

KANATLI HAYVAN YETİŐTİRME

II

13. HAFTA

Hindi, Ördek ve Kaz Eti ve Özellikleri

Kaz eti pazarlanabilir bir ürün olarak tanıtılabilir, besin değeri ile ilgili bilgi önemlidir. Bu özellikle önemlidir, çünkü tüketiciler gıda tüketimiyle ilgili sağlık yönlerinin daha fazla farkına varmaktadır ve kırmızı et ürünlerinin gerekli besin özelliklerine sahip olmasını talep etmektedir (Ngapo ve Drans-field, 2006)

Table 2. The means values (\pm SD) for the proximate analyses (g/100 g) of the meat derived from 6 meat treatments

Item	Species						LSD ¹
	Egyptian goose, n = 6	Guineafowl, n = 6	Ostrich fan fillet, n = 6	Ostrich moon steak, n = 6	Pekin duck, n = 6	Broiler chicken, n = 6	
Moisture	62.2 ^c \pm 2.3	64.5 ^{ab} \pm 1.5	63.0 ^{cb} \pm 2.6	63.2 ^{cb} \pm 2.3	61.8 ^c \pm 0.7	65.7 ^a \pm 0.9	2.0
Protein	30.9 ^{cb} \pm 2.6	31.9 ^{ab} \pm 1.9	32.7 ^a \pm 2.2	32.5 ^{ab} \pm 1.6	31.4 ^{ab} \pm 0.6	29.8 ^c \pm 1.4	1.6
Fat	5.9 ^a \pm 1.9	3.2 ^b \pm 0.9	3.8 ^b \pm 0.7	3.8 ^b \pm 0.8	5.8 ^a \pm 0.6	3.7 ^b \pm 0.8	1.2
Ash	1.7 ^a \pm 0.3	1.6 ^a \pm 0.4	1.6 ^a \pm 0.5	2.0 ^a \pm 0.5	1.7 ^a \pm 0.3	1.6 ^a \pm 0.4	0.5

^{a-c}Means in rows with different superscripts differ at $P \leq 0.05$.

¹LSD (least significant difference). $P = 0.05$

Table 3. The mean scores (\pm SD) for the fatty acid composition (% of total fatty acids) of the meat derived from the 6 meat treatments

