Norwegian Red crossbred – an Irish solution?

Is the Norwegian Red crossbred an Irish solution to some of the perceived weaknesses of the Jersey crossbred? Some Irish farmers think you get all the fertility benefits and have a male calf and cull cow you can sell. **Jack Kennedy** reports

For those looking to scale up numbers and expect cows to walk long distances, then the 4 x 4 cow that we discussed last week is an absolute necessity. She must hold good body condition score, go back in calf quickly every year, produce good milk solids and be prepared to get very little individual attention. The Norwegian Red crossbred is an option for farmers who want this type of cow.

In 2004, Frank Buckley and the Moorepark team initiated a study to compare Norwegian Red purebreds and crossbreds beside Friesian comrades in Irish herds.

Moorepark imported 400 Norwegian Red calves and sold them to commercial farmers. This means that the oldest Norwegian crossbred cows, which were on trial, have just started their fourth lactation this year.

This week, we review third lactation performance. Overall trial results look very good. Let's be clear — this is strong research data. The results include all culling and fertility performance from 46 commercial farms. That's a large number of farms and management systems. Information from over 300 Norwegian Red crossbred cows is included in the study and third lactation results are presented below.

Let's look at the results. *Figure 1* shows the milk performance. Yes, they are milk recording 305-day figures. What does it say? It tells us the crossbred can produce over 450kg of milk solids in commercial spring calving herds. On average last year, these farms probably fed between 500kg and 600kg of meal. Initially, some farmers were concerned that protein yield was too low but Frank said, like any breed, there are low protein sires and high protein sires. You must select the high protein sires within the breed.

Figure 2 shows the fertility performance. There are only small differences in some of the fertility traits. Remember, this data relates to the third lactation animals only. While small, they are quite significant. Look at pregnancy to first service for all the commercial farms:

- 48% for the Holstein Friesian to 61% with the crossbred;
- Six-week in calf rate: again, 60% for the Holstein versus 71% for the crossbred. These are significant differences which show the good fertility traits of the Norwegian breed as well as some hybrid vigour from crossing.

The calving to conception figure is interesting. It looks like there is not much difference — 87 days for the Holstein and 84 for the Norwegian. However, Frank informs me that the Holsteins have slipped almost two weeks in calving date over the duration of the trial, so while calving to conception might not look much different (only three days for third lactation results), a small number of days each year can quickly turn into a two-week difference.

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ABOVE: A typical looking Norwegian Red crossbred third calver on Coughlan's farm last week.

RIGHT: A purebred Norwegian Red yearling bull on Shane Fitzgerald's farm last week.

HOLSTEIN FRIESIAN	PURE NORWEGIAN RED	NORWEGIAN RED CROSSBRED
Milk solids: 492kg/cow	Milk solids: 470kg/cow	Milk solids: 488kg/cow
Milk: 6,536kg	Milk: 6,248kg	Milk: 6,486kg
Protein: 3.55%	Protein: 3.545%	Protein: 3.55%
Fat: 4.03%	Fat: 4.01%	Fat: 4.01%
SCC: 226	SCC: 207	SCC: 218

