

# 0171-31/33— Level 3 Advanced Technical Extended Diploma in Agriculture

2023

**Qualification Report** 

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#### Introduction

This document has been prepared by the Chief Examiner and Principal Moderator; it is designed to be used as a feedback tool for centres in order to enhance teaching and preparation for assessment. It is advised that this document is referred to when planning delivery and when preparing candidates for City & Guilds Technical assessments.

This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2023 academic year. It will explain aspects which caused difficulty and potentially why the difficulties arose.

The document provides commentary on the following assessments:

#### Year 1

- Pathway 1
  - o 0171-002/502 Level 3 in Agriculture
    - March 2023 (Spring)
    - June 2023 (Summer)
  - o 0171-001 Level 3 in Agriculture Synoptic Assignment

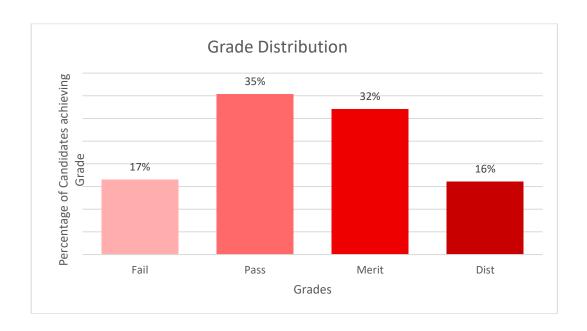
#### Year 2

- Pathway 1
  - o 0171-010/510 Level 3 in Agriculture (Livestock) Theory exam
    - March 2023 (Spring)
    - June 2023 (Summer)
  - o 0171-009 Level 3 in Agriculture (Livestock) Synoptic Assignment
- Pathway 2
  - o 0171-012/512 Level 3 in Agriculture (Arable) Theory exam
    - March 2023 (Spring)
    - June 2023 (Summer)
  - o 0171-011 Level 3 in Agriculture (Arable) Synoptic Assignment
- Pathway 3
  - o 0171-014/514 Level 3 in Agriculture (Farm Mechanisation) Theory exam
    - March 2023 (Spring)
    - June 2023 (Summer)
  - 0171-013 Level 3 in Agriculture Farm Mechanisation) Synoptic Assignment

### **Qualification Grade Distribution**

#### 0171-31/33

The grade distribution for this qualification is shown below:



Please note City & Guilds will only report qualification grades for candidates who have achieved all of the required assessment components, including Employer Involvement, optional units and any other centre assessed components as indicated within the Qualification Handbook. The grade distribution shown above could include performance from previous years.

## **Theory Exams – Year 1**

#### 0171-31/33- Level 3 Technicals in Agriculture

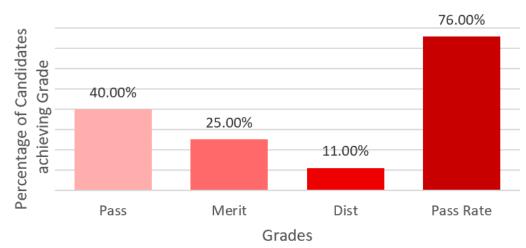
#### **Grade Boundaries**

Assessment: 0171-502/002 Series: March 2023 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42



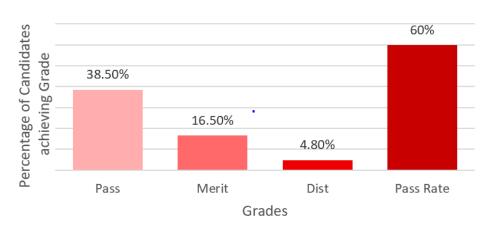


Assessment: 0171-502 Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

0171-502 June 2023 Grade Distribution



#### **Chief Examiner Commentary**

#### 0171-502 Level 3 in Agriculture - Theory exam

#### Series 1 - March 2023

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to last year.

Candidates demonstrated a weakness across recall of knowledge, struggling on the AO1 questions which including sheep breeds, live outputs from a pig herd and perennial crops.

AO2 questions responses were varied across the cohort. The candidates who achieved higher marks were able to demonstrate breadth and depth of knowledge, backed up by relevant examples and including explanation and justification where needed. Lower achieving candidates tended to give brief and listed answers. There was evidence of candidates not fully reading questions, which meant they missed out on marks by not responding in the way needed or not providing the level of detail required to access the full range of marks available at AO2. Candidates did not always engage with the command verbs, for example simply stating rather than explaining, this meant that candidates did not always provide enough detail when asked for explanations or descriptions.

