



COWS BREEDER'S AWARENESS OF THE TRANSITIONAL DISEASES THAT AFFECT THE FARM ANIMALS IN RABIAA DISTRICT, NINEVEH GOVERNORATE, IRAQ

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Abstract

The aim of this research is to assess the level of awareness of cows breeders of the Transitional diseases that affect to farm of animals, as well as to identify the awareness of the respondents in each disease and in each item of the diseases and identify the significance of differences in the degree of awareness according to some independent variables and identify the most important veterinary problems which facing cows breeders. The study sample included (155) randomly selected subjects representing 50% of the research community. For the purpose of data collection, a three-part questionnaire was designed. The first part includes independent variables. The second part included scale of awareness for cows breeders of the Transitional diseases The third included the most important problems facing cows breeders with communicable diseases. After data collection and discharge using Excel program were analyzed statistically using some statistical means such as range, frequency, arithmetic mean and analysis of variance. The results showed that 78.7% of the respondents have an awareness of communicable diseases in a moderate tends to low. The results also showed that the highest level of awareness among the respondents on the transmission of diseases was in foot-and-mouth disease and the lowest level of awareness of the respondents was the disease of bovine viral diarrhea. There were also significant differences in the degree of awareness of cows breeders of the transmission of diseases according to independent variables (age, level of education, animal tenure, number of years working in animal breeding), while there was no significant difference in the degree of awareness of cows in the transmission of diseases according to (Veterinary information sources). The research also included some conclusions and recommendations.

Key Words: Cows breeders, Awareness, Transitional diseases.

Introduction

Livestock is one of the most important tributaries of the agricultural economy in the world because of the resources it has a strong relationship with foreign currency, where the revenues of this wealth is focused on the provision of animal products that can not be abandoned in human food for one of these materials and there is no suitable alternative to replace them and the absence in food Human causes nutritional problems and is the main building block in diseases of malnutrition (Hassan, 2005). In the Arab region, the animal production sector is one of the main sectors in most countries because of its economic importance in terms of providing food first and the field of work second (Arab Organization for Agricultural

Development, 1995). This is not much different from us in Iraq and the dependence of the population on the provision of their needs of milk and meat and the manufacture of dairy products and other food products (Arab Organization for Agricultural Development, 1998), (FAO, 2003). It is known that the size of livestock in Iraq exceeds the size of the population and that the number of livestock represents the majority of this size, because of their great importance in the economies of countries, including Iraq (Al-Abbassi, 2017). Where the cows in Iraq came second after sheep, where the number (1.325) thousand head in 2004 (Ministry of Planning and Development, 2004). The livestock sector faces a major problem as a result of lack of care for livestock. Poor care and the inability of the breeder to provide the ingredients to improve them lead to a decrease in their

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efficiency and production (Mousa *et al.*, 2013). There is no doubt that animal productivity is the locus of its genetic abilities and environmental conditions surrounding the care, nutrition and prevention of diseases and protection from environmental conditions (Ministry of Agriculture, 2014). Perhaps understanding the nature of animal diseases in order to prevent them before they occur to control them if they occur is the key to the preservation of this wealth, we must understand and know the epidemic of these diseases so that we can control them (Ministry of Agriculture, 2015). Infectious diseases pose a continuing threat to livestock production as they are often the boundary between profit and loss, as these diseases have a negative impact on productivity and control. These diseases require intensification and concentration of health care and effective prevention programs so that these diseases can be prevented and contained as soon as possible (Ministry of Agriculture, 2012). Infectious diseases are characterized by being transmitted from an infected animal to a healthy animal. The causative agent is germs, fungi or viruses. The animals that have been infected and cured remain a source of infection for a period of time, There are animals infected with *Brucella*, which remains a source of infection for several years after abortion and stray animals play an important role in the transmission of communicable diseases, especially dog disease and transmitted infectious diseases through birds, flies, ticks and mosquitoes. Foot-and-mouth, rinderpest (Faraj, 2009). The most important infectious diseases that affect livestock are foot-and-mouth disease, brucellosis and dermatitis as it is a highly prevalent epidemic disease that is dangerous to livestock. Disease, generally at the level required for the effective implementation of prevention and control measures (Food and Agriculture Organization, 2000). Therefore, the cattle breeders are of little knowledge in the management of their herds, as these are facing a range of production-related challenges. Veterinary extensional, which is consistent with the reality of these breeders (Hadi and Ashwaq, 2015). Since agricultural extension is an educational activity that is shared with other learning activities in many characteristics and unique to other characteristics make it a distinct entity, it aims just as other educational activities aim to bring about changes in personality by shaping the knowledge structure of members of his audience by providing them with knowledge and useful skills In their work (Al-Odaibi, 2002). Intensive agricultural extension efforts are needed to familiarize cattle breeders with the damage caused by these infectious diseases and preventive measures to control and overcome these diseases from extension training programs focusing on areas of animal production

