

# Unit 15: Understand the Principles and Practices of an Equine Stud

<b>Unit code:</b>	<b>Y/601/0305</b>
<b>QCF Level 3:</b>	<b>BTEC National</b>
<b>Credit value:</b>	<b>10</b>
<b>Guided learning hours:</b>	<b>60</b>

## ● Aim and purpose

This unit aims to provide learners with an understanding of the principles of equine stud principles and practices and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

## ● Unit introduction

The quality of breeding stock and breeding programmes in the UK is improving but is still some way behind the European sports horse breeding market. The demand for quality sports horses in the UK means some riders still have to travel abroad in order to find horses of sufficient quality to compete at an international level. As a result, the need to improve the quality of breeding stock has become increasingly important if the UK stud sector is to stay afloat within this market.

On completion of this unit, learners will gain an insight into the importance of evaluating the suitability of mares and stallions for breeding, and the avoidance of indiscriminate breeding. This results in increased profitability and reduces the number of physiological and psychological defects in horses, thus reducing the need for horse welfare organisations.

Learners will develop an awareness of routine stud activities as well as practical skills in, for example, assisting in teasing, covering and weaning. The unit explores the routine healthcare of brood mares and stallions and also the importance of record keeping for a stud. Planning and monitoring of these activities is also covered.

Learners will have the opportunity to look at the requirements and preparation for the foaling process, the parturition itself, and the aftercare of mare and foal. All of these skills are vital for working within the stud industry.

## ● Learning outcomes

**On completion of this unit a learner should:**

- 1 Understand the planning and management of breeding programmes
- 2 Be able to participate in routine stud activities
- 3 Know how to plan, monitor and record routine care for breeding stock
- 4 Know the foaling process and aftercare of mare and foal.

# Unit content

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## 1 Understand the planning and management of breeding programmes

*Breeding programmes:* evaluation, selection and justification of stock for breeding; purpose of breeding programme, planning, avoidance of indiscriminate breeding; understanding and evaluation of pedigrees and bloodlines; assessment of the horse's physical and mental condition before stud work (brood mare, stallion); determination of timescales and monitoring breeding programmes; methods of improving breeding potential eg manipulation of oestrus, use of hormones, light and dietary manipulation; ethical considerations of using breeding improvement techniques; evaluation of breeding programmes through assessment of progeny; use of technology to improve quality of progeny eg embryo transfer (ET), artificial insemination (AI); adherence to stud-book policy eg thoroughbreds

## 2 Be able to participate in routine stud activities

*Planning and organisation of routine activities:* assisting with swabbing, teasing, covering (natural and in-hand), pregnancy diagnosis, foaling, weaning; correct handling techniques for brood mares, mares with a foal at foot, foals, assisting with the handling of stallions (under supervision); preparation of equipment for activities; physical resources required; health and safety (correct personal protective equipment (PPE) for handler and assistants, suitable area for work, supervision, health and safety, risk assessments for all practicals, restraints for mare and stallion); review of activities carried out

## 3 Know how to plan, monitor and record routine care for breeding stock

*Planning and monitoring routine care of brood mares and stallions:* health checks; tooth care; foot care; grooming; daily routines; stable and environment suitability; feeding and watering; dietary, exercise and fitness requirements; importance of company; symptoms of deterioration in eg condition, breeding performance; sexually transmitted infections (STIs) of mares and stallions eg equine viral arteritis (EVA), equine herpes virus (EHV), contagious equine metritis (CEM) and the importance of hygiene; prevention of STIs; STI trends in the UK

*Recording:* stud activity records eg teasing, covering, swabbing, pregnancy diagnosis, foaling, veterinary, tooth and foot care, vaccinations, worming; other records, day book, livery records, client records, mare and stallion records, passports

## 4 Know the foaling process and aftercare of mare and foal

*Foaling process:* preparation eg equipment needed, foaling kit, suitability and adaptation of field or stable, removing Caslick's, removing fillet strings, tail bandage, communication and contact numbers of veterinary surgeon; monitoring, eg foaling alarms, close circuit television (CCTV), sitting up duties; foaling procedure: physical signs, behaviour, stages of foaling, assistance needed, signs of difficult or abnormal foaling