Figure 1: Milk production results for third lactation trial animals

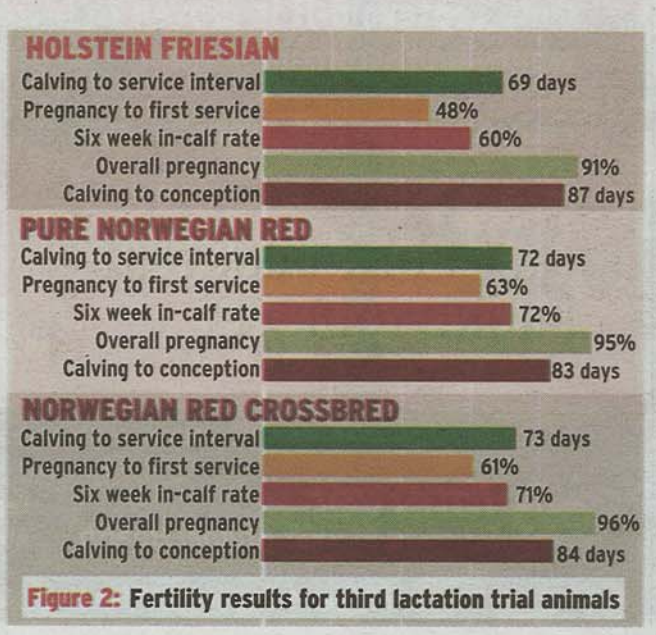
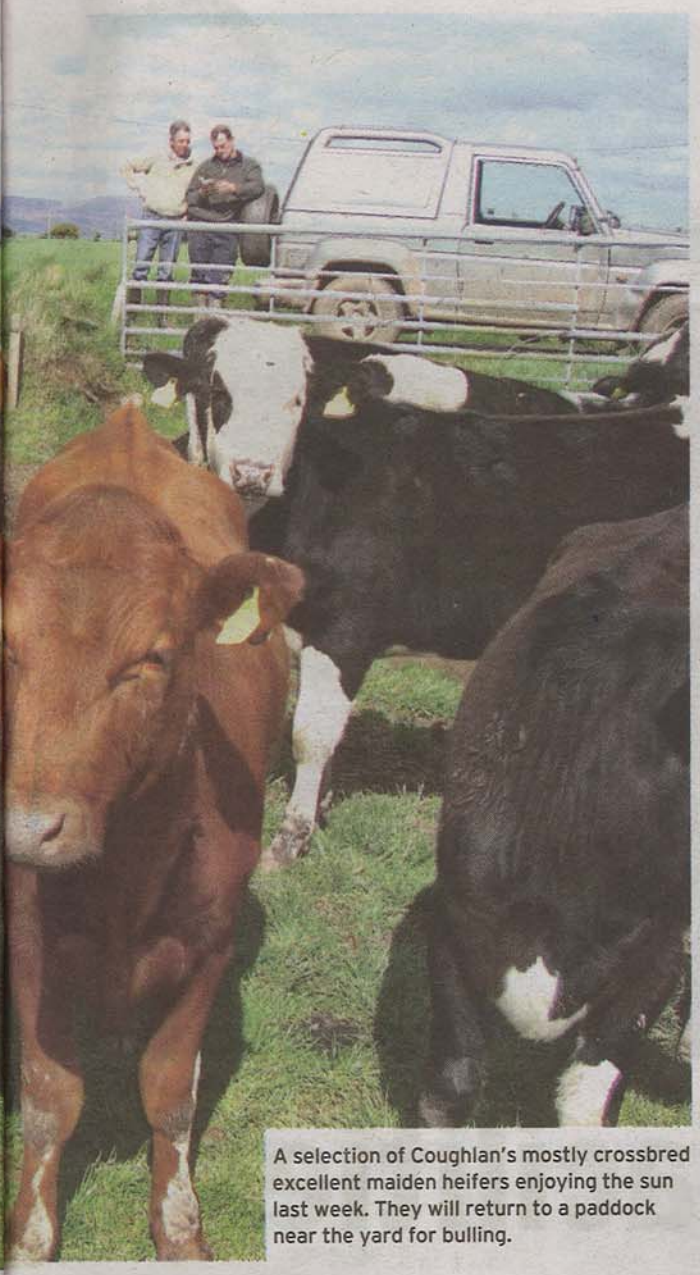


Figure 2: Fertility results for third lactation trial animals

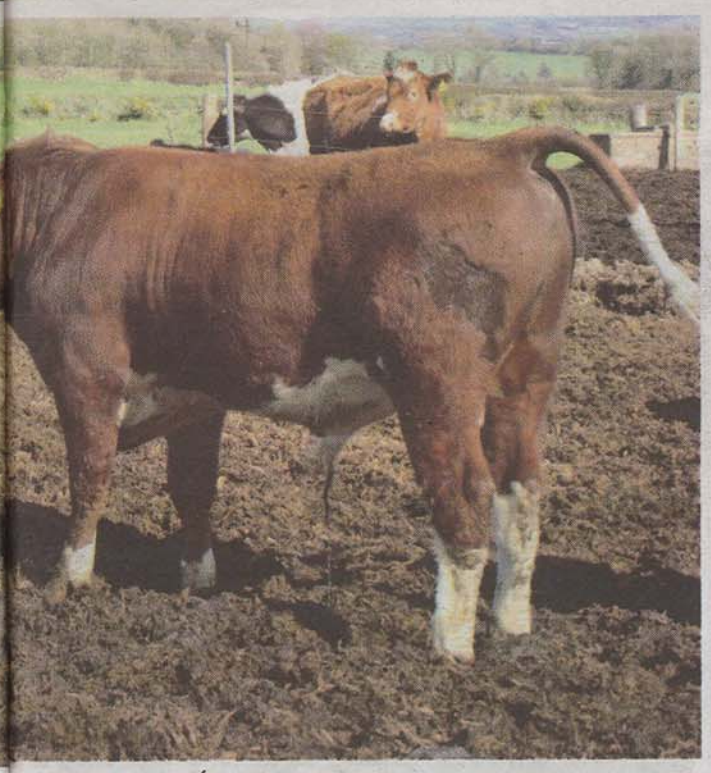
KEY POINTS

- Frank Buckley (*pictured right*) said there are five Norwegian Red bulls available this year in Ireland. All from NCBC, they are SJU, AKM, and NZT – which are suitable for use on maiden heifers and good on fertility protein and SCC. Then you have FJD and RTA for use on cows only. RTA is the number one bull in Norway and improves fertility, yield and SCC.

Farmer reaction to the breed



A selection of Coughlan's mostly crossbred excellent maiden heifers enjoying the sun last week. They will return to a paddock near the yard for bulling.



EAMON COUGHLAN

I went on farm last week to visit some of the farmers, who started in the Moorepark trial almost five years ago, to gather their thoughts on the breed. Eamon Coughlan (*pictured below*) farms near Glanworth in north Cork. This family farm is milking 160 cows in a seasonal compact spring calving system. Last year, Eamon fed 350kg of meal/cow and cows go to grass as they calve.