Fatty acid ¹	Species						LSD ²
	Egyptian goose, n = 6	Guineafowl, n = 6	Ostrich fan fillet, n = 6	Ostrich moon steak, n = 6	Pekin duck, n = 6	Broiler chicken, n = 6	
SFA							
C14:0	0.26 ^c \pm 0.08	0.43 ^a \pm 0.08	0.38 ^{ab} \pm 0.12	0.37 ^{abc} \pm 0.08	0.39 ^{ab} \pm 0.12	0.31 ^{bc} \pm 0.10	0.11
C15:0	0.10 ^{cb} \pm 0.01	0.12 ^b \pm 0.02	0.15 ^a \pm 0.02	0.15 ^a \pm 0.03	0.08 ^c \pm 0.03	0.11 ^b \pm 0.02	0.02
C16:0	20.03 ^b \pm 1.57	25.98 ^a \pm 1.61	26.24 ^a \pm 2.50	25.87 ^a \pm 3.11	26.86 ^a \pm 1.80	20.39 ^b \pm 3.69	2.94
C18:0	17.09 ^a \pm 3.71	16.30 ^a \pm 2.69	15.26 ^{ab} \pm 1.69	17.56 ^a \pm 1.91	12.58 ^{bc} \pm 1.04	11.06 ^c \pm 1.09	2.73
C20:0	0.11 ^d \pm 0.05	0.24 ^b \pm 0.12	0.18 ^{cb} \pm 0.04	0.18 ^{cb} \pm 0.02	0.12 ^{cd} \pm 0.02	0.35 ^a \pm 0.08	0.07
C21:0	0.04 ^a \pm 0.001	0.05 ^a \pm 0.02	0.12 ^a \pm 0.18	0.06 ^a \pm 0.02	0.06 ^a \pm 0.02	0.04 ^a \pm 0.03	0.09
C22:0	0.27 ^d \pm 0.14	0.51 ^{cd} \pm 0.11	1.52 ^a \pm 0.41	1.72 ^a \pm 0.42	0.80 ^{cb} \pm 0.09	1.01 ^b \pm 0.29	0.32
MUFA							
C14:1	0.02 ^a \pm 0.02	0.04 ^a \pm 0.05	0.03 ^a \pm 0.03	0.02 ^a \pm 0.02	0.04 ^a \pm 0.01	0.02 ^a \pm 0.03	0.03
C16:1n-7	1.36 ^d \pm 0.65	2.03 ^{cd} \pm 1.06	4.13 ^a \pm 0.68	3.54 ^{ab} \pm 0.68	2.81 ^{bc} \pm 0.62	1.48 ^d \pm 1.03	0.82
C18:1n-9 <i>trans</i>	0.10 ^b \pm 0.02	0.16 ^b \pm 0.09	0.21 ^{ab} \pm 0.02	0.49 ^a \pm 0.67	0.19 ^{ab} \pm 0.03	0.09 ^b \pm 0.03	0.33
C18:1n-9 <i>trans</i>	20.39 ^c \pm 5.57	24.15 ^b \pm 2.65	22.90 ^{cb} \pm 1.81	21.57 ^{cb} \pm 1.85	30.81 ^a \pm 1.81	20.85 ^{cb} \pm 2.14	3.59
C20:1n-9	0.11 ^b \pm 0.04	0.13 ^{ab} \pm 0.04	0.07 ^c \pm 0.01	0.11 ^b \pm 0.02	0.17 ^a \pm 0.04	0.10 ^{bc} \pm 0.02	0.04
C22:1n-9	0.26 ^a \pm 0.14	0.12 ^b \pm 0.04	0.09 ^{cb} \pm 0.02	0.11 ^b \pm 0.04	0.02 ^c \pm 0.01	0.15 ^b \pm 0.05	0.08
C24:1n-9	0.11 ^c \pm 0.04	0.23 ^b \pm 0.12	0.32 ^a \pm 0.07	0.37 ^a \pm 0.07	0.15 ^{cb} \pm 0.05	0.12 ^c \pm 0.05	0.08
PUFA							
C18:2n-6 <i>trans</i>	0.05 ^b \pm 0.003	0.05 ^b \pm 0.02	0.07 ^{ab} \pm 0.02	0.11 ^a \pm 0.09	0.04 ^b \pm 0.01	0.06 ^b \pm 0.01	0.04
