

# Use of natural Zeolite (NZ) in broiler diet and its effect on performance and carcass traits

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## Introduction

Natural zeolites have attracted considerable interest in the scientific community because of their abundance in nature, valuable chemical-physical properties, and their potential application in numerous industrial and agricultural fields.

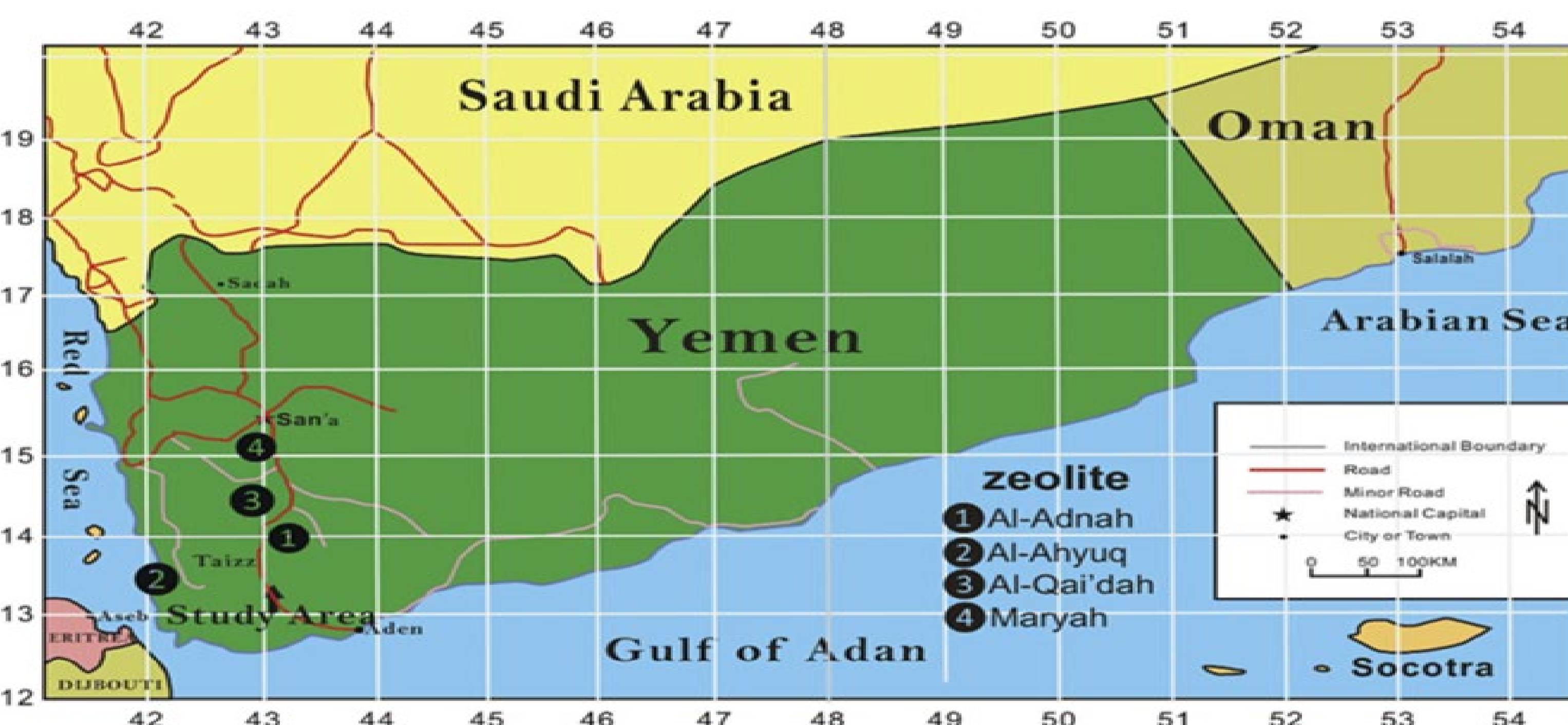


Fig. 1: Geological map of Yemen with the most promising zeolite occurrences

### Effect of zeolite (poultry)

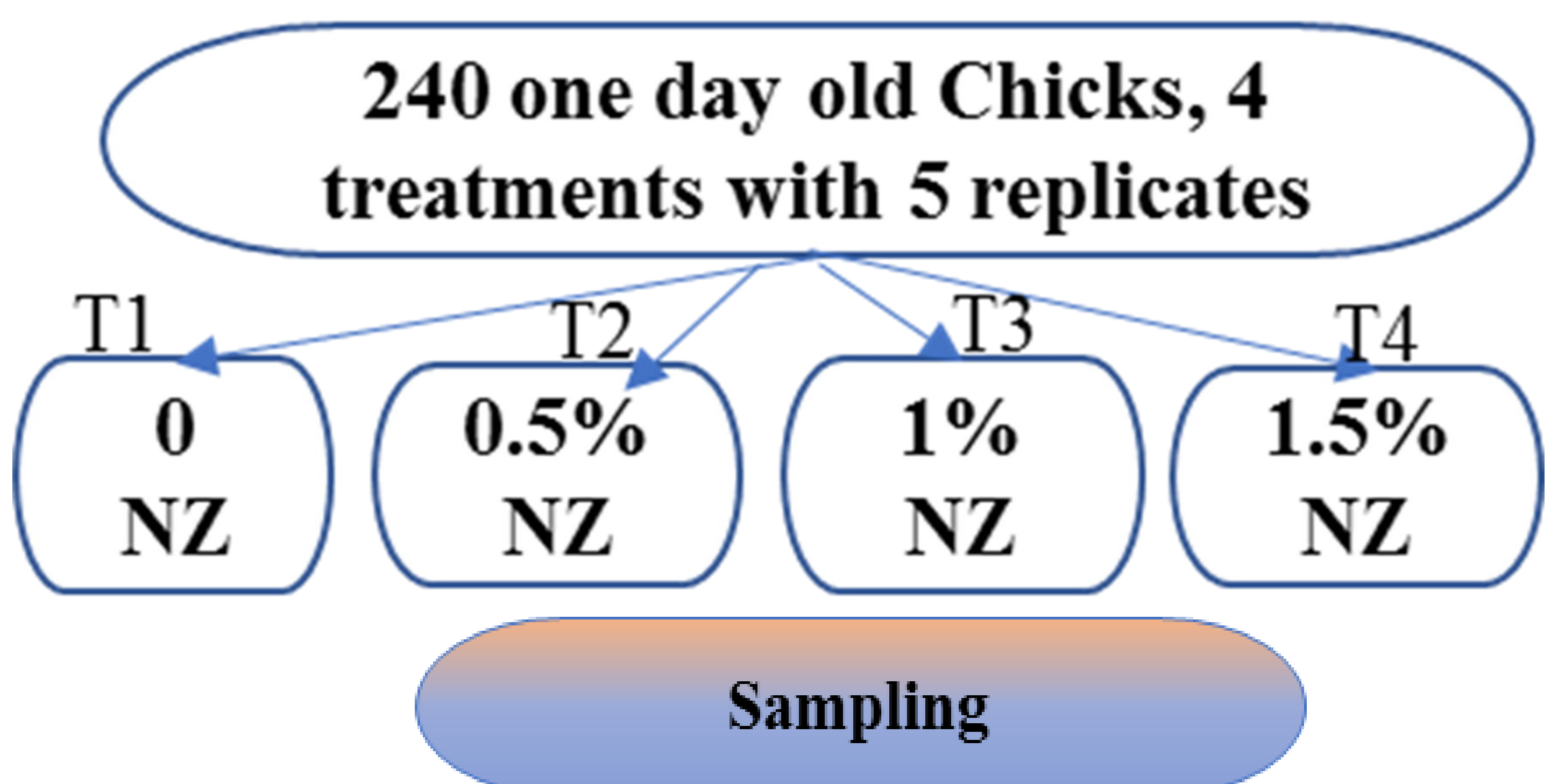
- Absorption of toxins,
- Eliminates harmful heavy and radioactive elements,
- Reduces intestinal pathogenic bacteria and the pH of the intestine
- Positively influences the intestinal morphology

Improvement of  
bird's health and  
performance

## Aim of the study:

Effects of NZ on performance, Caracas traits and blood protein and Ca levels in broiler

## Materials & Methods:



Body weight  
Feed intake  
FCR  
Auf Weekly Basis

42 d of Age slaughtering  
and determination of  
Carcass and blood value

The diet consisted of corn and soybean meal and this experiment lasted 42 days.

