5. SUMMARY

The present study was carried out at private farm of Etay El-Baroud. El-Behera Governerate. Experimental period lasted from June 1995 to May 1996.

Thirty eight Rahmani ewes aged between 2-5 years old during different reproductive stages (pregnancy and post-partum period) were used. Blood samples were collected every 30 days intervals during pregnancy period (up to the 150^{th} day) as well as during post-partum period (up to the 60^{th} day). Total protein (TP), Albumin (A), globulin (G), albumin/globulin ratio (A/G), total lipids (TL), cholesterol (Ch), lipids/cholesterol ratio (L/C), uric acid (Ur), creatinine (Cr), glutamic oxaloacetic transaminase (GOT), glutamic pyruvic transaminase (GPT) were measured. Blood components were performed in the laboratories of Animal Production Department, Faculty of Agriculture at Moshtohor, (Benha Branch) Zagazig University.

Also, some physiological parameters were determined on the same ewes during the same different reproductive stages (pregnancy and post-partum period) such as rectal temperature (RT), skin temperature (ST), respiration rate (RR), and pulse rate (PR). All these parameters were performed on ewes continuously every 15 days twice a day in the morning (at 8.00 a.m.) and in the afternoon (at 4.00 p.m.).

Results obtained could be summarized as follows:

A. Concentration of some blood plasma components in ewes during pregnancy period:

1- The parity number of ewes, sex and type of embryo had non significant effect on levels of plasma total protein, albumin, globulin and albumin/globulin ratio.

2- Month of pregnancy had a significant ($P<0.001$) effect on total protein level and non significant effect on plasma albumin, globulin and albumin/globulin ratio.

3- Season of the year had a significant ($P<0.05$ and $P<0.01$) effect on levels of plasma total protein, albumin, globulin and albumin/globulin ratio.

4- The interaction between, parity number and each of month of pregnancy, season of the year had significant effects ($P<0.001$), ($P<0.01$) on plasma total proteins.

5- Parity number and month of pregnancy had a significant ($P<0.001$) effect on plasma total lipids and non significant effect on levels of plasma cholesterol and lipids/cholesterol ratio.

6- Sex of embryo had insignificant effect on plasma total lipids, cholesterol and lipids/cholesterol ratio.

7- Type of embryo and season of the year had significant effects on plasma lipids/cholesterol ratio ($P<0.01$ and $P<0.05$), respectively.

8- The interaction between sex of embryo and month of pregnancy had a significant ($P<0.05$) effect on level of plasma cholesterol. Also the interaction between parity number and season of the year had significant ($P<0.01$ and $P<0.05$) effects on level of plasma cholesterol and lipids/cholesterol ratio, respectively.

9- Linear and quadratic coefficients of regression on age of ewe had significant ($P<001$) effect on levels of plasma total protein and total lipids.

10- Parity number, month of pregnancy and season of the year had non significant effects on levels of plasma uric acid, creatinine, GOT and GPT.

11- Sex of embryo had a significant ($P<0.05$) effect on level of plasma uric acid and GPT and non significant effect on levels of plasma creatinine and GOT.

12- Type of embryo had a significant effect on levels of plasma creatinine and GPT and non significant effect on level of plasma uric acid and GOT.

13- Coefficient of linear regression of plasma level of GOT on age of ewes was significant ($P<0.05$).

B- Concentration of some blood plasma components in ewes during post-partum period:

1- Parity number, sex of embryo, type of embryo and month of post partum period had non significant effect on levels of plasma total protein, albumin, globulin and albumin/globulin ratio.

2- Season of the year had a significant effect on levels of plasma albumin, globulin and albumin/globulin ration ($P<001$, $P< 0.01$ and $P<0.05$, respectively)).

3- Parity number had a significant ($P<0.01$) effect on level of plasma lipids and non significant effect on level of plasma cholesterol and lipids/cholesterol ratio.

4- Sex and type of embryo, month of post-partum period and season of the year had a non significant effect on total lipids, cholesterol and lipids/cholesterol ratio.

5- Coefficients of linear and quadratic regression of TL on age of ewe were significant which explain that TL is expected to increase with 3.903 mg/dl per month unit added to the age of ewe in case of linear relationship and to increase with 3.29 mg/dl per month unit in case of quadratic relationship.

6- Parity number had a significant ($P<0.05$) effect on level of plasma uric acid and non significant effect on level of plasma creatinine. However, season of the year had a significant ($P<0.01$) effect on level of plasma creatinine and non significant effect on level of plasma uric acid.

7- The effect of Sex, type of embryo and month of post-partum period on level of plasma uric acid and creatinine were not significant.

8- Parity number, sex of embryo and interaction between parity number and season of the year had a significant effect on plasma GOT ((P<0.05 and P<0.01).

9- Coefficient of linear regression of GPT on age of ewe was significant (P<0.05).

C- Clinical parameters:

1- During pregnancy period, parity number had significant (P<0.001) and (P<0.01) effects on RT at morning (8 a.m) and at afternoon (4. p.m) and on RR (P<0.05) at afternoon (4 p.m) and it had non significant effect on ST, PR and RR (at morning 8 a.m only). While during post partum period, parity number had significant (P<0.001) effects on RR and PR at morning (8. a.m) and afternoon (4. P.m) and it had non significant effect on RT and ST.

2- During pregnancy period, sex of embryo had a significant (P<0.001) effect on RT at morning (8. a.m) and on PR at afternoon (4 p.m) and a non significant effect on RT at afternoon (4 p.m), St, RR and PR at morning (8 a.m). However, during post-partum, sex of embryo had a significant (P<0.001) effect on RT, ST, PR and RR (at after noon on at 4 p.m).

3- During pregnancy period, type of embryo had a significant (P<0.05) effect on RR at afternoon (4 p.m) and non significant effect on RT, ST, RR (at morning 8 a.m only) and on PR. While during post-partum, type of embryo had non significant effect on all above studied traits.

4- During pregnancy period, biweekly intervals has a significant (P<0.001) effect on RT, RR and each of ST and PR at after noon (4 p.m). While during post-partum period biweekly intervals had a significant (P<0.001) effect on all above studied traits.

5- During pregnancy and post-partum periods, season of the year had a significant ($P<0.001$) effect on RR at afternoon only and non significant effect on the other traits studied.

6- The interaction between the parity number and season of the year, during pregnancy period, had a significant effect only on RT at morning. While during post-partum period, the same interaction had a significant effect only on RR and PR at morning 8 a.m and afternoon 4 p.m.

7- During pregnancy period the coefficient of linear regression of each of RR and PR at afternoon (4 p.m), on age of ewe were significant ($P<0.001$). While during post-partum period linear regression coefficients of RR at afternoon (4 p.m) and PR at morning (8 a.m) on age of ewe were significant ($P<0.001$).

8- During pregnancy period quadratic coefficients of regression of RR at morning (8 a.m) and at afternoon (4 p.m) on age of ewe, were significant ($P<0.001$). While during post partum period quadratic coefficients of regression of RT at afternoon and RR at morning (8 a.m) on age of ewe were significant ($p<0.001$).