

CHAROLAIS

THE BRITISH CHAROLAIS CATTLE SOCIETY

COMMERCIAL



“Giving You More”



Contents

- 3 Commercial producers return to Charolais - more kilos per cow, higher returns**
- 4-5 Undisputed weight for age - Charolais cross cattle leave £132 a head benefit over all other crosses: McIntosh Donald**
- 6-7 Gearing up for VIA: the rearer finisher's take focus on Eye Muscle Area and Retail Beef Yield EBV selection**
- 8-9 Charolais - The Profitable option at Darnford**
- 10-11 Beef farmer proves value of using EBVs**
- 12-13 1kg daily carcass gain target achieved at Hopping Farm**
- 14-15 Still ignoring EBV's, I don't believe it!**
- 16-17 Charolais cross stores achieving £200 a head more than other Continental crosses**
- 17 Charolais crosses reap enhanced finisher margins, HAU student place study**
- 18-19 Searching for sustainable suckler strategy? Charolais + Beef Shorthorn cross to maximise output**
- 20 Charolais crosses averaging £200 a head, more than other Continental crosses**
- 21 Backmuir - Reaping the rewards with Charolais**
- 22-23 Eblex Improved Herd Awards 2014 - Tweeddale herd wins Most Improved Herd Award for the Charolais breed**



Commercial producers return to Charolais - More kilos per cow, higher returns

Steven Crabtree is among an increasing number of commercial producers who are returning to Charolais. How come? Quite simply, he is finding that modern British Charolais is able to deliver more kilos per cow and subsequently higher returns to the family's 120 cow suckler herd.

Swapping other Continental terminal sire breeds for Charolais is increasing output by an average 70kg per eight month old weaned calf, which will equate to approximately £160.00 per head.

"We are currently in year three of using Charolais. We had been under the illusion that producing high value show calves was the way forward, however the herd was experiencing too many caesareans which had a subsequent impact on cow health, welfare and overall margins, and after five or six years we came to the conclusion it was not a sustainable system," Mr Crabtree explains.

"We decided to return to a solid commercial strategy featuring high growth rates in order to maximise the number of kilos per cow managed on a forage based diet. We agreed Charolais was the breed to introduce and we selected our first bull on ease of calving and growth rate EBVs.

"At the time, I didn't have a lot of faith in EBVs, however our son, Simon indicated they were the way forward in helping to select more accurately for specific traits, and I've got to admit that I'm now sold on the idea. Our second Charolais bull purchased this year was selected within the breed's top 1% for key performance traits.

"To establish what levels of performance are being achieved, we're measuring growth rates at weaning, and at slaughter or despatch from the unit. It's becoming an essential job that fits in to the busy workload."

The Crabtrees wean the entire crop of calves at eight months; Charolais cross bulls are averaging 370kg and taken through to finishing at 12 months to average 350kg deadweight and within the required specification, whilst the heifers are averaging 320kg at weaning. Last season they were retained on the unit for two months before selling privately to a finisher. Eventual plans are to finish the heifers to 340kg target deadweight within 20 months.

"At weaning our Charolais cross calves are consistently averaging an extra 70kgs liveweight per head over our other same age Continental cross calves, which has prompted me to question the key to profitability. I'd previously held on to the fact it was determined by conformation, fat class and so on, however breeding and rearing Charolais cross cattle has prompted me to revise profitability as being heavily influenced by number of days to slaughter. We are also great believers in using as a benchmark, calf weight at weaning which should be 60% of mature cow body weight.



Steven and Simon Crabtree with some of their latest born Charolais cross calves

"Our crops of Charolais cross calves are hitting target weights quicker proving they have faster feed conversion rates, and a faster turnover means a better cash flow accompanied by reduced inputs – both fixed and variable," he says adding "We have tried all manner of breeds in the past, however we now feel much better placed with Charolais than any other breed."

Fact File

Steven and Ann Crabtree
Bolton Abbey Park Farm, Bolton Abbey,
Skipton

750 acre LFA unit
900 ewes
120 Continental cross suckler cows

- **Spring / summer split calving herd**
- **Average 98% calves reared**
- **70% calving within the first six weeks**

Undisputed weight for age - Charolais cross cattle leave £132 a head benefit over all other crosses: McIntosh Donald

Undisputed weight for age –
Charolais cross cattle leave £132
a head benefit over all other
crosses: McIntosh Donald

The Milne family, Robbie, Barbara
and their son, James are among
the hundreds of suppliers to one
of Scotland’s major processors
who are reaping the benefits of
finishing Charolais cross cattle
within the specification and to
target weight faster than any
other Continental cross cattle
while measuring and monitoring
their performance against
the company’s monitoring
programme.

“Our Charolais cross Salers
bulls and heifers are finishing
at average heavier weights and
faster than processor, McIntosh
Donald’s kill of all other crosses,”
says Robbie. “For example, our
bulls have that performance edge
killing out 24 days earlier and 37kg
heavier and the heifers followed a
similar trend, while 70% of the bulls
graded U 2,3L or better and the rest in the R
specification. Furthermore, we believe our
cattle have the genetic potential for even
better performance. There is always room
for improvement.”

The Milnes farm at North Bethelnie,
Oldmeldrum, Inverurie, a 500 acre mixed
LFA unit with additional rented ground. The
farm carries a 320 cow split spring calving
Salers herd and a complementary 250
ewe flock. “We run a low input unit, yet
we are focused on maximising output and
subsequent value per unit of body weight
from our cows, all of which are put to the
Charolais. We also have that critical mass
which enables us to spread costs across the
herd.

“Apart from heifers retained for replacement
purposes, the remainder are finished to
340kg target weight, whilst all our steers
have been traditionally sold in Thainstone consistently arrive
within the day’s top 10% of store prices. However in an attempt
to retain more margin per cow for ourselves, we started to
finish the bulls from the early spring calving herd. The exercise
proved to be a success and we have sufficient accommodation,
so for the first time this season we are finishing the entire crop



Robbie and Barbara Milne with their family at North Belnethie



of male calves as bulls on a mix including homegrown cereals
and forage and forward bought peas and potatoes.”

All North Belnethie finished cattle are sold to McIntosh Donald
which offers support with its Qboxanalysis. The monitoring
programme provides producers with comparative information
on the on-farm performance of their own individual animals

against the rest of the company's kill, and ultimately enables them to make better on-farm management decisions.

The Milne's Charolais cross bulls are currently finishing at an average 385kg at 420 days, while same way bred heifers are reaching 340kg target weight at 17 months, performance reflecting similar performance, if not better than those same way crosses incorporated into the Qboxanalysis.

Charolais crosses make up almost 25% of McIntosh Donald's total kill. These cattle finished at an average 352kgs within 682 days, 22 days earlier and 14kg heavier than the remainder – a mix of Continental cross and native breeds. Those performance benefits are estimated to leave an additional income of more than £132 a head over the remainder, when taking in the current 396p/kg average market price (R4L) and 350p/day costs. See table 1.

Table 1: Finished cattle performance comparison, Charolais crosses v all others

	All Cattle		Young Bulls		Heifers	
	Char x	All others	Char x	All others	Char x	All others
Head	225,948	752,156	12,594	46,097	93,803	262,787
Ave dwt (kg)	352	338	363	348	314	304
Age (days)	682	704	438	444	658	685
Grade*	3.6	3.9	3.26	3.48	3.79	3.26

Source: McIntosh Donald Qboxanalysis

* Grading matrix takes in any figure below 4 as better than R4L

McIntosh Donald's Murray Gibb explains: "The Qboxanalysis system is providing our suppliers with a quick, easy to access and highly accurate analysis of each animal's classification for benchmarking purposes, both within their herd and as a performance guide against others. The system encourages farmers to weigh their animals at a younger age, and thereafter more frequently, batch them according to weights rather than age and select more carefully those ready for slaughter. Suckler producers may need to select more carefully their terminal sires while finishers need to review their feeding diets to achieve better weight gain and earlier finishing."

At North Belnethie, the Qboxanalysis data is examined after each kill. "We manually record every single beast so that we can check their performance, primarily for weight gain, and monitor the trends. While our Charolais bull selection is initially visual – he has to look the part, Breedplan data is essential for us to make a judgement, primarily on 400 day weight and we've found that the higher the figures the better the progeny's performance. In fact



Charolais bulls run with the Salers based suckler herd

the Qboxanalysis has convinced us to invest in bulls within the breed's top 10% on performance. Any bull or female leaving progeny that underperform is down the road."

The new finishing regime has also promoted the Milnes to rethink their systems. "Introducing EID and updating our handling system with weigh scales is on the cards and will enable us to monitor individual performance more carefully and fine tune where necessary, and overall further exploit our Charolais crosses genetic potential."



