

Out-wintering in practice

A summary of farmer experiences



Out-wintering Demonstration Programme 2007-08



Brian Atkinson
Scratchmere Scar
Penrith, Cumbria



Tony Wilson
West Highwood
Barnard Castle,
County Durham



Simon Bedell
The Linch House
Bishops Castle, Shropshire



Roger Hodson-Walker
Breach Farm
Swadlincote, Derbyshire



Adam Quinney
Reins Farm
Redditch, Worcestershire



Rob Saunders
Ravenswood Farm
Cowbridge,
Vale of Glamorgan



Philip Walters
Bower Farm
Newbury, Hampshire



Ed Williams
Narracombe Farm
Bovey Tracey, Devon

Modern application of a traditional practice

Out-wintering on fodder crops offers a range of benefits to UK cattle and sheep farmers. Based on traditional practices, the recent surge in interest is being fuelled by a combination of new varieties and innovative management ideas that make it highly relevant and valuable in the modern farming environment.

In addition to cutting feeding costs, advantages of out-wintering can include:

- Reduced pressure on housing.
- Increased production per hectare.
- Reduced labour, machinery and fuel for silage making, winter feeding, bedding and muck disposal.
- Rotational benefits including break-cropping and enhanced soil fertility.
- Healthier stock.



British Seed Houses is leading the way in the development of a modern era of out-wintering. In order to reinforce the basic principles and promote the concept in the context of modern and profitable livestock farming, the company has worked with EBLEX and HCC Meat Promotion Wales to stage a series of farm demonstrations across the country. This booklet summarises the experiences of the eight farmers involved and provides some additional practical information on out-wintering.



NARRACOME FARM

BOVEY TRACEY, DEVON

Farm size: 120 ha
Soil type: Light, shallow loams
Height: 750ft (230m)
Rainfall: 55 inches (1375mm)

Stocking: 140 commercial South Devon autumn and spring calving suckler cows; calves reared through to finish.

Out-wintering objectives:

- Solution to limited housing
- Better cattle health
- Lower feed costs.

Farmer Feedback

Ed Williams has used the fast growing rape/kale hybrid Swift and Maris Kestrel kale to out-winter youngstock at Narracombe farm, just to the south east of Dartmoor in Devon.

A group of 34 growing heifers that would normally have been supplemented at grass with up to 3kg/head/day of concentrates during the early autumn made impressive gains grazing 2ha of the new rape/kale hybrid Swift.



Six acres of Maris Kestrel kale supported 35 cattle aged 12-18 months in the November to late February period, supplemented by one round bale per day of grass silage. The cattle gained 80-100kg/head over that period, leaving Ed very pleased with the outcome.

"Cattle have grown well and remained very healthy," he remarked. "We'll certainly continue to out-winter and may include 9-10 month old weaned cattle in the programme this year."

SCRATCHMERE SCAR

PENRITH, CUMBRIA

Farm size: 240 ha
Soil type: Light sandy loams
Height: 750 ft (230m)
Rainfall: 34 inches (860mm).

Stocking: 300 Limousin X Belgian Blue spring calving suckler cows (converting to Stabiliser); finishing all cattle on the farm. Additional stores bought in to finish indoors.

Out-wintering objectives:

- Lower costs of suckler beef production
- Free up buildings to extend finishing enterprise

Farmer Feedback

Conversion to Stabilisers and out-wintering sit side-by-side in **Brian and Bren Atkinson's** plans to create a sustainable suckler beef production system at Scratchmere Scar.

This winter's successful pilot scheme has seen 70 cows out-wintered on a combination of Swift rape/kale hybrid and Maris Kestrel kale, supplemented with round bale straw and minerals. Next winter the aim will be to increase the Maris Kestrel kale to 15 acres (sown following first cut silage) and the Swift (sown after whole crop cereals) to 45 acres, and keep 150 cows outside.



"It's been particularly wet winter, but the system has worked very well," says Brian. "We're halving the cost of keeping cows by out-wintering and this is a significant step towards making suckler beef production sustainable."

