

Sample Pages of the 2023 John Nix Pocketbook for Farm Management.

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FORAGE VARIABLE COSTS

<i>Grassland</i>	1-2 year Ley	Intensive 3- 5 year Ley	Long Term Ley	Improved Permanent Pasture	Low Input P. Pasture
Yield t/ha (ac)	50 (20)	47 (19)	42 (17)	35 (14)	27 (11)
Stocking rate capacity	2.0 (0.8)	1.8 (0.7)	1.5 (0.6)	1.2 (0.5)	0.9 (0.4)
Years Ley	2	4	7	-	-
Kg/ha (units/acre)					
N	250 (199)	200 (159)	150 (120)	100 (80)	50 (40)
P	35 (28)	33 (26)	29 (23)	25 (20)	19 (15)
K	120 (96)	113 (90)	101 (80)	84 (67)	65 (52)
Costs £/ha (£/ac)					
Seed per year	59 (24)	40 (16)	26 (11)	8 (3)	4 (2)
Fertiliser	640 (259)	536 (217)	425 (172)	307 (124)	185 (75)
Sprays	15 (6)	10 (4)	5 (2)	2 (1)	0 (0)
Total £/ha/Yr	714 (289)	586 (237)	455 (185)	317 (128)	190 (77)
cost £/t fresh weight	14.29	12.45	10.86	9.65	7.02
<i>Other Forages</i>	Unimproved Pasture	Clover Ley	Maincrop	Kale	Swedes
Yield t/ha (t/acre)	15 (6)	40 (16)	37 (15)	45 (18)	70 (28)
Stocking rate capacity	0.5 (0.2)	1.4 (0.6)			
Kg/ha (units/acre)					
N	0 (0)	0 (0)	70 (56)	90 (72)	60 (48)
P	0 (0)	30 (24)	25.9 (21)	27 (22)	24.5 (20)
K	0 (0)	30 (24)	81.4 (65)	113 (90)	84 (67)
Costs £/ha (£/ac)					
Seed		37 (15)	209 (85)	70 (28)	209 (85)
Fertiliser		72 (29)	250 (101)	320 (130)	232 (94)
Sprays		10 (4)	70 (28)	14 (6)	14 (6)
Total £/ha (£/ac)	0 (0)	120 (48)	529 (214)	404 (164)	455 (184)
Cost £/t fresh weight	0.00	2.99	14.29	8.98	6.50
	Fodder Beet	Forage Rape	Maincrop Turnips	Stubble Turnips	
Yield t/ha (t/acre)	70 (28)	35 (14)	65 (26)	35 (14)	
Costs £/ha (£/ac)					
Seed	242 (98)	41 (16)	62 (25)	29 (12)	
Fertiliser	443 (180)	242 (98)	309 (125)	266 (108)	
Sprays	140 (57)	20 (8)	14 (6)	14 (6)	
Total £/ha (£/ac)	825 (334)	303 (123)	384 (156)	308 (125)	
Cost £/t fresh weight	11.79	8.65	5.91	8.81	

Forage Variable Cost Notes

1. **Stocking Rate Capacity:** In GLSU/Ha, this is a guide for forage types. It will vary between farm and field, but should help to identify stock carrying capacity of the land.
2. **Seed costs:** costs per year vary according to the length of leys.
3. **Fertiliser** is costed to come partially from manure and bagged fertiliser (50:50). Bagged is often less on permanent pasture, depending on management style which also affects stocking rates and productive levels per animal.
4. **Contract work** on maize, silage and cultivations; refer to page 202.
5. **Labour:** forage and conservation labour, pages 181
6. **Conservation machinery:** page 196.
7. An appropriate combination of these *forage Variable Costings* is used to calculate the forage costs of all the grazing livestock margins throughout the book. For simplicity, only the grasses, maize and stubble turnips are used. Each livestock gross margin explains which forage crops are used.
8. It is easy to identify arable land use, such as wheat production, potatoes or fallow. For forage, it is difficult. There may be several options for using that pasture with various livestock enterprises grazing the grass or consuming the conserved forage in winter. For much of the grass-growing time, the field may be unstocked allowing pasture to grow. This makes it difficult to identify the enterprises it feeds, stocking rates, pasture utilisation and indeed fallow grassland where is inevitably a significant amount of under or un-utilised grass. This is not identified by survey or statistics. The stocking rates used here are for typical commercial enterprises rather than the average UK pasture stocking rate.