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

Overall, candidates showed strength in:

- Unblocking balers (Unit 303)
- Crop rotation (Unit 304)

Candidates require further support in:

- Sheep breeds and live outputs for a pig herd (Unit 307)
- Soil organic matter (Unit 305)
- Functions of plant structures (Unit 305)

#### **Extended Response Question (ERQ)**

The extended answer question gives candidates the opportunity to demonstrate their grasp of the qualification and knowledge of agriculture in general. Candidates were asked to discuss the considerations for the crop and soil management for a crop of forage maize to be grown on a heavy soil. There were some well-developed answers with some excellent use of examples and some higher-level candidates were able to discuss a range of considerations. However, many candidates demonstrated a limited understanding of the key topics with mainly descriptive comments.

Answers in the main lacked detail and structure with limited use of technical language. It is advisable that candidates take time to plan their answers to help them to fully answer the question.

#### **Series 2 – June 2023**

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to previous series.

Overall, candidates showed strength in:

- Pig breeds (Unit 307)
- Body condition of rams (Unit 307)
- Uses of harvested wheat (Unit 304)

Candidates require further support in:

- Photosynthesis and aerobic respiration in plants (Unit 305)
- Calving intervals (Unit 307)

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

#### **Extended Response Question (ERQ)**

Candidates were asked to discuss how the choice of crop and husbandry can affect the soil structure. The question gave the opportunity candidates to demonstrate their knowledge and understanding of this topical and appropriate farm problem. Many failed to give sufficient detail to gain marks in the higher bands with mainly descriptive comments..

Candidates need to practice answering the AO4 questions to ensure accurate planning and to ensure structure and detail within their answer to achieve the higher bands.

Centres are reminded of the City & Guilds Technicals '**Exam Guides**' which can be accessed here:

https://www.cityandguilds.com/qualifications-and-apprenticeships/land-based-services/agriculture/0171-technicals-in-agriculture-and-landbased-engineering#tab=information

Candidates are strongly advised to be familiar with the command verbs they may encounter during examinations and to be prepared for the different types of structures of questions, as well as the need to read each question carefully and to respond clearly to the question given in the depth required.

## **Theory Exams – Year 2**

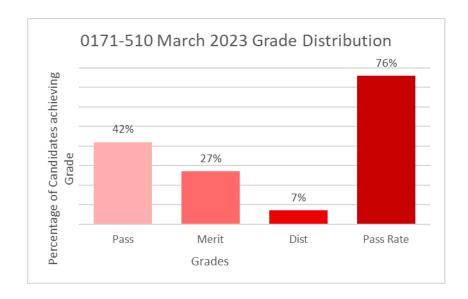
# 0171-33 – Level 3 Advanced Technical Extended Diploma in Agriculture (1080) (Livestock)

#### **Grade Boundaries**

Assessment: 0171-510/010 Series: March 2023 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	28
Merit mark	36
Distinction mark	44

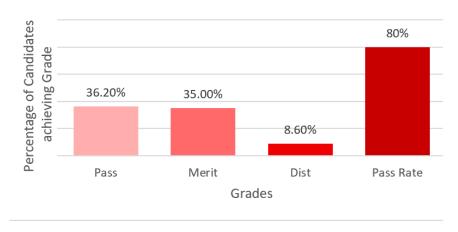


Assessment: 0171-510/010 Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	28
Merit mark	36
Distinction mark	44

0171-510 June 2023 Grade Distribution



#### **Chief Examiner Commentary**

## 0171-510/010 – Level 3 Advanced Technical Extended Diploma in Agriculture (1080) (Livestock) - Theory exam

#### Series 1 - March 2023

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to last year.

Candidates demonstrated a good recall of knowledge, gaining marks in topics such as ATV traction, zoonotic diseases and disadvantages of inbreeding.

