SUMMARY

It was evaluated the performance of eggs and meats production, fat of blood lipid profile, blood haematological, immunity, and organs lymphoid of safflower oil and inositol on Sentul chicken(female and male). This research used 162 birds (81 female 81male) was the males one-month-old was raised throughout (8 weeks) including one week for adaptation, the bird has been slaughtered at the age of 12 weeks, the female was 16 weeks old which were raised throughout (8 weeks) including one week for adaptation. Nine experimental diets were formulated to meet the nutrients requirements of Sentul chicken in addition to the basal control diet (T0) without safflower oil and inositol, eight experimental diets were formulated to contain safflower oil and inositol, on basis of safflower oil and inositol, At different levels, T1= 0.5% safflower oil, T2 = 0.5% inositol, T3 = 1% safflower oil, T4 = 1% inositol, T5 = 0.5 % safflower oil + 0.5% inositol, T6 =0.5% safflower oil + 1% inositol, T7 = 1% safflower oil + 0.5% Inositol, T8 = 1% safflower oil + 1% inositol. It was arranged based on a Completely Randomized Design of nine experimental with three replications, each replication with three birds. The measured variables of meats and eggs production, blood lipid profile, blood haematological, immunity, organs lymphoid and digestive profile. The results showed the treatments had no significant effect (P>0.05) on performance and the digestive profile, except carcass and non-carcass, had significant differences (P<0.05) of male which was carcass higher at (T7) 705.04±18.19 to decrease (T8) 624.31±28.28 and non-carcass which was recorded at (T3) 284.43±11.16 to (T4) 225.48±12.41, fat of blood lipid profile, hematological, titer antibody of ND was the non-significant effect (P>0.05) of males and females, except total cholesterol of significant male differences (P<0.05) which was the highest treatment at T8 (148.15)and T 7 (148.15). In contrast, egg production had significant differences (P<0.05) of females which recorded higher at (T1) 65.44±2.84 %, while significantly affected (P<0.05) to fat eggs yolk, were fat eggs yolk showing higher at (T7) 17.56 and titer antibody AI had significant differences (P<0.05) of males and females, were recorded higher of titer antibody AI in (T5) 15.33 and (T4) 200 of males and females. Weights of the thymus, bursa of Fabricius, and relative weight were not significantly different (P>0.05), while there was a highly significant difference (P<0.01) at the spleen which was between T1 6.13± .05 to T7 2.68±.07 of males. In contrast, the spleen and thymus did not have a significant difference (P>0.05) in females the relative weight of the bursa of Fabricius was significantly high (P<0.05) in females was at higher at (T4) 18.77g.

It can be concluded supplementation of safflower oil and inositol up to 1% had increased some Sentul chicken's performance. Also, it can maintain the stability of relatively the same values for blood profile, hematological parameters, and digestive organs and does not influence the physiological mechanism. Therefore, it had improved the immune response of titer antibody increased at AI, indicating that the healthy Sentul chicken.
Key words: Safflower oil, Inositol, Sentul, lipid profile, Haematological, Immunity**.**

RINGKASAN

Penelitian bertujuan mengevaluasi kinerja daging dan produksi telur, profil lemak darah, hematologi darah, kekebalan, organ limfoid dan profile histologi organ pencernaan, melalui suplementasi minyak safflower dan inositol pada ayam Sentul (jantan dan betina). Penelitian ini menggunakan 162 ekor ayam (81 jantan dan 81 betina). Ayam jantan berumur empat minggu yang dipelihara selama (8 minggu), termasuk didalamnya satu minggu untuk adaptasi, ayam jantan tersebut disembelih pada umur 12 minggu. Ayam betina berusia 16 minggu yang dipelihara selama (8 minggu) termasuk satu minggu untuk adaptasi. Sembilan pakan perlakuan diformulasi untuk memenuhi persyaratan nutrisi ayam Sentul. Selain pakan kontrol basal (T0) tanpa minyak safflower dan inositol, delapan pakan perlakuan diformulasikan mengandung minyak safflower dan inositol. Pada tingkat yang berbeda, T1 = 0.5% minyak safflower, T2 = 0.5% inositol, T3 = 1% minyak safflower, T4 = 1% inositol, T5 = 0.5 % minyak safflower + 0.5% inositol, T6 =0.5% minyak safflower + 1% inositol, T7 = 1% minyak safflower + 0.5% inositol, T8 = 1% minyak safflower + 1% inositol, disusun berdasarkan Rancangan Acak Lengkap dengan sembilan perlakuan dan tiga ulangan, masing-masing ulangan menggunakan tiga ayam. Variabel yang diukur terdiri atas kinerja produksi daging dan telur, profil lemak darah, hematologi darah, kekebalan, organ limfoid dan profil histologi usus. Hasil penelitian menunjukkan perlakuan berpengaruh tidak nyata (P>0, 05) terhadap performan dan profil pencernaan, kecuali bobot karkas dan non karkas ayam jantan (P<0, 05). Bobot karkas paling tinggi pada (T7) 705,04±18,19 dan terkecil pada (T8) 624,31±28,28 dan bobot non karkas tertinggi 284,43±11,16 (T3) dan terkecil pada (T4) 225,48±12,4. Perlakuan berpengaruh tidak nyata (P> 0, 05) terhadap profil lemak darah, hematologi, titer antibodi ND baik pada ayam jantan maupun beina, namun berpengaruh nyata (P<0, 05) terhadap kolesterol total pada ayam jantan, nilai tertinggi pada perlakuan T8 (148, 15) dan T 7 (148, 15). Perlakuan berpengaruh nyata (P<0, 05) terhadap produksi telur, produksi tertinggi pada (T1) 65,

44±2, 84%, terhadap lemak kuning telur, tertinggi pada (T7) 17, 56 dan titer antibodi AI tertinggi pada (T4) 200.0. Perlakuan berpengaruh tidak nyata (P>0, 05), terhadap bobot timus, bursa Fabricius dan bobot relatif, sedangkan pada limpa terdapat perbedaan yang sangat nyata (P<0, 01) yaitu antara T1 6.13± .05 sampai T7 2.68±. 07 pada ayam jantan. Sebaliknya, limpa dan timus tidak memiliki perbedaan yang signifikan (P>0, 05) pada ayam betina. Bobot relatif bursa fabricius secara nyata dipengaruhi perlakuan, dengan bobot tertinggi pada (T4) 18,77g. Dapat disimpulkan bahwa suplementasi minyak safflower dan inositol sampai level 1% dapat meningkatkan beberapa performa ayam Sentul. Selain itu, juga mempertahankan profil darah, parameter hematologi, dan organ pencernaan sehingga tidak beroengaruh negative terhadap kondisi fisiologis ayam. Suplementasi minyak safflower dan inositol juga meningkatkan respon imun terhadap titer antibodi avian infuenza yang menunjukkan ayam Sentul sehat.

Kata kunci: *minyak safflower, inositol, Sentul, profil lemak, hematologi, kekebalan.*