Gearing up for VIA: the rearer finisher's take

Focus on Eye Muscle Area and Retail Beef Yield EBV selection

VIA (Video Image Analysis) is an automated method of objectively assessing visual carcass conformation and fat classes to comply with EU regulations on carcass classification. The new technology removes the subjectivity which allegedly accompanies the current manual grading system, between lines and between slaughter houses. What's more VIA is able to improve the precision and accuracy of saleable meat yield, even for specific carcass joints.

VIA has already been officially introduced to slaughter houses in Ireland, both in the North and South. The mechanism has also been installed for trial purposes in Scottish plants. It's a question of time when VIA will be introduced on a commercial basis throughout Great Britain, and whether or not an accompanying new pricing system will be introduced.

Commercial producers are already starting to gear up for VIA to replace manual grading in Scotland. Balbirnie Home Farm's David Aglen says: "By the time the new technology is officially introduced, I want a shed of animals ready finished that will be able to exploit the system. VIA is a definitive measurement of the higher value muscle, so we're already changing our selection procedure and sifting out Charolais bulls we introduce to our suckler herd which are specifically within the breed's top 10% for Eye Muscle Area and Retail Beef Yield EBVs.

"Processors have already indicated that they're looking for carcasses with more eye muscle and overall retail meat yield



David Aglen

which in turn have a higher retail value, consequently we trust that they will eventually be prepared to pay dividends for these higher quality animals. Going forward, I believe that all beef producers will have to consider changing their selection criteria. I like to think that the days of going for big showy bulls are numbered."

Bull finishing trial Balbirnie Home Farm has commenced its own finishing trial to determine the performance efficiency and subsequent profitability of bulls v steers. For the first time ever, a portion of the crop of male calves have been left entire and their performance is being compared to same age steers.

The target is for the bulls to reach an average 380kg to 400kg deadweight within 14 months. See table 1.

Six month old bulls weighed an average 360kg at weaning and housing when they were wormed, vaccinated against pneumonia and introduced to a 16% CP homegrown barley grass silage mix. Three months later plans are to feed the diet ad lib for management reasons. Eventually the silage will be removed and replaced with straw.

Weighing is being carried out on a six week basis, or more frequently if necessary, says David. "We're great believers in measuring and monitoring to find out if our cattle are performing to target. It's easy to be disillusioned over what's doing well and what isn't." Weighing will be gradually stepped up to fortnightly in the final three months of finishing.

Table 1: Balbirnie Charolais cross finishing performance

	Bulls (target)	Steers (actual)
6 months weaning (kg)	360	340
Weight (kg)	700	580 - 620
14 months (kg dwt)	380 - 400	340

Source: Balbirnie Home Farm

He adds: "The trial's outcome will have a major influence on helping to shape the future of Balbirnie's beef enterprise."

David is farms manager to Balbirnie's 3,000 acre in hand mixed unit based at Freuchie, Fife. The unit carries a 230 cow suckler herd with all progeny taken through to finishing. Since taking up the position three years ago, David says he's been turning the enterprise in to profit by maximising output per cow. "Together with cattleman David Douglas, I've introduced a new management strategy within a sustainable system. We're attempting to produce better quality cattle at lower cost. That strategy includes developing a closed herd with sires selected for carcass quality as well as maternal traits."

One element which remains is Charolais as the herd's terminal sire, "The breed has already been tried and tested here for more than 20 years, and I personally believe that nothing can match Charolais cross cattle in terms of weight for age. Steers are finishing at an average 340kg deadweight in 14 months with similar trends being achieved among the unit's same age heifers at 325kg deadweight. Furthermore, whilst David says he is dependent on the herd's terminal sire to introduce better carcass traits, already 85% of Balbirnie's Charolais sired calves are finishing to R4L target specification.

"While that performance is satisfactory, we're bringing a new focus to Charolais. Our previous selection criteria was based on a bull within the breed's top 35% for performance traits combined with Calving Ease Direct EBVs and that has achieved our targetted level of performance. Nowadays, bulls within the breed's top 10% for Eye Muscle Area and Retail Beef Yield EBVs are top of our catalogue pick list, followed by calving ease and growth. When we arrive at a sale we go for visual appraisal and locomotion.

"So far progeny from one of these high genetic merit bulls are delivering: 14 month old steers are finishing at 355kg deadweight and 15 month old heifers 336kg with both grading within the -U, 3, 4L bracket."

To the future, and David is currently expanding the suckler herd to 300 cows. "The plan will fit with labour and land availability, and quite simply, our cattle make money. Balbirnie is all about making more from our own available resources, efficiently."

Visit the Charolais website at

www.charolais.co.uk

For all the latest news, forthcoming sales and catalogues, sale reports, online database, information etc



Useful Contacts

Breeders in your area

To view a list of breeders in your area visit the Society's website www.charolais.co.uk and click on the "On-Line Database" button. Select "Member Enquiry" and click on the "Member Located" button to select the area you require. Finally click "Search" to view the list. A list of breeders with websites can also be viewed on the Society's website at www.charolais.co.uk/breeder/breeders-websites/

Your local Contact

To find your local council member go to www.charolais.co.uk/society/council-of-management/
To find your regional contact go to www.charolais.co.uk/society/regional-contacts/

Pedigree information

To view pedigree information visit the Society's website www.charolais.co.uk and click on the "On-Line Database" button. Select "Animal Enquiry" and enter the name or tag number of the animal you wish to search for. Finally, click "Search" to view pedigree details of that animal. Alternatively contact the Charolais office on 02476 697222.

Performance Information

To View EBVs (estimated breeding values) and performance data visit the Society's website www.charolais.co.uk and click on the "On-Line Database" button. Select "EBV Enquiry" and enter the name or tag number of the animal you wish to search for. Finally click "search" to view EBV/Performance details of that animal. All EBV and performance data are available from Breedplan on 01738 622478.

Society

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Charolais - The profitable option at Darnford

The Watson family have relied on Charolais bulls to breed them top quality store and finished calves for several years now – but a more recent move to Salers cross cows in their suckler herd has proved a winning combination.

“We couldn’t find another terminal sire that could match the Charolais for growth and weight gain, and put onto the Salers crosses, we get a consistent, level crop of calves that look the part and also perform well for both the store and fat markets,” explained David Watson, who farms in partnership with his father Peter and brothers Adam and James (who works in Aberdeen as a contract specialist for BP).

They have run Darnford, a Banchory-based Dunecht Estate farm for 27 years, and along with two further nearby units, they farm 850 acres, and take a further 750 acres of annual lets for cropping and grazing.

The arable side of the business stretches to 600 acres, mainly malting barley, with the rest home-grown feed for their sizeable beef enterprise of 400 suckler cows.

Nowadays, 120 of those are autumn calvers, which all go to the Salers bull, with heifers kept for replacements. The remaining 280 calve in the spring to the Charolais – a hectic time of year for the family, with Adam mainly concentrating on the arable work and David busy contracting, so ease of both calving and management is a must.

“Dad is often himself at spring calving, but of the 280 calving this year, there were fewer than 10 that needed assistance – ease of calving is a big plus point with the Salers crosses and this helps increase the working life of the cow and to get her back in calf. The calves have plenty of vigour about them when



David Watson

they’re born too.

“It’s getting live numbers on the ground that’s important, and with the Charolais we know they’ll go on and do well,” said David.

“We pay particular attention to the feeding of the cows prior to calving, as it’s essential that they’re in the right condition for calving – we don’t want them over-fat. Keeping them outside as long as possible helps keep them fitter – we don’t bring the spring-calvers in until the end of January, for an end of February start,” he added.

With the Charolais/Salers blend producing a particularly uniform crop of calves, the Watsons have found that they can now select bulls to suit their type of cows.



A “Battery” of Charolais bulls used as terminal sires

“We normally need around seven Charolais bulls at a time, which we buy at Stirling, Thainstone, or privately. Buying bulls is a big cost to the business, but we’re certainly more willing now to pay a bit more to get the right bull – it makes a big difference and it does pay off in the long-run with the calves.

“We’re not scared of bulls with shape now either, as we know that the Salers can cope with that,” added David.

A recent purchase was the Mortimers Echo son, Westcarse Highlight, bought for 8000gns at Stirling in February.

“I’d say I definitely pay more attention to the bloodlines of the bulls now than I used to. We bought a bull recently that was a half brother to one that had done really well for us – so hopefully that family line will do the same again for us.

“A main issue for us is feet – we really need them to be good in that department. But with bulls being increasingly fed harder this can be a problem.

