medications**

The expiry date is the date to which the medicine is safe and effective.

#### **Topic 5.2 Describe the possible sources of contamination to medication and how to identify damage**

- **Contamination** – For example, bacteria from other animals or contaminated equipment, damp or mould resulting from incorrect storage.
- **Damage** – For example, damaged packaging, change in appearance of medication, disintegration.

## **Learning outcome 6: Know the relevant health and safety and animal welfare legislation**

### **Topic 6.1 Outline the current health and safety and animal welfare legislation codes of practice and any additional requirements**

For example, Health and Safety Executive Veterinary Medicines: Safe use by farmers and other handlers. RUMA Code of Practice, Control of Substances Hazardous to Health (COSHH), Health and Safety at Work Act, Defra Codes of Practice, Welfare of Farmed Animals Regulations.

### **Topic 6.2 Describe the correct methods for disposing of waste**

See Topic 3.2 above.

## Unit D1 – Prepare feed and water supplies for livestock

### What is this unit about?

This unit will provide the learner with the knowledge and skills required to prepare feed and water for livestock. It covers storing feed and checking that water supplies are in a suitable condition.

### Learning outcomes

	Learning outcome	Topic
1	Prepare feed and water supplies for livestock	1.1) Prepare feed correctly for livestock, in accordance with dietary instructions, by selecting the correct: <ul style="list-style-type: none"> <li>• Feed type</li> <li>• Quantity</li> <li>• Quality</li> </ul> 1.2) Check stocks are adequate and stored correctly under hygienic conditions 1.3) Check feed and water supplies and confirm they are fresh and clean 1.4) Provide information for completing records
2	Use and maintain relevant equipment	2.1) Use equipment according to instructions 2.2) Prepare, maintain and store equipment in a safe and effective working condition
3	Work safely	3.1) Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements
4	Know how to prepare feed and water supplies for livestock	4.1) Describe the correct methods for preparing and maintaining adequate stocks under hygienic conditions 4.2) Describe the type, quantity and quality of feed and drinking water required by the livestock 4.3) State the reasons for checking the condition of feed and water 4.4) State the types of records required and outline the importance of accurate record-keeping
5	Know the types of equipment required and how to maintain them	5.1) Describe the equipment that will be required 5.2) Describe how the variety of equipment should be maintained
6	Know the relevant health and safety legislation and environmental good practice	6.1) Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements

		6.2) Describe the correct methods for disposing of waste
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## Learning outcome 1: Prepare feed and water supplies for livestock

### Topic 1.1 Prepare feed correctly for livestock, in accordance with dietary instructions, by selecting the correct:

- **Feed type** – Appropriate to the livestock species, age, gender
- **Quantity** – According to farm feeding plan, sufficient to maintain the animal, dependent on life stage of animal
- **Quality** – Fresh, palatable, correct nutrients, correct minerals

Prepare by washing hands and selecting the correct personal protective equipment (PPE), use clean tools and equipment to measure and dispense food into the correct containers for the animals concerned.

### Topic 1.2 Check stocks are adequate and stored correctly under hygienic conditions

Read and understand feed labels to avoid cross-contamination and misfeeding. Store feed appropriately to maintain quality and minimise the risk of spoilage and cross-contamination.

Supply clean, fresh water to the animals according to their needs. Water should be provided ad lib unless otherwise directed.

### Topic 1.3 Check feed and water supplies and confirm they are fresh and clean

Check for cross-contamination. Ensure water is clean and free from feed. Clean troughs and other feed equipment regularly – at least weekly.

### Topic 1.4 Provide information for completing records

Follow workplace standard operating procedures for recording and providing information, for example: type of feed and water required, amount and whether eaten, change of diet.

## Learning outcome 2: Use and maintain relevant equipment

### Topic 2.1 Use equipment according to instructions

- **Personal use** – Footwear, gloves, apron, etc.
- **Handling and preparing food** – Scoops, shovels, buckets, etc.
- **Feeding** – Troughs, buckets, hayracks, circular feeders, bottles/teats, salt block holders

### Topic 2.2 Prepare, maintain and store equipment in a safe and effective working condition

Clean all equipment before using it for feed or water. Clean with water that is hot enough to kill bacteria.

Check all equipment and materials are clean and in good working order before and after use.

Report breakages, damage and defects to a line manager or supervisor.

## Learning outcome 3: Work safely

### Topic 3.1 Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements

Legislation may include Animal Health Acts, the Health and Safety at Work Act, Provision and Use of Work Equipment Regulations (PUWER), Environmental Protection Acts, codes of practice, as applicable, risk assessments and any other additional requirements.

Learners do not need to know the intricacies of these laws but they do need to know about the basic safety requirements, cleanliness and feed preparation requirements.

Animal waste, including feed, should be removed and disposed of correctly, in accordance with environmental legislation and following business policies and procedures.

Never use contaminated feeds or water.

## Learning outcome 4: Know how to prepare feed and water supplies for livestock

### Topic 4.1 Describe the correct methods for preparing and maintaining adequate stocks under hygienic conditions

Follow business feeding plans. Avoid over- and underfeeding.

Maintain records of feeding quantities and times to ensure no overfeeding and minimise wastage.

Monitor feed intake and any unusual incidents of weight gain or loss or changes in behaviour.

Store feed under the correct conditions and in a manner that avoids cross-contamination between feeds and with other products.

Store feed materials away from cleaning products, chemicals and animal medicines.

### Topic 4.2 Describe the type, quantity and quality of feed and drinking water required by the livestock

- **Dairy** – Grass, silage, hay, pre-calving mineral supplement, concentrates. Quantities dependent on time of year, whether cow is lactating, etc.
- **Beef** – Grass, grass silage, wholecrop cereals, rapeseed meal, sugar beet pulp, molasses, concentrates, minerals and vitamins. Dependent on time of year, age of cattle, sex of cattle, desired body conformation and finishing times.
- **Sheep** – Pastures (sheep will eat a bigger variety of plants than cattle), grass, hay, haylage, grains and whole cereals. Pregnant ewes may need additional supplements.
- **Pigs** – Omnivorous, different feed for weaning, growing and finishing. Typical feed ingredients include corn, soy meal, oats or farm grain-based feeds. These ingredients are used because they are easily digestible, are high in carbohydrates and calcium and are low in fibre. However, pigs also require vitamins and minerals for good health. “Whole” commercial pig feed is also available.

Intake of water has a positive correlation with feed intake. Ensure all livestock animals have easy access to clean water that is available at all times. Clean water troughs regularly – at least weekly.

#### **Topic 4.3 State the reasons for checking the condition of feed and water**

Ensure sufficient quantities, that there is no evidence of mould, mycotoxins or contamination of feed or water and that feed is still “fresh”, palatable and being taken up by animals.

#### **Topic 4.4 State the types of records required and outline the importance of accurate record-keeping**

Records will include stock records, feed plans, feeding records, health and safety assessments, risk assessments, etc.

Three main types of storage: physical (paper), electronic (computer, disk, USB stick, etc.) and online (website and cloud-based systems). All should be kept securely under lock and key or be password protected, where appropriate.

### **Learning outcome 5: Know the types of equipment required and how to maintain them**

#### **Topic 5.1 Describe the equipment that will be required**

- **Personal use** – Footwear, gloves, apron, etc.
- **Handling and preparing food** – Scoops, shovels, buckets, etc.
- **Feeding** – Troughs, buckets, hayracks, circular feeders, bottles/teats, salt block holders

#### **Topic 5.2 Describe how the variety of equipment should be maintained**

Feed equipment should be stored in good and clean condition so as to avoid any kind of contamination. Visual checks should be carried out on a regular basis and maintenance and cleansing records should be kept. If drugs or other additives have been mixed into the feed, then all of the equipment used should be cleaned between batches.

Where chemicals are used, they should be appropriate for cleaning and sanitising feed manufacturing equipment and should be used according to instructions. These products should be properly labelled and stored away from feed manufacturing, feed storage and feeding areas.

### **Learning outcome 6: Know the relevant health and safety legislation and environmental good practice**

#### **Topic 6.1 Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements**

Legislation may include the Animal Health Acts, Animal By-Products (ABP) Regulations, Health and Safety at Work Regulations, Provision of Use of Work Equipment Regulations (PUWER), Environmental Protection Acts, codes of practices, as applicable, risk assessments and any other additional requirements, including obtaining licences and approval for the disposal of some types of waste.

#### **Topic 6.2 Describe the correct methods for disposing of waste**

Fallen stock (livestock that dies of natural causes or disease or that is killed on a farm for purposes other than human consumption) must be disposed of in accordance with ABP Regulations (Enforcement) (England) 2011.