Sample Pages from
John Nix 53rd Edition

TOTAL COSTS OF FORAGE

Cost of Preserved Forage 2 cuts	Clamped Grass Silage *	Wrapped Grass Silage *	Hay *	Grazed Grass	Clamped Maize	Clamped Wheat
Variable Costs £/ha	586	586	586	586	529	878
Operational Costs						
Land Preparation	103	103	103	103	410	103
Drilling	12	12	12	12	57	48
Fertilising & Spraying	63	63	63	63	31	63
Mowing		73	73			
Turning		42	84			
Raking		44	44			
Harvest, Clamp/Gather	406		59		237	237
Land based Costs £/ha	1169	922	1023	763	1264	1329
Estimate: forage not taken	15%	15%	15%	15%		
Total Costs £/fresh t	29.3	23.1	25.6	19.1	30.1	60.1
Fresh DM	18%	18%	18%	18%	28%	53%
Preserved DM %	25%	30%	85%	8%	32%	14%
Preserved weight t	28.8	24.0	8.5	40.1	32.4	37.8
Sub-total £/t preserved	41	38	121	19	32	76
Round Baling £/bale		3.84	3.84			
Wrap x4 £/bale		1.66				
sheet £/t	1.65				1.65	1.65
Innoculant £/t						1.50
Bale Weight		200	400			
Total Costs £/t Preserved	42	43	131	19.1	36	79
Total Costs £/t dry weight	169	159	154	106	113	180
<i>MJ per kg DM</i>	<i>10.9</i>	<i>10.9</i>	<i>8.8</i>	<i>11.5</i>	<i>11.0</i>	<i>11.0</i>
£/MJ kg DM	5.5	1.46	1.75	0.92	1.02	1.63

** based on 2 cuts

Total Forage Cost Notes:

- Variable Costs:** Linked to previous schedule, with 47 tonnes per hectare from the 'intensive 2-5 year' margin and a 4-year ley.
- Conserved Grass (*)** figures are based on 2 cuts.
- Operational Costs:** Taken from contractor's charges, page 202, land preparation and drilling divided by length of rotation.
- All costs are charged to the forage, despite possible late season grazing.
- Neither *land rent* or the *Basic Payment Scheme* costs and incomes are included in this schedule. Depending on its use, will depend on whether you should include them in your costings. But if one is in, the other should be unless grazing licences used.
- Sale value of hay and (far less common because of its bulk) silage vary widely according to the region and season (supply/demand situation), quality and time of year: *Hay in small bales* has an average ex-farm sale value of £100 to £140/t, average £120/t (British Hay & Straw Merchants' Association). Seed hay £120/t and £100/t for meadow hay; prices are higher in the West than East and more after a dry summer or long winter. Prices are higher for horses as quality is higher. Big bale hay (including round bales) is £25 to £30/t cheaper and 90% of hay crop.

- Sell grass silage or maize silage for 2023 at cost plus margin. See schedule above. Include delivery cost. Grass Silage calculates at about £45-50/t delivered, maize silage about £36/t + margin (higher when forage is very short in an area and vice versa).

RELATIVE COSTS OF GRAZING, CONSERVED GRASS, AND FEEDS

	£/t Fresh Weight	Yield DM tonnes/ha (acre)	Cost per tonne DM (£)	MJ per kg DM	Pence per MJ of ME in DM
Grazed Grass	19	7.6 (3.1)	£108	12.8	0.84
Grass Silage	43	7.6 (3.1)	£171	10.9	1.57
Big Bale Silage	48	7.6 (3.1)	£160	10.8	1.48
Hay	132	7.6 (3.1)	£155	8.8	1.76
Kale (direct drilled)	23	6.8 (2.7)	£152	11	1.38
Forage Turnips (d.d.)	16	6.8 (2.8)	£149	10.2	1.46
Brewer's Grains	45	-	£188	11.7	1.62
Concentrates	350	-	£400	12.8	3.13

- In interpreting the above figures for use in planning feed use on farm, own land, labour and capital for equipment are included here for home-produced fodder but not for purchased feed, and much more storage is required.
- The consumption of fodder is limited by its bulk and its quality/digestibility.
- The cost of forage will vary enormously depending on growing conditions, soil fertility and type, intensity of farming practice and management ability.

cow or liveweight gain per head), breed (e.g. Friesian v. Jerseys) and quantities of non-forage feed consumed.

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