



## Goose Meat Production Responses to Grass Based Diets

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## Goose meat production responses to grass based diets

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**Introduction** Goose meat and feather production are important elements of farming in Hungary. There were no available data on grass intake by geese or the production potential of grass in goose farming, therefore, we conducted a series of experiments between 2000 and 2003 on goose production responses to grass-based diets.

**Materials and methods** Between 2000 and 2003 four feeding trials were conducted at the Animal Research Station of the Debrecen University Agricultural Sciences Centre using four-week-old growing geese. Previously, goslings had been intensively reared with complex grain pellets. We investigated goose production responses to different grass proportions in the diet (Treatment 1: 75%, Treatment 2: 50%, Treatment 3: 25%, Treatment 4: 0% chopped grass). The remainder of the diet comprised complex grain pellets for geese. Each group consisted of 25 birds. Geese were kept indoors with free exit to an open yard. Food was offered twice a day. Grass for feeding was cut every day from a mixed sward. Data were recorded daily for offered and rejected grass and on weekly for live weight gain. Live weight gains were statistically analysed by analysis of variance.

**Results and discussion** Throughout the experiment in 2003, the average live weight of geese was significantly lower in Treatments 1 and 2 (75% and 50% chopped grass in the diet) compared to other treatments. As a result, the final live weights for Treatments 3 and 4 were significantly higher than those for Treatments 1 and 2 (Table 1.). These results were probably due to the higher energy concentration of the diet. These results confirmed those from previous goose feeding trials with the same treatments in 2001 and 2002.

**Table 1** Average live weight of geese in the weeks of the experiment in 2003 (kg per goose)

Treatments proportion of chopped grass			Weeks									
			1	2	3	4	5					
75%	mean value	s.e	2.41	0.16	2.47	0.16	2.46	0.20	2.68	0.25	2.82	0.33
50%	mean value	s.e.	2.41	0.24	2.70	0.41	2.77	0.34	2.97	0.31	3.23	0.33
25%	mean value	s.e.	2.47	0.23	2.81	0.28	3.21	0.31	3.60	0.33	3.86	0.41
0	mean value	s.e.	2.38	0.38	2.79	0.28	3.25	0.38	3.52	0.32	3.85	0.33
LSD <sub>0.05</sub>			0.08	0.12	0.13	0.12	0.14					

s.e. - standard error of mean, LSD - Least Significant Difference

Geese are typically grazing waterfowl that can utilise grass quite effectively, because microbial degradation of fibre during digestion provides energy for maintenance and production. The digestive system of geese not only utilises fibre, but requires 4-10% fibre in the diet, depending on age (Anrique *et al.*, 1982). For reasonable meat and feather production grazing meat geese need at least 15% grain supplementation during the grazing season (Nagy & Mihók, 1992). Our results indicate that farmers can include grass (chopped or grazing) in goose feeding up to c. 25% with positive effects on feeding and production costs. A higher proportion of grass in the diet would result in both poorer live weight gains and final live weights.

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