

REVIEWER'S REPORT

Manuscript No.: IJAR- 58309

Title: Effects of Dietary Purple Maize on Growth Performance, Health Status, and Meat Quality of Ross 308 Broiler Chickens.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity			✓	
Significance			✓	

Reviewer Name: **ANAPANA GOPAL**

Reviewer's Comment for Publication.

General Comments

The manuscript investigates the effects of replacing conventional yellow maize with anthocyanin-rich purple maize in broiler chicken diets, focusing on growth performance, health status, and meat quality. The topic is relevant to sustainable poultry nutrition and functional feed development. The experimental design is straightforward, and the manuscript is generally well organized. The results indicate that purple maize can serve as an alternative energy source without compromising growth while improving meat sensory characteristics.

However, the manuscript requires **minor revision** before it can be considered for publication. Several methodological details are insufficiently described, statistical presentation needs improvement, language editing is necessary, and the discussion should better explain the biological significance of the findings.

Minor Comments

1. Novelty should be better highlighted

The Introduction should clearly explain what knowledge gap this study addresses and how it differs from previous studies using purple corn pigments or anthocyanin extracts.

2. Experimental design requires clarification

The authors should clearly mention:

- whether replicates or individual birds were considered as experimental units,
- randomization procedure,
- housing arrangement,
- environmental conditions (temperature, humidity, lighting schedule),
- ethical approval number.

3. Diet formulation

The manuscript only provides nutrient composition.

Please include:

- ingredient composition (%),

REVIEWER'S REPORT

- calculated metabolizable energy,
- amino acid balance,
- vitamin-mineral premix composition.

4. Statistical analysis

The statistical methodology requires improvement.

Please explain:

- which variable was analyzed using each statistical test,
- assumptions of normality,
- whether repeated measures analysis was performed for weekly body weight,
- software version.

Confidence intervals or effect sizes would strengthen the analysis.

5. Growth performance

Although differences were statistically non-significant, the experimental birds showed numerically lower final body weight and ADG.

The discussion should explain:

- possible nutritional reasons,
- anthocyanin concentration,
- digestibility differences,
- economic implications.

6. Meat quality

Only sensory evaluation was performed.

The study would be stronger if objective meat quality parameters were included, such as:

- pH,
- color (L*, a*, b*),
- water holding capacity,
- cooking loss,
- shear force,
- lipid oxidation.

7. Anthocyanin characterization

Since the study focuses on purple maize, quantitative determination of anthocyanin concentration should be reported.

Without phytochemical characterization, interpretation becomes limited.

8. Discussion

The Discussion mainly summarizes results.

It should compare findings with:

- previous poultry studies,
- antioxidant mechanisms,
- anthocyanin metabolism,
- possible effects on gut health and immunity.

Minor Comments

Abstract

- Mention the statistical significance more clearly.
- State practical implications.

REVIEWER'S REPORT

Keywords

Include terms such as:

- Anthocyanins
- Functional feed
- Poultry nutrition
- Antioxidants

Introduction

The introduction is informative but lengthy.

Some background information can be condensed.

Materials and Methods

Provide:

- vaccination schedule,
- mortality causes,
- feed preparation method,
- storage conditions of purple maize.

Figures

Improve figure resolution.

Increase font size.

Include sample size (n).

Tables

Table formatting should be standardized.

Use consistent decimal places.

Correct spelling:

- "Appearence" → **Appearance**
- "Arma" → **Aroma**

References

Several formatting inconsistencies exist.

Examples:

- spacing around "&"
- author initials
- journal formatting

Ensure all references follow the journal style.

Check duplicate citations (e.g., Luo et al., 2022 appears more than once).

Language

The manuscript requires professional English editing.

Several grammatical errors, punctuation inconsistencies, and awkward sentence constructions are present.

Strengths

- Relevant topic in poultry nutrition.
- Practical application of locally available purple maize.
- Appropriate experimental duration.
- Clear presentation of growth and health data.
- Good practical implications for sustainable poultry production.

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REVIEWER'S REPORT

Weaknesses

- Limited phytochemical characterization.
- Objective meat quality parameters are lacking.
- Discussion requires greater scientific depth.
- Statistical presentation can be improved.
- Several language and formatting issues remain.

Recommendation

Minor Revision