For animal carcasses or parts of carcasses you must get approval from the Animal and Plant Health Agency. Disposal at landfill.

It is prohibited to bury general waste on farms and there are limits as to what waste can be sent to waste disposal sites.

There are strict controls relating to the disposal of hazardous waste. Hazardous waste includes:

- Asbestos;
- Chemicals, e.g. brake fluid or print toner
- Batteries
- Solvents
- Pesticides
- Oils (except edible ones), e.g. engine oil
- Equipment containing ozone-depleting substances, e.g. fridges
- Hazardous waste containers

Any diseased plant waste or plant waste that has been infested by insects should be incinerated and not burnt in the open air. Incineration can also be used to dispose of other types of plant waste.

Waste plastic, such as silage wrap and pesticide containers, must be disposed of at a registered disposal site. Incineration is prohibited.

ABP Regulations do not apply to milk and, as long as it stays on your farm, you can dispose of it however you wish, including spreading it on your land.

## Unit D2 – Monitor and maintain the supply of feed and water to livestock

### What is this unit about?

This unit will provide the learner with the knowledge and skills required to monitor and maintain the supply of feed and water to livestock. It includes checking the ongoing supply of feed and water, as well as checking that animals are eating and drinking suitable amounts.

### Learning outcomes

	Learning outcome	Topic
1	Monitor and maintain the supply of feed and water to livestock	1.1) Supply feed to the livestock correctly using the specified method 1.2) Supply clean, fresh water to the livestock according to their needs 1.3) Check that livestock animals are feeding and drinking normally, in line with expected production requirements 1.4) Maintain the health and welfare of the livestock 1.5) Provide information for record-keeping
2	Select, use and maintain the relevant equipment	2.1) Select appropriate equipment for this area of work 2.2) Use equipment according to relevant legislation and instructions 2.3) Prepare, maintain and store equipment in a safe and effective working condition
3	Work safely and minimise environmental damage	3.1) Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements 3.2) Carry out work in a manner that minimises environmental damage 3.3) Dispose of waste feed materials and water safely and correctly
4	Know how to monitor and maintain the supply of feed and water for livestock	4.1) Describe the correct methods and procedures for ensuring livestock animals have access to feed and water 4.2) State the quality and quantity of water required by the livestock 4.3) Describe the normal feeding and drinking behaviour of the livestock and potential reasons for changes in consumption 4.4) State the reasons for checking the condition of feed and water and to whom problems should be reported



		<p>4.5) Describe the types of problems that may occur during feeding and watering</p> <p>4.6) State the limits of responsibility in relation to feeding and watering the livestock and resolving any problems</p> <p>4.7) Describe the livestock's production performance and the relationship between this and feeding and watering</p> <p>4.8) State the importance of making sure that feeding and watering equipment is not able to injure the livestock</p> <p>4.9) State the types of records required and the importance of accurate record-keeping</p>
5	Know the relevant health and safety legislation and environmental good practice	<p>5.1) Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements</p> <p>5.2) Describe how environmental damage can be minimised</p> <p>5.3) Describe the correct methods for disposing of organic and inorganic waste</p>
6	Know the types of equipment required and how to maintain them	<p>6.1) Describe the equipment that will be required for the activity</p> <p>6.2) Describe how to maintain the variety of equipment needed to monitor and maintain the supply of feed and water to livestock</p>

## Learning outcome 1: Monitor and maintain the supply of feed and water to livestock

### Topic 1.1 Supply feed to the livestock correctly using the specified method

Livestock should be fed rations that have been properly balanced for energy, protein, minerals and vitamins. This will ensure that their nutrient requirements are met and not exceeded, which would lead to waste and inefficiency.

Follow feeding plans and feed appropriate to the species and condition of the animal (for example, young, old, ill, working, pregnant).

### Topic 1.2 Supply clean, fresh water to the livestock according to their needs

Ensure troughs are regularly checked and topped up where necessary. Avoid filling dirty troughs.

All animals should have continuous access to a suitable water supply and be provided with adequate fresh drinking water each day, or be able to satisfy their fluid intake by other means. Animals are likely to suffer distress if they cannot access water for more than 24 hours.

### **Topic 1.3 Check that livestock animals are feeding and drinking normally, in line with expected production requirements**

Check the amount and type of food eaten, animals' weight and monitor water intake. Be aware of any changes in feeding patterns and report these to a supervisor or person in charge. Be able to make recommendations for changes in feeding.

### **Topic 1.4 Maintain the health and welfare of the livestock throughout**

Undertake appropriate husbandry requirements; ensure all animals are gaining access to appropriate feed and apply the principles of the "Five Freedoms".

### **Topic 1.5 Provide information for record-keeping**

Information may include the type and timing of feeds, recording wastage, cost of feed materials, incidents where medicated feed is used and uptake of feed by livestock.

## **Learning outcome 2: Select, use and maintain the relevant equipment**

### **Topic 2.1 Select appropriate equipment for this area of work**

- **Feeding equipment** – troughs, ring feeders, hayracks, creep feeders, teat feeders, bale crates, water troughs, water drinkers
- **Handling equipment** – feed barrows, shovels, scoops, hoppers

### **Topic 2.2 Use equipment according to relevant legislation and instructions**

Follow manufacturers' instructions and use equipment correctly, check equipment regularly, maintain and repair where necessary, use the correct personal protective equipment (PPE) for the task, take all precautions.

Ensure that all equipment is clean and suitable for feed and avoid cross-contamination.

### **Topic 2.3 Prepare, maintain and store equipment in a safe and effective working condition**

This should include pre-use checks, avoiding cross-contamination and undertaking a Provision of Use of Work Equipment Regulations (PUWER) check for powered equipment.

Keep clean and, where necessary, disinfect any equipment used in connection with primary production or animal feed.

Ensure equipment and materials are in the designated area when stored.

## **Learning outcome 3: Work safely and minimise environmental damage**

### **Topic 3.1 Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements**

Understand the relevant Animal Health Acts, Environmental Protection Acts and codes of practice, including Responsible Use of Medicines in Animals (RUMA).

Also be aware of own responsibilities under Health and Safety Acts – including PUWER, Manual Handling Regulations and Working at Heights. Be aware of the dangers of working with animals, including the risk of zoonoses.

Understand workplace policies and the importance of risk assessments to manage health and safety.

### **Topic 3.2 Carry out work in a manner that minimises environmental damage**

Dispose of waste correctly (see below). Source feed locally; take steps to minimise damage to the ground and surrounding areas when feeding livestock outdoors.

### **Topic 3.3 Dispose of waste feed materials and water safely and correctly**

Identify organic and inorganic waste and dispose of in the correct manner.

Remove and dispose of organic waste, including feed, in the muck heap, which must be situated on a concrete or solid base to ensure that no run off can occur.

Inorganic waste comprising paper, glass, metal and plastic, must be recycled or disposed of in the municipal bins, as instructed by the person in charge. The importance of removal and not feeding contaminated feed and water should be highlighted.

Store waste in the correct, suitable containers. Use licensed/specialist carriers where appropriate.

Use appropriate PPE for the task.

## **Learning outcome 4: Know how to monitor and maintain the supply of feed and water for livestock**

### **Topic 4.1 Describe the correct methods and procedures for ensuring livestock animals have access to feed and water**

All animals shall have access to feed at intervals appropriate to their physiological needs (and, in any case, at least once a day), except where a veterinary surgeon – acting in the exercise of his profession – directs otherwise.<sup>1</sup>

Have sufficient water troughs or another drinkable water source (for example, a bowser or water tanker) for animals to use wherever they are housed or grazing. These areas should be easy to access, smooth underfoot and not tend to waterlog.

### **Topic 4.2 State the quality and quantity of water required by the livestock**

Water should be clean and free from contamination. Livestock should have free access to water or be able to supplement their fluid intake by other means.

### **Topic 4.3 Describe the normal feeding and drinking behaviour of the livestock and potential reasons for changes in consumption**

- **Sheep** – Sheep will graze for an average of seven hours per day, mostly in the hours around dawn and in the late afternoon, near sunset. When supplements are fed to pastured sheep, it is best to feed them in the middle of the day so that normal grazing patterns are not disrupted.
- **Cattle** – Grazing occupies a large amount of time in both dairy cows (about eight hours per day) and in beef cattle (about nine hours per day)
- **Pigs** – On average, pigs eat 10–25 meals per day, with younger pigs having more meals than older pigs. As pigs grow, they eat faster, so older pigs spend less time eating than younger pigs.

Changes in eating behaviours could be indicators of pain, stress, illness/oncoming illness or that feed is no longer palatable.

