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**INCIDENCE AND SEASONAL PREVALENCE
OF FASCIOLIASIS IN BENI-SUEF, EGYPT**
(With 1 Tables & 2 Figs.)

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نسبة الإصابة بالدودة الكبدية في محافظة بنى سويف - مصر

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أجرى هذا البحث على مرض الديدان الكبدية في محافظة بنى سويف على الأبقار والجاموس والأغنام وإشتملت على دراسات عن نسبة الإصابة بالديدان الكبدية باستخدام فحص البراز لعدد ١٦١٠ من أنواع الحيوانات الثلاثة ، وأظهرت النتائج أن نسبة الإصابة في الأبقار ٢٨% والجاموس ٢٣% والأغنام ٣٩% . وقد وجد أيضاً أن النسبة كانت مرتفعة في الحيوانات البالغة عنها في الحيوانات الصغيرة وعالية أيضاً في الشتاء ثم الربيع والخريف وأخيراً في فصل الصيف .

SUMMARY

The present study was carried out to investigate the incidence and seasonal prevalence of fascioliasis among cattle, buffaloes and sheep in Beni-Suef. The results revealed infestation rates of 26.3%, 23.5% & 39.3% among examined cattle, buffaloes and sheep respectively. Winter season was more favourable for prevalence of fascioliasis and adult animals have more infestation rate than young.

INTRODUCTION

Fascioliasis is an important disease in cattle, buffaloes and sheep causing severe economical losses due to decrease in production of milk (BLACK and FROYD, 1972) and reduction in body gain about 8-28% (CAWDERY, 1977). Beside, these, Fascioliasis acts as a predisposing factor for other diseases (FROYED and WILLIAM, 1975) and also affects the conception rate of females (ARTHER, 1977) as well as the fertility of males (EL-SEIFY, *et al.* 1985).

There were several authors surveyed Fascioliasis in cattle, buffaloes and sheep in different localities in Egypt, among them, DRAZ (1949) whom found 100% of sheep infested by Fasciola in DELTA and EZZAT (1950) that reported the Fasciola infestation reached 90% among sheep and calves in Dakhala and Kharga Oasis; while HAIBA, *et al.* (1955) did not report any positive cases in animals of Faculty of Agricul-

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ture farm in Giza. While SOLIMAN and Zaki (1964) and ZAKI, et al. (1965) observed in their incidence on Fascioliasis in Gharbia Governorate and other localities that, cows and sheep were more susceptible to infestation by Fasciola species than buffaloes. On the other hand AMIN (1972) reported that cattle infested by Fasciola species in El-Fayoum by 47.2%, in Giza by 5.9%, in El-Gharbia by 9.4%, in El-Dakahliah by 6.9% and in Kafer El-Sheikh by 3.9% of the total examined animals. Recently, AYOUB (1983) in his study on both cattle and buffaloes in Gharbia Governorate observed that the old animals had the higher rate of infestation by Fasciola than youngsters.

From the available literatures, no workers clarified the infestation pattern of fascioliasis among domestic animals in Beni-Suef Governorate, therefore the present study carried out to investigate this problem.

MATERIAL and METHODS

A total number of 1610 cattle, buffaloes and sheep from different localities in Beni-Suef Governorate were subjected for clinical and parasitological examinations for detection of liver fluke eggs in their faeces. These animals were 894 cattle; 247 were buffaloes and 469 were sheep. These animals were young (6 months - 2 years) and adults (more than 2 years old). Faecal samples were collected directly from rectum of animals or from freshly defecated manure of some animals in plastic bags. These bags were labeled by all the data needed such as animal species, age, locality and date of collection. Samples were directly transferred to the Parasitology Department, Faculty of Vet. Medicine at Beni-Suef for examination. Detection of Fasciola eggs was carried out immediately by sedimentation method as described by BODDIE (1956).

RESULTS

The results as shown in Table (1) and histograms 1 & 2 revealed that 26.3% (233 out of 894) of examined cattle were infested by fascioliasis, while 23.5% (58 out of 247) of total examined buffaloes and 39.3% (185 out of 471) of sheep were infested by Fasciola.

These results also indicated that, winter season is the most favourable time for higher infestation in cattle and sheep where the infestation rates reached 30.6% & 50.3% in both animal species respectively. It was followed by autumn (27.6%), spring (26.0%) and summer (20.9%) among cattle and by autumn, summer and spring among sheep, while the rates of infestation reached 32.9%, 31.0% & 28.3% respectively in buffaloes, the autumn season was more suitable where the rate of infestation reached 36.1% and it was followed by winter, spring and summer where it reached 34.2%, 12.5% respectively.

Concerning the rate of infestation among adults and youngsters the results revealed that, in most seasonal time, the adults of cattle, buffaloes and sheep have the higher rates of infestation than youngsters.

