



Neutrophil and Lymphocyte Counts in Broilers Administered Aqueous *Vernonia amygdalina* as Natural Growth Promoter



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Introduction

- Plant extracts (phytochemicals) are natural growth promoters
- Phytochemicals can be used as feed additives
- Medicinal plants and spices can be suitable alternatives to antibiotic growth promoters
- In – vivo* effects of phytochemicals in poultry production include:

I. Improvement in growth performance

II. Antibacterial activity

III. Antioxidant activity

IV. Immune response modulatory effect

➤ **Effect of aqueous *Vernonia Amygdalina* extract on neutrophil and lymphocyte counts when administered to broiler chickens orally as a natural growth promoter was investigated**

Materials and methods

3 Treatments: 150 one-day old Anak 2000 broiler chickens having 5 replicates (10 birds / replicate)

Control: without antibiotic or *V. amygdalina*

Antibiotic: administered for 5 days at recommended dose

***V. amygdalina*:** 1.00 ml aqueous *V. amygdalina* per bird on day 7, 14 and 21 as natural growth promoter

Duration of study: 28 days

Sample collection/ analysis:

- Blood from 4 birds per replicate were collected into different sample bottles containing lithium heparin
- Appropriate hematological analysis was carried out to determine neutrophil and lymphocyte counts

Statistical analysis: Data collected was subjected to ANOVA and significant means stated at $P < 0.05$

Results

- Administration of 1.00 ml/bird of aqueous *V. amygdalina* significantly ($p < 0.05$) affected Neutrophil and lymphocyte counts (fig 2)
- Neutrophil counts were significantly ($p < 0.05$) higher in birds administered *V. amygdalina*