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<sup>1</sup> Defra: Code of Recommendations for the Welfare of Livestock

**Topic 4.4 State the reasons for checking the condition of feed and water and to whom problems should be reported**

Check the condition of feed to ensure that it is fresh, free from contamination and is the right feed for the species.

Problems should be reported to the farm manager/owner or a person in charge.

In some circumstances, it may be necessary to report problems to a vet.

**Topic 4.5 Describe the types of problems that may occur during feeding and watering**

Prevent individual sheep from gorging by making sure there is plenty of trough space available to the flock.

Sufficient roughage must be available in all cattle diets to reduce the risk of inducing bloat or laminitis.

Monitor how much forage is available and, when there is no longer enough for the animals' needs, it should be supplemented with other suitable feeds.

Ensure that adequate trough space is provided to ensure that all pigs can receive their allocation of feed.

**Topic 4.6 State the limits of responsibility in relation to feeding and watering the livestock and resolving any problems**

Know your job responsibilities and clarify work instructions where necessary.

Seek regular support and supervision from your supervisor through supervisory sessions and bring any problems to the attention of your team leader.

Seek advice from work colleagues and supervisors to clarify objectives and activities.

Ensure that all major work activities are accurately documented/recorded.

Ensure that the health and welfare of animals in your care is maintained and promoted at all times.

**Topic 4.7 Describe the livestock's production performance and the relationship between this and feeding and watering**

Nutrition has the biggest impact on breeding and growth within the lifetime of a productive animal. However, the costs associated with achieving target growth pathways must be considered, together with returns from expected outcomes.

It is important to consider what nutrition the animal requires to achieve a particular specification for the intended market.

**Topic 4.8 State the importance of making sure that feeding and watering equipment is not able to injure the livestock**

It is important to ensure that equipment has no sharp edges and that it is clean. Electrical equipment must be earthed.

**Topic 4.9 State the types of records required and the importance of accurate record-keeping**

Records required may include the type and timing of feeds, recording wastage, cost of feed materials, incidents where medicated feed is used and uptake of feed by livestock.

Records can be kept manually or electronically.

## **Learning outcome 5: Know the relevant health and safety legislation and environmental good practice**

### **Topic 5.1 Outline the current health and safety and animal welfare legislation, codes of practice and any additional requirements**

See Topic 3.1 above for examples of legislation and codes of practice.

### **Topic 5.2 Describe how environmental damage can be minimised**

Minimise waste, recycle, avoid ground damage by grazing animals, avoid run-off from animal waste, dispose of waste correctly, feed appropriate amounts to avoid waste feed.

### **Topic 5.3 Describe the correct methods for disposing of organic and inorganic waste**

See Topic 3.3 above for further details.

## **Learning outcome 6: Know the types of equipment required and how to maintain them**

### **Topic 6.1 Describe the equipment that will be required for the activity**

- Feeding equipment – troughs, ring feeders, hayracks, creep feeders, teat feeders, bale crates, water troughs, water drinkers
- Handling equipment – feed barrows, shovels, scoops, hoppers
- Appropriate PPE – gloves, protective goggles, appropriate footwear

### **Topic 6.2 Describe how to maintain the variety of equipment needed to monitor and maintain the supply of feed and water to livestock**

This should include pre-use checks, avoiding cross-contamination and undertaking a PUWER check for powered equipment.

Keep clean and, where necessary, disinfect any equipment used in connection with primary production or animal feed.

Ensure equipment and materials are in the designated area when stored.

## Unit E1 – Move animals between locations

### What is this unit about?

This unit will provide the learner with the skills and knowledge to move animals between locations in a manner that is appropriate, minimises stress and is safe. It also covers making sure that the new location is safe, secure and suitable.

### Learning outcomes

	Learning outcome	Topic
1	Be able to move animals between locations	1.1) Select the animal to be moved and approach it in a manner that is likely to minimise stress 1.2) Prepare the route for the movement of animals 1.3) Check that the new location is safe, secure and suitable for the animal's requirements 1.4) Move the animal to its new location in an appropriate way and pace, while maintaining the well-being of the animal and other animals in the vicinity 1.5) Establish the animal in the new location, consistent with instructions 1.6) Provide clear and accurate information for recording purposes
2	Be able to work safely and minimise environmental damage	2.1) Work in a way that maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements 2.2) Wear appropriate protective clothing
3	Know how to move animals between locations	3.1) Describe the reasons for moving animals 3.2) Describe how to identify the animals to be moved 3.3) Describe how the animal's health status and behaviour may affect the movement process 3.4) Describe the importance of approaching animals in a manner that minimises stress 3.5) Describe the risks inherent in moving animals and how they can be minimised 3.6) Describe how to assess the safety, security and suitability of the new location 3.7) Describe how to select appropriate methods for moving animals based on: <ul style="list-style-type: none"> <li>• Their health</li> <li>• Environmental conditions</li> </ul> 3.8) Describe how to establish animals once they have been moved

		3.9) Describe how to identify problems and to whom they should be reported
4	Know the relevant health and safety legislation and environmental good practice	4.1) Outline the current health and safety and animal health and welfare legislation, codes of practice and any additional requirements relating to animal welfare legislation
5	Know how to maintain accurate records	5.1) Identify the types of records required and state the importance of accurate record-keeping

## Learning outcome 1: Be able to move animals between locations

### Topic 1.1 Select the animal to be moved and approach it in a manner that is likely to minimise stress

Identify and select the select correct animal(s) following instructions. Always approach animals quietly and calmly to avoid unnecessary stress. Approach animal at its level and at a safe distance.

### Topic 1.2 Prepare the route for the movement of animals

The route should be secure and escape-proof. Ensure that the area is safe for both the animal and handler – identify and remove all hazards, including trip hazards and wet floors that may cause slipping.

### Topic 1.3 Check that the new location is safe, secure and suitable for the animal's requirements

Ensure that the new location is free from hazards, is clean and uncontaminated. It must be suitable to meet livestock requirements; for example, suitable size, ventilation, lighting, humidity and environmental enrichments.

### Topic 1.4 Move the animal to its new location in an appropriate way and pace, while maintaining the well-being of the animal or other animals in the vicinity

Handle the animal appropriately and at a pace that will ensure its safety and avoid undue stress or injury. Ensure the animal being moved – and other animals in the vicinity – are kept under control.

### Topic 1.5 Establish the animal in the new location, consistent with instructions

Settle the animal into the enclosure. Spend time with the animal and observe it for signs of stress, which may include panting, excessive vocalisation, pacing and excessive salivation.

### Topic 1.6 Provide clear and accurate information for recording purposes

Records may be verbal, written or electronic. Record animal details and details of its move. Record animal responses to the move.

## Learning outcome 2: Be able to work safely and minimise environmental damage

### Topic 2.1 Work in a way that maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements

Follow legislation, such as the Health and Safety at Work Act 1974 and Control of Substances Hazardous to Health (COSHH) 2002. Ensure the safety of self and others. Follow any relevant animal welfare legislation and codes of practice.

### Topic 2.2 Wear appropriate protective clothing

Appropriate clothing may include gloves, aprons, steel toe-capped boots, rubber boots, etc.

## Learning outcome 3: Know how to move animals between locations

### Topic 3.1 Describe the reasons for moving animals

Animals may need to be moved to allow maintenance or cleaning of accommodation, to improve the suitability of the animal's location, for enrichment, or to meet the physical needs of the animal during pregnancy.

### Topic 3.2 Describe how to identify the animals to be moved

Check animal identification (ear tags, etc.) against records. Check with supervisor.

### Topic 3.3 Describe how the animal's health status and behaviour may affect the movement process

Injury or poor health may affect the pace at which the animal is moved. Poor health may delay the move. Aggressive or nervous behaviour will affect its pace of movement and may require more people to ensure adequate control and restraint.

### Topic 3.4 Describe the importance of approaching animals in a manner that minimises stress

To avoid undue stress, to ensure that the animal adapts to the move, to reduce the chance of injury to both handler and animal.

### Topic 3.5 Describe the risks inherent in moving animals and how they can be minimised

Risks may include crushing, trampling, bites, goring, etc. Risk can be reduced by approaching the animal calmly, using adequate control and restraint and having assistance, where necessary, to deal with potential aggression or unpredictable behaviour.

### Topic 3.6 Describe how to assess the safety, security and suitability of the new location

Check for cleanliness of the environment and hazards such as broken catches and sharp edges. Ensure the location is secure and escape-proof.

