

Thipwadee Pooldech 2010: Effect of Dietary Dried Cassava Leave on Immunity Egg Quality and Productivity of Layers. Master of Science (Animal Nutrition and Feed Technology), Major Field: Animal Nutrition and Feed Technology, Department of Animal Science. Thesis Advisor: Associate Professor Uthai Kanto, M.S. 91 pages.

Effects of dietary dried cassava leaves (DCL) on immunity of the animal were studied in 160 laying hens aged 21-44 weeks. The animals were divided into 5 groups of 32 animals each. Each group of the animals were further divided into 4 sub-groups (replications) of 8 layers each, and was randomly fed an experimental diet containing 0, 2.5, 5, 7.5 or 10% dried cassava leaves meal for a period of 24 weeks. Results showed that layers on diet containing 10% DCL had significantly higher ($P < 0.05$) T-lymphocyte proliferation on day 3 and 7 post-stimulation than those on the diets without DCL. The 21, 33 and 45 week-old layers on diets containing DCL had no significant higher ($P > 0.05$) total antioxidant capacity than those on the diet without DCL. Animal on diets containing DCL had no significant differences ($P > 0.05$) in tGSH and GSSG but GSH/GSSG ratio in 33 weeks have significant difference ($P < 0.05$) than those on the without DCL. The effect of dietary DCL supplementation on performance and egg quality was investigated using 480 Hisex brown laying hens aged 21-44 weeks. The birds were divided into 5 groups of 96 animals each. Each group composed of 4 replications of 24 layers each and was randomly fed an experimental diet containing 0, 2.5, 5, 7.5 or 10% DCL for a period of 24 weeks. Results showed that there were no significant differences in laying performances including hen-day production, hen mortality and egg mass among treatment groups. The increasing levels of DCL in the diets significantly increased dietary intake of the animals ($P < 0.05$). Layers on diet containing 10% DCL had no significantly higher egg weight and Haugh unit than those on the control diet containing 0% DCL ($P > 0.05$). The increasing of the dietary levels of DCL in layer diet significantly increased yolk color score ($P < 0.01$). Dried cassava leaves can be used in hen layer diet at 10% without any adverse effects on performance and egg quality.

Student's signature

Thesis Advisor's signature