C18:2n-6 <i>cis</i>	14.77 ^b \pm 1.44	15.11 ^b \pm 2.31	16.11 ^b \pm 0.85	14.87 ^b \pm 2.38	15.77 ^b \pm 1.14	33.26 ^a \pm 6.31	3.62
C18:3n-6	9.37 ^a \pm 2.74	1.75 ^{cd} \pm 0.67	2.19 ^c \pm 0.57	2.01 ^c \pm 0.61	0.52 ^d \pm 0.05	3.91 ^b \pm 0.97	1.42
C18:3n-3	0.20 ^c \pm 0.06	0.31 ^a \pm 0.07	0.27 ^{ab} \pm 0.04	0.30 ^a \pm 0.04	0.28 ^{ab} \pm 0.06	0.23 ^{bc} \pm 0.03	0.06
C20:2	0.20 ^c \pm 0.08	0.33 ^b \pm 0.07	0.30 ^b \pm 0.05	0.35 ^b \pm 0.07	0.29 ^{cb} \pm 0.04	0.66 ^a \pm 0.16	0.10
C20:3n-6	11.43 ^a \pm 2.60	8.94 ^b \pm 2.47	6.71 ^c \pm 0.96	6.86 ^c \pm 0.81	6.76 ^c \pm 1.18	3.40 ^d \pm 0.82	2.06
C20:3n-3	0.13 ^{ab} \pm 0.03	0.14 ^{ab} \pm 0.03	0.11 ^{ab} \pm 0.02	0.30 ^a \pm 0.40	0.11 ^{ab} \pm 0.03	0.09 ^b \pm 0.02	0.20
C20:4n-6	0.07 ^{bc} \pm 0.04	0.09 ^{abc} \pm 0.02	0.10 ^{ab} \pm 0.03	0.12 ^a \pm 0.03	0.06 ^c \pm 0.02	0.06 ^c \pm 0.03	0.03
C20:5n-3	0.94 ^a \pm 0.30	0.34 ^a \pm 0.08	0.45 ^a \pm 0.21	0.56 ^a \pm 0.09	0.67 ^a \pm 0.31	1.15 ^a \pm 1.75	0.87
C22:2	0.16 ^a \pm 0.05	0.07 ^{cd} \pm 0.04	0.09 ^{cb} \pm 0.02	0.12 ^{ab} \pm 0.03	0.05 ^{cd} \pm 0.03	0.04 ^d \pm 0.04	0.04
C22:5n-3	1.66 ^a \pm 0.72	0.46 ^b \pm 0.11	1.43 ^a \pm 0.72	1.70 ^a \pm 0.63	0.11 ^b \pm 0.02	0.16 ^b \pm 0.04	0.57
C22:6n-3	0.77 ^b \pm 0.28	1.93 ^a \pm 0.66	0.58 ^{cb} \pm 0.36	0.60 ^{cb} \pm 0.24	0.28 ^c \pm 0.16	0.90 ^b \pm 0.33	0.43
SFA	37.91 ^c \pm 2.22	43.63 ^{ab} \pm 2.80	43.85 ^{ab} \pm 1.40	45.90 ^a \pm 3.92	40.87 ^{bc} \pm 1.63	33.27 ^d \pm 4.58	3.60
MUFA	22.24 ^d \pm 5.93	26.70 ^{bc} \pm 3.58	27.54 ^b \pm 2.39	25.71 ^{bcd} \pm 2.19	34.00 ^a \pm 2.31	22.71 ^{cd} \pm 3.06	4.17
PUFA	39.70 ^a \pm 3.93	29.47 ^b \pm 2.99	28.33 ^b \pm 2.59	27.70 ^b \pm 3.91	24.89 ^b \pm 2.40	43.86 ^a \pm 7.06	4.74
PUFA/SFA	1.05 ^b \pm 0.06	0.68 ^c \pm 0.09	0.65 ^c \pm 0.07	0.61 ^c \pm 0.12	0.61 ^c \pm 0.07	1.36 ^a \pm 0.33	0.18
n-6/n-3	9.94 ^b \pm 1.79	8.56 ^b \pm 2.37	9.60 ^b \pm 2.60	7.06 ^b \pm 1.03	17.78 ^a \pm 8.09	21.83 ^a \pm 10.17	6.29

