

## COMMON CAUSES OF REDUCED FERTILITY IN COWS IN SOME DISTRICTS OF SALAH- ADDIN

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### ABSTRACT

This study was designed to determine the incidence rate of some fertility problems that occur in cows in some districts of Salah AL-Din province. Data were collected from the records of the documentation of the coming cases to the veterinary clinics in AL- Dhuluiya and Al-Tuz in Salah-addin province. The results of the statistical data showed that cases of dystocia, retained fetal membranes and metritis were the highest incidence of other genital problems in local Iraqi cows, while the incidence of uterine and vaginal prolapse was less than the incidence of other cases. The system of breeding and the quality of food used have the greatest effect on the proportion occurrence of various reproductive problems in local Iraqi cows.

**Keyword:** fertility, uterine prolapse, dystocia, metritis.

### الاسباب الشائعة لانخفاض الخصوبة في الابقار في بعض اقضية صلاح الدين

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### الخلاصة

صممت هذه الدراسة لمعرفة نسب حدوث بعض مشاكل الخصوبة التي تصيب الابقار في بعض اقضية محافظة صلاح الدين. تم جمع البيانات من السجلات الخاصة بتوثيق الحالات المرضية القادمة الى المستوصفات البيطرية في كل من قضائي الضلوعية والطوز في محافظة صلاح الدين. اثبتت نتائج البيانات الاحصائية ان حالات عسر الولادة واحتباس المشيمة والتهاب الرحم كانت اعلى نسبة حدوث من بقية الحالات التناسلية الاخرى في الابقار العراقية المحلية في حين كانت حالة انقلاب الرحم و المهبل اقل نسبة حدوثا من بقية الحالات. ان لنظام التربية ونوعية الغذاء المستخدم التأثير الاكبر على نسبة حدوث المشاكل التناسلية المختلفة في الابقار العراقية المحلية.

### Introduction

Fertility problems are the most common problems affecting reproduction and production in cattle (1). Where reproductive problems lead to significant economic losses in the dairy industry because of the low number of born calves, delayed uterine involution and an increase in calving interval, resulting in reduced milk production, increased costs due to veterinary services and early culling of

cattle (2). Therefore, reproductive management plays a very important role in cattle herds, that is any factor causes delay in pregnancy in cows directly reduces both milk production and the number of calves produced per cow per year, increasing the likelihood of herd replacement to reduce economic losses (3).

Among the main reproductive problems that have a direct effect on the reproductive performance of cows are

abortion, dystocia, retention of fetal membrane (RFM), inflammation of the uterus, uterine and vaginal prolapse, and lack of oestrus (4). There are many factors that may have a direct impact on the occurrence of these reproductive problems in cows. Among the most important factors are the management system of herd and the nutritional status of animals in addition to the environment (5). Therefore, this study was designed to know the most important reproductive problems affecting local Iraqi cows, which have a significant role in the reduction of reproductive efficiency and identify the most important factors leading to the occurrence.

## Materials and methods

### 3-1- Data collection:

In this study, the required data were collected from the records of cases in the veterinary dispensary for AL- Dhuluiya and AL- Tuz districts which are subordinate to the General Authority of Veterinary Medicine in the period between

2011 - 2015, where the cases were divided by year of arrival to the clinic after a special form was established in which each case of genital cases installed in the records in the clinics mentioned above.

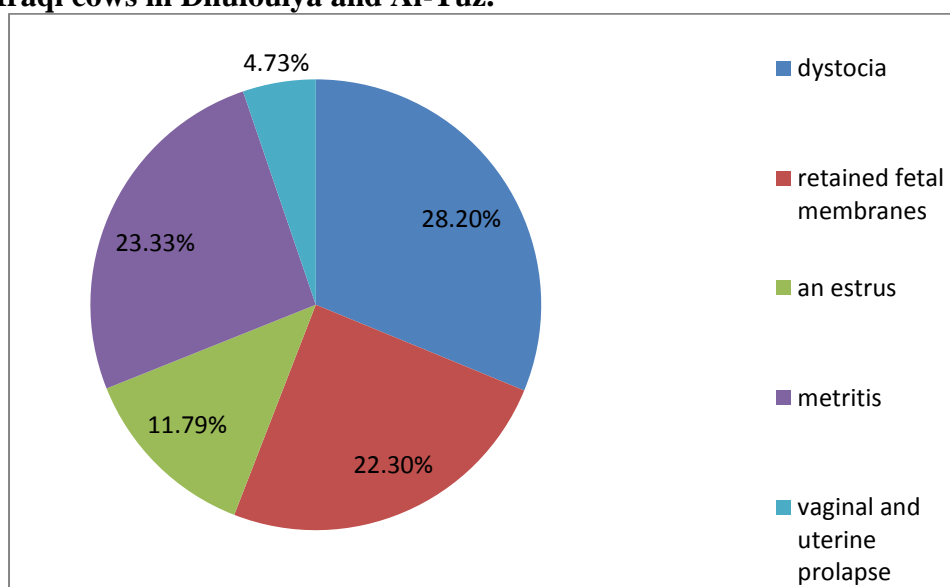
### 3.2. Statistical analysis:

The data was entered into Microsoft Excel program and then transferred to the SIGMA stat program to analyze the data and output the percentages for each case and presented as a table and diagram.