AO2 questions responses were varied across the cohort. Many candidates demonstrated weaknesses in understanding questions that related to farm animal health and nutrition. The candidates who achieved higher marks were able to demonstrate breadth and depth of knowledge, backed up by relevant examples and including explanation and justification where needed. Lower achieving candidates tended to give brief and listed answers. There was evidence of candidates not fully reading questions, which meant they missed out on marks by not responding in the way needed or providing the level of detail required to access the full range of marks available at AO2. Candidates did not always engage with the command verbs, for example simply stating rather than explaining, this meant that candidates did not always provide enough detail when asked for explanations or descriptions.

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

Overall, candidates showed strength in:

- Traction of ATV (Unit 335)
- Environmental impact of slurry spreading (Unit 316)
- Zoonotic diseases (Unit 313)
- Inbreeding problems (Unit 334)
- Infertility in cows (Unit 334)

#### Candidates require further support in:

- Types of hazardous waste (Unit 316)
- Respiration rates of farm animals (Unit 313)
- Differences between bacteria and a virus (Unit 313)
- Alveoli (Unit 334)

#### **Extended Response Question (ERQ)**

The extended answer question gives candidates the opportunity to demonstrate their grasp of the qualification and knowledge of agriculture and livestock in general. Candidates were asked to discuss health and profitability of a livestock enterprise. Generally, candidates showed good knowledge and discussion of the challenges and solutions facing livestock. Most answers were well structured with accurate and consistent use of technical terms. Higher-level candidates produced coherent and well-structured answers with excellent knowledge and discussion of health and profitability with relevant and current technical language. Some candidates focused their answers on just one area, for example many candidates wrote at length about nutrition without exploring other areas of health and profitability.

#### **Series 2 – June 2023**

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to last year.

Overall, candidates showed strength in:

- Cross breeding (Unit 334)
- Injection methods (Unit 313)
- Effects of insufficient energy in the diet of a dairy cow (Unit 313)

Candidates require further support in:

- Function of the stomachs (Unit 334)
- Cause of bloat (Unit 313)
- Metabolic disorders (Unit 313)

#### **Extended Response Question (ERQ)**

Candidates were asked to discuss how a sheep farmer can reduce their reliance on wormers. Generally, candidates showed good knowledge and discussion of the challenges and solutions. Most answers were well structured with accurate and consistent use of technical terms. However, few went beyond grazing regimes, egg counts and correct dose rates.

Centres are reminded of the City & Guilds Technicals '**Exam Guides**' which can be accessed here:

https://www.cityandguilds.com/qualifications-and-apprenticeships/land-based-services/agriculture/0171-technicals-in-agriculture-and-landbased-engineering#tab=information

Candidates are strongly advised to be familiar with the command verbs they may encounter during examinations and to be prepared for the different types of structures of questions, as well as the need to read each question carefully and to respond clearly to the question given in the depth required.

# 0171-33 – Level 3 Advanced Technical Extended Diploma in Agriculture (1080) (Arable)

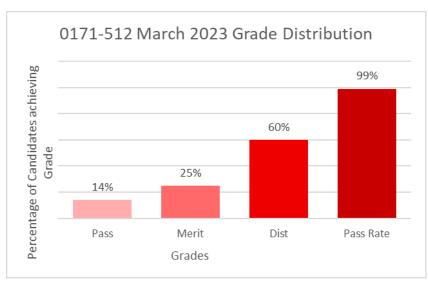
#### **Grade Boundaries**

Assessment: 0171-512/012

Series: March 2023

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

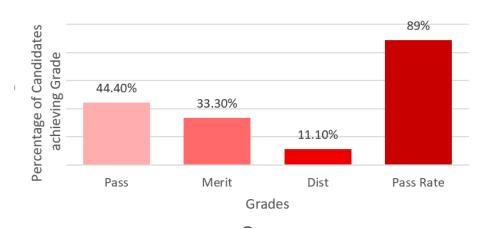


Assessment: 0171-512 Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42





#### **Chief Examiner Commentary**

## 0171-512/012 – Level 3 Advanced Technical Extended Diploma in Agriculture (1080) (Arable)

#### Series 1 - March 2023

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to last year.

Candidates demonstrated a good recall of knowledge, gaining marks in topics such as hazardous waste and safely operating a RTFL. There was some weakness in the recall question relating to hedge maintenance.