“If we can, we prefer to buy bulls in October and let them get settled in and their feet hardened off before we use them. We also keep them outside as much as possible, to maintain fitness and hopefully minimise feet problems.”

All the bulls receive boluses and have their feed supplemented with Harbro Bull Fertility, to help maintain fertility and hoof health. They also have their feet checked and trimmed if required, three months prior to them working.

The same theory is used with the cows – after the spring-born calves are weaned in October, the cows are condition scored, with the leaner ones given some extra feeding and the rest put back outside.

Although they will alter the store/fat ratio depending on the market, generally around 70 calves are sold store through Thainstone, at 10-11 months old, while the remainder are finished and sold direct to McIntosh Donald from 18 months onwards.

“For fattening the calves, we buy in some straights – pot ale, invercrombies and sugar beet pulp, but the rest is all home-grown. We make up our own TMR ration – investing in a mixer wagon has allowed us much better control over feeding,” explained David.

“We don’t feel we have to feed Charolais any more than we would other breeds, yet they perform so much better, and for the store market, we’ve found it’s Charolais calves that people want,” he added.

Recent sale lines certainly confirm that, with the first batch of 35 store calves with an average weight of 455kg, selling



Spring born Charolais/Salers calves

earlier this year to a top of £1390, and levelling out at £1202. Meanwhile, finished calves sold through McIntosh Donald late last year levelled at £1472 with an average deadweight of 350kg and mainly U grades.

Keeping on top of herd health is paramount and by breeding their own replacements, the Watsons are able to do that as best they can. Cows are all vaccinated with Rotovect and against BVD and Lepto before going to the bull, and they test for Johne’s every two years.

Always aiming to improve efficiency and margins, the Watsons feel they have found the best system for their beef business, and with just the family plus two part-time staff, it’s one that they are able to manage fairly easily.

“We feel we’ve found an ideal combination for our system which causes us few problems at calving time, whilst not losing out on returns in the long term,” added David.



Beef Farmer proves value of using EBVs

Latest figures from Farmers Weekly's Beef Focus Farm show estimated breeding values (EBVs) really do work. Jeremy Hunt reports

EBLEX statistics show suckled calf producers are still losing money, with the top third of lowland producers losing about £60 a head while average producers have negative margins of £236.72 a head.

However, it is something that doesn't have to be the case as *Farmers Weekly's* beef focus farmer Simon Frost of Hopping Farm, Derbyshire, has found.

He says the secret to profitable beef production lies in sire selection and use of EBVs. He uses bulls which are easy calving with below average birthweights and have high growth rates and eye muscle area EBVs. These types of bulls are termed "curve benders".

EBVs work

On-going monitoring by Harper Adams University of the performance of his 130 spring-calving Limousin cross Holstein-Friesian sucklers confirms the huge influence of bull EBVs relating to calving ease, birthweight, 400-day weight, fat depth, eye muscle area and ultimately retail beef yield.

"All the latest figures from the performance being achieved at Hopping Farm confirm EBVs work," says Simon Marsh, senior lecturer and beef specialist at Harper Adams University.

Latest figures

The latest figures relate to the progeny born in 2011 of three Charolais herd sires: Littlebovey Altra (terminal sire index +48),



Simon Frost hopes to achieve the new target daily carcass gain of 1.02kg birth to slaughter with his latest team of sires.

Balthayock Clifford (+56) and Swalesmoor Duke (+57). The Charolais breed Terminal Sire index average is +31.

Duke-sired calves achieved the highest weaning weight at 345kg (at 203 days) and the highest daily gain from birth to weaning of 1.5kg. Clifford calves achieved the highest slaughter weight at 782kg as well as carcass weight at 467kg. The fastest finishing calves were by Duke at 430 days while both Clifford and Duke

FARM FACTS

- Hopping Farm - 130 spring-calving Limousin cross Holstein-Friesian cows that are put to high index Charolais bulls.
- Calves are weaned in October and intensively finished on a 16% crude protein home mix and ad-lib big bale silage.
- Home mix consists of rolled barley, oats, Hipro soya, linseed and minerals. It's initially fed at 1.5kg a day. By four weeks, the home mix is increased to 4kg, with 6kg six weeks then 8kg by week eight and remains at his level through to slaughter.
- On arrival the calves are offered top-quality first-cut grass silage, but by week eight is replaced by mature second-cut silage with higher fibre to compliment the high home-mix feed rate

Table 1. Bull calf performance by sire at Hopping Farm.

Sire	Altra	Clifford	Duke
Calf birth wt (kg)	44.2	48.4	46.5
Calving Ease1 (1-5)	1.4	2.2	1.5
Weaning wt (kg)	331	336	345
Weaning age (days)	207	198	203
DLWG (birth - wean)	1.41	1.47	1.50
Slaughter wt (kg)	766	782	760
Carcase weight (kg)	458	467	455
Conformation score2 (1-5)	4.44	4.33	4.22
Fat score2 (1-7)	3.50	3.37	3.33
Slaughter age (months)	14.5 (442 days)	14.5 (442 days)	14.1 (430 days)
DLWG birth - slaughter (kg)	1.64	1.67	1.67
DCG from birth3 (kg)	0.99	1.00	1.01

1 Calving Ease Score 1 = unassisted to 5 = caesarean

2 EUROP carcass classification: Conformation: P=1 and E=5, Fat class: 1=1 and 5H=7

3 The daily carcass gain calculation deducts 24kg for the calf birth carcass weight

The highest overall carcass conformation score of the 2011 calf crop was achieved by Altra calves with 44% E and 55% U grades, explains Mr Marsh.

“Unfortunately, there isn’t an EBV for eye muscle area and fat depth for Altra. But pedigree breeders must be encouraged to scan cattle to identify bulls whose progeny will grade well – especially heifers that can be taken to heavier weights without getting over-fat on intensive systems.”

The latest team of sires being used at Hopping Farm – Maerdy Grubby, Vexour Freddy and Balthayock Elector – have even superior EBVs to the bulls previously used and it’s hoped they will achieve the new target gain from birth to slaughter of 1.02kg. The Terminal Sire index figures for these three bulls are +85 (Grubby), +64 (Freddy) and +56 (Elector).

“The data on which we have selected these bulls is more accurate because of Breedplan so we now have bulls like Grubby who is extremely easy calving with a low calf birthweight, but has a far bigger growth rate, bigger eye muscle area and higher retail beef yield than Clifford,” says Mr Frost.

“But breeders must understand it’s essential to give accurate information about birthweight and calving ease. This data is paramount,” says Mr Frost, who also runs the Mawstone herd of pedigree Charolais.

Wherever possible the gestation length of the suckler cows at Hopping Farm is recorded. “We can work this out based on the pregnancy scanning results; we actually scan when the bulls have been in for 60 days and then again to pick up any cows that we are not 100% sure are pregnant”

“We record gestation length, the birthweight and the calving ease of all calves and we continue to work closely with John and Alan Dore (finishers of the calves) to provide data to record the all important daily carcass gain figure,” says Mr Frost.

But he believes that while there are now more commercial bull buyers taking account of EBV figures there are still many who are still buying bulls to produce “pretty” calves to sell on as stores.

“The fact the top third of suckler herds are still losing money according to EBLEX is a deeply worrying situation. But it is retrievable if there is far greater acceptance of the fact that bull selection based on EBVs really works in terms of enhanced performance of the progeny and ultimately improved profitability.

Table 2. Charolais sire EBVs and Terminal Indexes at Hopping Farm compared to the breed average.

EBVs	Altra	Clifford	Duke	Charolais Breed Avg
Calving Ease Direct (%)	+2.0	-4.5	+2.5	-1.1
Birth wt (kg)	+2.4	+3.5	+2.5	+2.7
200 day wt (kg)	+30	+35	+33	+25
400 day wt (kg)	+45	+53	+51	+42
600 day wt (kg)	+51	+65	+61	+48
Eye Muscle Area (sqcm)	N/A	+5.8	+5.6	+3.0
Fat Depth (mm)	N/A	-1.0	-0.5	-0.4
Retail Beef Yield (%)	N/A	+3.0	+2.3	+1.0
Terminal Index	+48	+56	+57	+31
TI percentile band	Top 10%	Top 1%	Top 1%	N/A

calves shared the best daily gain to slaughter of 1.67kg. The highest Daily Carcass Gain from birth was 1.10kg achieved by Duke- sired calves.

“We selected Clifford on his high figure for retail beef value. He had the highest index of any bull in the sale, with a big muscle score and negative fat score,” says Mr Frost.

“He was +0.5 for Calving Ease and we felt prepared to compromise on that to meet our need for a bull to really ramp up our performance. He has been a sensational sire in terms of the performance of his calves, but we’ve had to assist quite a few calves.