*Aftercare:* immediate aftercare and checks for mare and foal; problems eg retention of afterbirth, passing meconium, use of colostrum, septicaemia, haemolytic foals, entropion, neonatal maladjustment syndrome, joint ill, meconium retention, scours, rejection of foals, orphans and fostering

## Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
<b>P1</b> evaluate the physical, mental and genetic qualities of stock for breeding purposes [IE]	<b>M1</b> explain how scientific advances in breeding technology improve breeding programmes	<b>D1</b> analyse why indiscriminate breeding occurs and the associated welfare consequences
<b>P2</b> examine the importance of planning and monitoring breeding programmes [IE,RL]		
<b>P3</b> review methods of breeding improvement techniques [RL]		
<b>P4</b> describe the routine activities associated with stud practices [IE]		
<b>P5</b> perform routine stud activities [TW, SM]	<b>M2</b> demonstrate confident, time efficient techniques in completing routine stud activities to meet given objectives	<b>D2</b> evaluate selected routine stud activities and make appropriate recommendations for improvement
<b>P6</b> demonstrate safe working practices and use of Personal Protective Equipment when carrying out routine stud activities		
<b>P7</b> plan and monitor routine care for breeding stock	<b>M3</b> discuss selected STIs in horse breeding and how they can be prevented	
<b>P8</b> record information on breeding stock as a result of monitoring care for stallions and mares [CT]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
<b>P9</b> describe the requirements for the preparation of foaling	<b>M4</b> discuss selected health problems that can occur with newborn foals including prognosis, treatment and management.	<b>D3</b> evaluate how technological advances have improved prognosis for selected health problems associated with mares or newborn foals.
<b>P10</b> describe the stages of the normal foaling process and signs of abnormal foaling		
<b>P11</b> outline the after care of the mare and foal following foaling.		

**PLTS:** This summary references where applicable in the pass criteria, in the square brackets, the elements of the personal, learning and thinking skills. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

<b>Key</b>	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

# Essential guidance for tutors

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## Delivery

Delivery of this unit will involve practical assessments, written assessment, visits to suitable collections and will link to work experience placements. Tutors delivering this unit have opportunities to use as wide a range of techniques as possible. Lectures, discussions, seminar presentations, visits to open days at studs or fertility clinics, supervised practicals and work experience would all be suitable. Emphasis is on the development of practical skills, as stud practices are a key element in the horse breeding industry, and learners should be encouraged to draw on their personal experiences and skills gained through work experience. Delivery should stimulate, motivate, educate and enthuse learners.

Work placements should be monitored regularly in order to ensure the quality of the learning experience. It would be beneficial if learners and supervisors were made aware of the requirements of this unit before any work-related activities are undertaken so that naturally occurring evidence can be collected at the time. For example, learners may have the opportunity to handle mares or foals, and they should ask for observation records and/or witness statements to be provided as evidence of this. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

Whichever delivery methods are used, it is essential that tutors stress the importance of the horse's welfare at all times, and the need to manage the resource using legal methods.

Health and safety issues relating to handling brood mares, foals and stallions must be stressed and reinforced regularly, and risk assessments must be undertaken before all practical activities. Initially, learners must be taught safe working practices and techniques through demonstrations and supervised practicals. Learners must then have sufficient time and guidance to develop their practical skills.

Tutors should consider integrating the delivery, private study and assessment for this unit with other relevant units and assessment instruments learners are taking as part of their programme of study.

The learning outcomes within this unit are directly linked.

For learning outcome 1 learners will be aware of the importance of the planning and management of breeding programmes. Delivery is likely to be through formal lectures, discussions, supervised practical sessions and independent learner research, such as linking pedigree and progeny performance. Practical involving the observation of any non-routine activities, such as artificial insemination or collections, would be beneficial. Visits to larger studs (TB or non-TB), fertility units or videos would all be useful ways of enhancing learners' knowledge in terms of new technologies that are not necessarily used in every stud. Health and safety issues must be addressed before learners visit any other yard. Adequate PPE must be provided and used following the production of suitable risk assessments.

Visiting expert speakers could add to the relevance of the subject for learners. For example, a veterinary surgeon, stud manager or AI technician could talk about planning breeding programmes, breeding and fertility problems and new technologies. A horse welfare officer could talk about the huge welfare problems that they face as a direct consequence of indiscriminate breeding.