### Results:

The results of the current study, as shown in Figure (1), showed that the most common Parturition problems experienced by local cows in both AL- Dhuluiya and Al-Tuz districts were cases of dystocia, with 28.20%, metritis and retained fetal membranes by 23.33 and 22.30%, respectively, while vaginal and uterine prolapse were less frequent and by 4.73% followed by cases of anestrus by 11.79%.

**Figure (1) The general average of some fertility problems during the five year in the local Iraqi cows in Dhulouiya and Al-Tuz.**



The results of the present study showed that the rates of occurrence of different fertility problems were distributed in different ways during the different years which data were collected and as shown in

Table (1). Where the incidence rates of different genital cases were low in both 2014 and 2015 (22 and 37 cases, respectively) compared with those recorded in 2011, 2012 and 2013, with a total of 115, 98 and 106 cases, respectively.

**Table (1) shows the percentages and numbers of various fertility problems in local Iraqi cows distributed in 2011 - 2015 for the Dhulouiya and Al-Tuz .**

The total	Vaginal and uterine inversion	Inflammation of uterus	Lack of estrus	Placental retention	Difficulty of obstetrics	cases / years	
						The ratio(%) Number of cases	years
%100 115	%12.93 (15 )	%24.13 (28 )	%11.20 (13 )	%19.82 (23)	%31.03 (36)	The ratio(%) Number of cases	2011
%100 98	%14 (14)	%23 (23)	%19 (19)	%23 (23)	%19 (19)	The ratio(%) Number of cases	2012
%100 106	%4.54 ( 5)	%23.63 (26)	%10.9 (12)	%21.81 (24)	%35.45 (39)	The ratio(%) Number of cases	2013
%100 22	%14.81 (4 )	%3.70 (1 )	%7.40 (2)	%18.51 (5 )	37.03 (10 )	The ratio(%) Number of cases	2014
%100 (37 )	%16.21 ( 6)	%35.13 ( 13)	%0 (0 )	%32.43 (12 )	%16.21 (6 )	The ratio(%) Number of cases	2015
%100 378	%4.73 (44 )	%23.33 (91 )	%11.79 (46 )	%22.30 ( 87)	%28.20 (110 )	General average Number of cases	

## Discussion

The results of the present study showed that the incidence dystocia was the highest among the other problems recorded in local Iraqi cows (Fig. 1) followed by both the case of metritis and the retained fetal membranes. This confirms that the occurrence of cases of dystocia is one of the most important factors for the occurrence of metritis. The incidence of dystocia, metritis, and the retained fetal membranes in the current study is higher than that recorded in other studies (4,6,7,8,9).

This may be due to the nature of the nurture and the quality of food as the majority of cows located in the areas of Dhulouiya and Al-Tuz depend on the food available from green grass with a small amount of grains and therefore many of these animals suffer from the lack of

nutrition, which have a significant impact in the incidence of reproductive problems in cows (10,6). Since cows with a weakened body condition are vulnerable to metabolic and inflammatory problems, and thus they will be highly susceptible to various fertility problems such as dystocia, retained fetal membranes, and metritis (8).

Anestrus is a fertility problem of cows and leads to significant economic losses due to late pregnancy and calve born (11). The current study showed that the incidence of anestrus in local Iraqi cattle (11.79%) as shown in Figure (1) was similar to that recorded by (8,12) at 10.3% and 10.2% For both studies respectively, while it was lower than previously recorded by (6,13), where it reached 37 and 16.4 %, respectively, in other studies (4,14) , they reached 5.3 and 4.2% for both

studies respectively. The high difference between these studies may be due to different breed, nutritional status or to different management system followed (15).

The results of the current study showed that the percentage cases of an estrus of all other genital cases in local Iraqi cattle as shown in Figure (1) was 4.74%, higher than that recorded by many studies (4,6,8,14). The increase in incidence of an estrus is associated with high incidence dystocia and retained fetal membrane (4,6,8).

The results of the current study, as shown in Table (1), showed a rise and decreased in the rate of incidence of different genital cases during the different years. This may be due to differences in the level of living of breeders and its impact on the general situation of the country, especially in 2014 and 2015, where only a small number of cases (22 and 37 cases respectively) were recorded. This may be due to the security conditions experienced by the province after the entry of criminal gangs and the migration of many breeders from their villages.

We conclude from the current study that cases of dystocia, retained fetal membranes and metritis in the local Iraqi cows were the highest incidence of the rest of the other genital cases. The nature of rearing, and low quality of food have clear impact on the high incidence of these different fertility problems in cows.

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