

CLOSTAT®

Active Microbial

A study conducted at Al-Muwgar Research Station at the University of Jordan evaluating the impact of feeding CLOSTAT®, a proprietary strain of *Bacillus subtilis*, showed an improvement in **eggshell thickness, eggshell weight, and egg production** when fed to older laying hens for a 10 week period.¹

EGGSHELL THICKNESS

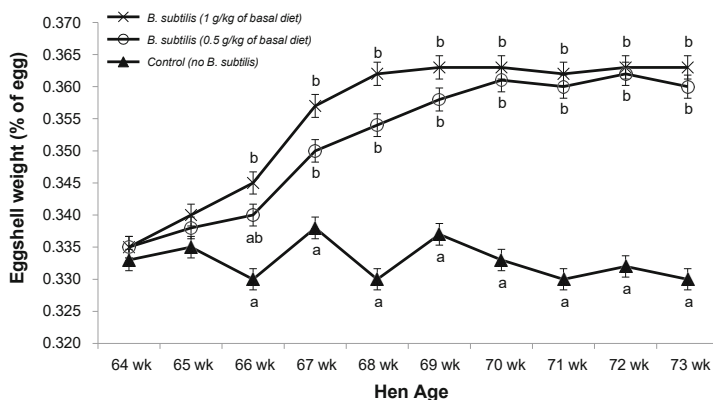


Figure 1: Eggshell thicknesses (mean±SEM) of laying hens supplemented with different levels of *B. subtilis*. ^{a,b,c} Different letters indicate significant differences at the same week.

EGGSHELL WEIGHT

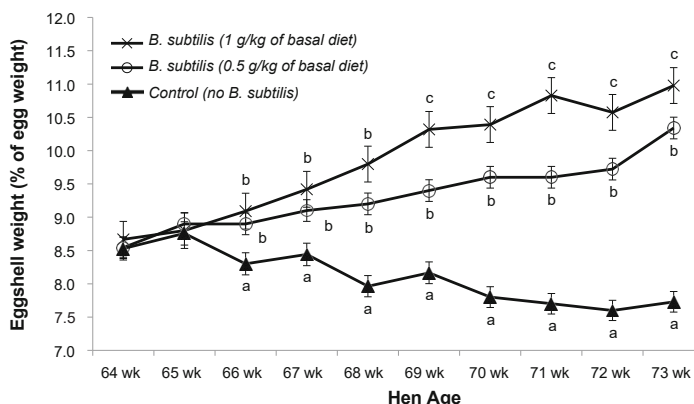


Figure 2: Eggshell weights (mean ±SEM) of laying hens supplemented with different levels of *B. subtilis*. ^{a,b,c} Different letters indicate significant differences at the same week.

EXPERIMENTAL DESIGN

White laying hens of age 64-73 weeks were randomly assigned to one of three treatments (8 reps/treatment; 4 hens/rep). Basal diet (control), basal diet + CLOSTAT (*B. subtilis*) (0.5 g/kg, 1lb/ton), and basal diet + CLOSTAT (1 g/kg, 2lb/ton). To measure eggshell quality, all eggs were individually weighed, and egg mass was calculated. Eggs produced in the last day of each week were broken, and their contents were separated and weighed individually to determine eggshell weight, thickness, and density. In addition, performance, tibia traits, and bacterial counts were measured during the study (data not shown on page; refer to reference 1).

EGG PRODUCTION

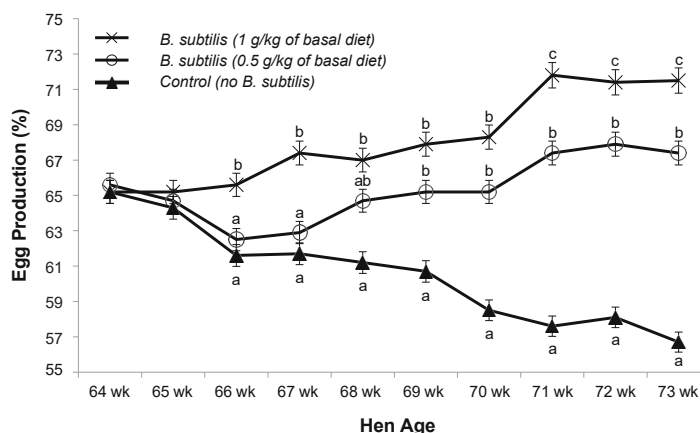


Figure 3: Egg production (mean± SEM) of laying hens supplemented with different levels of *B. subtilis*. ^{a,b,c} Different letters indicate significant differences at the same week.