### Topic 3.7 Describe how to select appropriate methods for moving animals based on:

- **Their health** – Ensure the method suits the health status of the animal to prevent further injury or deterioration and stress. Allow the animal to move at its own pace.
- **Environmental conditions** – Ensure the method you choose allows the animal to move safely and adapt to the environment. Consider adapting methods to suit weather and surface conditions.



**Topic 3.8 Describe how to establish animals once they have been moved**

Settle the animal into the accommodation. Once there, spend time with the animal and observe it for signs of stress, which may include panting, excessive vocalisation, pacing and excessive salivation.

**Topic 3.9 Describe how to identify problems and to whom they should be reported**

Monitor the animal for signs of distress. Report to a supervisor immediately.

**Learning outcome 4: Know the relevant health and safety legislation and environmental good practice****Topic 4.1 Outline the current health and safety and animal health and welfare legislation, codes of practice and any additional requirements relating to animal welfare legislation**

Follow current legislation, to include the Health and Safety at Work Act 1974, Control of Substances Hazardous to Health (COSHH) 2002, Reporting of Injuries, Diseases and Dangerous Occurrence Regulations (RIDDOR) 1995, Environmental Protection Act 1990, Animal Health Act 1981 and Protection of Animals Act 1988.

**Learning outcome 5: Know how to maintain accurate records****Topic 5.1 Identify the types of records required and state the importance of accurate record-keeping**

Records may be written, electronic or verbal. They ensure the welfare of livestock and allow accurate, clear communication between staff and supervisors/farm owner.

## Unit F1 – Establish and confirm pregnancy in livestock

### What is this unit about?

This unit covers the establishment and confirmation of pregnancy in livestock through natural methods and by artificial insemination. Reproduction of livestock is an essential part of many livestock enterprises.

When working with livestock, you need to be appropriately trained in line with current legislation and hold a relevant award, where appropriate.

This standard is for those who are responsible for establishing and confirming pregnancy in the land based and environmental sector.

### Learning outcomes

	Learning outcome	Topic
1	Be able to establish and confirm pregnancy in livestock	<p>1.1) Select livestock animals that have been identified as suitable for breeding, in accordance with instructions</p> <p>1.2) Identify animals showing signs of heat</p> <p>1.3) Achieve fertilisation of the livestock using the correct methods and in accordance with instructions, using at least one of the following:</p> <ul style="list-style-type: none"><li>• Natural methods</li><li>• Artificial insemination</li></ul> <p>1.4) Check and confirm pregnancy, in accordance with instructions</p> <p>1.5) Provide clear and accurate information for recording purposes</p> <p>1.6) Assess and confirm the health and condition of the female throughout the pregnancy</p>
2	Know how to establish and confirm pregnancy in livestock	<p>2.1) Describe the anatomy of male and female reproductive systems and how fertilisation takes place</p> <p>2.2) Classify livestock suitable for breeding</p> <p>2.3) Describe the factors that influence conception</p> <p>2.4) Describe how to prepare livestock for service</p> <p>2.5) Give the positive and negative points of different methods of service</p> <p>2.6) Describe the signs indicating that an animal is pregnant</p> <p>2.7) State why it is necessary to maintain breeding records</p> <p>2.8) Describe the types of problems that may occur during pregnancy, including abortion and prolapses, and to whom these should be reported</p>

		2.9) Define and identify the types of records required and the importance of accurate record-keeping
3	Know the relevant health and safety legislation and environmental good practice	3.1) Outline the current livestock welfare and health and safety legislation, codes of practice and any additional requirements 3.2) Describe the correct methods for disposing of waste

## Learning outcome 1: Be able to establish and confirm pregnancy in livestock

### Topic 1.1 Select livestock animals that have been identified as suitable for breeding, in accordance with instructions

Animals are selected by breed, characteristics and condition. They are identified by ear tags, semi-permanent paint, freeze branding, etc.

### Topic 1.2 Identify animals showing signs of heat

Signs may include the animal being in an excited/restless/nervous condition, excessive/unusual vocalisations, reduced feed intake, licking and smelling other animals, attempting to mount other animals and frequent urination. Clear mucous discharge from the vulva will be observed, as well as swelling of the vulva and the tail being in a raised position. On palpation, the uterus will be turgid and the cervix will be opened.

### Topic 1.3 Achieve fertilisation of the livestock using the correct methods and in accordance with instructions, using at least one of the following:

**Natural methods** – Select a male animal for breeding and possibly undertake semen checks. Bring the male to females at the start of the breeding process. Monitor and record activity/services.

**Artificial insemination** – A male is artificially stimulated and semen collected. Semen can then be diluted, stored and used to inseminate females. For example, bull semen can be diluted and stored at room temperature for up to three weeks. Since the lifespan of sperm in the female tract is so short and ova only survive for 8–10 hours, the timing of the artificial insemination is critical. Successful conception depends upon detecting the time that the animal is “on heat” and when ovulation occurs.

### Topic 1.4 Check and confirm pregnancy in accordance with instructions

- **Cattle** – Rectal palpation, blood tests, ultrasound
- **Sheep** – Check for absence of heat, ultrasound, blood tests
- **Pigs** – Daily observations, blood tests, ultrasound

### Topic 1.5 Provide clear and accurate information for recording purposes

Records may be written, electronic or verbal. Follow organisational procedures. Records may include ear tag data to identify the animal, dates of breeding/insemination, breed, sire, dam, etc.

### Topic 1.6 Assess and confirm the health and condition of the female throughout the pregnancy

Monitor animals. Encourage exercise and normal eating behaviour. Animals can be sorted into groups and fed accordingly if changes in body condition scores are needed during this time. During the last third of pregnancy, adjust nutrition to increase protein and energy to aid normal foetal development.

## Learning outcome 2: Know how to establish and confirm pregnancy in livestock

### Topic 2.1 Describe the anatomy of male and female reproductive systems and how fertilisation takes place

- **Male** – Testes, semen, accessory glands, penis, sperm
- **Female** – Ovaries, ovum, cervix, womb, uterus, vagina, fallopian tubes

Copulation deposits several hundred million sperm in the vagina. They swim through the cervix and uterus to the fallopian tubes. During this journey, the sperm undergo their final phase of maturation so they are ready to fertilise the ovum by the time they reach it in the upper fallopian tube.

High mortality means only a small proportion of sperm deposited actually reach the ovum.

The sperm attach to the outer ovum membrane. Enzymes secreted from the head of the sperm dissolve this membrane so it can enter. Once one sperm has entered, further sperm are prevented from penetrating. The sperm loses its tail and the two nuclei fuse to form a zygote with the full set of paired chromosomes restored<sup>1</sup>.

### Topic 2.2 Classify livestock suitable for breeding

Consider breed and temperament. Consult with conformation guides and market specifications.

### Topic 2.3 Describe the factors that influence conception

Breeding stock, type/method of insemination, condition of the herd/flock, chance, game between birth and first insemination, weather, season, etc.

### Topic 2.4 Describe how to prepare livestock for service

Methods include adjusting nutrition ahead of service and monitoring the oestrous cycle to ensure correct timing of service.

### Topic 2.5: Give the positive and negative points of different methods of service

- **Artificial insemination** – Dilution of the semen means that one male can be used to fertilise many more females than under natural conditions. There are also advantages in the male and female not having to make physical contact. Routine examination of the semen for sperm concentration, quality and activity allows only the highest quality semen to be used, so a high success rate is ensured.
- **Natural methods** – Reduces the need for heat detection. Possible slight improvement in conception rates. Expensive, possible biosecurity issues.

### Topic 2.6 Describe the signs indicating that an animal is pregnant

Signs may include cessation of oestrus cycle, sluggish temperament, tendency to fatten, gradual drop in milk yield, gradual increase in weight and increase in size of udder.

### Topic 2.7 State why it is necessary to maintain breeding records

Maintaining good records will help to pinpoint problem areas; determine the 'reproductive efficiency' of breeding stock and management practices; identify trends and tendencies related to age, season, etc.; ensure management decisions are made for good reasons and based on objectively gathered data.

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<sup>1</sup> [https://en.wikibooks.org/wiki/Anatomy\\_and\\_Physiology\\_of\\_Animals/Reproductive\\_System#Fertilisation](https://en.wikibooks.org/wiki/Anatomy_and_Physiology_of_Animals/Reproductive_System#Fertilisation)

**Topic 2.8 Describe the types of problems that may occur during pregnancy, including abortion and prolapses, and to whom these should be reported**

- **Sheep** – Toxaemia, prolapse, hypocalcaemia, mastitis, metritis, listeriosis
- **Cattle** – Toxaemia, prolapse, dropsy conditions
- **Pigs** – Brucellosis, clostridial, mineral or vitamin deficiencies

Report problems to a line manager, veterinarian, business owner, colleagues, etc.

