

## A Survey of *Hypodermosis* in Cattle Slaughtered in Thrace (Trakya) Turkey

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**Abstract:** In this study, a total of 365 cattle (234 male, 131 female) slaughtered in different localities in Thrace (The European part of Turkey) were examined for hypodermosis between January and May of 1997. *Hypoderma bovis*, *H. lineatum* and unidentified 2nd instar larvae were found in the skin and subcutaneous tissue of the back region of the animals. The prevalence rate and intensity of infestation were 3.56% and 10.23 respectively.

**Key Words:** Hypodermosis, *Hypoderma bovis*, *Hypoderma lineatum*, cattle, prevalence, Turkey.

### Trakya'da Mezbahada Kesilen Sığırlarda Hypodermosis

**Özet:** Bu çalışmada Ocak-Mayıs 1997 ayları arasında Trakya'da Malkara, Edirne, Çorlu, Tekirdağ, Hadımköy ve Lüleburgaz mezbahalarında kesilen 234'ü erkek 131'i dişi toplam 365 sığır hypodermosis yönünden incelenmiştir. Hayvanların sırt derisi altında *Hypoderma bovis*, *H. lineatum* ve ayrıımı yapılamayan ikinci dönem larvalara rastlanmıştır. Enfestasyonun yaygınlığı %3.56, enfestasyon yoğunluğu ise 10.23 olarak bulunmuştur.

**Anahtar Sözcükler:** Hypodermosis, *Hypoderma bovis*, *Hypoderma lineatum*, Sığır, Yaygınlık, Türkiye.

### Introduction

In Turkey, two species of *Hypoderma* (*H. bovis* and *H. lineatum*) parasitize in cattle (1-5). Some researchers (1, 4-7) have studied on their prevalence in different parts of this country.

There is no study reflecting the prevalence of hypodermosis in cattle from Thrace

### Materials and Methods

This study was performed on over 1-year-old cattle slaughtered in the abattoirs of different localities (Malkara, Edirne, Çorlu, Tekirdağ, Hadımköy and Lüleburgaz) in Thrace (the European part of Turkey) between January and May of 1997. A total of 365 cattle (234 male, 131 female) were examined. After being flayed, the skin and subcutaneous tissue of the back region of animals were examined for larvae. The identification of 3rd instar larvae was made according to the literature (8).

### Results

In this study, the 3rd instar larvae of *Hypoderma bovis* and *H. lineatum*, and their unidentified 2nd instar larvae were differentiated. In 365 cattle examined, the prevalence rate was 3.56%. The highest rate (21.4%) was recorded in 14 cattle slaughtered in Edirne in mid February. The average intensity of infestation (total no. of larvae /total no. of infected animals) was found to be 10.23. Other results are given in Table.

### Discussion

Various studies (4-7) performed in different parts of Turkey have shown that two species of *Hypoderma* (*H. bovis* and *H. lineatum*) occur in cattle, and that the prevalence rate of hypodermosis ranges from 20 to 55.77%. In Thrace, only one study (1) has been conducted on this subject. In that study (1), the prevalence rate was reported to be 1.9%. Since the origin of the animals in this study is unclear, it is questionable in terms of prevalence.

Table The prevalence rate of hypodermosis in cattle slaughtered in Thrace

Month	Location	E	I	%	No of larvae/infested cattle					li (M-M)
					Hb	HI	L <sub>2</sub>	To	li	
January	Malkara	43	0	%0	0/0	0/0	0/0	0/0	-	-
February	Edirne, Çorlu	41	5	12.20%	14/3	21/2	38/5	73/5	14.6	2-37
March	Tekirdağ, Hadımköy	97	1	1.03%	2/1	2/1	0/0	4/1	4	4
April	Tekirdağ (3 times)	160	7	4.38%	2/2	1/1	53/5	56/7	8	1-20
May	Lüleburgaz	24	0	%0	0/0	0/0	0/0	0/0	-	-
Total		365	13	3.56%	18/6	24/4	91/10	133/13	10.23	1-37

Abbr.: No. of examined (**E**) and infested (**I**) animals; Infestation percentage (%); No. of larvae/infested animals with *H. bovis* (**Hb**), with *H. lineatum* (**HI**) and with unidentified L<sub>2</sub> (**L<sub>2</sub>**); Total no. of larvae/infested animals (**To**); Intensity of infestation (Total no. of larvae/Total no. of infested animals) (**li**), Minimal and maximal no. of larvae (**M-M**)

In the studies mentioned above (1, 5-6) intensities of infection were reported to range between 6.92 and 22.5.

In the present study, the prevalence rate and intensity of infestation were found to be 3.56% and 10.23 respectively. However, it is certain that the prevalence

rate should be higher than that found in this study because all migrating larvae would not have arrived at the back region of all the animals at the same time. For this reason, in order to obtain the accurate rate, a more complex study using tagged animals is necessary.

## References

1. El- Metanawy TM; Zayed, AA.: The Prevalence of Hypoderma lineatum and Hypoderma bovis (Diptere: Oestridae) infesting cattle in Istanbul Region, Turkey. Vet. Med J. Giza, 1992; 40(1), 145-151.
2. Merdivenci, A.: Türkiye'de siğır (Bos Taurus) larda Hypoderma lineatum (de Villers, 1789) un varlığı. Ankara Üniv. Vet. Fak. Derg., 1963; 10(2), 206-212.
3. Mimioğlu, M.: Siğır ve Ankara keçilerinde Nokra (Hypodermosis). Ankara Üniv. Vet. ve Ziraat Fak. Basımevi. 1966.
4. Sayın, F; Bouland, C; Thornberry, H.: Present situation of hypodermosis in Turkey. Warble fly control in Europe. A symp. in the EC Programme of Coordination of Res on Animal Pathol., Brussels, 16-17 september 1982 (ed. by Bouland, C; Thornberry, H.), pp 39-41, 1984.
5. Zeybek, H.: Ankara yöresi siğır ve tiftik keçilerinde Hypoderma spp. (Nokra) nın yayılışı. Etlık Vet. Mikrob. Derg., 1988; 6(2), 45-56.
6. Celep, A; Gürsoy, S.: Samsun ve Amasya yöresi siğır larda hypodermosis'in yayılış nispeti, nokra larvalarının dönemlerine göre siğır larda kalış zaman ve sürelerinin tespitine dair araştırmalar. Etlık Vet. Mikrob. Derg., 1987; 6(1), 143-150.
7. Celep, A; Açıcı, M; Çetindağ, M; Gürbüz, İ.: Samsun Yöresi Siğır larda Paraziter Epidemiyolojik Çalışmalar. Etlık Vet. Mikrob. Derg., 1994; 7(5), 153-162.
8. Zumpt, F: Myiasis in man and animals in the Old World. A textbook for Physicians, Veterinarians and Zoologist. Butterworths, London, 1965.