“We bought Clifford just before the changeover from Signet recording to Breedplan recording. In my opinion, Breedplan is a superior system on which breeders can base their selection.”

1kg daily carcass gain target achieved at Hopping Farm

Farmers Weekly/Harper Adams Beef Focus farmer Simon Frost has just hit one of his lifetimes targets for his suckler herd with a daily carcass gain (dkg) of his bull calves of 1.00kg from birth to slaughter. The 2011 crop of calves recorded a carcass weight of 462kg at just 440 days (14.4 months) old. This daily carcass gain calculation removes 24kg from the carcass weight to account for the calf birth carcass weight. With a kill out of 59.8% (gut full) this equates to a live slaughter weight of 773kg and a daily live weight gain of 1.66kg from birth – phenomenal performance.

The herd is independently monitored by Simon Marsh, Senior Lecturer and Beef Cattle Specialist at Harper Adams University who comments that this is the best dkg I've ever seen. The dkg on many of the herds I monitor and suckled bull performance that I analyse typically ranges from 0.70 to 0.80kg. So how does Simon Frost achieve this tremendous performance? By total focus on what we call the 'Golden Triangle' of genetics, nutrition and health.

The suckler herd at Hopping Farm is based on small to medium sized milky Limousin x Holstein-Friesian cows which are put to top 1% terminal index Charolais bulls which have been specifically selected to have positive Calving Ease Direct EBVs with very high 400 day Growth and Eye Muscle Area EBVs. These types of bulls are termed as 'curve-benders' which can be found within the Charolais as well as all other terminal sire breeds.

Simon Frost sells his calves at weaning to John and Alan Dore



Simon Frost and Simon Marsh

at Glapwell near Chesterfield and they 'really know how to manage and finish quality high genetic merit cattle' feeding a 16% CP home mix and good quality big bale silage.

The 2009, 2010 and 2011 calf crops

Steady progress has been made over the years with the finishing bulls. The 2009 bulls recorded a carcass weight of 438kg at 447 days old equating to a dkg of 0.94kg. The 2010 bulls recorded a carcass weight of 427kg at 415 days old equating to a dkg of 0.97kg and then finally the target of 1.00kg dkg was hit with the 2011 calf crop.

Table 1. Simon Frost's suckled bull calf finishing results compared to the EBLEX target.

	EBLEX	S Frost Bulls	
	Targets	2010	2011
Slaughter age (months)	14.0	13.6	14.4
Slaughter wt (kg)	590	714	773
DLWG birth - slaughter (kg)	1.28	1.62	1.66
Kill out %	59.0	59.9	59.9
Carcass weight (kg)	348	427	462
DCG from birth (kg)	0.77	0.97	1.00
% E & U grades	N/A	96	96
Concentrates (kg/bull)	1,500	1,384	1,662
Silage (kg DM/bull)	N/A	412	681
FCR (kg feed DM/kg gain)	5.3:1	4.7:1	4.9:1

The 2011 calves carcass weight of 462kg may by some commentators be considered to be too heavy for a lot of retail outlets. With the rising demand for beef these heavy weight carcasses are now seldom penalised, and, if it is penalised it may only be a 10p/kg deduction for any weight over 450kg. The 'shoe is now on the other foot' with world demand for beef increasing. Some 44% of the bulls recorded a fat class of 4L so the comment I would add is that they could easily be finished at lighter weights and still have decent fat cover.

Simon has hosted several groups of visiting farmers this last year and some commented on visually assessing the finishing bulls that there were 'too many R grades'. You will note from table 1 that only 4% graded R, the rest grading E's and U's. I suspect these comments were made by finishers with what Simon Frost would describe with 'inny-outy' cattle that are relatively weak on the

loin and shoulders in relation to the back-end. It should be remembered that conformation classification is based on assessing a carcass in three areas, the shoulders, loin and back-end. If a beast has a decent back-end appropriate for a U+ but if the loin and shoulders are weaker and graded -U then the carcass will get an overall classification of -U. Hence disappointment by some producers with carcass grading results when visually they only look at the back-ends of cattle!

The reason for the heavier carcass weights for this last batch of calves is simply attributed to them being 'slower to get going' according to Alan Dore. One thing they do not do with the bull calves on arrival after weaning is push too much home mix at them. It is all about minimising stress with the calves when they are weaned by housing them in well ventilated, well bedded straw yards with double the recommended space allowance. Top quality silage is fed ad lib and home mix is gradually built up and by 4 weeks they are on 4kg, 6kg at 6 weeks and 8kg at 8 week. The bulls start on good quality dry 11.5ME big bale grass silage but by January it is replaced with mature fibrous 2nd cut with 9.8ME which complements the high cereal feeding rate. When asked about the economics of intensive finishing Alan Dore remarks "you have to feed to the potential". The merits of intensive cereal finishing is a question frequently asked of Simon Marsh and he is reluctant to suggest diluting down the energy density of ration of high performance stock. The main option to consider is replacing some cereal with very high quality forage. Dramatically reducing cereal feed rate will reduce dcg, delay slaughter and generally increase overall finishing costs. The bulls eat on average 6.96kg of home-mix plus 2.85kg silage DM from weaning to slaughter so you can calculate with your feed prices what it costs to put on 1kg of carcass weight per day and judge for yourself if intensive finishing is economic!

Achieving 1.00kg dcg from birth to slaughter has been a long term target for Simon Frost. The next target is 1.02kg. The question I would ask is 'how high can we go'? Having got the health and nutrition 'spot on' Simon attributes the improvement in dcg from 0.94 to 1.00kg over the last 3 years to simply 'better bulls with higher indexes'. Simon has recently added to his bull stud with the purchase of Maerdy Grubby at Stirling in February. Grubby, a son of Blelack Digger who is by the renowned Balthayock Adonis, has a Calving Ease Direct of +11.8 (breed average = -0.9), a 400 day weight of +68kg (breed average = +42kg) and Eye Muscle Area of +7.8sq cm (breed average = +3.0). Grubby has a top 1% Terminal Index of +82 and is a true 'curve bender'. He will throw progeny that are very easily calved with excellent growth and since the Eye Muscle Area EBV is one of the highest within the breed will produce E and U+ grade carcasses and help Simon continue with the genetic improvement in his herd.

Heifers finishing results

The heifers being a much early maturing breed type are finished on significantly lower levels of home mix. This averages just 3.0kg per head per day of the same good quality 16% CP home-mix based on barley, oats, hi-pro soya, linseed, molasses and minerals. This year a yeast culture was fed.

Table 2. Simon Frosts 2011 born suckled heifer calf finishing results.

	S Frost Heifers
Slaughter age (months)	14.8 (450 days)
Slaughter wt (kg)	550
DLWG birth - slaughter (kg)	1.14
Kill out %	56.0
Carcass weight (kg)	308
DCG from birth (kg)	0.64
Conformation class	4% E, 60% U, 34% R, 2% O+
Fat class	38% @ 3, 58% @ 4L, 4% @ 4H
Concentrates (kg/head)	789 + 1,038kg DM silage
FCR (kg feed DM/kg gain)	6.5:1

The UK average heifer carcass weight in 2011 was 310kg @ 690 days old. Simon's heifers finished 7.8 months younger than the UK average at similar carcass weights. It is of note that 96% were finished at fat class 3 and 4L with only 4% finished at fat class 4H, with 64% at E and U grades.

It is also worthy to note that the difference in carcass weight between the bulls and heifers was a massive 154kg. At a carcass value of £3.70/kg this is worth £570 in favour of the bulls. Based on feed costs of £215/t for home-mix and £100t/DM for good quality silage, the bulls would have feed costs of £425 per head compared to the heifers £274 i.e. £151 more for the bulls. This still leaves a net margin over feed in favour of the bulls of £419! Serious consideration therefore needs to be given to the development and use of sexed male semen, especially in a synchronisation programmes. Unfortunately it is not recommended to currently use sexed semen, which is predominantly sexed for heifers, in synchronisation programmes.



Charolais X bulls

Still Ignoring EBV's I don't believe it!

**I don't need figures. I know a good bull when I see it.
I have been breeding cattle all my life and manage fine without figures.
The figures cannot be trusted**

Numerous comments are still being heard from producers about the merits of EBVs and it is now almost 20 years since they were introduced to the UK industry.

Why do we still have the grass roots resistance? Is it too macho to admit to needing to use figures to buy a bull?

I readily admit that the buyers eye is a vital part of the process but used on its own the eye can be misleading. Why is the eye demanding that bulls at breed sales are sold over conditioned and even very fat in some cases? Can the eye not select the best beast presented in plainer condition?