WEST HIGHWOOD

BARNARD CASTLE, COUNTY DURHAM

Farm size:	114 ha
Soil type:	Medium/heavy loams
Height:	650 – 950 ft (200 – 290m)
Rainfall:	35 inches (870mm)
Stocking:	70 Limousin X Belgian Blue spring calving suckler cows; finishing all cattle on the farm. 500 breeding ewes.
Out-wintering objectives:	- To eliminate housing for suckler cows - To reduce feeding costs - To reduce labour requirements

Farmer Feedback

Tony Wilson's second consecutive out-wintering season was far wetter than his first, but that has not deterred him and he will press on with his objective of having his entire spring-calving herd outdoors all year round.

This winter, 8 acres of Maris Kestrel kale has fed 30 cows for almost 120 days, supplemented with one bale per day of round bale straw. Cows are now approaching calving in ideal condition, having begun the winter at about condition score 3.



"We shall grow more kale again next year and increase the amount of grass run-back available to the cows," says Tony. "We'll also increase the amount of straw, as it is better to have too much than too little. We're saving around £4 per cow per week by out-wintering, and the cows are healthier and require less labour, so we shall continue to improve and develop our system."

THE LINCH HOUSE

BISHOPS CASTLE, SHROPSHIRE

Farm size:	250 ha
Soil type:	Free draining medium loam
Height:	800 - 1,100ft (250 – 340m)
Rainfall:	30 inches (750mm)
Stocking:	100 spring calving pedigree Limousin suckler cows; 40 Limousin cross suckler cows; 800 Welsh Mule breeding ewes and pedigree Texel breeding flock.
Out-wintering objectives:	- Reduce costs - Maintain health of dry cows - Increase biosecurity

Farmer Feedback

Farming in an era where biosecurity is an increasingly vital issue for livestock farmers, **Simon Bedell** places a reduced reliance on off-farm accommodation high on his list of out-wintering advantages.

Traditionally, The Linch House has sent cattle away during the winter months, but with TB widespread in the region and other potential concerns such as foot and mouth disease and bluetongue never far away, the wisdom of this practice has come into question.



"We don't have the buildings available here at the home farm to accommodate all the cattle, so out-wintering allows us to keep them on the unit and therefore reduce our risks," says Simon. "Out-wintering also keeps the cows healthier and reduces feed costs and is a system that works very well on this farm."

BREACH FARM

SWADLINCOTE, DERBYSHIRE

Farm size:	215 ha
Soil type:	Varying from sandy gravel to heavy clay
Height:	360 - 440ft (110 – 135m)
Rainfall:	26 inches (650mm)
Stocking:	120 mainly spring calving pedigree Simmental and Aberdeen Angus suckler cows.
Out-wintering objectives:	- To minimise the cost of beef production.

Farmer Feedback

For **Roger Hodson-Walker**, out-wintering is primarily driven by the need to keep the cost of beef production down, and is a mixture of traditional methods and new ideas. Strip grazed Maris Kestrel kale and a pure stand of AberTop cocksfoot are key to providing a 9-month grazing platform for the suckler cows. This 32-acre field, split equally, typically supports 60 cows for most of the winter.

"If we are to be competitive in beef production, we need a system in which the cows can feed themselves, bed themselves, and muck themselves out – for as much of the year as possible," says Roger. "On this basis, we can roughly halve the cost of keeping the cows, and that's a significant saving over all."



REINS FARM

REDDITCH, WORCESTERSHIRE

Farm size:	200 ha
Soil type:	Heavy loams
Height:	325ft (100m)
Rainfall:	28 inches (700mm)
Stocking:	50 spring calving commercial suckler cows; additional stores for finishing; 250 Lleyen breeding ewes.
Out-wintering objectives:	- Reduce feed costs - Free up buildings for increased store cattle throughput.

Farmer Feedback

With the true cost of housing cows calculated to be in the region of £1.50/cow/day, **Adam Quinney** estimates that out-wintering is saving him around £1.15/cow/day.

Furthermore, he is freeing up buildings that can be used to increase the number of store cattle going through the unit, thereby improving the viability of this separate enterprise.

