

Effect of supplementing the stem powder of *Lycium chinense* Miller into the organic diet on the laying performance and egg quality of ISA Brown laying hens⁽¹⁾

Sheng-Der Wang ⁽²⁾ Shen-Shyuan Yang ⁽³⁾⁽⁶⁾ Ching-Chi Hung ⁽⁴⁾ An-Kuo Su ⁽³⁾ Shih-Yi Shen ⁽²⁾
and Jhin-Syuan Wang ⁽⁵⁾

Received: Apr. 7, 2023; Accepted: Aug. 14, 2023

Abstract

The purpose of this experiment was to investigate the effects of supplementing the stem powder of *Lycium chinense* Miller (*LcM*) into the organic laying hen diet on the laying performance, egg quality and the contents of selenium in egg (including egg white and egg yolk). Ninety ISA brown laying hens were divided into 3 groups, with organic diet or organic diet additionally supplementing with 1% or 3% of *LcM* stem powder. In each group, 30 laying hens were housed in 30 individual cages with one hen one cage. The experimental period was from 23 to 30 weeks of age. The data of body weight, egg weight, number of eggs laid and feed consumption of each group were collected. Eggs at 30 weeks of age in each group were collected to analyze egg quality. The results showed that supplementing the stem powder of *Lycium chinense* Miller into the organic diet with 1% or 3% did not result in a significant effect on body weight, hen-day egg production, laid egg number, egg weight and egg mass. Egg shape index, Haugh unit, eggshell trait, yolk ratio, yolk color and the contents of selenium in eggs also had no significant effects among the three groups. It can be concluded that supplementing the stem powder of *Lycium chinense* Miller into the organic diet, the amounts up to 3% has no significant impact on laying performance and egg quality of laying hens.

Key Words: *Lycium chinense* Miller stem powder, Laying hen, Egg quality.

(1) Contribution No. 2760 from Taiwan Livestock Research Institute (TLRI), Ministry of Agriculture (MOA).

(2) Northern Region Branch, MOA-TLRI, Miaoli 36843, Taiwan, R. O. C.

(3) Eastern Region Branch, MOA-TLRI, Ilan 268, Taiwan, R. O. C.

(4) Animal Nutrition Division, MOA-TLRI, HsinHua, Tainan, 71246, Taiwan, R. O. C.

(5) Miaoli District Agricultural Research and Extension Station, MOA, Miaoli 363201, Taiwan, R. O. C.

(6) Corresponding author, E-mail: ssyn@mail.tlri.gov.tw