## Results

Fig. 2: Live body weight and body weight gain (g/bird)

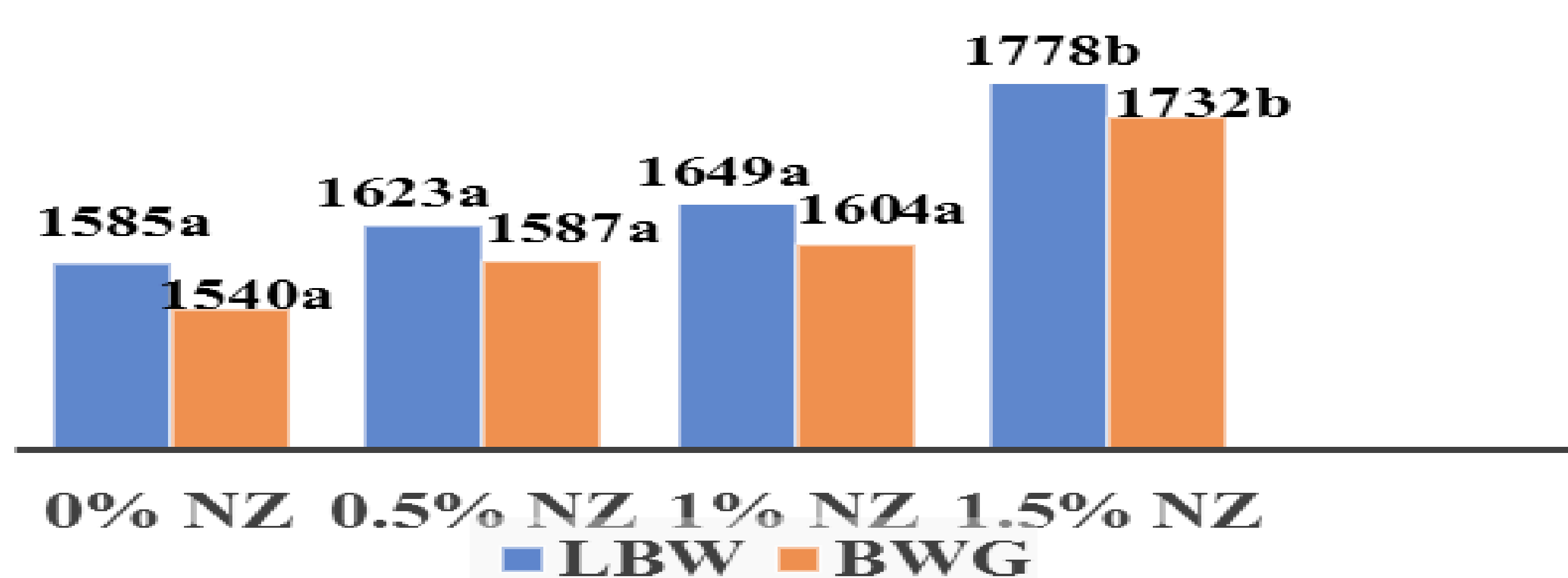


Fig. 4: Feed Conversion ratio (g/g)