Learning outcome 2 covers learner participation in routine stud activities, and learning outcome 3 covers the provision of routine care and records for brood mares and stallions. Underpinning theory and discussions will be necessary in conjunction with hands-on practicals to allow learners to develop essential practical handling skills. Some of the practicals, such as swabbing, covering and pregnancy diagnosis, will be more appropriate as 'observed practicals'. Other practicals, such as handling stallions, foals, weaning and teasing, would be expected to be carried out under supervision at all times for health and safety reasons. Visiting speakers could include a stud manager or veterinary surgeon who could talk about STIs or the assessment of physical and mental health before breeding. Access to example stud records is also important here.

Learning outcome 4 covers the foaling process and aftercare. Learners should gain an underpinning knowledge of, and have an opportunity to participate in, foaling if time and facilities allow. Formal lectures, discussions, research, video clips and supervised practical sessions would all be relevant. A talk from a veterinary surgeon or veterinary nurse specialising in neonatal care would add relevance for learners. It would also serve as a useful opportunity for learners to ask any questions as they are completing the unit.

## Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of unit.
<b>Assignment 1: Breeding Review</b> (P1, P2, P3, M1, D1)
Theory session: evaluate suitability of mare and stallion for breeding.
Practical session: looking at mares and stallions on yard or stud.
Theory and stud visit: evaluate planning and monitoring of breeding programmes.
Theory session: review breeding improvement techniques and technological advances.
Theory session and guest speaker: analyse why indiscriminate breeding occurs and the associated welfare consequences.
internet and journal research to compare and contrast good and bad practice for two different breeding programmes.
<b>Assignment 2: Stud Practice</b> (P4, P5, P6, P7, P8, M2, M3, D2)
Learners to plan routine care and monitoring for breeding stock in the form of logbooks and daily records.
Daily records and logbooks to evidence practical assessment for performing these stud activities.
Evaluate different stud routines either from practical assessments, stud visits or work placements, discuss STIs in horse breeding and how good practice can prevent them.
<b>Assignment 3: Successful Foaling</b> (P9, P10, P11, M4, D3)
Theory session: describe the requirements for successful foaling.
Theory and video session: describe stages of normal foaling and aftercare of the mare and foal.
Theory, research or veterinary guest speaker session: health problems of mare and newborn foal and associated advances in technology.
End of unit review.
Unit review.

## Assessment

For P1, learners are required to justify the selection of a named broodmare and a named stallion for breeding purposes. Evidence could be in the form of a report, presentation, poster, or scenario case study such as a consultant's report for a mare owner looking to breed a quality sports horse. Learners should consider the mare and stallion in relation to producing offspring suitable for a chosen discipline or role.

P2 requires learners to examine the importance of planning and monitoring breeding programmes. Learners must discuss the relevance of monitoring pedigrees, progeny performance and grading of mares and stallions. Evidence could be in the form of a report or presentation.

P3 requires learners to review different breeding improvement techniques. Discussion should cover topics such as the use of artificial insemination and fertility testing. Evidence could be in the form of a report or presentation and be linked to M1.

P4 requires learners to describe the routine activities associated with stud practices. Tutors should identify the scenario or agree this through discussion with learners. A scenario could be used where learners act as a stud manager who is producing a report or presentation to inform owners what routine care is required to run a good stud. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. Suitable assessment strategies include oral questions, a report, poster or presentation. It is important that learners cover the care and record keeping elements to achieve P7. However, learners can link the two together. The unit content should be referred to by the tutor as a guide to which care and records learners are expected to include.

For P5 and P6, learners must undertake routine stud activities under supervision to meet given objectives. Tutors should identify the objectives or agree these through discussion with learners. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. This should be based largely on the assessment of practical skills, and could be evidenced through a logbook (with each practical noted down and tutor comments after each), and individual assessments on specified key practicals with some oral questioning, or through a work experience placement if applicable. It is important that the unit content is referred to in order to ensure learners are assessed on key activities, such as teasing, weaning, handling brood mares and foals and assisting with handling stallions. Learners must demonstrate safe working practices and use of PPE when carrying out routine stud activities.