**Topic 2.9 Define and identify the types of records required and the importance of accurate record-keeping.**

Records can be written, verbal or electronic. Topic 2.7 outlines the reasons for accurate record-keeping.

**Learning outcome 3: Know the relevant health and safety legislation and environmental good practice**

**Topic 3.1 Outline the current livestock welfare and health and safety legislation, codes of practice and any additional requirements**

Legislation may include the Health and Safety at Work Act 1974, Control of Substances Hazardous to Health (COSHH) 1991, Provision and Use of Work Equipment Regulations (PUWER) 1998, Animal Welfare Act 2006, Transport of Animals order (2006).

Be aware of how animals may be hurt by, for example, biting, scratching, kicking or butting, crushing and zoonosis.

**Topic 3.2 Describe the correct methods for disposing of waste**

Dispose of waste safely and correctly. Dispose of waste materials following the correct procedures for clinical, domestic or industrial waste, as appropriate. Segregate waste according to current legislation. Dispose of waste according to current legislation, using licensed companies.

## Unit F2 – Monitor and maintain livestock during pregnancy

### What is this unit about?

This unit provides the learner with the knowledge and skills required to care for livestock during pregnancy. This includes monitoring the animal's health and condition and reporting any concerns.

### Learning outcomes

	Learning outcome	Topic
1	Maintain livestock during pregnancy	1.1) Check that accommodation for the livestock is in accordance with instructions 1.2) Provide feed and water correctly, in accordance with livestock requirements during pregnancy 1.3) Provide clear and accurate information for recording purposes 1.4) Recognise the health and condition of an animal based on: <ul style="list-style-type: none"><li>• Appearance</li><li>• Posture and movement</li><li>• Behaviour</li></ul>
2	Work safely and minimise environmental damage	2.1) Work in a way that maintains health and safety and animal welfare and is consistent with relevant legislation, codes of practice and any additional requirements

### Learning outcome 1: Maintain livestock during pregnancy

#### Topic 1.1 Check that accommodation for the livestock is in accordance with instructions

Ensure accommodation is well ventilated, clean, appropriately lit (if indoors), a suitable size for given numbers of animals and their length of stay, has dry and plentiful bedding and access to food and water. Environment should be clean – remove wet and dirty bedding, etc. Flooring should be suitable and clean. Provide clean and dry bedding.

#### Topic 1.2 Provide feed and water correctly, in accordance with livestock requirements during pregnancy

Providing feed rations that have been properly balanced for energy, protein, minerals and vitamins will ensure that animals' nutrient requirements are met and not exceeded, which would lead to waste and inefficiency. Follow feed plans appropriate to the species.

#### Topic 1.3 Provide clear and accurate information for recording purposes

Follow workplace standard operating procedures for recording and providing information; for example, type of feed and water required, amount and whether eaten, change of diet, etc.

#### **Topic 1.4 Recognise the health and condition of an animal based on:**

- **Appearance** – Normal feeding habits, breathing, vocalisation, bright eyes and no sign of deformities/injuries  
**Posture and movement** – Standing and moving correctly, even weight distribution, no sign of limping or lameness
- **Behaviour** – As noted above, eating, drinking, licking, scratching, smelling, looking and reacting to stimuli

### **Learning outcome 2: Work safely and minimise environmental damage**

#### **Topic 2.1 Work in a way that maintains health and safety and animal welfare and is consistent with relevant legislation, codes of practice and any additional requirements**

Follow all company policies and procedures.

Legislation may include Animal Health Acts, Animal By-Products Regulations, Environmental Protection Acts, codes of practice as applicable, risk assessments and any additional requirements, including obtaining licences and approval to dispose some types of waste.

Health and Safety regulations include Personal Protective Equipment Regulations 2002, Control of Substances Hazardous to Health (COSHH) Regulations 2002, Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR) 1995 and the Health and Safety at Work Act 1974.

## Unit F3 – Maintain the health and welfare of livestock during and after birth

### What is this unit about?

This unit will provide the learner with the knowledge and skills required to monitor and maintain the health and welfare of livestock during parturition. The learner will also monitor the condition of both the mother and offspring after birth.

### Learning outcomes

	Learning outcome	Topic
1	Maintain the health and welfare of livestock during and after birth	1.1) Maintain accommodation for the livestock in accordance with instructions during parturition 1.2) Maintain appropriate levels of hygiene and biosecurity 1.3) Identify the signs of parturition 1.4) Observe the health and condition of the female throughout parturition and report any concerns to the appropriate person 1.5) Provide the mother and young with suitable care, in accordance with instructions
2	Work safely and minimise environmental damage	2.1) Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements 2.2) Dispose of waste safely and correctly 2.3) Provide clear and accurate information for recording purposes
3	Select, use and maintain the relevant equipment	3.1) Select the appropriate equipment for this area of work 3.2) Use equipment according to relevant legislation and manufacturers' instructions 3.3) Prepare, maintain and store equipment in a safe and effective working condition

### Learning outcome 1: Maintain the health and welfare of livestock during and after birth

#### Topic 1.1 Maintain accommodation for the livestock in accordance with instructions during parturition

Ensure accommodation is well-ventilated, clean, appropriately lit (if indoors), a suitable size for given numbers of animals and their length of stay, has dry and plentiful bedding and access to food and water. Environment should be clean – remove wet and dirty bedding, etc. Flooring should be suitable and clean. Provide clean and dry bedding.



### **Topic 1.2 Maintain appropriate levels of hygiene and biosecurity**

Remove animals before cleaning their accommodation. Remove bedding, etc. and organic debris, clean with detergent and disinfect. Follow directions for chemicals.

Thoroughly clean equipment, including all recesses, grooves, hinges, etc.

Wear appropriate personal protective equipment (PPE) at all times, including clean overalls, gloves, etc.

### **Topic 1.3 Identify the signs of parturition**

- **Cattle** – Increased udder size, swollen vulva, disappearing pelvic ligaments, mucus, restlessness
- **Sheep** – Separates from herd, vulva swelling and mucus forming
- **Pigs** – Restlessness, loss of appetite, sow lies down frequently, vulva swells, mucus discharge, sow prepares nest from the straw

### **Topic 1.4 Observe the health and condition of the female throughout parturition and report any concerns to the appropriate person**

- **Pigs** – Farrowing takes between two and four hours. As the process starts, the sow will lie down on her side. The expulsion of a piglet is accompanied by marked tail swishing and fluid expulsion with mild straining. Piglets are delivered at intervals of approximately 15 minutes. Observations suggest that sows deliver a small number of piglets (say, two to four) at 10–20 minute intervals, before appearing to stop for 60–90 minutes. They then start again, with normal delivery intervals. There appears to be no problem here, but if such delays occur in the second half of the farrowing process, stillbirths are likely.
- **Cattle** – The birth process is divided into three stages. First-stage labour is represented by dilatation of the cervix and the cow will separate itself from the rest of the herd. Second-stage labour is represented by expulsion of calf (calves), and takes from five minutes to several hours. Third-stage labour is completed by expulsion of fetal membranes (afterbirth or cleansing), which usually occurs within two or three hours of the birth of the calf.
- **Sheep** – The birth process is divided into three stages. First-stage labour is represented by cervical dilatation; second-stage labour by expulsion of the foetus; third stage labour is completed by expulsion of foetal membranes. There are various behavioural changes, including the ewe having a reduced desire to feed, seeking a sheltered area of the field or corner of the barn, pawing at the ground and frequently sniffing at this area and alternately lying/standing.

An appropriate person could be the farm manager, supervisor, a suitably qualified person or vet.

### **Topic 1.5 Provide the mother and young with suitable care, in accordance with instructions**

- **Cattle** – Ensure calf can ingest its mother's first milk, the colostrum. Disinfect the calf's umbilical region with a tincture of iodine or another disinfectant (to prevent any infection from entering the bloodstream through the navel). The final stage of parturition is the cleaning stage, where the cow must expel the placenta. The cow should be observed closely over the next 12 hours or so, to make sure that the afterbirth has been expelled. If a cow fails to clean within 24 hours of delivery, a veterinarian should be contacted.
- **Pigs** – Remove membranes from around the piglet's nose to enable breathing. Disinfect navels with iodine. Keep piglets warm.
- **Sheep** – Ensure that lambs receive an intake of colostrum.

## Learning outcome 2: Work safely and minimise environmental damage

### Topic 2.1 Work in a way that maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements

Legislation may include the Animal Welfare Act 2006, The Welfare of Farmed Animals (England) Regulations 2007, EU legislation governing specific animal welfare and the “Five Freedoms”.