AO2 questions responses were well answered across the cohort. Many candidates demonstrated weakness in understanding the question that related to hydrostatic transmission. The candidates who achieved higher marks were able to demonstrate breadth and depth of knowledge, backed up by relevant examples and included explanation and justification where needed. Lower achieving candidates tended to give brief and listed answers. There was evidence of candidates not fully reading questions, which meant they missed out on marks by not responding in the way needed or providing the level of detail required to access the full range of marks available at AO2. Candidates did not always engage with the command verbs, for example simply stating rather than explaining, this meant that candidates did not always provide enough detail when asked for explanations or descriptions.

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

Overall, candidates showed strength in:

- Hazardous waste/waste management (Unit 316)
- Fertiliser spreaders (Unit 326)
- Pesticide application (Unit 326)
- Operating a RTFL (Unit 335)

Candidates require further support in:

- Hedge maintenance (Unit 317)
- Hydrostatic transmission (Unit 335)

#### **Extended Response Question (ERQ)**

The extended answer question gives candidates the opportunity to demonstrate their grasp of the qualification and knowledge of agriculture and arable farming in general. Candidates were asked to discuss the methods of minimising the environmental impact when loading and spreading the fertiliser. Generally, candidates showed good knowledge and discussion of the topic. Most answers were well structured with accurate and consistent use of technical terms. Higher-level candidates produced coherent and well-structured answers with excellent knowledge and discussion of health and profitability with relevant and current technical language.

#### **Series 2 – June 2023**

This question paper was a well-balanced paper that is comparable to previous papers with relevant topic areas across the paper linking to the scope of the qualification. There was a relatively small number of candidates sitting this paper. Generally candidates engaged well with the questions; it was clear where they were bringing workplace knowledge to their answers, such as safe use of RTFL and setting up fertiliser spreaders. Knowledge recall and understanding was varied across the paper depending on topic area with engine cycles and legislation causing difficulties for many candidates.

Those candidates achieving the best marks provided fuller answers across all the questions, with few gaps across the scope of the qualification, clearly understanding the command verbs. Those candidates achieving the lower marks failed to expand on questions other than using factual recall and showing significant gaps in knowledge, therefore unable to access the available marks in the paper.

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

Overall candidates showed strength in:

- Sources of waste (unit 316)
- Improving ecological farm habitats (Unit 317)
- Safe RTFL operation (Unit 335)
- Fertiliser spreader calibration (Unit 326)

Candidates appear to require further support in:

- Waste management planning (Unit 316)
- Legislation (Unit 317)
- Diesel engine 4 stroke cycle stages and descriptors (Unit 335)

#### **Extended Response Question (ERQ)**

The extended answer question gives candidates the opportunity to demonstrate their awareness, knowledge and understanding across the scope of the arable paper; focussing on a realistic and appropriate scenario linking environmental impact to the storage loading and spreading farmyard manure, with a 12-tonne spreader, pulled by a 150hp tractor, and access to a rough terrain forklift truck. On this paper, this question was generally poorly answered with majority of candidates either in band 1 or very low band 2, with a small number of candidates reaching the top of band 2. Candidates tended to list or describe spreading, without describing the environmental impacts as asked for in the question.

Centres are reminded of the City & Guilds Technicals 'Exam Guides' available here:

https://www.cityandguilds.com/qualifications-and-apprenticeships/land-based-services/agriculture/0171-technicals-in-agriculture-and-landbased-engineering#tab=documents

Candidates are strongly advised to be familiar with the command verbs they may encounter during examinations and to be prepared for the different types of structures of questions, as well as the need to read each question carefully and to respond clearly to the question given in the depth required.

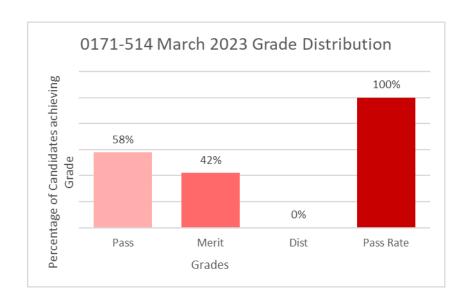
# 0171-33 – Level 3 Advanced Technical Extended Diploma (1080) (Farm Mechanisation)

#### **Grade Boundaries**

Assessment: 0171-514 Series: March 2023

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	43



#### **Chief Examiner Commentary**

#### 0171-514/014 Level 3 in Agriculture –Theory exam (Farm Mechanisation)

#### Series 1 - March 2023

The question paper was generally balanced and covered a good level of knowledge and understanding from across the qualification. Questions were answered with a varying degree of accuracy and depth, and overall candidates' performance on the paper was comparable to last year.