(Shalaby, 2016). The main objectives of study are following :

1. Determine Cows breeders' Awareness in the Transitional diseases that affect farm animals in Rabiaa district, Nineveh governorate in general.
2. Rank the items of Transitional diseases according to Cows breeders' Awareness in it.
3. Determination of significant differences in the degree of awareness of cows breeders in diseases transmitted to farm animals and each of the following independent variables are (age, level of education, animal tenure, number of years of cows breeding and veterinary information sources),
4. Identify the most important veterinary problems which facing cows breeders.

Materials and Methods

The research was conducted in Rabiaa district, Nineveh governorate, Which includes (330) cows breeder. after excluding 20 of them for the purpose of extracting reliability, the number of after excluding 20 of them for the purpose of extracting reliability, the number of became (310). A simple random sample of 50% was selected of cattle breeders Thus, the number of respondents was (155) breeders Who were included Surveyed. For the purpose of collecting research data, a questionnaire was prepared consisted of three parts. The first part consists of personal, social and communication variables are (educational level, age, Number of years working in cattle breeding, Animal Tenure, Veterinary Information Sources). The educational level of the respondents was determined according to the following indicators (Illiterate, Read and Write, primary, secondary, Institute and College) has been given numeric codes (1,2,3,4,5,6), respectively. Age It was measured by the years of the respondent's age at the time of collecting the research data. Number of years working in cattle breeding It was measured by the number of years the breeder which spent in cattle breeding until the time of collection data. Animal Tenure this variable was measured basis on the number of cattle owned by the respondents. Veterinary Information Sources it is measured by (9) Sources using the following indicators (often, sometimes, not contacted) It has been assigned numeric codes (3,2,1) respectively. The second part of the questionnaire included (39) items related to Transitional diseases affecting farm animals, cows breeders' awareness of these diseases has been measured by the use of three alternatives: awareness with high degree-awareness with moderate degree-awareness with low degree, has been given numeric codes (3,2,1) respectively. The third part

of the questionnaire included (10) important veterinary problems which facing cattle breeders in the study region. The questionnaire was presented to the professors of the Agricultural Extension Department and the transfer of techniques also presented to the professors in specialty of Animal Production, to ensure content and face validity of the items. On the basis of their observations, some items have been deleted and amended, bringing the final number of items (33). (pre test) was conducted on a sample of (20) respondents from outside the research sample, where the Reliability of the items was found by Cronbach's Alpha and the Reliability coefficient (0.89). For the purpose of analyzing the data, some statistical methods were used such as mean, Pearson correlation coefficient, Spearman Brown correlation coefficient (Al-Baldawi, 2009).

Results and Discussion

1. Determine Cows breeders' Awareness in the Transitional diseases that affect farm animals in Rabiaa district, Nineveh governorate in general.

The results showed in table 1 that the highest numerical value for awareness of cattle breeders was (102) and the lowest numerical value was (46), with a mean of (58.77) and standard deviation of (9.89). The respondents were divided into three categories according to the awareness of cattle breeders in the Transitional diseases that affect farm animals, As it has been shown, only (21.30%) of the cattle breeders were ranked in the high category. the percentage of cattle breeders in the medium category was (45.16). while the percentage of low category was (33.54). this means that the 79.70% of cattle breeders do not have high awareness in the Transitional diseases.

This may be due to the lack of veterinary extension programs aimed to raising the awareness of cow breeders about the Transitional diseases in terms methods of prevention of the diseases and method of control on it. This result agree with (Shalaby, 2016), (Abu Zeid, 2014), (Al-Abbassi, 2017).

2. Rank the items of Transitional diseases according to Cows breeders' Awareness in it.

Table 1: Shows the distribution of the respondents according to the their awareness in the Transitional diseases that affect farm animals.

Percentage	Number	Categories
33.54	52	Low(46-64)
45.16	70	Medium(65-83)
21.30	33	High(84-102)
100	155	Total

S.d=8.89, X=58.77

It is clear from table 2 that the level of awareness of cows breeders was high in the field of foot-and-mouth disease, where their awareness was high in most items of this disease, especially the items (isolation of infected animals) and (Vaccination small calves one month after birth) which ranked first with an arithmetic mean (3.77). This may be due to the importance of these items, as isolating the infected animal as well as vaccination from the disease before infection is to be done by any breeder with great care for animals and is considered one of the most important preventive measures that must be taken when infected most cases.

