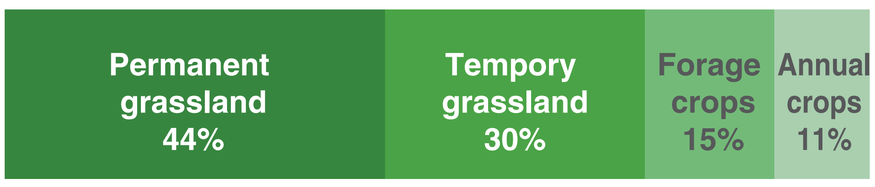
Italian Dairy Sheep Farming Sustainability Benchmarking

ITALY - YEAR 2021

DAIRY SHEEP FARM PROFILE (AVERAGE (MIN-MAX))

Land use & area

Total Sheep Area (UAA): 74 (21-130) ha
Main Forage Area (MFA): 64 (19-110) ha
Stocking rate: 7.0 (3.6-12.4) ewes/ha

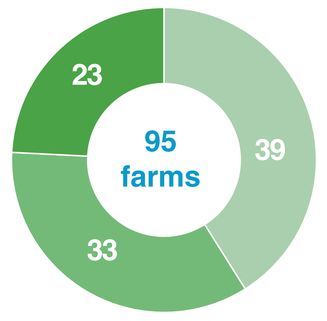


Productivity & dairy performance

Flock size (N° of ewes): 364 (150-637)
Milk Yield: 164 (94-242) kg FPCM*/ewe/year
*FPCM = Fat and Protein Corrected Milk 75-55

Useful Dry Matter (UDL): 20.6 (12.1-29.6) g/l
Litter size: 0.9 (0.37-1.2) lambs/ewe

Dairy sheep systems



ENVIRONMENTAL AND ECOSYSTEM SERVICES FOR ITALIAN DAIRY SHEEP FARMS

Food performance*
5 (2-8) *people/ha UAA*
**PerfAlim. Cereopa*

Maintenance of biodiversity*
0.7 (0.1-1.5) *ha biodiversity eq/ha UAA*
**Hedgerows included*

Nitrogen balance surplus*
57 (21-97) *kg N/ha UAA*
**(N_{inputs}-$N_{outputs}$)*

Direct fossil energy
3.9 (0.2-6.9) *MJ/kg FPCM*
**Fuel & Electricity consumption*

CARBON FOOTPRINT ASSESSMENT

Gross GHG* emissions
2.8 (1.9-3.6) *kg CO_2 eq/kg FPCM*
**GHG = GreenHouse Gases (CO_2 + CH_4 + N_2O)*

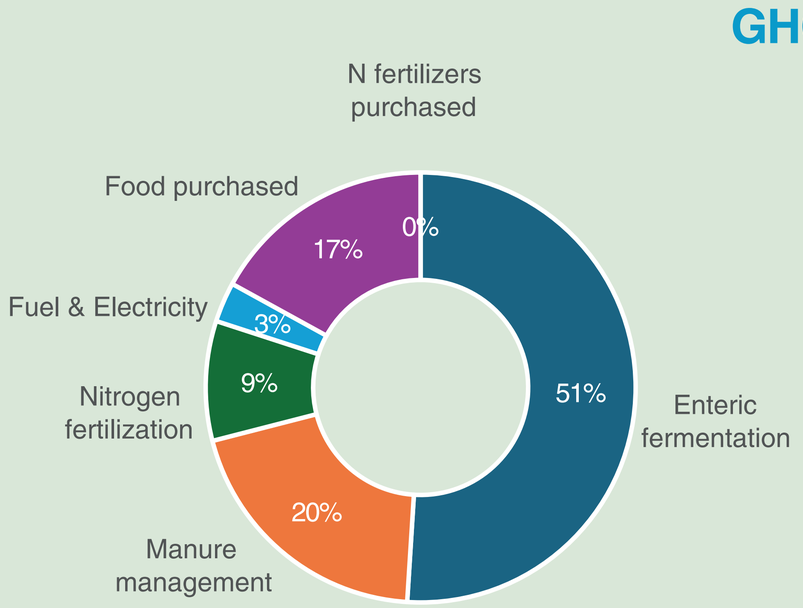
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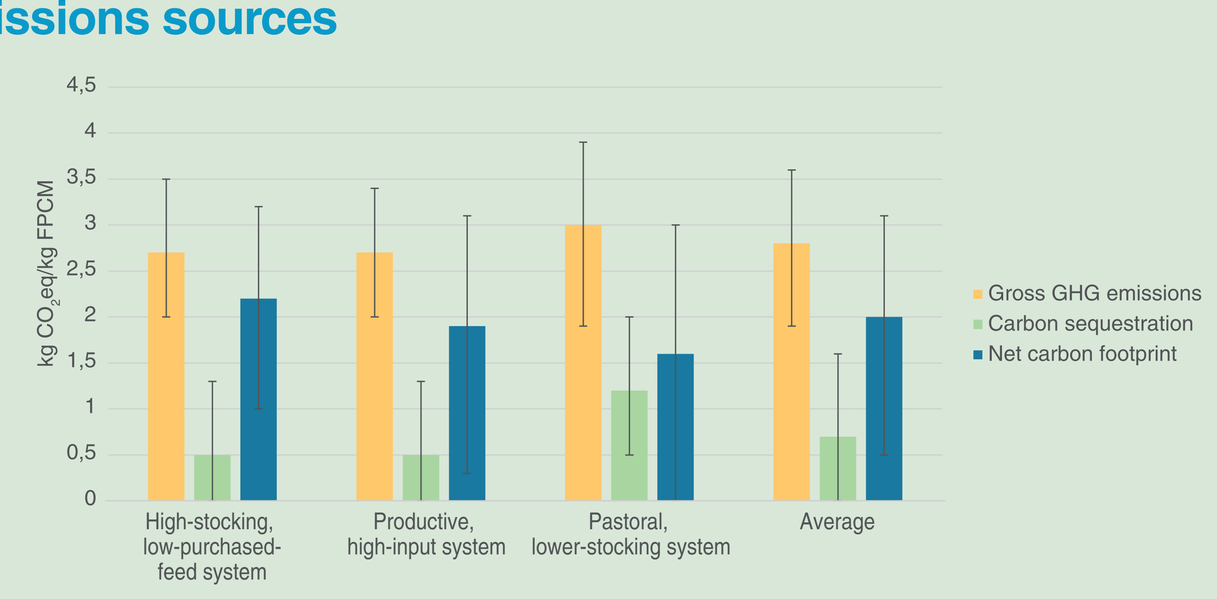
Carbon sequestration*
0.7 (0-1.6)
kg CO_2 eq/kg FPCM
*Hedgerows included