You may argue that it is the breeders producing the over-fit animals at sales but they are only doing this because the buyer only bids on these over-conditioned animals.

Over-conditioning at sale time is no good for the young bull and can lead to reduced fertility, defective or damaged feet and joints and a reduced working life. A good bull with good genetics is a sizeable investment so make sure one is bought that will last and contribute to the herd. If he is breeding replacements in a herd his legacy will last for many years.

As a forward thinking producer you should use EBVs in conjunction with your selection by eye. EBVs should be trusted - across most of the breeds there are large data samples being analysed and the science behind EBVs is very sound and of many years standing. Buying a bull which gives you difficult calving will cost you a lot of money. EBVs are a worldwide language, so why are we still dragging our heels? It is all too easy to knock the system and the criticism is largely unfounded.

EBVs work for you - this has been proven time and time again. Results from using high EBV bulls have been documented well in the past and the financial reward from using them has been immense.

In Northern Ireland (Greenmount College), the progeny of an elite bull (Top 1% for 400 day growth, Muscle and Beef Value) was compared to a bull with average EBVs. On average the cattle were 30kg deadweight heavier at slaughter and took 74 less days to slaughter. With current prices this is worth over £200.

Data analysed on 8400 cattle born from bulls bought through the HCC Welsh Beef Quality Improvement Programme showed the following.

From a top 10% bull on 400 day growth EBV the extra weight was 137kg to finish at 18 months. At weaning male calves were 350kg as opposed to 300kg for calves born bull with average EBVs.

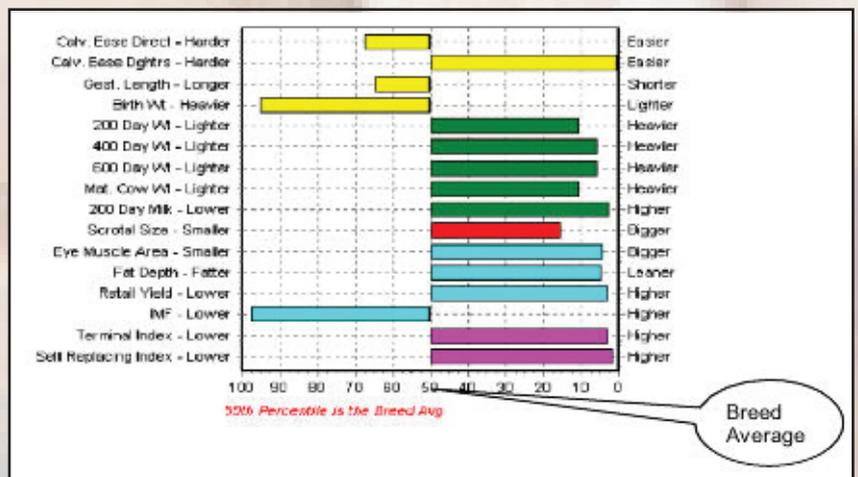
This extra weaning weight was worth a gigantic 9t extra beef over a five year bull life.

You may not believe in EBVs but you need to start using them.

THEY ARE TRIED, TESTED AND THEY WORK

And they are easy to understand. A typical display seen at a sale is in Figure 1.

Figure 1 EBV Display Board used at Sales



Data presented is compared to the breed average for the breed and you can only compare the information from within, and not between, breeds.

In essence figures to the right of average are higher (better) and figures to the left are lower (worse). It is important to remember that a bar to the left of average is not always a bad thing. For example, if you have a lean cattle it would be wise to opt for a bull with a fat EBV to the left of the centre line. This would ensure your cattle would finish economically and achieve their target weights, incurred without penalties. (N.B BCCS have already flipped the Fat Depth EBV line over lean and harder to finish. So that "fatter" is perceived to be better than "leaner".

As it is not possible, yet, to put the display in Figure 1 into sale catalogues (if it were to happen the industry would move forward quickly), the information is displayed in figure 2. This allows you to compare individual EBVs with averages but does not tell you how good is the animal (Top 25%, Top 1%, etc). You have to look at a table in the front of the catalogue to find the breed percentile figures.

Figure 2. Display of individual EBVs

In the example above the 400 day weight EBV of +56 kg has an accuracy of 92% and the breed average is +38 kg. The individual EBVs are often combined into an overall index or value (Figure 3) - in this example the bull has a terminal index of +£36. But how good are these actual EBVs/indexes - is it not much easier to use the chart (Figure 1)?

Individual EBV's														
	Calving Ease Direct (%)	Calving Ease Daughters (%)	Gestation Length (days)	Birth Wt. (kg)	200 Day Wt. (kg)	400 Day Wt. (kg)	600 Day Wt. (kg)	Co w Wt. (kg)	200 Day Milk (kg)	Scro tal Size (cm)	Eye Mus cle Area (sq cm)	Fat Dep th (mm)	Ret ail Bee f Yiel d (%)	IMF (%)
EB V	-3.5	+16.8	+1.6	+4.3	+31	+56	+64	+55	+10	+0.3	+4.9	-1.0	+2.1	-0.3
Acc	89%	87%	93%	92%	93%	92%	90%	78%	88%	85%	62%	71%	67%	52%
Breed Average EBV's														
EB V	-0.6	-0.3	+1.3	+2.5	+23	+38	+43	+42	+4	-0.2	+2.9	-0.3	+0.8	+0.1

Figure 3 Overall Index Values

The index can be Terminal (Beef Values) or Self Replacing

SELECTION INDEX VALUES		
Market Target	Index Value	Breed Average
Terminal Index	+36	+22
Self Replacing Index	+45	+26

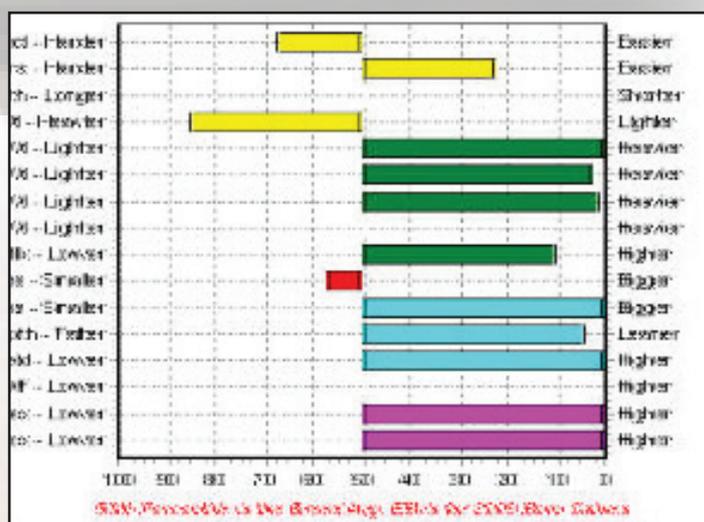
(Maternal Value). Various traits are used to construct the indices and these may differ from breed to breed. It is strongly advised to use the index as a guide but make the final selection by looking at the individual traits and selecting on the traits you think are needed to make progress in your herd.

Buying an animal should not be a rushed decision. Do not just arrive at the market/on farm knowing that you need to buy and you quickly get into buying mode with your 'eye' kicking in and all your best laid plans to study figures go out the window. When you get home you kick yourself and several months later you may kick yourself a bit more.

Get the sale catalogues in advance of the sale either from the auctioneers or off the breed society websites. On society websites you will also be able to see the colour charts for the animals by looking at the on-line database and searching for the individual animals. It is better to prepare in advance and have a short list of bulls which meet your criteria and you can then study in more depth on sale day with the eye.

I still hear of producers unwilling to buy a bull unless they have a high sale day weight or a high daily liveweight gain. Why? High weights and growth often come out of the feed bag - not a permanent effect. You want a long lasting effect of a bull in your herd - you need only rely on EBVs (backed up by your eye) - A true measure of GENETIC POTENTIAL.

Figure 4. Is this is a good Bull?



Why is Figure 4 displayed? You can see from the diagram that growth, muscle and terminal index figures are to the right of the breed average line showing this is a bull of a high genetic merit. However this bull when sold looked small and had a 400 day weight of 616kg and daily gain from birth to sale of 1.43kg/day - considered low as it represents a Charolais. And, as he was presented in 'less than fit' condition he was not sought after. But he had the genes to do the job. His structure was sound, he had good plates, muscle from withers through the loin and was very lean (no fat). So you could see potential.

And a beef farmer had him marked prior to the sale and bought him as there was little or no competition. This farmer would not have bought him if he had no EBVs.