Table 2 also showed that Bovine Viral Diarrhea disease came in the last rank, which indicates that the awareness of cows breeders in this disease was low in this disease and all its items, especially the last two items (saliva fluids) and (The animal spends a severe drought) and an arithmetic mean of (3.61) and (3.35) respectively. This may be due to the fact that these symptoms are a symptom of the normal or that the breeder can not be noticed easily, but need someone with considerable experience in this area, therefore came in the last.

3. Determination of significant differences in the degree of awareness of cows breeders in diseases transmitted to farm animals and some independent variables.

Age: When comparing the mean levels of cows breeders' awareness of the transitional diseases affecting farm animals for the three age groups using the analysis of variance, the calculated values (F) were (7.55**) a significant value at the level 0.01 as in table 3 and thus reject the null hypothesis and accept the alternative hypothesis, there is a significant difference In the degree awareness of the respondents of transmissible diseases according to age variable. This agree with (Shalaby, 2016). The reason for this may be that the older the respondent, the more experience in how to prevent diseases that affect his animals.

Education level: F value is calculated was (8.81**) a significant value at the level 0.01. thus reject the null hypothesis and accept the alternative hypothesis, there is a significant difference In the degree awareness of the respondents of transmissible diseases according to Education level variable. This agree with (Raad and Hamid, 2018). This may be due to the fact that the most educated respondents are more aware of the modern methods that prevent their animals from getting sick and also increase preventive measures against these diseases.

Animal tenure: When comparing the mean levels of cows breeders' awareness of the transitional diseases

Table 2: Rank the items of transitional diseases according to cows breeders' awareness in it.

Grade	Mean	Items	Name of disease
1.5	3.77	Isolate the infected animal	Foot - and - mouth
1.5	3.77	Vaccination small calves one month after birth	
3	3.61	Wash the hoof with soap and water	
4	3.35	put zinc ointment on the Udder	
5	3.25	Antibiotic injections	
6	3.12	Disinfect floors and walls of Barns	
7	3.09	used cream to ointment to treat sores	
8	3.00	Inoculation Females of males intact.	Infectious abortion
9	2.90	Disinfection of birth hangars with disinfectants after abortion.	
10	2.83	Burning and burying dead embryos	
11	2.80	Dimensions of dogs from the barn	
12	2.61	Care of food hygiene	
13.5	2.28	Care for the cleanliness of the barn and disinfection with disinfectants	
13.5	2.28	Prevent the spread of insects	Streptococcal inflammation
15	2.13	Attention to water hygiene	
17	2.08	Attention to the barn in terms of ventilation and heating	
17	2.08	Vaccination of all cows older than 6 months	
17	2.08	Treatment of places infected in the animal body by antibiotics	
19	2.07	Spray animals with effective insecticides	
20	1.96	Observe of infected animals	
21	1.89	vaccination of cows with BCG vaccine	Bovine Tuberculosis
22	1.77	attention in the cleanliness of the barns	
23	1.75	Combating cats, dogs, mice and insects in farms	
24	1.76	Isolation of infected animals from uninfected	
25	1.74	attention to the cleanliness of cows	
26	1.72	Providing ventilation and sunlight conditions in the barns	
27	1.70	disinfection of tools and vessels when the appearance of any injury	
28	1.55	Ulceration and erosion of the mouth	Bovine Viral Diarrhea
29	1.49	secretions from the eye and nose	
30	1.45	watery diarrhea in calves from the age of 6 to 12 months	
31	3.71	Loss of appetite significantly	
32	3.69	Infertility can be caused by the virus itself in cows	
33	3.61	saliva fluids	
34	3.35	The animal spends a severe drought	

affecting farm animals for the three animal tenure groups using the analysis of variance, the calculated values (F) were (1.82*) a significant value at the level 0.05 as in table 3 and thus reject the null hypothesis and accept the alternative hypothesis, there is a significant difference In the degree awareness of the respondents of transmissible diseases according to animal tenure variable. This agree with (Fayyadh, 2010), (Shalaby, 2016), (Raad and Hamid, 2018). The reason for this is that the respondents who own more farm animals are more aware than others because of their keenness to preserve this wealth from loss due to diseases because they are considered the only capital owned by the respondents.

