

**STUDYING THE IMPACT OF ADDING PROBIOTIC
ON THE PRODUCTIVE PERFORMANCE OF
BROILER STRAINS UNDER
ENVIRONMENTAL
CONDITIONS OF
EGYPT**

By

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ABSTRACT

Emad Eldin Ahmed Fahmy Ali Ahmed Elshahed: Studying the Impact of Adding Probiotic on the Productive Performance of Broiler Strains Under Environmental Conditions of Egypt. Unpublished M.Sc. Thesis, Department of Poultry Production, Faculty of Agriculture, Ain Shams University, 2017.

The productive performance measurements were measured for broiler strains when probiotics added for the broiler diet and exposed to high temperature during the first week under environmental conditions of Egypt.

The study was aimed to investigate the effects of probiotic on growth performance and immunity competence (used PHA-P) for Ross strain in summer season. A total of 375 one day old Ross chicks, at 7 days old (Ross-500) broilers were randomly divided into 5 groups. The degree of temperatures of housing were held at $29 \pm 3^{\circ}\text{C}$ and $68 \pm 3\%$ relative humidity.

Control group fed the normal diet with normal environmental temperature and relative humidity. The weight gain and carcass traits (Carcass, thigh, drum and breast weight) were recorded to different treatment and control groups. The results reached that group fed probiotic were significant increase of weight gain and carcass traits as compared to the normal groups under high ambient temperature.

On the other hand, the immunity competence significant increase in groups fed probiotic compared to normal fed. The last results concluded that the probiotic is essential for the maintenance of broilers performance and immunity competence under heat stress condition.

Key words: Probiotic, Productive performance, immunity and Broiler

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LIST OF ABBREVIATIONS

| | |
|-------|------------------------------------|
| ADG | average daily gain |
| AGP | antibiotic growth promoter |
| ALT | Alanine amino transferase |
| AST | Aspartate amino transferase |
| BC | before Christ |
| BSA | bovine serum albumin |
| BSP | Bacillus subtilis-based probiotic |
| BW | Body weight |
| BWG | Body weight gain |
| CMI | cell-mediated immune |
| CP | Curd protein |
| dl | Deciliter |
| ED | experimental day |
| ELISA | Enzyme Linked Immuno Sorbent Assay |
| ESR | Erythrocyte Sedimentation Rate |
| FAO | Food and Agriculture Organization |
| FC | Feed Consumption |

| | |
|------|---------------------------------|
| FCR | feed conversion ratio |
| g | Gram |
| GALT | gut-associated lymphoid tissues |
| GI | gastrointestinal |
| GLM | general linear models |
| GRAS | generally recognized as safe |
| H/L | Heterophil to Lymphocyte ratio |
| Hb | Heamoglobin |
| HS | Heat stress |
| IFP | Intermittent feeding programme |
| Ig | Immunoglobuline |
| IL | Interlukin |
| Kg | Kilogram |
| LAB | lactic acid bacteria |
| LBP | Lactobacillus-based probiotic |
| LBW | Live body weight |
| LDL | Low-density lipoprotein |
| LPS | lypopolisaccharides |