For P7 and P8, learners must plan, monitor and record routine care for a selected broodmare or stallion. Tutors should identify the brood mare or stallion or agree them through discussion with learners. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. Assessment for this could be linked to P4. A report, presentation or logbook would be suitable as evidence. It is important that the assessment strategy is set early enough to allow learners to plan and monitor the routine care of the named horse over a period of time, ideally three to six months. It is important that the unit content is referred to in order to ensure learners include factors such as diet, exercise requirements, routine husbandry treatments and sexual health. Assessment could also include exemplar records.

For P9, learners need to explain what factors need to be taken into account when preparing and planning for foaling. Oral questioning, a report, poster, presentation or information leaflet would all be suitable forms of evidence. Alternatively, a video diary outlining the preparation undertaken would be a good assessment tool and could provide a long-term teaching resource.

For P10 and P11, learners must describe the signs of foaling, the foaling process, both normal and abnormal, and immediate aftercare of mare and foal. Evidence could be provided through oral questioning, a report, presentation or information leaflet for new foal owners.

For M1, learners must explain how scientific advances in breeding technology improve breeding programmes. This could be linked to assessment for P3. Learners could discuss how scientific technology could be included in selecting the mare and stallion for P1. A presentation or report would be suitable for assessment.

M2 requires learners to demonstrate confident techniques in completing routine stud activities to meet given objectives. Tutors should identify the objectives or agree them through discussion with learners. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. Evidence may be in the same form as for P5. However, the tutor would be looking for a greater degree of confidence when handling horses. Learners should be capable of assisting in a wider range of stud activities, and be capable of playing a larger role in activities such as teasing, weaning or handling stallions.

For M3, learners must discuss selected STIs in horse breeding and how they can be prevented. Tutors should identify the STIs or agree them through discussion with learners. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. It is expected that, as a minimum, learners will provide evidence covering at least three different STIs. A report or presentation would provide suitable evidence.

M4 requires learners to discuss selected health problems that can occur with newborn foals including prognosis, treatment and management. Tutors should identify the health problems or agree them through discussion with learners. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. It is expected that, as a minimum, learners will provide evidence covering at least three different health problems. A report or presentation would be suitable evidence. Tutors should refer to the unit content to see the types of problems that learners should be discussing. It is also important that learners discuss prognosis, treatment and management as well as describing the ailment or disease itself.

For D1, learners must analyse why indiscriminate breeding occurs and the associated welfare consequences. Evidence for this could link to P1. A report, presentation, or scenario as outlined in P1 would all be suitable evidence. Alternatively, learners could write an article for a journal or magazine on indiscriminate breeding and its welfare consequences.

D2 requires learners to evaluate selected routine stud activities and make appropriate recommendations for improvement. Tutors should identify the routine stud activities or agree them through discussion with learners. These are likely to be based on activities undertaken for P2 or M2. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. Evidence could be in the form of a presentation or project that links to P4 or M2.

D3 requires learners to evaluate how technological advances have improved the prognosis of health problems associated with either the mare or foal during or after parturition. Tutors should identify the health problems or agree them through discussion with learners. Where possible, to ensure assessment is fair the size and complexity of the tasks should be the same for all learners. It is expected that, as a minimum, learners will provide evidence covering at least two health problems with their associated advances. Evidence could be in the same form as for and link to assessment in M4.

### Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3, M1, D1	Breeding Review	Discuss setting up a successful stud. Choose appropriate breeding stock, and evaluate breeding technologies and programmes.	Written report.
P4, P5, P6, P7, P8, M2, M3, D2	Stud Practice	Design and plan practical assessment logbooks. Undertake practical stud activities, monitor work and then analyse performance.	Practical observation. Written evaluation.

Criteria covered	Assignment title	Scenario	Assessment method
P9, P10, P11, M4, D3	Successful Foaling	Produce an observation checklist for planning and monitoring the stages of normal and abnormal foaling.  Produce a summary for aftercare. Evaluate health problems and relevant advances in technology.	Written evidence.

## Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Land-based sector suite. This unit has particular links with:

Level 2	Level 3
Introduction to Equine Stud Practice	313.1 Attend to mare and foal during foaling 313.2 Care for mare and foal
	Understand Animal Anatomy and Physiology

## Essential resources

Learners will need regular access to breeding stock, including stallions, brood mares and foals. Regular experience must be gained with all of these animals to allow learners to develop confidence over time. Obviously not all stallions are suitable to be handled by less experienced learners and, therefore, the stallion(s) used should be chosen carefully by the tutor.

Sufficient numbers of horses should be available to give learners experience of a realistic working environment. Evening work may be needed to observe foaling, if appropriate. Direct practical experience is essential for this unit and this may be gained through work experience or yard duties.

Equipment required includes handling and restraint equipment, exercise tack, foaling alarms and equipment, PPE, artificial vagina, teasing and covering equipment and stud records.

Physical resources include covering barns, stables including those with foaling boxes, CCTV, teasing board, fields including mare and foal and stallion paddocks.

## Employer engagement and vocational contexts

This unit focuses on the practical and theoretical aspects of breeding and stud management and will give learners background knowledge relating to safe procedures and suitable equipment whilst working with stud horses and the suitable equipment, and an understanding of efficient routines and care. Centres are encouraged to create and develop links with local equestrian professionals and studs. This could be via guest lectures, visits and lecture demonstrations. Vocational placements are vital to enable learners to practise and update their skills.

## Indicative reading for learners

### Textbooks

Brega J – *The Horse: Breeding and Youngstock* (J A Allen, 1996) ISBN 0851316476

Rose J and Pilliner S – *Practical Stud Management* (Blackwell Science, 1989) ISBN 0632020318

Rose J and Pilliner S – *Breeding the Competition Horse, Second Edition* (Blackwell Science, 1993) ISBN 063203727X

Rossdale P – *Horse Breeding* (David & Charles Ltd, 2003) ISBN 0715316559

### Websites

[www.aht.org.uk](http://www.aht.org.uk)

Animal Health Trust

[www.defra.gov.uk](http://www.defra.gov.uk)

Department for Environment, Food and Rural Affairs

[www.ilph.org](http://www.ilph.org)

International League for the Protection of Horses

[www.sporthorsegb.co.uk](http://www.sporthorsegb.co.uk)

Sport Horse Breeding of Great Britain

[www.stallionsdirect.com/index.html](http://www.stallionsdirect.com/index.html)

Stallions Direct

[www.thefoalingguide.com](http://www.thefoalingguide.com)

The Foaling Guide

[www.weatherbys.co.uk](http://www.weatherbys.co.uk)

Weatherbys

## Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
<b>Independent enquirers</b>	comparing breeding programmes carrying out research and evaluating information in relation to the qualities of breeding stock and health problems of mares and foals
<b>Creative thinkers</b>	reviewing stud activities to try out alternatives or new solutions
<b>Reflective learners</b>	evaluating and reviewing stud activities to inform future progress
<b>Team workers</b>	undertaking practical stud activities and collaborating with others towards a common goal
<b>Self-managers</b>	undertaking stud activities to work towards goals, showing initiative, commitment and perseverance.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
<b>Creative thinkers</b>	researching breeding programmes analysing and evaluating information, judging its relevance and value
<b>Team workers</b>	undertaking practical tasks taking responsibility and showing confidence in themselves and their contribution
<b>Self-managers</b>	undertaking practical tasks to organise time and resources prioritising actions, anticipating, taking and managing risk
<b>Effective participators</b>	evaluating stud routines and identifying improvements that would benefit others and themselves.

## ● Functional Skills – Level 2

Skill	When learners are ...
<b>ICT – Find and select information</b>	
Select and use a variety of sources of information independently for a complex task	using the internet to research examples of different breeding programmes
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	using accurate and current research for the above
<b>ICT – Develop, present and communicate information</b>	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> <li>• text and tables</li> <li>• images</li> <li>• numbers</li> <li>• records.</li> </ul>	keeping records and monitoring stud activities
Bring together information to suit content and purpose	evaluating stud activities
Present information in ways that are fit for purpose and audience	presenting information for assessment
<b>English</b>	
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading and summarising breeding technologies, foaling procedures, and health problems for breeding stock.
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	<p>completing a written summary on breeding programmes and scientific breeding improvement technologies</p> <p>completing a written summary of STIs in horse breeding</p> <p>completing development plans for improvements to stud activities.</p>