XX International Grassland Congress: Offered papers

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L. 't Mannetje
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The XX International Grassland Congress took place in Ireland and the UK in June-July 2005. The main congress took place in Dublin from 26 June to 2 July and was followed by post congress satellite workshops in Aberystwyth, Belfast, Cork, Glasgow and Oxford. The meeting was hosted by the Irish Grassland Association and the British Grassland Society and was organised by the bodies represented on the Local Organising Committee.

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The suitability for organic cattle beef production of mixed farming systems in the highlands of north east Portugal

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Keywords: agricultural systems, land use, ranching, meadow, organic cattle feeding stuffs

Introduction The EC Reg. 1804/99 takes account of animal production in organic farming. However, these specifications may limit implementation and expansion of organic animal production, due to environmental and system constraints. Mixed farming, as defined by Spedding (1988) and Grigg (1996), is commonly practiced in the NE highlands of Portugal. Two farms were studied in this region in order to evaluate their suitability for organic cattle beef production, taking account of the technical specifications of the EC regulation.

Materials and methods Two farms were monitored for a year (autumn 2002-03); one located near Montalegre (F1) (41º 36' N, 7º 55' W and 950 m asl) and the other near Vinhais (F2) (41º 53' N, 6º 58' W and 700 m asl). The long-term annual rainfall is 1531 and 741 mm and the annual mean temperature 9.6 and 12 ºC, respectively. The farms, F1 and F2, produce beef cattle from the "Barrosã" and "Mirandesa" breeds, respectively. Farm activities and components such as inputs, outputs, yield and flows between state variables were recorded.

Results Legumes are present in meadows, although with low mean values, i.e. 7 % (F1) and 15 % (F2). Farm F1 has a larger area of grassland and other forage crops than F2 (96.4 % compared to 40.6 %), less cropland based on cereals and crucifers (11.5 % compared to 40.6 %), 7-8 times less off-farm nitrogen (inorganic-N fertilisers) and grazing accounts for a higher proportion of the cattle diets (67.3 % compared to 51.9 %). Considering these as criteria for suitability for organic farming, F1 is better suited for organic beef production.

Table 1 Characteristics of farms F1 and F2 (total annual values from autumn 2002 to autumn 2003)

	Montalegre farm (F1)				Vinhais farm (F2)			
	Area		Feedingstuffs		Area		Feedingstuffs	
Land use	(ha)	(%)	(DM, t/yr)	(%)	(ha)	(%)	(DM, t/yr)	(%)
Meadow	22.6	63.1	$120.1^{G} + 69.0^{H}$	68.6	16.2	29.1	$88.2^{G} + 52.9^{H}$	76.2
Turnip + beetroot					1.5 [1]	2.7	3.1^{F}	1.7
Maize (regional)	3.9 [1]		21.1^{F}	7.7	0.2 [1]		0.4^{F}	0.2
Fallow [2]					9.6	17.2		
Wheat (grain) [2]					0.3	0.5		
Rye (grain) [2]					6.3	11.3		
Rye (forage)	4.1 [1]	11.5	11.2^{G}	4.1	0.4 [1]		2.1^{F}	1.1
Oat (forage) [2]					1.4	2.5	34.2^{H}	18.5
Vegetable-garden	0.2 [1]				0.2 [1]			
Long-term fallow [2]					3.5	6.3	4.3^{G}	2.3
Shrubs and forest	7.8	21.8	54.0^{G}	19.6	7.2	12.9		
Chestnut	1.3	3.6			9.7	17.4		
Total	35.8	100.0	275.4	100.0	55.7	100.0	185.2	100.0

Other data per farm, F1 and F2, respectively: concentrates 5,120 and 1,280 kg; feedingstuffs area 34.5 ha and 22.6 ha; stocking rate (livestock units/ha of feedingstuffs area) 0.58 and 0.35; livestock weight 8,942 and 7,467 kg; deadweight 615 and 249 kg; off-farm N 10 and 75 kg.
[1]Double crop; [2]Cereal-fallow rotation; [G]Grazing; [H]Hay; [F]Green forage

Conclusions The simpler mixed farming system practised in F1, located in a more mountainous humid region, is approaching a ranching system, as defined by Grigg (1996). This farm, using only seven state variables, five of which are directly related to cattle, seems to better fulfil the specifications for organic animal production.

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