So how has this bull gone one. You can read about it yourself as this bull belongs to Simon and Susanne Frost, Farmers Weekly/Harper Adams Beef Focus Farm and results from his farm are reported every month. (And they are independently calculated). The performance of the calves by this sire have been tremendous and extol the merits of EBVs. Converting feed to muscle efficiently and not laying down excess fat is the name of the game. We all look at daily liveweight gain as a key performance indicator but we should also add deadweight gain (carcase gain) per day. It is fair to say that the Frosts have become believers in EBVs in recent years as a tool to help to grow the income of the family farm - can we rely on Single Farm Payment for everyone?. They are now well and truly converted - what I would call Progressive Beef Farmers.

There are many examples out there of producers embracing EBVs and I hope we all start seeing that using EBVs is not an affront to our ability to select a good beast but an assured way of producing cattle effectively and profitably in the future. There is no shame in progress. We have the tools in the form of EBVs and they work. Give them a go. Or are you currently doing so but dare not admit it?

Ian Pritchard
SAC Beef Specialist

Charolais cross stores achieving £200 premium over all others

Achieving an average £200 a head premium for Charolais cross stores over all others in the marketplace combined with underlying confidence in demand for quality Scotch beef is enabling the Mill family to feel more strongly placed to manage the impact of CAP Reform on their livestock business.

They also have the critical mass, their 1,800 acre Caithness unit carries 200 suckler cows, 1,100 ewes, 250 ewe hogs, plus a 40 cow added value pedigree Charolais herd. However their future success will also be dependent on maximising the potential of all the tools in the box, says William. "Be it genetics, nutrition or husbandry, there's always potential for improvement, the real challenge is how to best exploit. As far as the suckler enterprise is concerned, then it's going to be about increasing the number of kilos produced per cow and upping the quality of each calf."

In fact it's about progressing the strategy already in place, he explains. "Continued selection for milkiness among our closed Simmental cross herd combined with the use of higher quality Charolais bulls – the best we can afford, has enabled us to increase the average weight of our 11 month old stores marketed in the last three years. We're also proud to turn out quality, shapely cattle which invariably are among the day's top 10% of average prices at Quoybrae and selling to repeat buyers, and last year they achieved an average £200 a head premium over all others. We believe that level of performance is scheduled to continue to improve with our next crop of calves having purchased in 2013 a Charolais bull within the breed's top 5% for performance, and in particular top 1% for eye muscle area EBV. He also had shape and length - the total package."

William farms Forsie, Westfield, Thurso in partnership with his father, Russell and mother, Mary. The LFA unit has been farmed by the Mill family for more than a century and gradually expanded to its current scale. Recent investments include new slatted accommodation to provide more cow space and accompanying slurry storage, together with various labour saving devices.

"For example, for the past three years we've been EID recording all the calves which makes for ease of management. We like to keep an eye on them all to see if they're performing and weigh each individually at weaning and then again up to three times before sale."

Forsie's Charolais cross calves are currently achieving the unit's target 1.2kg daily liveweight gain from birth to sale at 11 months. They're offered creep prior to weaning to maximise growth rates whilst feed conversion efficiency is at its greatest. "Last year was exceptional, we had such a flush of grass so creeping wasn't necessary." On housing in October / November



From left, Pauline and William, Mary and Russell Mill with Owen, Amy and Abby

they're introduced to a grass silage homegrown cereal mix, weaned at nine months at an average 300kg, and continued on the same diet until point of sale in April when 80% of the crop are reaching just under 400kg at 11 months of age.

It was that exceptional growth rate which attracted Russell Mill to initially invest in Charolais over 40 years ago. "We were witnessing Charolais leaving significant growth and a subsequent price differential over all native breeds in the marketplace and we decided to introduce a bull to our suckler herd. We saw an immediate benefit," he explains.

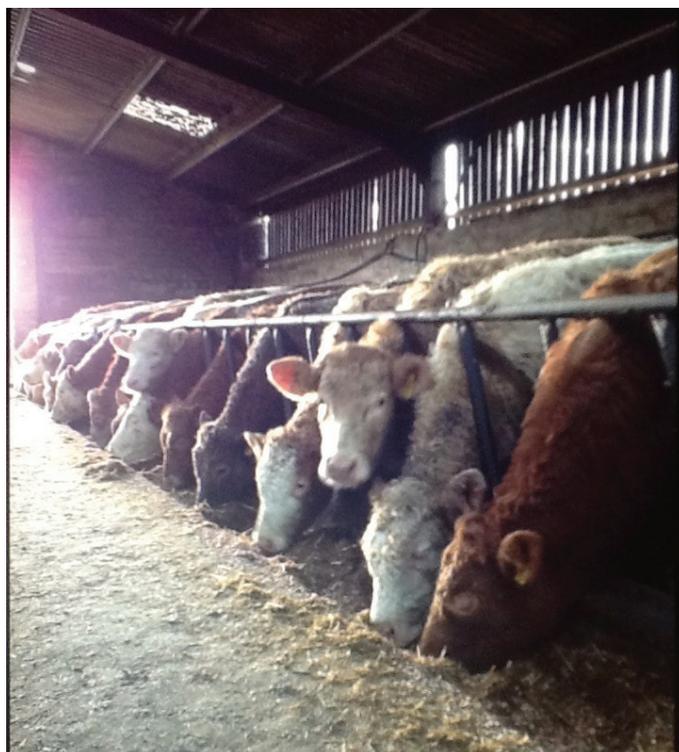
Anticipating strong demand for Charolais bulls within the region, shortly afterwards the Mills purchased foundation bloodlines to establish and develop a pedigree herd producing bulls to meet a new, growing demand from the region's commercial sector. "Over the years our selection criteria has been market led, we've focused on long, clean, stylish animals with good feet. We've always chosen new bulls bred from consistent well-bred damlines. Things have changed in the last few years since we've had Breedplan data to back up our decision making," says Russell.

"In fact half of our bull buyers are now balancing their decisions made on eye with Breedplan data – 200 day, 400 day, eye muscle area and ease of calving EBVs – they're a useful tool and nowadays we are focused on breeding higher genetic merit bulls to meet that demand. We use these homebred sires across our own herd – we would never sell a bull that we wouldn't use ourselves."

Improving the number of calves reared per year, combined with reaping the rewards of establishing and developing a Farm Health Plan during the last five years are set to help the Mill family to continue to improve overall output per cow.

“One of our biggest dreams here is for three more staff,” says Will. “However it’s simply not going to happen. We feel we’ve reached stocking capacity with the current labour units – myself, Dad who is stepping back from the day to day routine, and one employed person. It’s not going to be just a question of sustainability under the new CAP Reform regime, it’s how much is physically possible and at the same time achieving a balance family life. However one aspect which we are confident will help bolster the unit is the premiums for our Charolais cross cattle reflecting the industry’s continuing quest for quality and efficiency.”

Wintering cattle at Forsie



Charolais crosses reap enhanced finisher margins HAU student placement study

Charolais sired steers reached 400kgs target deadweight one month earlier than other Continental crosses on a specialist finishing unit and thereby achieved a £54 a head profit margin over all others, according to findings from a large scale study. Furthermore, the trends persisted among the Charolais cross heifers which consistently finished to 365kg target deadweight 12 days faster than the remainder.

Those findings concluded a 12 month placement report by Harper Adams University BSc Hons Ag student, Drew Patrick on James Burnett’s Newark based finishing unit with 6,500 head annual turnover. Of that total, approximately 40% were Charolais crosses.

The study which was designed to investigate how the unit could improve its efficiency, took in 1,000 Continental cattle bought in the store ring throughout England and Wales at an average 450kg liveweight and introduced to a TMR diet including vegetable waste, brewer’s grains, pot ale syrup, forage maize and straw. Average time to finishing was 110 days.

Drew explains: “The Charolais cross steers were ready for slaughter at an average 395kg deadweight, 27 days sooner than any of the other cattle in the shed, demonstrating that they have greater genetic potential to grow faster on the same finishing diet and within the same system, and thereby reduce the number of days to slaughter.

“The one month differential has the potential for huge impact on a large unit like the Burnett’s. In fact, if this unit swapped all its Continental cattle for Charolais crosses, then it could improve profits by over £150,000 per annum, a figure that confirms faster growth rates and accompanying feed efficiency



Drew Patrick

can reduce both variable and fixed costs. In addition, finishing Charolais crosses provides the opportunity to increase cattle turnover and subsequent cash turnover.”

Searching for sustainable Suckler strategy?

Charolais + Beef Shorthorn cross to maximise output

What does it take for a sustainable future for a suckler cow enterprise? According to SAC beef specialist Ian Pritchard, the answer lies in maximising output per unit of her body weight. That means accurately matching cow type to environmental conditions before selecting the correct terminal sire to drive profits with minimal inputs.