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Net Carbon Footprint
2.0 (0.5-3.1)
kg CO_2 eq/kg FPCM

GHG emissions sources





Italian Dairy Sheep Farming Sustainability Benchmarking

ITALY - YEAR 2021

GHG EMISSIONS AND TECHNICAL RESULTS WITHIN EACH SYSTEM

Productive, high-input system

Indicators		10% of farms that have the lowest emissions	Average (of the group)	10% of farms that have the highest emissions
GHG emissions	*kg CO_2eq/kg FPCM*	1.8	2.7	3.9
Carbon sequestration	*kg CO_2eq/ha UAA*	300	148	87
Technical indicators for Flock Management and Production				
Milk Yield	*kg FPCM/ewe/year*	222	209	160
Litter size	*lambs/ewe*	0.8	0.8	0.72
Concentrate consumption	*kg/ewe*	126	203	190
Concentrates self-sufficiency	*%*	33	10	9
Technical indicators for Land Management				
Mineral Nitrogen	kg N/ha UAA	1	4	17
Organic nitrogen pressure	kg N/ha UAA	43	59	95
Permanent grasslands & pastoral areas	%	53	26	19
Hedges	linear meter/ha UAA	67	353	2 933
Technical indicators for Manure management				
Grazing days for Ewes	days/year	151	187	217
Hours outside for Ewes	hours/day	9.9	9.0	12.6
Technical indicators for Energy consumption				
Electricity	kWh/kg FPCM	0.14	0.14	0.16
Fuel	litres/ha UAA	151	111	136

Pastoral, lower-stocking system

Indicators		10% of farms that have the lowest emissions	Average (of the group)	10% of farms that have the highest emissions
GHG emissions	*kg CO_2eq/kg FPCM*	1.8	3.0	4.21
Carbon sequestration	*kg CO_2eq/ha UAA*	262	134	118
Technical indicators for Flock Management and Production				
Milk Yield	*kg FPCM/ewe/year*	203	134	118
Litter size	*lambs/ewe*	0.75	0.84	1.04
Concentrate consumption	*kg/ewe*	90	169	291
Concentrates self-sufficiency	*%*	0	2	0
Technical indicators for Land Management				
Mineral Nitrogen	kg N/ha UAA	7	3	13
Organic nitrogen pressure	kg N/ha UAA	61	52	70
Permanent grasslands & pastoral areas	%	62	68	74
Hedges	linear meter/ha UAA	0	220	60
Technical indicators for Manure management				
Grazing days for Ewes	days/year	195	202	227
Hours outside for Ewes	hours/day	9.9	9.3	4.8
Technical indicators for Energy consumption				
Electricity	kWh/kg FPCM	0.03	0.12	0.25
Fuel	litres/ha UAA	51	42	38