Health and safety regulations may include Personal Protective Equipment (PPE) Regulations 2002, Control of Substances Hazardous to Health (COSHH) Regulations 2002, Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR) 1995 and the Health and Safety at Work Act 1974.

### Topic 2.2 Dispose of waste safely and correctly

Dispose of waste materials, following the correct procedures for clinical, domestic or industrial waste, as appropriate. Segregate waste according to current legislation. Dispose of waste according to current legislation, using licensed companies.

### Topic 2.3 Provide clear and accurate information for recording purposes

Records can be verbal, written or electronic.

## Learning outcome 3: Select, use and maintain the relevant equipment

### Topic 3.1 Select the appropriate equipment for this area of work

Appropriate equipment will include face masks, aprons, shoulder-length gloves and goggles when using/preparing chemicals. Appropriate clean footwear and disposable overalls. Lambing ropes, buckets, iodine solutions, heat lamps.

### Topic 3.2 Use equipment according to relevant legislation and manufacturers' instructions

Follow manufacturers' guidance at all times. If in doubt about how equipment should be used, seek advice from colleagues or management.

### Topic 3.3 Prepare, maintain and store equipment in a safe and effective working condition

Visual checks should be carried out on a regular basis and maintenance and cleansing records should be kept. Return equipment to its correct storage place. Record equipment that needs repairing or replacing. Undertake regular routine maintenance, such as sharpening.

## Unit G1 – Livestock husbandry

### What is this unit about?

This unit introduces the skills and knowledge needed for agricultural livestock production and how these are applied in practice.

The unit covers a variety of common husbandry techniques that are required on livestock farms. It covers practical skills that are relevant to beef, dairy, pig and sheep production systems.

### Learning outcomes

	Learning outcome	Topic
1	Carry out beef and dairy husbandry activities	1.1) Carry out the following husbandry tasks on beef and dairy cattle: <ul style="list-style-type: none"><li>• Ear tagging</li><li>• Disbudding</li><li>• Daily stock check for health issues (lameness, mastitis etc)</li><li>• Milking (where relevant)</li></ul>
2	Carry out pig husbandry activities	2.1) Carry out the following pig husbandry tasks: <ul style="list-style-type: none"><li>• Tagging procedures</li><li>• Appropriate storage and use of semen</li><li>• Artificial insemination of livestock/supervision of natural mating</li><li>• Administration of appropriate treatments, including euthanasia</li></ul>
3	Carry out sheep husbandry activities	3.1) Carry out the following sheep husbandry tasks <ul style="list-style-type: none"><li>• Ear tagging</li><li>• Docking and castration</li><li>• Preparation for shearing</li><li>• Crutching</li><li>• Lameness assessment and respond appropriately</li></ul>

### Learning outcome 1: Carry out beef and dairy husbandry activities

#### Topic 1.1 Carry out the following husbandry tasks on beef and dairy cattle:

- **Ear tagging**

Disinfect the tag and load the tag supplied with the appropriate applicator. Hold/restrain the animal securely. Insert the tag in the middle/lower ear, one-third from the head and two-third from the tip of the ear.

The female part of the tag should always be placed at the front of the ear. Avoid piercing the ridges of cartilage in the middle of the ear because this may deform the ear and can result in infection.

Cattle should be tagged from the back of the ear and the tag then rotated 180° to the correct position, facing downwards.

- **Disbudding**

Hot disbudding (heated iron). Anaesthesia is a legal requirement and essential. Restrain animals and clip hair around the horn bud. Ideally, all cattle in the UK should be disbudded using a hot iron to burn the horn bud-producing tissue. Use of scoops and other similar instruments causes more pain and distress and should be avoided.

- **Daily stock check for health issues**

Cows with good mobility will walk with even weight-bearing rhythm on all four feet, with a flat back. Lamé cattle will be unable to keep up with the healthy herd and will either show uneven weight-bearing on a limb that is immediately identifiable, or will walk with shortened strides and an arched back.

Causes of lameness include poor quality floors in cattle housing, poor cow tracks, cows being forced to stand for too long on hard surfaces, poorly designed cubicles, ineffective foot trimming, infectious diseases and poor nutrition.<sup>1</sup>

The most obvious symptoms of clinical mastitis are abnormalities in the udder, such as swelling, heat, hardness, redness, or pain; and in the milk, such as a watery appearance, flakes, clots or pus.

Practices such as paying close attention to milking hygiene, culling chronically infected cows, good housing management and effective dairy cattle nutrition to promote good cow health are essential in helping to control herd mastitis levels

- **Milking**

Safely herd livestock into the parlour and position them properly. Check for signs of mastitis and ensure udders are clean.

Check machinery is functioning correctly, correctly attach units to livestock and remove when milking ceases. Remove livestock from the parlour quickly and safely. Report any problems with livestock or equipment to a supervisor.

Complete the milking procedure in the time allocated. Check the quality of milk for human consumption. Properly dispose of contaminated milk, according to instructions.

## Learning outcome 2: Carry out pig husbandry activities

### Topic 2.1 Carry out the following pig husbandry tasks:

- **Tagging procedures**

Restrain in a suitable handling system. Clean the ear prior to tagging because infections can be caused by unhygienic practice.

Follow the manufacturer's instructions to fit the tag correctly. Position the tag in the centre of the flat part of the ear, avoiding visible veins and ridges of cartilage. If placed too low or too close to the edge, the tag may be pulled out by ripping through the ear.

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<sup>1</sup> <https://dairy.ahdb.org.uk/technical-information/animal-health-welfare/lameness/husbandry-prevention/mobility-scoring/#.XAU88eKYSUK>

Clean the pliers after use and store them, along with any unused tags, in a clean place<sup>2</sup>.

- **Appropriate storage and use of semen**

Storage temperature should be within the range of 15–19°C (59–66°F) to maintain viability and maximise shelf life. Store in a dedicated storage container – never in a domestic refrigerator.

Semen is extremely temperature-sensitive and shelf life is significantly reduced at temperatures above 20°C. Viability is reduced and sperm may even suffer cold shock and die below 15°C.

Turn or gently agitate stored semen twice a day.

Calculate the number of doses needed for one hour's worth of inseminations and only remove the required number of doses from storage at any one time. This prevents unnecessary and prolonged exposure of semen to temperature fluctuations and avoids returning unused and possibly damaged semen to storage<sup>3</sup>.

- **Artificial insemination (AI) of livestock/supervision of natural mating**

- **AI** – Nose-to-nose contact with a “chatty” active boar is essential during AI. Boar contact should be maintained throughout insemination and for the 10 minute “rest period” after insemination.

The stockperson must mimic some of the stimulation normally provided by the boar, for example applying back pressure, flank/udder rubbing.

Always maintain good hygiene standards.

Insert insemination catheter. When a firm resistance is felt, the catheter is pulled slightly back to achieve a firm lock. Once the catheter is firmly locked in place, the flat pack is raised above the level of the vulva to an angle of 45° above the horizontal. With a good insemination, this process will be completed within three minutes, but may take up to five minutes.

The catheter is left in the sow for five minutes to continue the cervical stimulation and maintain uterine contractions.

Allow the sow to rest for 10 minutes and then return her to her weaned group. Record any events such as bleeding.

- **Natural mating** – Supervise to ensure that a satisfactory service occurs. When the sow is introduced to a boar and it is obvious that she will not stand, she should be removed as quickly and quietly as possible.

It is not advisable to leave a sow unattended with the boar because there is a risk that the boar may cause serious injury to the sow, especially if he is very aggressive.<sup>4</sup>

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<sup>2</sup> <http://www.thepigsite.com/articles/4920/tagging-animals-for-identification/>

<sup>3</sup> <http://www.thepigsite.com/articles/3910/semen-storage-and-handling/>

<sup>4</sup> <http://www.thepigsite.com/articles/1593/basic-pig-husbandry-the-boar/>

- **Administration of appropriate treatments, including euthanasia**

See Unit B4 for details of how to administer treatments.

If you are signed off as competent for the type of pig, carry out the appropriate euthanasia procedure without delay.

If you are not signed off as competent for the type of pig, promptly contact the relevant person (relevant to the pig type and the method) – if they cannot be on the site within 60 minutes, an alternative trained and competent person must attend to the pig.