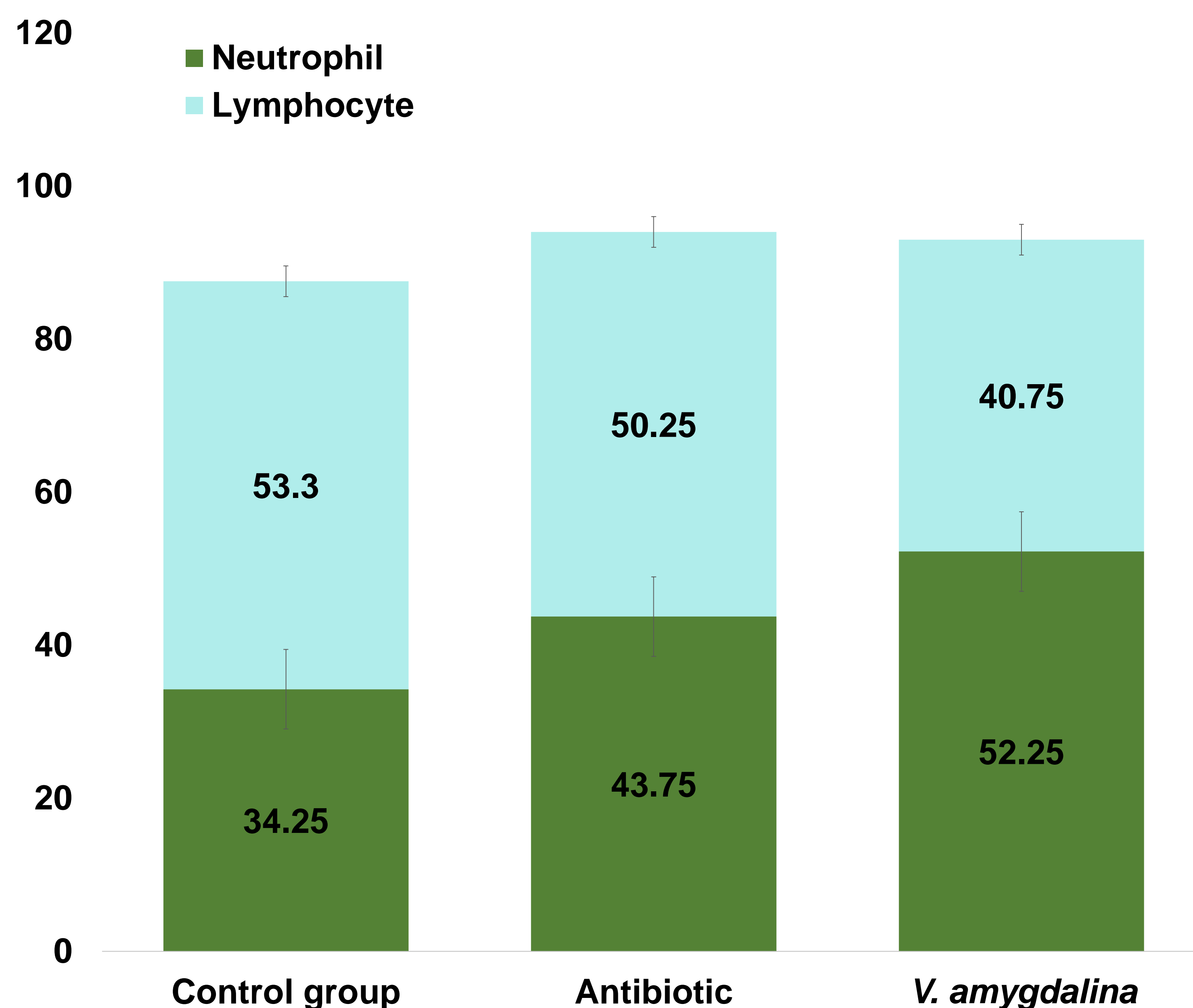


Fig 2: Effect of aqueous *V. Amygdalina* administration as natural growth promoter on neutrophil and lymphocyte counts

- Lymphocyte counts were significantly ($p < 0.05$) lower in birds administered Aqueous *V. amygdalina* compared to the control group
- Lymphocyte counts in the antibiotic treatment was not significantly different ($p > 0.05$) from aqueous *V. amygdalina* administration



Conclusion

Aqueous *V. amygdalina* positively impacted neutrophil and lymphocyte counts in broiler chickens as a natural growth promoter