For years, Eamon and his father would have used the Munster AI 'Bull of the Day' semen to breed replacements for the herd. Herd average production delivered last year was 1,250 gallons (5,500kg) at 3.92% fat and 3.44% protein. Herd EBI is now €75 (milk 15/fertility 49).

Out of 145 cows and heifers calved down this year, Eamon has 68 heifer calves on the ground. That's not a bad performance and close to the 50% target heifer calves that we talked about two weeks ago.

Cows are inseminated for nine weeks and maiden heifers get one chance at AI and then the stock bull is released. This year, Eamon has a young Norwegian Red clean-up bull. The same bull will run with the herd once the nine weeks of AI are completed. Eamon rears all bull calves on the farm and finishes steers every year at less than two years of age. He is milk recording, using the A8 milk recording scheme, so the herd is milk recorded four times during lactation.

In 2004, Eamon used Norwegian Red straws on some of his Holstein cows so that when the purebred Norwegian calves arrived in 2005, the different breeds would be reared and compared beside each other.

In 2005, he had eight purebred Norwegian Red heifer calves dropped in the yard. The trial had begun. He was now able to compare Norwegian Red crossbreds with Holstein Friesians and purebred Norwegian Red cattle. In 2008, these animals completed their third lactation. Seven of the eight original crossbred cows are still in the herd.

It's fair to say that, in general, Eamon is not overly enthusiastic about the purebred Norwegian Red. However, he is a fan of the crossbred and, this year, will use Norwegian Red semen on the 100 odd Holstein Friesian cows that he has in the herd. The two Norwegian bulls he has picked out for this year are SJU and NZT. He has 75 other crossbred breeding animals to serve and he will use some of the high EBI black and white genomic bulls on these cows and heifers.

What does he think of the crossbred? "I would have no bother recommending the Norwegian Red crossbred cow. I am using the semen myself, which is the acid test on heifers and cows. I feel the crossbred has a smaller frame, carries more condition, requires little or no maintenance and performs well in fertility. The milk solids are every bit as good as my Friesians. The Norwegian Red fits better with my system as I am keeping all male progeny to beef."

Eamon pulled out the milk records for the third lactation Norwegian Red cows for 2008. For 305-day yields, they averaged 6,334kg at 4.26%fat and 3.48% protein or 490kg of milk solids. This was produced on grass from calving and 350kg of meal. The similar Friesian bred animals (mostly GMI sired) averaged 6,466kg at 4.10% fat and 3.36% protein (482kg of milk solids).

Eamon Coughlan with one of the third lactation Norwegian Red crossbreds standing behind him.

SHANE FITZGERALD

Shane Fitzgerald is farming near Conna, not far from Fermoy, Co Cork. Shane has been involved with Moorepark on the Norwegian Red study since the beginning of the trial. Shane's background in herd breeding is coming from a Holstein cow.

However, for a number of years, he has been using a good bit of New Zealand Friesian and Jersey semen around the same time as the EBI Index was getting off the ground. Herd EBI now is €98 (milk 40/fertility 55).

He was not keen on introducing another breed into the mix when first approached by Frank Buckley. It even took a good bit of persuasion from Frank to keep Shane's herd in the trial. Now, three years later and Shane believes that high fertility Norwegian Red semen is an option for Irish farmers.

Shane said: "I have hardly had to touch a Norwegian Red crossbred for cell count or lameness and if I was an Irish farmer looking to improve fertility, I would have no qualms about using good Norwegian Red bulls to cross on a Holstein cow. If you are in the business of selling, it also provides a cow that is more suitable for a lot of customers than the Jersey crossbred, who not everyone is in love with just yet. "

I asked Shane whether the Norwegian Red was an option for an Irish farmer, struggling with fertility, who was looking for a robust, high fertile cow to produce good solids.

Shane said: "I wouldn't think twice about it; yes, I would use Norwegian semen. They are a different cow to the Jersey crossbred, which I also like, because they are heavier, stockier animals but they hold condition well as they are smaller framed than the Holstein."

Shane had also pulled out the milk records for the third lactation Norwegian Red crossbred cows in 2008. For 305-day yields, they averaged 5,730kg at 4.06% fat and 3.55% protein (440kg milk solids). Similar Friesian comrades averaged higher in volume at 6,927kg at 3.94% fat and 3.58% protein (520kg of milk solids).

Performance review

The Norwegian Red study started in 2004. Over 400 calves were imported from Norway and bought by Irish farmers. The intention was to set up a study to test purebred Norwegian Red cattle side by side with Irish Holstein Friesians and crossbred Norwegian Red cattle. The trials were carried out on 46 commercial farms, mainly in Cork and Tipperary. Moorepark researchers gathered information each year from the performance of these animals. Today, some of the farmers on the study continue to use Norwegian Red semen as they were pleased with the Norwegian Red crossbreds in particular.

RIGHT: The purebred Norwegian Red calves arriving into Ireland in late 2004.

Shane Fitzgerald with the herd last week.