The trained and competent person must:

- Confirm that euthanasia is the best course of action for the welfare of the pig
- Restrain the pig (in a way appropriate to the size)
- Kill the pig as soon as possible with a method relevant to the pig type
- Check that the kill (or stun/kill) has been effective
- If the kill (or stun/kill) has been ineffective, re-administer and re-check effectiveness
- Move the carcase to secure storage prior to disposal<sup>5</sup>

## Learning outcome 3: Carry out sheep husbandry activities

### Topic 3.1 Carry out the following sheep husbandry tasks

- **Preparation for shearing**

A sheep shearer should be contacted well in advance of shearing time. Sheep should be penned before shearing. They should be sorted into the following groups: lambs, yearlings, rams and ewes by breed and/or grade. Sheep should be fasted before shearing. This will result in a much cleaner shearing floor. A full stomach also contributes to animal discomfort during shearing. Wet sheep should not be shorn. Sheep should be shorn on a clean, dry surface (e.g. wood, carpet, canvas or concrete). The shearing area should be swept after each sheep to provide a clean surface for the next.

- **Crutching**

Crutching is similar to shearing, but only a portion of the animal is shaved, with the aim of maintaining the cleanliness of the animal and reducing incidents of flystrike.

- **Lameness assessment and respond appropriately**

- **Flock assessment** – The flock is first observed in an undisturbed condition to identify animals that cannot bear weight on a foot when standing. They may either hold the foot off the ground, or be grazing in a kneeling position. Animals should then be gently encouraged to walk away from the assessor, who observes the animal's gait.
- **Individual assessment** – Individual animals should be encouraged to walk along a race, preferably on a hard, flat surface, if this available, and gait-scored.<sup>6</sup> (This is not standard or expected practice on commercial farms)

Most outbreaks of lameness in sheep are caused by either interdigital dermatitis (scald) or footrot; footrot is responsible for 90% of sheep lameness.

<sup>5</sup> <https://assurance.redtractor.org.uk/contentfiles/Farmers-5403.pdf>

<sup>6</sup> <http://responsiblewool.org/wp-content/uploads/2016/07/Lameness-Scoring-Guidance.pdf>

Treatment for scald is antibiotics and foot baths; for footrot, use a long-acting antibiotic injection.

- **Tail docking and castration**

Castration may only be carried out in strict accordance with the law and only by a competent, trained operator. Castration may only be performed by a veterinary surgeon, using a suitable anaesthetic.

Under the Protection of Animals (Anaesthetics) Act 1954, as amended, it is an offence to castrate lambs that have reached three months of age without the use of an anaesthetic. Furthermore, the use of a rubber ring, or other device to restrict the flow of blood to the scrotum or tail, is only permitted without an anaesthetic if the device is applied during the first week of life.

Consider carefully whether tail docking is necessary within a particular flock. Tail docking may only be carried out if failure to do so would lead to subsequent welfare problems because of dirty tails and potential flystrike.

Tail docking must be carried out only in strict accordance with the law and only by a competent, trained operator.

The Welfare of Livestock (Prohibited Operations) Regulations 1982 (SI 1982 No. 1884), as amended by the Welfare of Livestock (Prohibited Operations) (Amendment) Regulations 1987 (SI 1987 No. 114) prohibit penis amputation and other penile operations, tooth grinding, freeze dagging and short-tail docking of sheep unless, in the case of female sheep, sufficient tail is retained to cover the vulva and, in the case of male sheep, the anus.

If it is considered that both tail docking and castration are necessary, thought should be given to performing both operations at once, so as to minimise disruption and the potential for mis-mothering and distress.<sup>7</sup>

- **Ear tagging**

Hold the sheep securely. Insert the tag into the middle/lower ear, one-third from the head and two-thirds from the tip of the ear. One-third of the tag should show below the ear. This point of the tag should go in from the outside of the ear, ending up on the inside of the ear when applied. Avoid piercing the ridge of cartilage along the top of the ear because this may deform the ear and can result in infection. Adult stock should be tagged from the backward ear position and the tag then rotated 180° to the correct position, facing downwards. Small animals can be tagged from the forward position – this will avoid the need to rotate the tag.

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<sup>7</sup> <https://www2.gov.scot/Publications/2009/06/18114052/6>

## Unit 10 – Input costs, cost of production, margins and impact on business profitability

### What is this unit about?

This unit focuses on the range of financial and physical records that are required to meet legal requirements as well as to ensure effective business operation. Learners will become aware of paper-based and computerised systems for financial records and how these can be used to aid decision-making, monitor and control business performance.

### Learning outcomes

	Learning Outcome	Topic
1)	Understand how to use financial and physical record-keeping systems	1.1) Monitor business performance and progress 1.2) Financial records 1.3) Physical records

### Learning outcome 1: Understand how to use financial and physical record-keeping systems

#### Topic 1.1: Monitor business performance and progress

Learners will understand how financial and physical records are used in monitoring business performance and progress to include:

- production levels
- costs of production – input costs, staffing costs, drying costs, harvesting costs, etc.
- financial efficiency – monitoring income and expenditure, storing information correctly, recording transactions in a timely manner
- monitoring against targets – check regularly to ensure budget is on target. Check actual spend against budgeted expenditure
- budgets – understand the farm budget and maintain records for inspection (receipts, invoices, purchase orders, etc.)
- previous periods
- relevant review periods, i.e. weekly, monthly, annually – ensures that transactions are being recorded, that expenditure is checked against budget assumptions, allows for appropriate remedial actions
- staff roles in recording and analysing information – spending funds appropriately, managing budgets, monitoring and recording expenditure, recording transactions, keeping records up to date, minimising costs, reporting your own actions and those of your team



### **Topic 1.2: Financial Records**

Learners will understand the importance of keeping accurate financial records in relation to legal requirements and management efficiency.

Learners will understand the following financial records used within the business:

- purchasing and ordering procedures
- order forms and orders
- deliveries and receipts
- invoices and sales records
- credit control
- payment methods
- bookkeeping, i.e. cash analysis, petty cash, cash flow, budgets, computer accounts programmes
- basic accounts, i.e. trading account, balance sheet, depreciation
- taxation, i.e. VAT, income tax PAYE, national insurance contributions, corporation tax
- wage calculation

### **Topic 1.3: Physical records**

Learners will understand the importance of maintaining physical records for the farm business, to include:

- production
- inputs
- staffing
- customers
- resource use
- data protection
- legal requirements to keep records, e.g. pesticide use, veterinary medicines, transport, animal movement, passports

Learners will be able to: identify records and check that they are suitable for their intended use; make entries that are accurate and complete; understand the importance of storing sensitive information in line with legal and organisational requirements; take appropriate actions to remedy mistakes and omissions.

# Unit H1 – Maintain and develop personal performance

## What is this unit about?

This unit will provide the learner with the knowledge and skills to agree and develop their own personal performance with an appropriate person.

The learner will maintain and develop personal performance with regards to working to targets and completing specific tasks.

## Learning outcomes

	Learning outcome	Topic
1	Maintain personal performance	1.1) Identify current competence and areas for development using relevant techniques and processes 1.2) Carry out work in accordance with responsibilities and organisational requirements
2	Develop personal performance	2.1) Agree personal performance and targets with an appropriate person 2.2) Review performance and progress regularly and use the outcome to plan future development activities 2.3) Seek advice from an appropriate person if clarification of specific tasks is required 2.4) Seek constructive feedback and advice from others and use it to help maintain and improve performance
3	Know how to develop personal performance	3.1) State own limits of responsibility in relation to specific tasks and activities 3.2) State who to obtain advice from in relation to specific tasks and activities 3.3) List the correct procedures for obtaining advice 3.4) State the risks involved in not obtaining advice when specific tasks and activities are unclear 3.5) Describe how to determine and agree development needs and personal targets 3.6) State why personal performance should be reviewed

## Learning outcome 1: Maintain personal performance

### **Topic 1.1 Identify current competence and areas for development using relevant techniques and processes**

May include certificates of competence, previous qualifications, references from previous employers, appraisals, training programmes, team discussions, demonstrations in the work environment, etc.

### **Topic 1.2 Carry out work in accordance with responsibilities and organisational requirements**

Carry out duties according to own work programme and the organisation's requirements. Discuss new areas of work with line managers or supervisors. Clarify precise duties and needs in discussions with line managers. Maintain appropriate records to evidence actions taken. Discuss role with line managers and act on appropriate and relevant feedback.

## Learning outcome 2: Develop personal performance

### **Topic 2.1 Agree personal performance and targets with an appropriate person**

In discussions with line managers and/or supervisors, establish your aims and objectives (or goals); i.e. what you want to achieve or where you want to go in the short, medium or long-term in your career. Assess your current position and identify needs for improving skills, knowledge or competence.

### **Topic 2.2 Review performance and progress regularly and use the outcome to plan future development activities**

Agree performance-related reviews with manager. Annual appraisals and more regular review meetings.