“Suckler keepers need to evaluate the cow type they keep and check that they are ‘pulling their weight’; there is no room for passengers,” he said.

Mr Pritchard judged the Morrisons Beef Shorthorn Suckler Herd of the Year Award 2012 and found among his finalists Iain and Sarah Malcolm, who he says were farming an exemplary herd by maximising output from their own resources complemented by huge attention to detail.

The Malcolm’s Callander, Perthshire based Beef Shorthorn cross herd achieved a minimum rearing percentage of 91%, a tight bulling period of eight weeks with 100% calving outdoors on target and 74% within the first three weeks. In addition, calves were reared to a profitable sale weight with a daily liveweight gain of 1.2kg per day from milk and grass alone, creep was introduced in the last fortnight before weaning at six months. “In a difficult year like 2012, performance had to be good – this farm, as usual, had to sell all of the calves shortly after weaning.” Steers averaged 275kg and £620, and heifers, 265kg and £580, and were within the top



Iain Malcolm

10% through Stirling and Oban markets.

Mr Malcolm together with his wife Sarah and sons, Angus and Jack, runs the 2,700 acre hill unit at Cromlix and Coilechat, incorporating a 170 cow commercial herd, the majority of which Beef Shorthorn cross Highland, with over 50% put to the Charolais terminal sire. Mr Malcolm explained: “Historically we have retained homebred Beef Shorthorn cross heifers, but recently changed policy to buying in replacements in order to introduce the best of the breed’s maternal traits that maximise



margins on the less favoured grazing. We certainly don't keep them for fun, they have to be commercial and pay their way."

The ability to efficiently convert grass thereby minimising concentrates input is crucial to a successful suckler strategy, explained Mr Pritchard: "Cows need to forage well, utilising variable quality forage, and putting condition on in the summer months to take them through the winter." The Malcolm's unit is exemplary. Mr Malcolm said: "The sucklers form a grazing rotation alongside our complementary flock of 1,000 ewes to make the most of the poorer grassland, staying on the in-by from calving until weaning in mid-September. Come November, they go back up to the hill ground. We don't grow any forage crops or feed hay, with cows outwintering on hill grazing supplemented with an average 490kg per head of bought in concentrate rolls. They come down on to in-by to calve from mid-March."

The herd's all year round foraging ability has also brought massive savings to the Malcolm's fixed costs. Machinery and equipment and subsequent depreciation costs have been minimised to one 80hp tractor, grass topper, lime spreader, direct drill, post driver and three quad bikes. Outwintering the herd means no investment in accommodation has been required.

As well as selecting Beef Shorthorn cross heifers for key maternal traits, Mr Malcolm maintains that using estimated breeding



values (EBVs) to choose high performing continental terminal sires is essential to seeing returns. "We select Charolais bulls for calving ease first and foremost, coupled with the visuals of length, height and a rangy frame to produce larger framed, shapely calves out of our compact cows that are fast growing and with unbeatable weight for age."

Maintaining herd health also features in the strategy. Outwintering helps to improve overall status and the herd is currently tested BVD and is Johne's free. Cows average eight crops of calves before they are moved on. "I'm confident that we could keep them for longer if this wasn't such an extensive unit."

OFFICIAL SOCIETY AUCTIONEER CONTACT DETAILS

Aberdeen

Aberdeen & Northern Marts Ltd Tel: 01467 623700

Ballymena

Ballymena Mart Tel: 028 2563 3470

Carlisle

Harrison & Hetherington Ltd Tel: 01228 406230

Dungannon

Dungannon Farmers Mart Tel: 028 8772 2727

Holsworthy

Kivells Ltd Tel: 01840 261261

Stirling

United Auctions Ltd Tel: 01786 473055

Welshpool

Welshpool Livestock Sales Ltd Tel: 01938 553438

Charolais crosses averaging £200 a head more than other Continental crosses

Cumbrian beef producer, Mark Bowman is focused on maximising output per suckler cow and has found that he has been able to boost annual income by over £200 a head by simply swapping terminal sires for Charolais.

“Our main objective for our cattle enterprise is to rear calves with a big carcass because there’s no disputing – weight pays, and then finish the entire crop as efficiently as possible,” Mark explains.

“We use a mix of markets – both live and dead. At present all cattle are sold liveweight through the ring at Penrith mart with buyers providing feedback on carcass data – it’s a useful exercise and helps to identify where we can make further improvements to selecting more carefully our genetics as well as management. A Charolais cross heifer made 270p per kg liveweight (£1,650) at the mart’s Easter prime show.

“We’ve tried and tested three crops of Charolais sired calves and they’ve certainly lived up to our expectations. Take the bulls, they’re finishing on average eight weeks earlier and killing out 30kg heavier than our other continental crosses, while our biggest surprise has been the heifers, in particular their quality – they’re long, clean and have good conformation and they’re reaching an average 400kg in 20 months.” The entire crop of bulls and heifers are fed an identical diet at the same rate. See table 1.

Table 1: Cringledyke finished cattle average performance

	Charolais cross		Continental cross	
	Bulls	Heifers	Bulls	Heifers
Days to slaughter	450	600	510	600
Weight (kg)	440	400	410	370

Source: Cringledyke

Those performance benefits delivered by the Charolais cross bulls are leaving Mr Bowman an additional income of more than £300 a head over the continental crosses, when taking in the current 380p per kg average market price (R4L) and 350p per day costs. In addition, the Charolais cross heifers are delivering an extra £100.

Mark Bowman farms Cringledyke, Kirkoswald, a 500 acre hill unit including 100 acres of cereals and 30 acres of roots, and carrying 115 suckler cows and followers plus 1,150 ewes. All progeny are taken through to finishing. The unit is farmed in a family partnership – Mark and his wife, Julie and parents, Maurice and Pat.

Finishing homebred bulls and heifers on home grown grain has been key to Mark’s strategy for the last 20 years, and it’s one that he continues to tweak while keeping the system as simple as possible.



Mark Bowman of Cringledyke with his Charolais sired progeny

Introducing Charolais as the herd’s terminal sire was a relatively recent decision. “We were seeking to breed and rear an animal with a big frame on which to grow muscle – we want to exploit size and weight and we decided to invest in Charolais five years ago having watched how the breed had evolved since it was originally introduced to the county more than 40 years ago. It has developed more muscle, has a favourable temperament, and we believed there was the potential to exploit hybrid vigour using him over our continental cross dairy suckler cows.

“Over 80% of the herd is scheduled to calve in spring and the remainder autumn in order to spread the workload and cash flow,” he says. “We carefully select milky cows, ones that will provide sufficient milk for their calves through to September when we introduce creep, a mix based on home grown barley.”

Weaned calves are housed in November, bulls averaging 350kg and heifers 270kg. The bulls are introduced to the finishing diet, a 14% CP barley mix. The Charolais crosses are finishing at 15 months and an average 440kgs, killing out at 58% and within the U 3,4L specification, while the heifers are overwintered on silage plus 2kg a head of barley based home mix, grazed the following summer and then rehoused and finished at an average 19 months; they kill out similar to the bulls and all grade -U or better.

He adds: “We are proud of our beef enterprise which is producing a high quality and fully traceable product, as efficiently as possible. Making just one change by introducing Charolais to the herd has certainly helped to improve our efficiencies and we’re continually fine tuning. In fact we’re working away here not just for ourselves, but we would also like to make sure the opportunities are available for our two young sons, Arthur and Jack to eventually secure a farming future.”

Backmuir - Reaping the rewards with Charolais

Farming on a large scale in the North-east of Scotland, Philip Simmers has found that using Charolais bulls across his suckler herd, suits his forage-based system perfectly. “Our calves are doing 1.6kg to 2kg per day on a silage-based diet – that is what Charolais are capable of,” he says.

In 2014, nine to 13 month old bullock calves weighing an average 448kg sold through Thainstone Mart store sales to level out at £1,180 whilst the heifers, averaging 418kg made £1,060.

“The Charolais calves are doing so well, that we’re currently making plans to finish them ourselves. We think we would only need to keep them for a few more months, and be finishing them at 16 to 17 months,” explains Philip.

In partnership with his brother Simon, the Simmers – engineers by trade – run an extensive farming business across Aberdeenshire and Morayshire. Backmuir Trading Ltd comprises 2,500 acres of cereals and a large suckler herd, with the beef operation based at Backmuir Farm, Keith.

Having tried various beef breeds over the years, they now predominately use Charolais bulls – of which they need 50 at any one time.

“With the Charolais calves, you get weight at a young age, and on the silage-based diet that we are feeding, there’s no way we would get the same return with any other breed,” explained Philip, who first began investing in land in the 1980s.

