

Jeerapa Tiewsomboonkit 2007: Effects of Dietary Dried Cassava Leaves on Immunity in Broilers. 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. 81 pages.

Effects of dietary dried cassava leaves (DCL) in broiler diets on immunology of the animals were studied in 720 day-old broiler chicks utilizing randomized complete block design. The study was divided into 2 parts of the identical practice protocol but conducting at 2 period of time. Each part of the study, 360 day-old broiler chicks was divided into 4 groups of 90 animals each. Each group of the animals was further divided into 6 subgroups of 15 animals each which was kept in a pen where feed and water were provided ad libitum. Each group of the animals was randomly fed an experimental pelleted corn-soybean meal diet which containing 0, 3, 5 or 7 % dried cassava leaves meal. Result of the study have shown that broilers on diet containing DCL have significantly higher ($P<0.05$) phagocytosed macrophage for opsonized and unopsonized sheep red blood cells than those on the diet without DCL. DCL have no influence on antibody development of the animals. Broilers on diets containing DCL have significantly higher ($P<0.05$) T-lymphocyte proliferation in day 0, 3 and 7 than those on the diet without DCL. Animals on diet containing 5 and 7 % DCL had significantly higher ($P<0.05$) GSH in erythrocyte than those on diet containing 0 and 3 % DCL. Broilers on diets containing DCL had significantly higher ($P<0.05$) total antioxidant capacity in blood than those on the diet without DCL. Inclusion of DCL in broiler diets significantly ($P<0.05$) reduced production performance of the animals.

Qualitative study of DCL extract presented phenolic compounds, β -caroteins and xanthophylls. Alkaloids, flavanoids and tannins were found from phytochemical test of DCL. The content of phenolic compound in DCLM is 318.62 mg/100 g.

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Thesis Advisor's signature

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