The early experience of out-wintering cows has been positive and Adam is already making plans for a larger acreage of brassica fodder crops including Maris Kestrel kale and Swift rape/kale hybrid in 2008. Plans may include store cattle as well as dry cows being grazed outside for at least part of the winter. The cows are a mixture of Hereford cross and Angus x South Devons, but the aim is to breed in Saler blood extra hardiness, increased frame and easier calving characteristics.



RAVENSWOOD FARM

BONVILSTON, VALE OF GLAMORGAN

Farm size:	200 ha
Soil type:	Free draining sandy loam
Height:	975ft (300m)
Rainfall:	26 inches (650mm)
Stocking:	110 spring calving suckler cows; 30 pedigree Charolais suckler cows; youngstock and bought-in store cattle.
Out-wintering objectives:	- Reduce costs - Improve growth rates from out-wintered stores - Expand numbers without additional buildings

Farmer Feedback

Out-wintering suckler cows and store cattle has been a longstanding practice for **Gus and Rob Saunders**, but until this year the tendency has been to rely on grass as the primary source of winter fodder.

This winter, however, cattle have had access to around 40 acres of Maris Kestrel kale, supplemented with hay and grazed in three separate areas.

According to Rob Saunders, the expectation is that the improved feed value from kale - costed at 45p/head/day - should boost the growth rates of youngstock.

"With the quantity and quality of fodder available, we would expect store cattle to be achieving gains of 1kg/head/day over a period of around 100 days, which should take them through to when quality grazing is available again," he said.



BOWER FARM

NEWBURY, HAMPSHIRE

Farm size:	400 ha
Soil type:	Free draining chalk downland
Height:	550ft (170m)
Rainfall:	30 inches (750mm)
Stocking:	75 spring calving suckler cows; 2-300 bought-in store cattle; Mule and Mule x Suffolk breeding ewe flock (late Feb lambing); Christmas turkeys.
Out-wintering objectives:	- Reduce costs - Maintain health of cattle - Reduce pressure on buildings

Farmer Feedback

The rising value of cereals along with a reluctance to incur the cost of housing cattle unnecessarily has prompted **Phillip Walters** to extend the scope of out-wintering this season.

Phillip has long favoured a mixture of forage rape and stubble turnips for out-wintering his herd of continental-cross spring calving suckler cows. For the first time this year, he is developing a system for younger cattle, grazing the new fast-growing rape/kale hybrid Swift supplemented with round bale hay.

Compared with the cost of feeding cattle inside, and all the associated costs of bedding straw and muck spreading, he says out-wintering makes his beef production system more financially viable. With newer varieties coming along that add flexibility and later drilling opportunities, the system also has significant rotational benefits.



Fodder crop production and composition

	Sowing rate (kg/ha)	Days to grazing	No of grazings possible	Summer/ winter use	Dry matter %	Digest-ibility (D-value)	ME (MJ/kg DM)	CP (% DM)	% Utili-sation	Average DM yield t/ha***	Establi-ishment £/ha
Swedes	1.00	170-250	1	winter	17-20	87	12-13	10-11	80	11	218
Kale	6.25	150-220	1	both	15-17	80	10-11	14-17	80	11	222
Stubble turnips	5.00	60-100	1	both	12-15	85	10-11	17-18	80	7	153
Grazing turnips	5.00	60-100	2+	both	12-15	75	10-11	17-18	75	6	153
Rape/kale hybrid	6.25	90-110	2*	winter**	12-15	80	10-11	18-19	80	8	158
Forage rape	6.25	90-110	2	both	10-12	80	10-11	19-20	80	7	152

* Care should be taken when sowing early as this is a vigorous crop and if not grazed will bolt
** Can also be sown for summer use, but care should be taken to utilise when ready
*** Yield based on summer crops

Choosing kale varieties with high leaf-to-stem ratio reduces the amount of wasted crop.