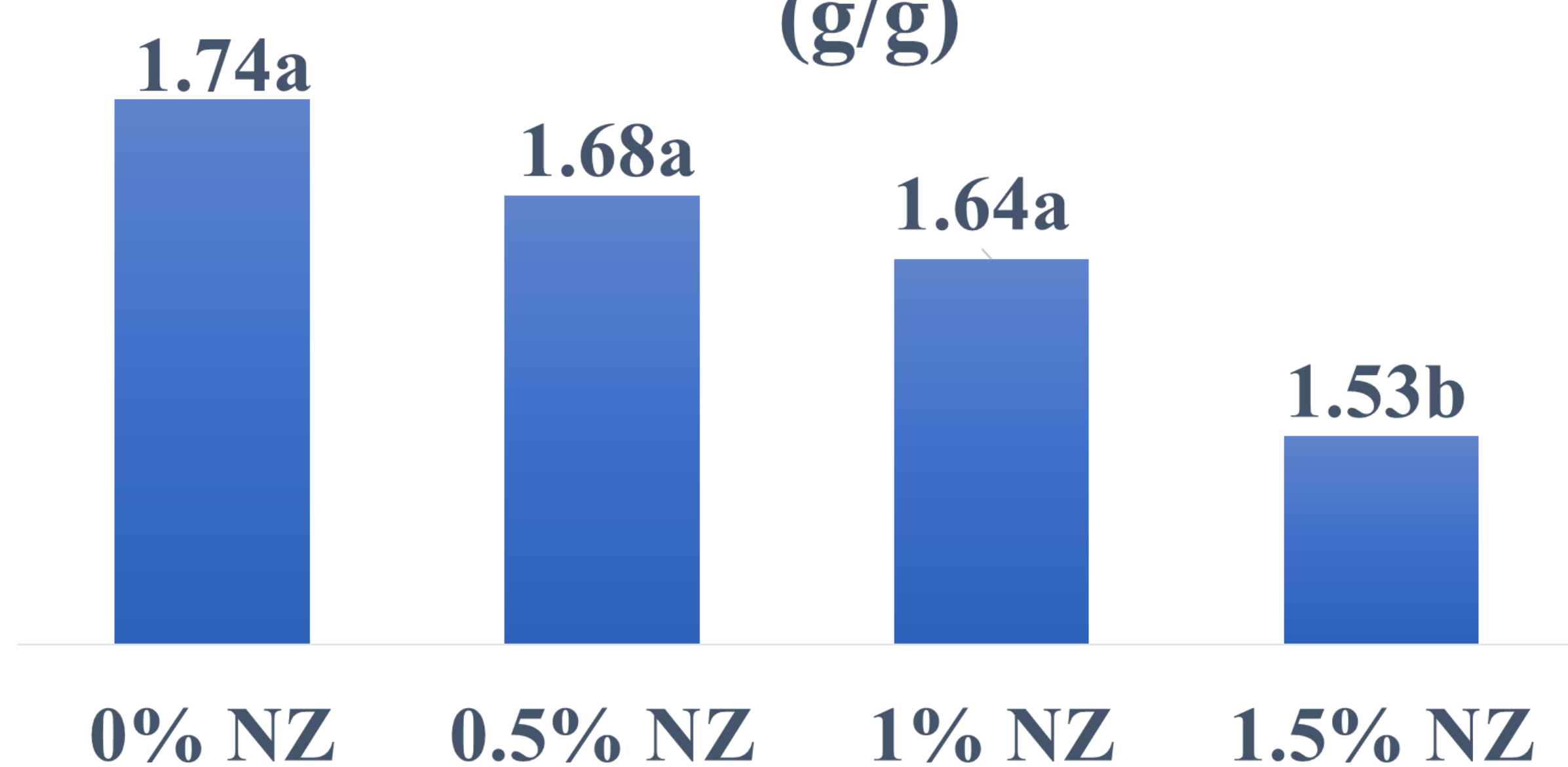
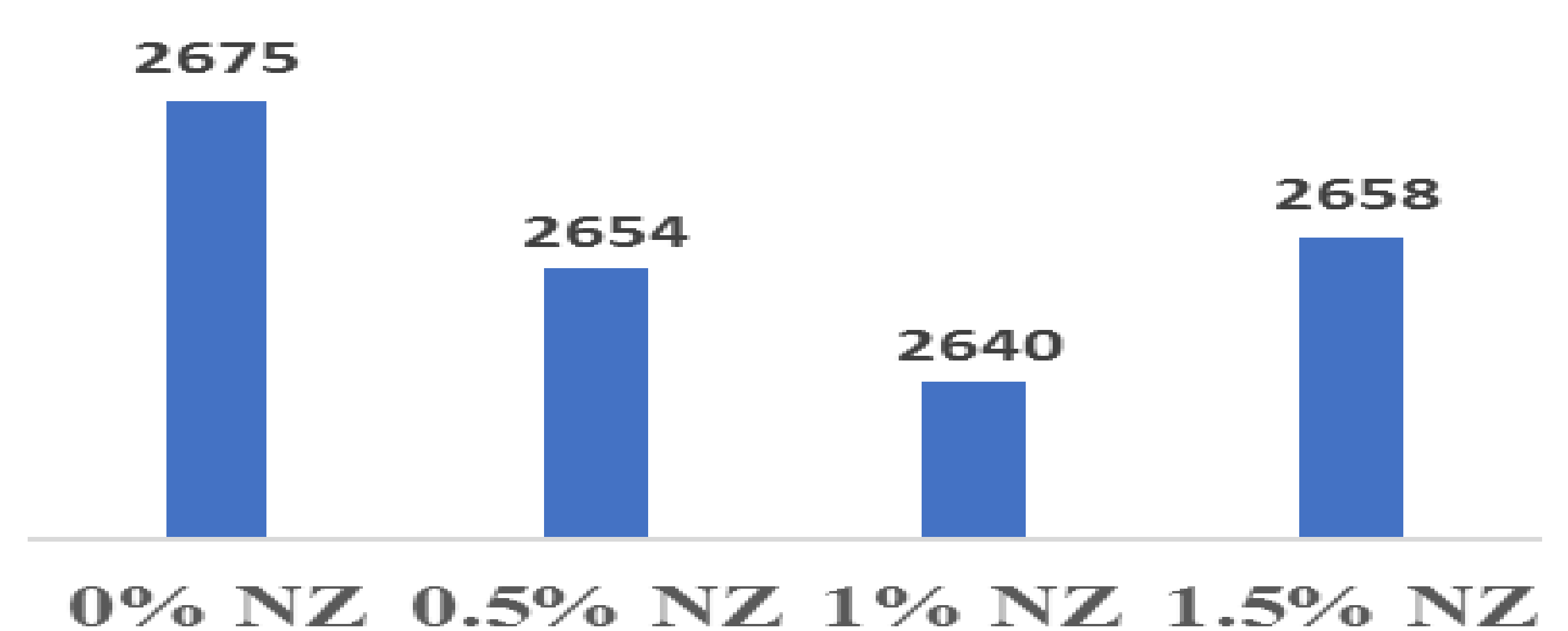