Overall, candidates' performance was stronger in the recall questions. Most candidates demonstrated a good recall of knowledge, gaining marks in topics such as machinery operation, power units and hydraulics operation. The candidates who achieved higher marks were able to demonstrate breadth and depth of knowledge, backed up by relevant examples and included explanation and justification where needed. Lower achieving candidates tended to give brief and listed answers. There was evidence of candidates not fully reading questions, which meant they missed out on marks by not responding in the way needed or providing the level of detail required to access the full range of marks available. Candidates did not always engage with the command verbs, for example simply stating rather than explaining, this meant that candidates did not always provide enough detail when asked for explanations or descriptions.

Candidates need to be reminded to take care and read the questions carefully, particularly the command words where a named example or a specific number of points may need to be covered.

Overall, candidates showed strength in:

- Hydraulic systems (Unit 310)
- Cooling systems (Unit 310)
- Control systems (Unit 310)

Candidates require further support in:

- PUWER (Provision and Use of Work Equipment Regulations) (Unit 310)
- Joining equipment (Unit 318)

#### **Extended Response Question (ERQ)**

The extended answer question gives candidates the opportunity to demonstrate their grasp of the qualification and knowledge of agriculture and farm mechanisation in general. Candidates were asked to discuss procedures to repair the hydraulic system of a seed drill in the workshop. It was evident that most candidates planned their answers in the exam which resulted in more structured responses. Generally, candidates showed good knowledge and discussion of the safety aspects and most answers were well-structured with accurate and consistent use of technical terms. There was a consistent focus on safety, but it would have helped the candidates to spend more time on thinking through the problem and demonstrating more breath of knowledge in other areas.

Centres are reminded of the City & Guilds Technicals '**Exam Guides**' which can be accessed here:

https://www.cityandguilds.com/qualifications-and-apprenticeships/land-based-services/agriculture/0171-technicals-in-agriculture-and-landbased-engineering#tab=information

Candidates are strongly advised to be familiar with the command verbs they may encounter during examinations and to be prepared for the different types of structures of questions, as well as the need to read each question carefully and to respond clearly to the question given in the depth required.

## Synoptic Assignments – Year 1

#### 0171-31/33 -Level 3 Technicals in Agriculture

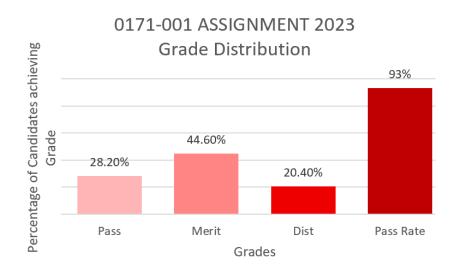
#### **Grade Boundaries**

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0171-001

Series: 2023

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	43



#### **Principal Moderator Commentary**

In the Synoptic, the standards of candidate work have been on a par with previous years.

Overall, the synoptic assignments were well written by the candidates with a range in quality of work as you would expect for Level 3 students. Practical tasks were of a good standard, especially livestock handling, as would be expected from candidates undertaking this qualification.

The synoptic assignment contained a good spread of practical tasks and background knowledge, at the appropriate level, spread across machinery, estate skills, crops, livestock, environmental aspects, health and safety and management.

#### Centres are asked:

- To include areas for improvement on the Candidate Record Form (CRF) unless the mark awarded is in the excellent band.
- To carefully check the addition of the total marks on the CRF.
- To annotate on candidate's work, incorrect statements and the quality of the work, e.g. areas which are good or lacking detail.
- When using dictation software to carefully check what has been typed.
- To upload all the forms and evidence as one document.

## **Synoptic Assignments – Year 2**

# 0171-33 – Level 3 Advanced Technical Extended Diploma in Agriculture (1080) (Livestock)

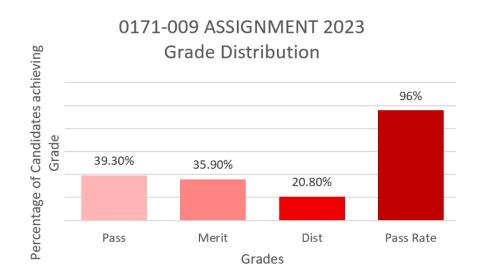
#### **Grade Boundaries**

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0171-009

Series: 2023

Total marks available	60
Pass mark	24
Merit mark	34
Distinction mark	44



#### **Principal Moderator Commentary**

In the synoptic, the standards of candidate work have been on a par with previous years.