Stocking/cost guidelines for out-wintered brassicas

	DM (kg/ha)	Number of animals per ha for 100 days (crop is 70% of diet)				Cost per day per animal (pence)			
		Suckler cows	Stores 350kgLW	Ewes	Lambs	Suckler cows	Stores	Ewes	Lambs
Swedes	9,000	16	15	87	68	13.6	14.5	2.5	3.2
Kale	11,000	19	18	107	84	11.7	12.3	2.1	2.6
Stubble turnips	6,500	11	10	63	49	13.9	15.3	2.4	4.0
Grazing turnips	3,500 (regrowth 1500)	9	8	49	38	17.0	19.1	2.4	4.0
Rape/kale hybrid	6,500	11	10	63	49	14.4	15.8	2.5	3.2
Forage rape	4,000	7	6	30	30	21.7	25.3	5.1	5.1

Assumptions: 500kg suckler cows; liveweight gains for store cattle of 0.75kg/day; 55kg ewes on maintenance feeding; liveweight gains for lambs of 200g/day.

Practical experience suggests that the grazing fence should be long enough to allow all animals in the group to graze the crop at the same time without any difficulty in accessing the crop, even for the most timid animals.



Calculating requirements and output

Forage Brassicas – Daily Feed Requirements

	EXAMPLE based on a 270 kg weanling requiring 8kg/DM/day	Your Livestock and Fodder Crop Requirements
1 Livestock Total Intake <i>Estimate total daily intake on the basis of a dry matter requirement of 3% of liveweight.</i>	8kg DM/day	
2 Brassica % of Diet (How much of the diet will be grazed brassica?)	70%	
3 Brassica Daily Requirement (Box 1 x box 2)	5.6kg DM	
4 Number of Livestock	25	
5 Daily Requirement from Brassica (Box 3 x box 4)	140 kg dm	
6 Estimated Crop DM Yield/m ² *	0.8kg/DM/m ²	
7 Total daily grazing area required (Box 5/box 6)	175 m ² of brassica	
8 Length of Feed Face	120 m	
9 Fence to be moved (Box 7/box 8)	1.5 m/day	

*Based on crop yields of 10t dm/ha, (1kg/sqm) x 80% utilisation
Grazing management is important to optimise the potential of these crops.Strip grazing small areas will provide the most efficient utilization. Grazing larger areas will increase trampling and waste of available forage.

Measuring dry matter yield of your crop and calculating daily grazing requirements

For accurate feed planning it is essential to measure the DM yield of your crop. This is easily achieved using:

- A 1m square frame
- A seed bag
- A pair of garden shears
- Some scales

A number of samples should be taken from each field, picking representative sampling points.

1. Place the frame in your forage crop.
2. Use the shears to cut each plant within the frame (about 10cm from the ground) and put the harvested crop in the bag.
3. Hook the bag onto the scales and record the crop weight per meter squared.
4. To calculate DM yield per hectare multiply the fresh weight per m2 by 10,000, then multiply by the expected crop DM percentage (See table on page 12).



Varieties for Out-wintering



Maris Kestrel kale

Superior leaf-to-stem ratio, vigorous early growth and good winter hardiness makes Maris Kestrel the outstanding first choice kale for out-wintering.



Swift rape/kale hybrid

Rapid growing and with excellent regrowth potential, Swift is also winter hardy and offers added flexibility to out-wintering systems.



Appin grazing turnips

With an 80:20 leaf-to-root ratio, Appin produces high yields of highly palatable, easy-to-digest fodder more quickly than other brassica crops, and offers re-growth potential.



Vollenda stubble turnips

Very high yields and an excellent 60:40 leaf-to-root ratio, and can deliver a feed crop in summer or winter months.



Stego rape

Very high yielding with highly digestible stems, Stego ensures high usage levels and minimal waste and has excellent disease resistance.

Siskin swedes

High yielding and suited to grazing, Siskin has been bred for beneficial neck and leaf retention and displays strong clubroot resistance.

Find out more

A selection of technical guides and Farm Bulletins about out-wintering is available free on request from British Seed Houses.



Cutting Feed Costs and Filling Forage Gaps with Fodder Crops:

Start benefiting from low cost forage.



Farm Demonstration Sheets:

These are available to download at www.britishseedhouse.com



Farm Bulletin:

A guide to out-wintering on Maris Kestrel kale.



Maris Kestrel:

A guide to growing successful Maris Kestrel kale.

All of the above can be viewed or downloaded from www.bshagriculture.com or can be obtained free of charge by contacting British Seed Houses at either Bristol or Lincoln using the contact details below.



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