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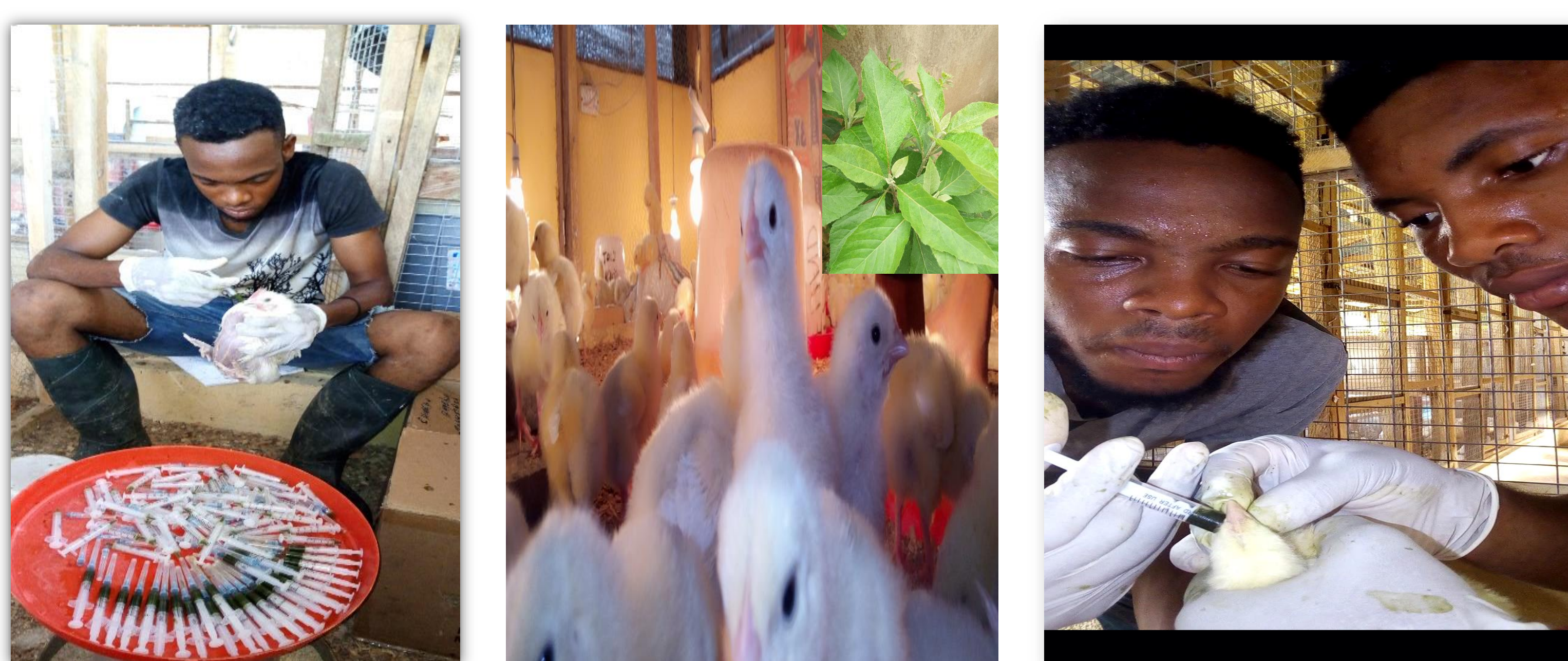
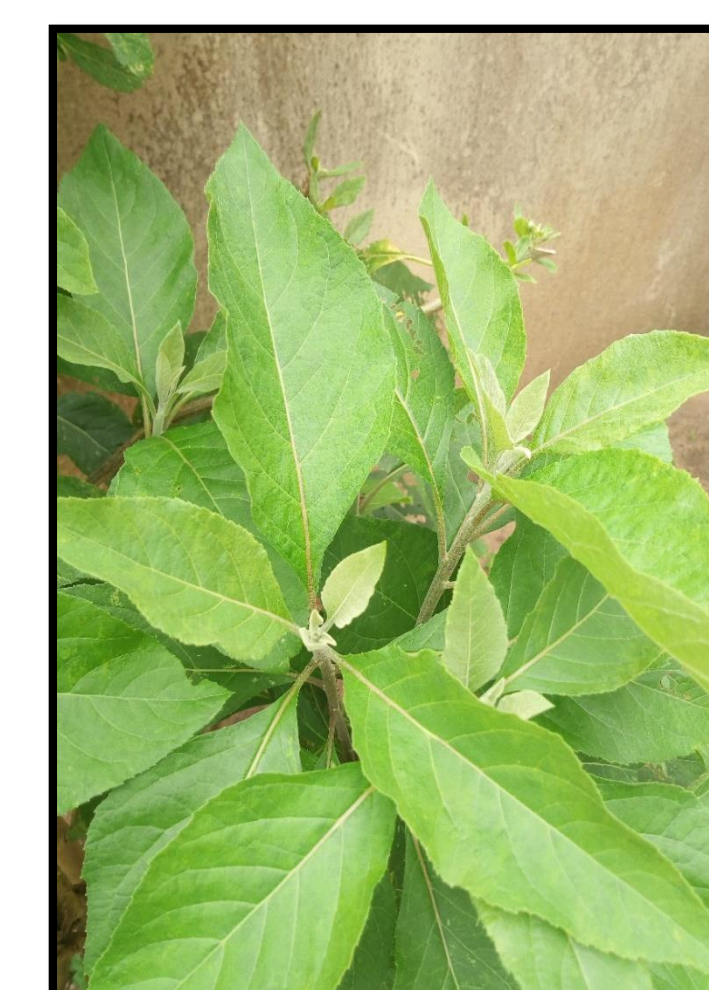


fig1: administration of *V. amygdalina*