Year 11 Agricultural Technology

Assessment Task 2, 2024

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| **TOPIC**: Animal Production – Layer Feed Trial | **MARKS:** /40 |
| **SUBMISSION REQUIREMENTS:** Submitted **ONLINE** through **CANVAS** by **Friday 28th June**, **2024** **(Term 2 Week 9)** | **WEIGHTING:**  30%  |
| **OUTCOMES TO BE ASSESSED:****P1.1 – Describes** the complex, dynamic and interactive nature of agricultural production systems**P1.2 – Describes** the factors that influence agricultural systems**P2.2 – Describes** the biological and physical resources and applies the processes that cause changes in animal production systems**P4.1 – Applies** the principals and procedures of experimental design and research |
| **DIRECTIONAL VERBS:****Applies:** Use, utilise, employ in a particular situation**Describes:** Provides characteristics and features |
| **TASK DESCRIPTION****Part A Experimental Design** **(P2.2, P4.1) (30 Marks)**Students are to **apply** and **describe** and experimental design that investigates the impact of the change in feed on the colouring of chicken’s eggs. Students are expected to review the experiment design, **describe** the results provided and present their findings as a written report.**Part B** **Research** **(P1.1, P1.2) (10 marks)**Students are required to ***apply*** the data collected to research, using secondary sources, the various feeds available to layer chickens, and produce a comprehensive ***description*** of their impact on chicken egg quality.  |
| **ASSESSMENT CRITERIA:****Part A: Experimental Design and Report (30 marks) (P2.2, P4.1)**Students are to **record** results over a four-week period utilising a yolk colour chart, to **examine**:* Colour of yolk
* Colour of albumin

Results will be **recorded** a minimum of twice every week during class time during the next 4 weeks.***Your Task***Students are required to produce a written report using the scenario provided that is based on the following points:* *Research question (Aim)*
* *Hypothesis*
* *Equipment*
* *Method* – Steps to perform the task. Include a diagram of the experiment set up
* *Experimental Design Principles*: **Describe** how each ofthese principles are met: randomisation, replication, standardisation and control
* *Results* – Tabulated data (provided) to be used to determine averages for each set of data for each day of analysis. Graphical representation is also required of the tabulated data provided.
* *Data analysis*: What did the results indicate: **Describe** any trends or patterns with the data. Provide a **description** that summarises the results indicated in the data.
* *Discussion* – **Describe** why feed is important in changing the colour of egg yolk and albumin - use examples to support your response. **Describe** any potential problems (at least two) that may have occurred and how they can be overcome. Suggest two improvements that could be considered if this experiment was to be performed again.
* *Conclusion* - summary of findings including link to your hypothesis

**PART B – Research (10 marks) (P1.1, P1.2)**Students are to consider the following points: * **Describe** the ideal conditions of feeds used in commercial production and those at the school farm.
* **Describe** how consumer expectations/demands, have influenced the processes of a commercial layer production farm?
* **Describe** the process of how diet influences the colour of egg yolk.
* Bibliography **-** Correctly reference any sources of information used.

Students need to display a bibliography. The appropriate way to display a bibliography is in alphabetical order. *Surname Initial Year of Publication Title of Publication/journal Page number(s)*If it is a web address: *Web address Last date accessed*Acknowledgement of source used where appropriate.Plagiarism will not be tolerated and will result in **ZERO** score being awarded as per Camden High School Assessment policy. |

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|  **ASSESSMENT MARKING CRITERIA** |
| **Criteria – Part A: Experimental Design & Report**   **(P2.2, P4.1)** | **Mark** | **Grade** |
| Develops a comprehensive experimental report that demonstrates an extensive investigation on the impact of feed on the internal colour of chicken eggs. The aim, hypothesis, method and appropriate data are included and in the correct format. The basic principles of experimental design are extensively applied. All data is **described** effectively and the subsequent conclusions either do or do not support the hypothesis with extensive justification.  | 25-30 | A |
| Develops a thorough experimental report that demonstrates a thorough investigation on the impact of feed on the internal colour of chicken eggs. The aim, hypothesis, method andappropriate data are included and in the correct format, although some details may belacking. The basic principles of experimental design are all addressed with some inconsistencies. All data is **described** effectively and the subsequent conclusions either do or do not support the hypothesis with student justification present.  | 19-24 | B |
| Develops a sound experimental report that demonstrates a sound investigation on the impact of feed on the internal colour of chicken eggs. The aim, hypothesis, method, appropriate data, and principles of experimental design are included and in the correct format, although some components may be incomplete or incorrect. Collected data is **described** and the subsequent conclusions either do or do not support the hypothesis. | 12-18 | C |
| Develops a basic experimental report that demonstrates a basic investigation on the impact of feed on the internal colour of chicken eggs. The aim, hypothesis, method, appropriate data, and principles of experimental design are included and in correct format, with severalcomponents incomplete or incorrect. Collected data is displayed and a conclusion that either do or data do not support the hypothesis. | 6-11 | D |
| There is evidence of a limited experimental report that demonstrates a limited investigation of layer chickens. The aspects of experimental design have been attempted but lack details in relation to relevance, correct format or conclusions drawn. | 1-5 | E |

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| **Criteria – PART B: Research Report**   **(P1.1, P1.2)** | **Mark** | **Grade** |
| Report comprehensively **describes** the impact of management decisions on animal production enterprises specifically commercial layer production. The response will provide an extensive **description** for the interactions of this production system in relation to the influence of consumers on production requirements. | 9 -10 | A |
| Report thoroughly **describes** the impact of management decisions on animal production enterprises specifically commercial layer production. The response will provide a **description** for the interactions of this production system in relation to the influence of consumers on production requirements. | 7 -8 | B |
| Report **describes** some management decisions on animal production enterprises specifically commercial layer production. The response will provide a **description** ofthe interactions of this production system in relation to the influence of consumers on production requirements. | 5-6 | C |
| Report **identifies** some management decisions for commercial layer production. The response will present an **example or issue** of the production systems in relation to the influence of consumers on production requirements. | 3 -4 | D |
| Report **identifies a** management decision OR an example of consumer influence for commercial layer production systems. | 1-2 | E |