Table (1)
Incidence and seasonal prevalence of fascioliasis among Cattle, Buffaloes
& Sheep in Beni-Suef province

SEASON	ANIMAL SPECIES		TOTAL ANIMALS EXAMINED	POSITIVE ANIMALS	
				NO.	%
Spring	CATTLE	ADULTS	105	27	25.7
		CALVES	141	37	26.2
		TOTAL	246	64	26.0
	BUFFALOES	ADULTS	59	13	22.0
		CALVES	25	2	8.0
		TOTAL	84	15	12.9
SHEEP	ADULTS	LAMBS	73	33	45.2
			42	11	26.2
		TOTAL	115	44	38.3
Summer	CATTLE	ADULTS	125	41	32.8
		CALVES	129	12	9.3
		TOTAL	254	53	20.9
	BUFFALOES	ADULTS	45	7	15.6
		CALVES	19	1	5.3
		TOTAL	64	8	12.5
	SHEEP	ADULTS	60	23	38.3
		LAMBS	66	16	24.2
	TOTAL	126	39	31.0	
Autumn	CATTLE	ADULTS	77	25	32.5
		CALVES	75	17	22.7
		TOTAL	152	42	27.6
	BUFFALOES	ADULTS	40	18	45.0
		CALVES	21	4	19.1
		TOTAL	61	22	36.1
	SHEEP	ADULTS	36	17	47.2
LAMBS		43	9	20.9	
	TOTAL	79	26	32.9	
Winter	CATTLE	ADULTS	94	36	38.3
		CALVES	48	38	25.7
		TOTAL	242	74	30.6
	BUFFALOES	ADULTS	22	8	36.4
		CALVES	16	5	31.3
		TOTAL	38	13	34.2
	SHEEP	ADULTS	87	54	62.1
LAMBS		64	22	34.4	
	TOTAL	151	76	50.3	
TOTAL	CATTLE		894	233	261
	BUFFALOES		247	58	23.5
	SHEEP		471	185	39.3

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DISCUSSION

The results of the present study indicated higher infestation rates of sheep by fascioliasis followed by cattle then buffaloes in Beni-Suef Governorate as they were 39.3% ; 26.3% and 23.5% respectively. This may be attributed to the lesser susceptibility of buffaloes to fascioliasis and this agrees with those of SOLIMAN and ZAKI (1964) and AMIN (1972).

The results obtained indicated that the winter was the most favorable season for fasciola infestation as indicated by a higher infestation rate, followed by autumn, spring and summer seasons. This can be attributed to the fact that summer season in Egypt is a grassing one for sheep and cattle outside the stables, and the animals stay for a long time around the water passages for eating the green grass infested by encysted metacercariae of fasciola, therefore the higher infestation rates were in winter season. Also, in this study, a higher infestation rates were reported in adults than in youngs, while may be due to that the life span of Fasciola takes longer time to produce the eggs (diagnostic stage) in adult age, or may be attributed to several times of exposure of adults than youngs, as reported by DRAZ (1949); EZZAT (1950); SOLIMAN and ZAKI (1964); ZAKI, *et al.* (1965); AMIN (1972) and AYOUB (1983).

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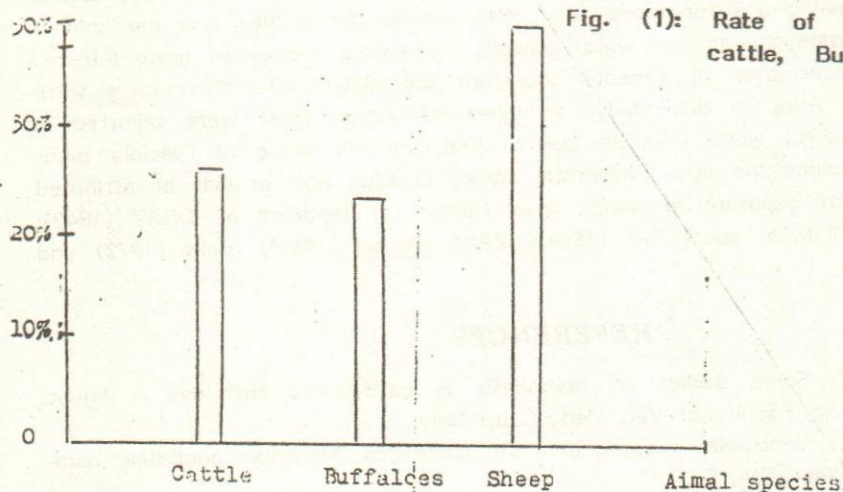


Fig. (1): Rate of infestation among cattle, Buffaloes & Sheep.

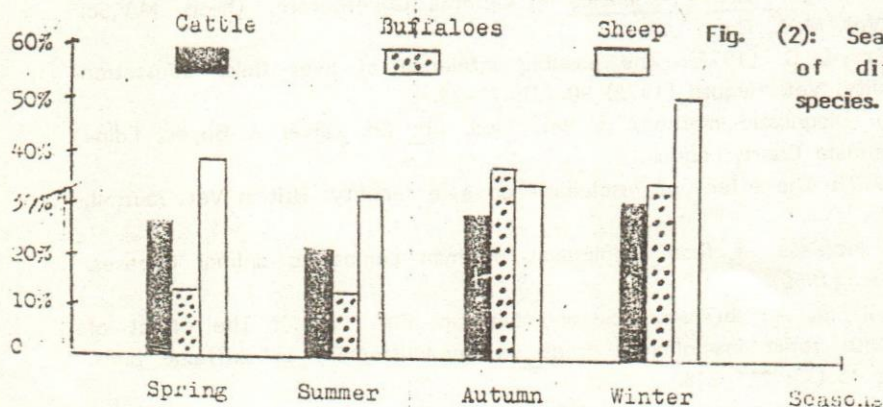


Fig. (2): Seasonal infestation of different animal species.