Overall, the synoptic assignments were well written by the candidates with a range in quality of work as you would expect for Level 3 students. Practical tasks were of a good standard, as would be expected from candidates undertaking this qualification.

The synoptic assignment contained a good spread of practical tasks and background knowledge, at the appropriate level, spread across livestock, health, feeding and handling and husbandry, finances, management, health and safety, and machinery maintenance checks and operation.

#### Centres are asked:

- to include areas for improvement on the Candidate Record Form (CRF), unless the mark awarded is in the excellent band.
- to carefully check the addition of the total marks on the CRF.
- to annotate incorrect statements and the quality of the work on candidates' work, e.g. areas which are good or lacking detail.
- to carefully check what has been typed when using dictation software.
- to upload all the forms and evidence as one document where possible.

# 0171-33 – Level 3 Advanced Technical Extended Diploma in Agriculture (1080) (Arable)

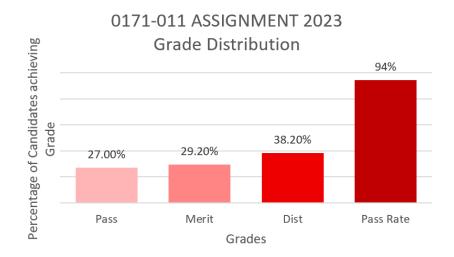
#### **Grade Boundaries**

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0171-011

Series: 2023

Total marks available	60
Pass mark	25
Merit mark	34
Distinction mark	44



#### **Principal Moderator Commentary**

In the synoptic, the standards of candidate work have been on a par with previous years.

Overall, the synoptic assignments were well written by the candidates with a range in quality of work as you would expect for Level 3 students. Practical tasks were of a good standard, as would be expected from candidates undertaking this qualification.

The synoptic assignment contained a good spread of practical tasks and background knowledge, at the appropriate level, spread across farm habitat maintenance, machinery set up and operation, environmental aspects, health and safety, finances, and management.

#### Centres are asked:

- to include areas for improvement on the Candidate Record Form (CRF), unless the mark awarded is in the excellent band.
- to carefully check the addition of the total marks on the CRF.
- to annotate incorrect statements and the quality of the work on candidates' work, e.g. areas which are good or lacking detail.
- to carefully check what has been typed when using dictation software.
- to upload all the forms and evidence as one document where possible.

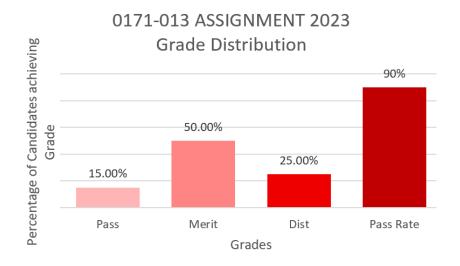
# 0171-33 – Level 3 Advanced Technical Extended Diploma (1080) (Farm Mechanisation)

#### **Grade Boundaries**

Assessment: 0171-013

Series: 2023

Total marks available	60
Pass mark	25
Merit mark	34
Distinction mark	43



#### **Principal Moderator Commentary**

In the synoptic, the standards of candidate work have been on a par with previous years.

The synoptic assignment contained a good spread of practical tasks and background knowledge, at the appropriate level, spread across fabrication repair, machinery repair and maintenance, health and safety, environmental aspects, machinery operation, and costs of consumables and components.

Overall, the synoptic assignments were well written by the candidates with a range in quality of work as you would expect for Level 3 students. Practical tasks were of a good standard, as would be expected from candidates undertaking this qualification.

#### Centres are asked:

- To include areas for improvement on the Candidate Record Form (CRF) unless the mark awarded is in the excellent band.
- To carefully check the addition of the total marks on the CRF.
- To annotate on candidate's work, incorrect statements and the quality of the work, e.g. areas which are good or lacking detail.
- When using dictation software to carefully check what has been typed.
- To upload all the forms and evidence as one document.