The Backmuir team now consists of two tractor men, five stockmen, plus Philip and his family and Simon and his family. The beef system includes Sim-Luings, pure Luings, Limousins and Simmentals, plus the cross cows – all of which are run separately, for management purposes. The whole herd calves in the spring, with the Charolais calves all brought back to be wintered at Backmuir, from where they’re then sold as stores at between nine and 13 months old through Thainstone Mart.

“We keep the calves in batches, so we know which calves are off which bulls, and all of our cattle are electronically tagged, so that we can keep track of them at any time. The calves are all born between March and April and weaned by the beginning of November. They don’t receive any creep feed, just grass and



Philip Simmers with his sons Andrew and Reece

milk from their mothers, then they go on to a silage-based diet with home-grown cereals,” said Philip.

Another change underway is the gradual switch to an entire Sim-Luing suckler herd. With the demand increasing for this hardy female, the Backmuir team is now running pure Luings with Simmental bulls, to breed its own replacements.

“We hope to eventually have all Sim-Luing cows, on a grass based system and going to the Charolais bull. They are big, strong cows, which calve really easily and keep their condition well, and put to the Charolais, they produce a very consistent, strong batch of calves.”

Philip is also particular about his choice of bulls, and because he needs so many at a time, if he sees one that suits him, he generally buys it. “What I look for in a bull is the same as what I want to see in the calves – shape, length and good on their feet. I often buy breeders’ type bulls to put on the suckler herd, because I’ve found that it’s worth paying extra to get the right type. That’s a really important part of our beef system, and it makes a huge difference to the calves,” he adds. Having now used Charolais bulls for around 30 years, Philip is confident that the breed has continued to improve, and finds he’s never short of choice at bull sales.



Eblex Improved Herd Awards 2014

Tweeddale herd wins Most Improved Herd Award for the Charolais Breed



Jonathan Watson with Tweeddale Charolais

The Tweeddale herd, owned by Brian Redhead and Jonathan Watson, of Berwick-upon-Tweed, Northumberland, has been recognised by EBLEX as the Most Improved Herd of Charolais cattle in England for 2014.

The award is presented by the EBLEX Beef Better Returns Programme (BRP) to the performance-recorded herd that shows the greatest genetic gain for commercial characteristics over a 12-month period. There is a separate award for each of 10 UK breeds.

Bowsden Moor, on the doorstep of the Northumberland National Park and the Scottish border, is a 600-acre livestock farm. It is home to two pedigree flocks and three pedigree herds, with a total of 300 sheep and 160 cows respectively. They provide their own winter forage and 35 acres of winter barley is grown for home use.

Third-generation farmer Jonathan Watson runs Bowsden Moor in partnership with his uncle Brian Redhead. Their focus is on producing quality pedigree livestock to suit the commercial needs of today's modern farmer, with animals that are born easily with good growth rates to promote efficient production systems.

Entering the pedigree market thirty years ago with the needs of the commercial buyer in mind, they have developed well-established pedigree flocks of Brijon Suffolks and Brijon Texels, providing around 80 shearing rams sold through Kelso each year.

The 100-strong Tweeddale Limousins herd was established in 1998 and their herd of 40 Tweeddale British Blue cows was founded seven years ago.

Establishing an easy-calving Charolais herd

Around six years ago, Jonathan and Brian started to become aware of the increasing popularity of the Charolais breed, particularly among commercial producers, whose interest was

piqued due to the breed's focus on calving ease.

Their own interest in the breed started to develop and, in 2012, satisfied that they wanted to establish their own pedigree herd, they purchased 12 cows privately; ten with calves at foot, and two in-calf females. They added another four cows later that year from the Rumsden herd, two in-calf heifers from the Holtstead herd and seven heifers from the Barrance herd to form the foundation 25 cows. They concentrated on the visual appearance of the cows, selecting females with correct breed type, a large frame, good locomotion and style.

Being well-acquainted with pedigree herd production and having listened to buyers over the years, they already believed performance recording was a useful tool to develop a herd's genetic potential. Therefore a keen focus on figures, concentrating on particular traits, was essential when it came to purchasing their bull. Their focus was on cattle with superior Estimated Breeding Values (EBVs) for calving ease and milk, combined with good 200- and 400-Day Weight EBVs. These traits help to predict a bull's genetic potential to produce calves born easily which will develop and grow quickly.

In June 2012 they purchased Blelack Blackberet, a proven six-year-old stock bull, owned by the Goldie family, who had already sold around 40 sons from him. Blelack Black Beret shows exceptional EBVs for Direct Calving Ease, being in the top one per cent of the breed, and 200, 400 and 600-Day Weight EBVs all in the top 10 per cent of the breed. At the same time, they purchased a heifer, "Goldies Gleam", her brother being a top bull on an AI stud.

Jonathan and Brian have a group of 40 recipient cows for use within their extensive flushing programmes involving each of these pedigree herds, around half of which will carry Charolais embryos.

To date they have had two crops of calves from Blackberet and recently sold their first bull sired by him, aged 13 months.



Tweeddale Ebony with 5 month old Blackberet heifer calf Tweeddale Justo

Tweeddale Invincible had a Terminal Index and Calving Ease EBV in the top 10 per cent of the breed. As is the case with Blelack Blackberet, the calving ease is coupled with good growth rates, with a 400-Day Weight EBV in the top 1 per cent of the breed. At the Carlisle society sale, Tweeddale Invincible made 7500gns. Their initial intention in establishing the Charolais herd being realised, this young bull was a small, easily-born calf himself, and demonstrated a daily liveweight gain of 2.02kg.

They have done extensive embryo work with Goldies Gleam and Lakenheath Eugenie each having ten calves on the ground, all showing great promise. Two of the Eugenie x Blackberet heifers have since been introduced into the flushing programme

Annual production system

The Tweeddale herd has three main calving blocks, providing a year-round supply of pedigree bulls from their Limousin and Charolais herds. These bulls are aged 14 to 16 months old, with around 60 per cent being sold through the Carlisle and Stirling society sales, and 40 per cent sold directly from the farm.

Their British Blues tend to calve between April and July and are sold through the main society sale in May when they are approaching two years old.

Cows are housed over winter and, for ease of management, all calving is done indoors. Calves are creep fed from four months of age and weaned at around six months old. A month after weaning, they select which animals to retain for their own replacements or to sell for breeding. Heifers are separated from bull calves and reared on a forage diet. They will be 30 months old at first calving.

While building up numbers, they have retained up to 70 per cent of the females produced. Now they can start to be more selective about which females to retain and use estimated breeding values (EBVs) to concentrate on growth traits, milk and calving figures, as well as overall index to ensure the herd is progressive. Combined with performance, females must have a large frame with good locomotion and breed type. Temperament is also important, as they want quiet, steady, unstressed animals.

All male calves remain entire, anything not making the grade will be housed on an intensive ration to finish at 13 months of age, with the aim to provide a 400kg, U or E-grade carcass.

Bull calves are housed for winter on a growing ration. Those destined for October or February sales will be turned out to grass in April and brought back in for a couple of months in advance of sale.

“Blelack Blackberet is working tremendously well and we are really pleased with his progeny to date,” said Jonathan.

“Buying a proven bull with exceptional breeding values for calving and growth traits is boosting overall index figures in our progeny. He has certainly contributed to achieving this early award from EBLEX, but there is still plenty of work to do!

“Blackberet has a good breed character; his calves are born small with no muscle, but they grow like mushrooms and pile on the muscle!”

Bulls selected for artificial insemination or flushing programmes are chosen to compliment Blackberet. They focus on increasing eye muscle in the herd by choosing sires within the top one per cent for the breed, while retaining the easy calving trait. These daughters are to be bred back to Blackberet.

Marketing their stock

The Tweeddale herd frequently attends the Royal Highland, Great Yorkshire and Royal Welsh shows, as well as the Livestock Event at Birmingham.

“Selling pedigree cattle is the main part of our business and the main reason for showing is to provide a shop window from which to advertise our stock,” said Jonathan.

They aim to sell 20 Charolais bulls a year; the embryo work allows them to concentrate on their top breeding cows to produce as many calves from them as possible each year.

The majority of Tweeddale Charolais are sold to the commercial market, with a great emphasis put on EBVs and index through the sales. The society is fully behind performance recording and all bulls sold through their sales are now presented with their ultrasound scanning information and at least two weights alongside them.

Jonathan and Brian have a good reputation and the Tweeddale, Brijon and Bowsden Moor prefixes are well-known to other pedigree and commercial producers. Together they look forward to taking their Charolais herd forward and watching it develop over the forthcoming years.



Ubecca with 2 month old Blackberet heifer calf Tweeddale Jayde



MacG
April '14

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