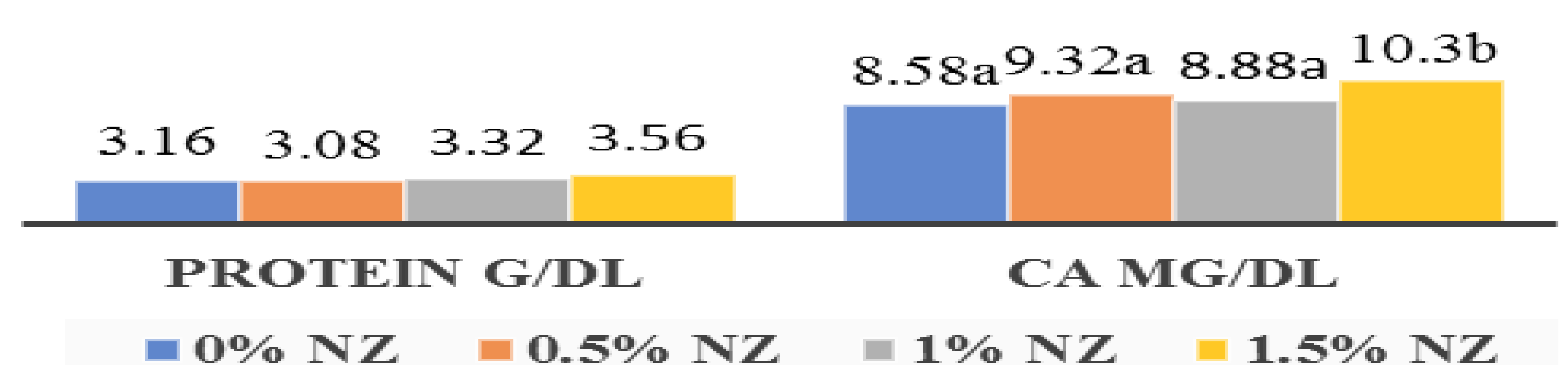
Fig. 3: Feed intake (g/bird)



Tab. : Effects of NZ on carcass traits and relative organ weight

	Treatments				
Parameter	0% NZ	0.5% NZ	1% NZ	1.5% NZ	P-Value
Caracass%	62.2a	68.9a	66.8a	68.9a	0.130
Thigh (g)	127a	146a	138a	140a	0.410
Tibia (g)	32b	28b	33b	40a	0.007
Breast (g)	247b	289ab	309ab	331a	0.047
Heart %	0.33b	0.38b	0.36b	0.46a	0.030
Gazared (%)	1.74b	1.76a	1.74b	1.77a	0.009
Liver (%)	1.96b	1.90b	2.02a	2.20a	0.022

Fig. 5: Effects of NZ on Protein and Ca value in blood of broiler



## Conclusion

In this study, the addition of 1.5% NZ improved live body weight, feed conversion ratio, and increased the relative weight of breast and weight of tibia without any adverse effects on broiler.