Number of years of cows breeding: F value is calculated was (9.15**) a significant value at the level

0.01. thus reject the null hypothesis and accept the alternative hypothesis, there is a significant difference in the degree awareness of the respondents of transmissible diseases according to number of years of cows breeding variable. This is agree with (Shalaby, 2016), (Al-Abbassi, 2017). This may be due to the fact that the respondents who have more than years of work in the field of animal husbandry, especially cows, have great experience in the field of animal husbandry and care and protection from diseases.

Veterinary information sources: When comparing the mean levels of cows breeders' awareness of the transitional diseases affecting farm animals for the three veterinary information sources groups using the analysis of variance, the calculated values (F) were (0.010) not

Table 3: The results of analysis of variance differences in average degree of respondents awareness in transitional diseases affecting farm animals according to some variables.

variables	categories	Number	%	Average degree of awareness	F value
age	(16-30) year	31	20	40.075	7.55**
	(31-45) year	70	45.16	52.342	
	(46-60) year	54	34.84	62.117	
Education level	Illiterate	30	19.35	13.888	8.81**
	Read & Write	32	20.64	22.222	
	Primary	43	27.74	29.166	
	Secondary	24	15.48	16.667	
	Intermediate	14	9.32	9.723	
animal tenure	Institute	12	7.74	8.334	1.82*
	Less than 75 animal	39	25.16	37.166	
	76-150 animal	90	58.07	58.567	
number of years of cows breeding	More than 150 animal	26	16.77	23.325	9.15**
	(8-15) year	39	25.16	33.678	
	(16-23) year	70	45.16	53.142	
veterinary information sources	(24-31) year	46	29.67	49.166	0.010
	Low (8-13)	60	38.70	30.546	
	Medium (14-19)	75	48.38	48.540	
	High (20-25)	20	12.90	33.325	

significant value and thus accept the null hypothesis and reject the alternative hypothesis, there is no significant difference in the degree awareness of the respondents of transmissible diseases according to veterinary information sources. This may be due to the fact that veterinary information sources have no positive or negative impact on the awareness of cattle breeders in the field of communicable diseases.

4. Identify the most important veterinary problems which facing cows breeders.

Table 4 shows the most important veterinary problems experienced by cows breeders in Rabia region and have been used the arithmetic mean and frequencies

Table 4: Veterinary problems facing cows breeders in the field of veterinary services.

Grade	%	Number	The Veterinary problems
1	65	102	Lack of timely availability of veterinary medicines
2	63	98	High vaccine prices
3	56	88	The limited number of veterinary extension specialists
4	52	81	Lack of veterinary awareness among cattle breeders
5	48	75	lack of knowledge of vaccine educators and dates
6	38	60	High prices of veterinary medicines
7	31	49	distance of the veterinary unit from the village
8	29	45	The small number of veterinarians in veterinary units
9	26	41	Lack of means of transporting sick animals to veterinary units
10	21	33	Lack of concentrated feed for animals

to rank these problems according to their importance for cows breeders. Where the result showed that (Lack of timely availability of veterinary medicines) and (High vaccine prices) Ranked first and second grade with percentage (65%), (63%) respectively. This may be due to the fact that most treatments are imported, which is why they are expensive and affect their unavailability in time.

While the problems (Lack of means of transporting sick animals to veterinary units) and (Lack of concentrated feed for animals) Ranked last grade with percentage (26%), (21%). This may be due to the lack of importance of concentrated feed in the prevention or prevention of infectious diseases or that their relationship is small and that after the veterinary units are no longer hindered in the case of a veterinarian in the region.

Conclusion

In spite of the absence of extension and veterinary activities in general which related diseases that affect farm animals this is confirmed by the manager the veterinary health clinic and the breeders themselves, but the knowledge of cows breeders in this aspect is not underestimated out where the level of awareness of breeders was medium. Most of the independent factors studied had a significant relationship with the level of awareness of the cows breeders of the transmissible diseases (age, level of education, animal tenure, number years of animal husbandry). We also conclude the absence or weakness of the role of agricultural extension and other related organs in the research area regarding preventive measures against communicable diseases affecting farm animals.

Recommendations

He should take the agricultural extension device its role with veterinary health institutions in the implementation various extension activities, especially its important role in raise the awareness of breeders of the need to take measures to prevent the spread of diseases among animals. Activating the important role of the media, both visual and print, through radio and television programs that increase the awareness of breeders to take preventive measures against diseases affecting farm animals.

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