To an extent, achievement of this topic will depend on the organisation's processes.

### **Topic 2.3 Seek advice from an appropriate person if clarification of specific tasks is required**

Provide evidence/records (verbal or in writing) of times when advice or guidance has been sought – particularly with reference to development plans agreed as part of Topic 2.1.

### **Topic 2.4 Seek constructive feedback and advice from others and use it to help maintain and improve performance**

Evidence of occasions when feedback has been sought and given may come from a formal write up of performance plans and assessments, or more informal evidence from colleagues and line managers.

## Learning outcome 3: Develop personal performance

### **Topic 3.1 State own limits of responsibility in relation to specific tasks and activities**

Know and understand your responsibilities from your job description and be able to relay these.

### **Topic 3.2 State who to obtain advice from in relation to specific tasks and activities**

Appropriate people may include line managers, colleagues, technical experts, veterinarians and other specialists/appropriately qualified people.

### **Topic 3.3 List the correct procedures for obtaining advice**

Understand the organisation's procedures for obtaining advice. Understand organisation's hierarchy. Know the roles and experience of colleagues and managers. Know where to obtain expert advice if needed – technical manuals, specialists, etc.

### **Topic 3.4 State the risks involved in not obtaining advice where specific tasks and activities are unclear**

Be able to state the risks to the individual, livestock and the business if tasks are not carried out correctly. Know to always seek advice if unsure about any particular task or part of task.

### **Topic 3.5 Describe how to determine and agree development needs and personal targets**

This will include one-to-ones, appraisals and performance reviews with managers and supervisors.

### **Topic 3.6 State why personal performance should be reviewed**

Ensures that targets are set and met. Can motivate individuals. Ensures that an individual's performance is helping to achieve their own goals and those of the organisation. Can identify areas that need improvement and training needs. Provides an opportunity to assess future goals.

## Unit H2 – Communication

### What is this unit about?

This unit will provide the learner with the knowledge, understanding and skills required to communicate information within the workplace.

### Learning outcomes

	Learning outcome	Topic
1	The principles and techniques of work-related communication	1.2) The importance of clear and unambiguous communication 1.3) Different forms of communication aids and their uses 1.4) The value of effective and timely communication in customer care
2	Communicate work-related information	2.1) Communicate with others, including team, clients, the public and colleagues 2.2) Use basic IT systems when communicating

### Learning outcome 1: The principles and techniques of work-related communication

#### Topic 1.1 The importance of clear and unambiguous communication

Know the communication techniques used to gain and maintain the attention and interest of an audience.

Understand the purposes of communication to:

- Exchange information
- Make or confirm arrangements
- Persuade staff or customers
- Make plans
- Develop skills and knowledge
- Build or maintain relationships
- Delegate tasks to team
- Advise team when performing well or under-performing

Know:

- The level of detail that may be required and the need for clarity
- The importance of confirming information and why this should be acknowledged and accurately recorded
- The importance of explaining to others the level of confidence that can be placed on the information being communicated
- The relevant legislation in receiving and sending information

## **Topic 1.2 Different forms of communication aids and their use**

Know:

- The different methods for communicating information and the ways it may need to be adapted to suit the audience
  - Written, e.g. letters, reports
  - Electronic, e.g. emails, texts
  - Verbal, e.g. telephone calls
  - Face-to-face, e.g. meetings, presentations
  - Distance, e.g. video conferencing
- The principles of effective written, verbal and IT communications in a business environment
- The advantages and disadvantages of different methods of communication for different purposes

## **Topic 1.3 The value of effective and timely communication in customer care**

Understand:

- The importance of effective communication in customer service
- How tone of voice, choice of expression and body language can affect the way customers perceive their experience
- Why 'customer service language' is used
- Verbal and non-verbal signals that show how a customer may be feeling
- The types of information needed when communicating verbally with customers
- When information may be required urgently
- Why it is important to take messages accurately and the potential effects of not doing so
- The situations in which confidentiality must be maintained
- The importance of handling customer complaints

## **Learning outcome 2: Communicate work-related information**

### **Topic 2.1 Communicate with others, including team, clients, the public and colleagues**

Be able to:

- Identify the information to be communicated
- Confirm that the audience is authorised to receive the information
- Provide accurate information using an appropriate communication method, e.g. verbally, in writing, etc.
- Communicate in a way that the listener can understand, using language that is appropriate to the topic
- Confirm that the listener has understood what has been communicated
- Communicate with people clearly, concisely and professionally
- Use correct grammar, spelling, sentence structure and punctuation in written communications
- Pass on messages accurately, receive and forward on information
- Identify customers' wants and priorities

- Listen 'actively' to what people are saying
- Use a tone of voice and expression that reinforces messages when communicating
- Use language that reinforces empathy with people
- Adapt a response in accordance with peoples' changing behaviour
- Provide information and advice that meets customers' needs
- Maintain organisational standards of behaviour and communication when interacting with people
- Check that people have understood what has been communicated
- Adhere to organisational policies and procedures, legal and ethical requirements when communicating verbally with people
- Escalate any problems that cannot be resolved by yourself

### **Topic 2.2 Use basic IT systems when communicating**

- Use IT for checking/monitoring works carried out by the team, which might include handheld devices/computer software
- Use mobile phones for making calls
- Send/receive emails

## Unit H3 – Establish and maintain effective working relationships with others

### What is this unit about?

This unit will provide the learner with the knowledge and skills required to work effectively with others under minimal direction through clear communication and cooperation.

The learner will establish and maintain effective working relationships with colleagues, supervisors and managers and persons external to the team, department or organisation.

### Learning outcomes

	Learning outcome	Topic
1	Maintain working relationships with others	<p>1.1) Identify opportunities to improve working practices with the appropriate person</p> <p>1.2) Carry out activities requiring cooperation with others, in accordance with required procedures</p> <p>1.3) Communicate with others in a way that promotes effective working relationships</p> <p>1.4) Keep others informed about work plans or activities that affect them</p> <p>1.5) Seek assistance from others without causing undue disruption to normal work activities</p> <p>1.6) Respond in a timely and positive way when others ask for help or information</p>
2	Understand why good working practices are important	<p>2.1) State why good working relationships are important</p> <p>2.2) Suggest ways in which good working relationships can be maintained</p> <p>2.3) State the methods of dealing with disagreements within the workplace</p> <p>2.4) Describe own level of responsibility in relation to dealing with disagreements</p> <p>2.5) State why effective communication is important</p>

### Learning outcome 1: Maintain working relationships with others

#### Topic 1.1 Identify opportunities to improve working practices with the appropriate person

Identify and suggest ways in which the business might improve the way things are done; think about health and safety issues, ways to improve animal welfare, ways in which things can be done more efficiently or with improved cost effectiveness. Work closely with managers and colleagues to implement changes and agree on solutions.



**Topic 1.2 Carry out activities requiring cooperation with others, in accordance with required procedures**

Where agreed, implement the changes, working closely with colleagues, outside organisations and other suppliers, as appropriate.

**Topic 1.3 Communicate with others in a way that promotes effective working relationships**

Listen attentively and actively to others. Speak clearly and ensure that others understand your message. Demonstrate competence in a variety of communication methods: speaking, writing, email, etc.

**Topic 1.4: Keep others informed about work plans or activities that affect them**

Ensure effective and timely communication of activities. Tell others of work plans that involve or affect them.

**Topic 1.5 Seek assistance from others without causing undue disruption to normal work activities**

Be aware that when you need to ask for help or assistance for a task, this should be in line with policies or to ensure your safety in the workplace. Communicate with colleagues and work across departments or teams where necessary.

**Topic 1.6 Respond in a timely and positive way when others ask for help or information**

Show understanding and respect the needs of others when they ask for assistance. Respond appropriately, in a timely fashion.

**Learning outcome 2: Understand why good working practices are important**

**Topic 2.1 State why good working relationships are important**

Build trust and improve efficiency and performance in the workplace.

**Topic 2.2 Suggest ways in which good working relationships can be maintained**

Honesty, trust, good communication, respecting and recognising the contribution of others, responding to the needs of customers and suppliers.

**Topic 2.3 State the methods of dealing with disagreements within the workplace**

Business policies, take responsibility, understand the position of others, seek the contribution of a third party, arbitration, mediation.

**Topic 2.4 Describe own level of responsibility in relation to dealing with disagreements**

Understand your position and level within the organisation's hierarchy.

**Topic 2.5 State why effective communication is important**

Helps achieve goals and maintain strong working relationships at all levels of an organisation. Clear lines of communication help build trust and improve morale. Effective communication between colleagues will help reduce the likelihood of workplace misunderstandings and conflict.