^{a-d}Means in rows with different superscripts differ significantly at $P < 0.05$.

¹SFA (saturated fatty acids); MUFA (monounsaturated fatty acids); PUFA (polyunsaturated fatty acids); PUFA/SFA (polyunsaturated fatty acid/saturated fatty acid ratio).

²LSD (least significant difference). $P = 0.05$.

Table 4. The mean scores (\pm SD) of the mineral composition (mg/100 g, dry basis) for the 6 different meat treatments

Mineral	Species						LSD ¹
	Egyptian goose, n = 6	Guineafowl, n = 6	Ostrich fan fillet, n = 6	Ostrich moon steak, n = 6	Pekin duck, n = 6	Broiler chicken, n = 6	
P	192.5 ^b \pm 15.6	182.4 ^{bc} \pm 18.4	179.3 ^c \pm 9.80	181.7 ^c \pm 6.5	186.5 ^{bc} \pm 6.4	208.7 ^a \pm 16.0	11.0
K	180.1 ^{ab} \pm 19.1	162.5 ^c \pm 15.0	171.5 ^{bc} \pm 9.6	180.1 ^{ab} \pm 8.3	169.3 ^{bc} \pm 13.8	189.5 ^a \pm 20.8	11.0
Ca	12.3 ^b \pm 1.74	11.9 ^b \pm 1.8	11.6 ^b \pm 1.80	11.6 ^b \pm 2.0	17.3 ^a \pm 1.4	10.7 ^b \pm 1.5	2.0
Mg	32.5 ^b \pm 2.3	30.2 ^b \pm 5.0	32.6 ^b \pm 1.3	30.7 ^b \pm 1.0	31.4 ^b \pm 2.0	36.7 ^a \pm 2.7	3.0
Na	22.0 ^{bc} \pm 6.0	15.8 ^d \pm 2.2	20.6 ^c \pm 0.6	24.5 ^b \pm 1.9	29.0 ^a \pm 1.9	18.9 ^{cd} \pm 2.2	3.2
Fe	7.5 ^a \pm 0.59	1.8 ^d \pm 0.6	4.2 ^b \pm 0.40	3.6 ^c \pm 0.4	4.6 ^b \pm 0.8	1.4 ^e \pm 0.2	0.5
Cu	0.5 ^a \pm 0.14	0.2 ^{cd} \pm 0.1	0.3 ^{bc} \pm 0.03	0.3 ^{bc} \pm 0.03	0.4 ^{ab} \pm 0.2	0.1 ^d \pm 0.02	0.1
Zn	2.1 ^{bc} \pm 0.40	1.2 ^d \pm 0.3	2.3 ^b \pm 0.2	5.5 ^a \pm 0.4	1.9 ^c \pm 0.2	1.2 ^d \pm 0.2	0.2
Mn	0.1 ^a \pm 0.01	0.04 ^{bcd} \pm 0.01	0.04 ^{bc} \pm 0.01	0.03 ^d \pm 0.002	0.04 ^b \pm 0.01	0.03 ^{cd} \pm 0.004	0.01
B	0.03 ^b \pm 0.004	0.03 ^b \pm 0.01	0.03 ^a \pm 0.01	0.03 ^a \pm 0.003	0.03 ^b \pm 0.004	0.03 ^{ab} \pm 0.003	0.003
Al	2.8 ^a \pm 2.2	3.1 ^a \pm 1.9	4.3 ^a \pm 0.9	4.4 ^a \pm 1.0	2.7 ^a \pm 1.8	3.2 ^a \pm 1.6	1.9

^{a-d}Means in rows with different superscripts differ significantly at $P < 0.05$.

¹LSD (least significant difference). $P = 0.05$.

Tavuklarda normal olarak 1-2 ve hindilerde ise 4-7⁰C karkas sıcaklığı istenmekte ve ayırıcı makinenin ise 0-2⁰C olması önerilmektedir.

Bu şekilde proteinlerin denatüre olması minimize edilmekte ve etin fonksiyonel yapısının oluşmasına yardımcı olunmaktadır.

Tablo 8.2. Orta ağır beyaz hindilerde 18. hafta karkas özellikleri

Karkas Özellikleri	Erkek	Dişi
Karkas Ağırlığının % si		
Göğüs + Sırt eti	54.2	53.6
Deri	6.0	7.3
Et	29.2	30.6
Kemik	19.1	15.7
Yağ %		
Göğüs + Sırt eti	0.76	0.75
But eti	3.52	6.42
Karkas	4.37	5.93
Karaciğer	2.14	3.86
Kalp	3.13	6.33

Üretilen 1 kg ayrıışmış hindi etinin maliyeti içerisinde tüm girdiler yanında kullanılan ekipmanın oynar kısımlarında meydana gelen aşınmadan dolayı ihtiyaç duyulan yedek parça sıklığı da eklenmelidir.

Ayırıcıya verilen ham maddenin en azından % 95'nin kullanılabilir nitelikli ürün olarak elde edilmesi gerekmektedir. Bu değer aynı zamanda kullanılan ekipmanın randımanı hakkında bilgi verecektir.