



Grassland management on the Low Cost Farm: An overview of the period 1998-2006

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Introduction



- Low Cost Farm' research farm (Waiboerhoeve the Netherlands)
- Produce milk at a (max) cost price of 0.35 euro kg⁻¹.
- Derived targets grassland management were:
 1. low input of minerals (N, P)
 2. minimal use of chemicals
 3. long grazing season
 4. efficient use of labour
 5. minimal grassland renewal

Materials and Methods



- Developing a farm system (case study)
- Dairy farm with 55 cows (HF & Montbéliarde)
- Milk production : 8200 kg FPCM year⁻¹
- Replacement (rate of young stock): 20%
- Concentrate use maximized to 1600 kg /cow per year
- Permanent grazing system after 2002

Results

Table 1 The development in N and P application with artificial fertilizer and manure (1998-2005)

year	N artif. fert. (kg ha ⁻¹)	N manure (kg N ha ⁻¹)	N total (kg N ha ⁻¹)	P ₂ O ₅ artif. fert. (kg ha ⁻¹)	P ₂ O ₅ Manure (kg ha ⁻¹)	P ₂ O ₅ Total (kg ha ⁻¹)
1998	225	53	278	25	35	60
1999	186	82	268	32	35	67
2000	127	73	200	26	16	42
2001	136	51	186	23	38	61
2002	119	66	185	21	33	54
2003	53	79	132	0	55	55
2004	89	160	249	0	106	106
2005	182	59	241	0	56	56



- N fertilization reduced from 275 to 145 kg N ha⁻¹
- Net average grassland yield 11.5 ton DM ha⁻¹
- Total feeding costs € 0.044 kg⁻¹ milk
- Permanent grazing decreases input of labour (-1%)
- Total average costs on the Low Cost Farm of € 0.34 kg⁻¹ milk

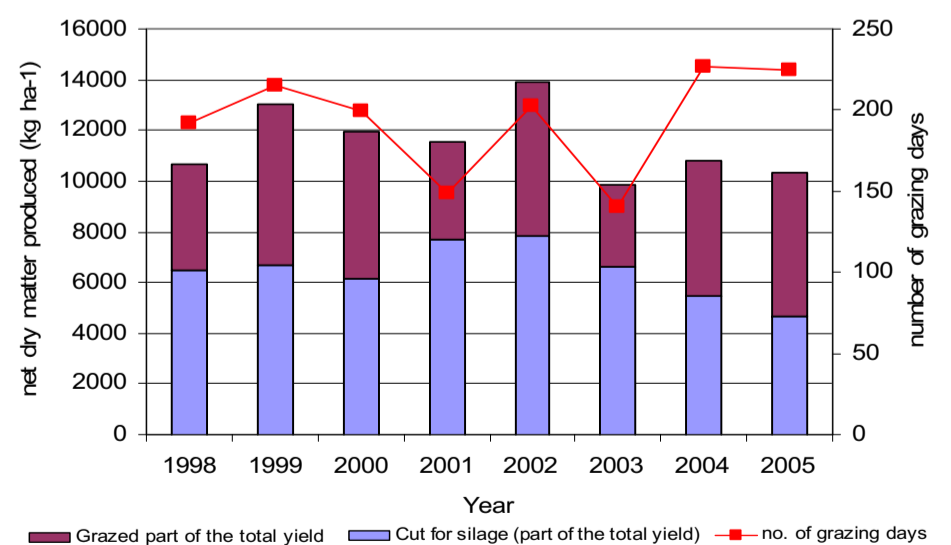


Figure 1 Net grass yield (sum of animal intake of fresh grass and silage) kg ha⁻¹ DM and number of grazing days in period 1998-2005

