Province of the
EASTERN CAPE
EDUCATION

CHIEF MARKER'S REPORT

SUBJECT:	AGRICULTURAL SCIENCES P1

1. ANALYSIS OF QUESTION BY QUESTION PERFORMANCE

QUESTION 1

1.1 Understanding and application of basic concepts.
1.2 Questions covered LO 1, ASs 1, 2, 3; LO 2, ASs 1, 2, 3, 4; and LO 3, AS 3. Scores ranged from 0 to 40, with an average score of 14 marks. About 20% of the 14 501 candidates, however, obtained below 10 out of 45 marks.
1.3 Questions 1.2.5, 1.3.4 and 1.3.5, which were based on Animal Diseases and Protection, were poorly answered.

Question 1.4 which required candidates to change the underlined words to make the statements true was poorly answered. More than 50% of the candidates scored zero (0) for this sub-question. Only 6 out of the 14 501 candidates managed to get the correct answer for Question 1.4.4, which demanded candidates to mention the structure at the entrance of a broiler unit used to disinfect the feet of workers.

QUESTION 2

1.1 Relating parts to functions; application of concepts; interpretation of data and calculations.
1.2 Questions adequately covered LOs 1, ASs 1, 2, 3, 5 & 7; LO 2, ASs 1, 2, 3 & 7. Though candidates should have managed to obtain higher marks, their performance was rather disheartening. Highest score obtained was 30; the lowest 0, with 43% obtaining less than 7 out of 35 marks. Average mark was 8.
1.3 None of the few candidates who attempted to answer Question 2.1.5 could obtain the full mark, 3, allocated to the question. Candidates could not deduce the impact of a reduced intake of roughage on ruminant digestion.

Contrary to expectation, Question 2.2 was poorly answered. More than 80% of the candidates could not respond correctly to questions 2.2.1 – 2.2.4. From responses of candidates, it was clearly evident that most learners do not know the difference between minerals and vitamins. Instead of the micro-element iron (Fe), a good number of candidates mentioned vitamin A as the micro-element which is likely to be deficient in piglets reared on concrete floors.
Pitiably, a sizable number of candidates apparently did not even know what micro-elements and vitamins are.

Though not a difficult calculation, pathetically only 27 candidates out of the 14501 candidates managed to get the full mark for Question 2.3.1 which carried a total of 3 marks. The rather woeful performance of candidates can be attributed to their lack of understanding of how to solve problems on co-efficient of digestibility from first principles.

In Question 2.4.1 (on Pearson's Square), the majority of candidates could draw the square and put in the required values but failed to clearly state the ratio in which the two feeds are to be mixed as demanded by the question.

QUESTION 3

1.1 Critical thinking; application of concepts; pictorial analysis; calculation and using data to plot graph.

1.2 Question covered all LO1, ASs 1, 2 & 3; LO 2, ASs 1, 2, 3, 4, 5 & 7; LO 3, ASs 1 & 4; LO 4, AS 3.

With an average score of 16 and marks ranging from 0 to 34, candidates' performance was comparatively better.

1.3 The general performance of candidates would have been far better had most of them been able to think creatively and express themselves well in Questions 3.1 and 3.2, which carried a total of 15 marks.

Candidates had no problem in understanding Question 3.5.1, but lacked basic skills and expertise in drawing simple line graphs.

Candidates could have done better had they been able to:

- Identify the dependent and independent variables
- Correctly label the axes
- Choose the appropriate scale
- Give a proper heading / title to the graph.

QUESTION 4

1.1 Knowledge and application of concepts; interpretation and analysis of graphs.

1.2 Questions covered LOs 1, ASs 1, 2, & 3; LO 2, ASs 1, 2, 3, 4, 5 & 7; LO 4, AS 4.

Candidates' performance was comparatively fair, with an average score of 15 out of 35 marks. However, about 35% of candidates obtained below 10 marks.

1.3 In Question 4.2.3, more than 50% of the candidates could not supply the correct names of the parts of the sperm used for movement and the transfer of genetic information.

Surprisingly more than 80% of the candidates could not give even one of the four examples of bacterial diseases of farm animals in Question 4.4. This gives the impression that educators do not only shy away from teaching bacterial diseases, but also from all other pathogenic diseases affecting farm animals.

Candidates' performance in Question 4.5 left much to be desired, particularly sub-questions 4.5.3, 4.5.4 and 4.5.6 which were respectively on herd management practices, diagnosing parasite infestation and biological control of internal parasites.

7. ANY ADVICE THAT YOU COULD GIVE TO EDUCATORS TO HELP LEARNERS TO REACH THE EXPECTED LEVELS

1. Learners, with the assistance of educators, should be made to prepare wall charts in the form ***annotated*** drawings on the following:

    - Digestive systems of the three categories of farm animals.
    - Feeds – concentrates and roughages.
    - Reproductive systems of farm animals.
    - Mating, artificial insemination etc.
    - Mammary gland and lactation curve.
    - Equipment / tools used in handling animals.
    - Equipment / tools used in various procedures / operations (eg. branding, castration, dehorning, etc.) on animals.
    - Animal diseases and the life-cycle of parasites.
    - Types of graphs – line, bar, histogram and pie.

    (***Charts should be affixed to walls of the classroom***)
    Thorough planning and preparation, making use of all available resources, (particularly a variety of textbooks), before lesson is delivered.

2. Educators must endeavour to complete Work Schedule before August.
3. Basic concepts should be thoroughly explained, emphasizing on the underlying scientific principles.
4. Calculations must be taught starting from **first principles** and formulae, where applicable, gradually developed.
   Learners should be exposed to the drawing and interpretation of all types of graphs.
   The implications and significance of results / answers of all calculations must be thoroughly discussed with learners. (e.g. the narrower the nutritive ratio, the higher the protein content and better the suitability of the feed for growth, production and reproduction).
   Educators with weak mathematical background may solicit assistance from maths teachers in their school.
5. Assignment to be given on a particular topic before and after topic has been taught.
   Previous NSC, both final and supplementary, question papers may be used for assignments.
6. A fifteen-minute, twice-a-week textbook reading (either aloud or silently) by learners, followed by a comprehension exercise is recommended.
   The advantages of this approach are:
    - Enhance learners ability to cope with Case Study questions
    - Sharpening their reading and interpretive skills
    - Covering sections of Work Schedule which an educator may find difficult to teach.

7. All tests must be structured along the lines of the final NSC examinations, taking into cognisance the three cognitive levels. Tests should always include Section A, with items covering all sub-questions – MCQ, Matching (Column A and Column B), give a word / term for a statement and changing underlined words to make statements true.
8. Learners must go on field trips / excursions to Agricultural Colleges, Research Stations and other places of interest to familiarise themselves with the practical aspects of the theory learnt in the classroom.
9. Educators to encourage and advise learners to pursue careers in Agriculture and related disciplines.

8. ANY OTHER COMMENTS

1. Principals in conjunction District Officials to facilitate arrangements for field trips and excursions. It is equally necessary to arrange tours / field trips for educators within the District to buttress their knowledge in the subject to enrich their classroom delivery.
2. Career Days / exhibitions pertaining to Agricultural Sciences to be organised by Subject Advisors.
3. Subject Advisors should be visible in schools to offer educators the necessary support.
4. SMTs to closely monitor the implementation of work programmes of educators.
5. Recognition / incentives given to educators who excel.