Peter Doyle identifies the plant's growing point to Irvine Allen and Fergal Maguire.

# It's all about forage

## Background

### The farmer

**Irvine Allen** farms a calf-to-beef system just outside Moate, Co Westmeath. The farm consists of 53 ha of grassland in total, which is divided into three main blocks. The land is a mixture of good free draining soil and high organic matter soils.

Approximately 120 Holstein-Friesian male calves are purchased at three weeks of age. The aim is to have as many of the cattle finished by 24 months of age as steers. The lightest 10% of the cattle are finished at grass as under-30 month steers.

Since Irvine joined the DairyBeef 500 programme the main objective has been to reduce the age of slaughter without increasing the level of concentrate input.

"Incorporating red clover into a proportion of my silage ground and white clover into the grazing ground has been a key step to help improve animal performance without increasing spending on fertiliser or meal," says Irvine.

### The researcher

**Peter Doyle** is a research officer on the Derrypatrick herd in Teagasc Grange. He, along with the Walsh Scholar Peter Bennett, and the technician and farm staff team in Grange, is comparing grass-clover vs. grass-only systems on the lifetime animal performance, Greenhouse Gas emissions and nitrogen use efficiency of suckler beef cattle.

In 2023, they found that yearling bullocks and heifers grazing grass white clover swards over the second grazing season had a 24 kg higher live-weight gain than cattle grazing grass-only swards.

This resulted in a 14 kg greater carcass gain at the end of the grazing season. There was also a reduction in fertiliser nitrogen applied.


Teagasc advisor **Fergal Maguire** reports on a meeting he had with Westmeath farmer Irvine Allen and Teagasc forage researcher Peter Doyle

At the start of the conservation Irvine explained that it was a visit to the Teagasc Grange Research Centre in 2022 with the DairyBeef 500 group that piqued his interest in red clover silage.

On the day he was impressed by the ability of the red clover silage to receive no nitrogen application, how the animals performed on the silage and that it seemed to be a lot more persistent than he originally thought.

Peter explained to Irvine that: "The red clover field in Grange in 2022 has performed well since. It is yielding slightly higher than the grass-only field receiving over 200 units of nitrogen and looks as good as ever today, with the exception of the headland where the clover has died due to compaction under traffic.

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(Left to right) Peter Doyle, Irvine Allen and Fergal Maguire.

"Cattle are performing well on the red clover silage with one of researcher Nicky Byrne's trials showing that dairy bred weanlings on red clover silage plus 1 kg of concentrate/day gained 9 kg (or 0.12kg/day) more than the weanlings on 75 DMD ryegrass-only silage and a kg of meal over the winter."

Irvine made the point that this was his first year feeding red clover silage and he felt that the weanlings performed well on it, however, he was feeding 4 kg of beet and 1 kg of concentrates with it.

When Peter was asked what he thought of the weanlings' diet he said that he felt that Irvine could cut back by half a kg on the amount of concentrates, as the animals would otherwise lose out on compensatory growth when turned out.

When we went out to look at the red clover silage sward on the farm, the first thing Peter said was that this was an ideal field for red clover. It is square in shape and dry, even after all the rain that it received in the spring.

Irvine explained his decision on why he chose this field: "The field is 6.8 hectares, it's very free draining and it's an awkward field to graze, as it's down the road from the farmyard but still close enough to get an application of slurry after every cut of silage."

Peter was happy to see that Irvine was applying no fertiliser nitrogen on the crop, but remained adamant that it was important to feed it with Phosphorus and Potassium either through slurry or a compound fertiliser like 0-7-30.

"The quickest way to reduce the lifespan of a red clover plant is to starve it of P and K," said Peter.

Since sowing last May, this field has yielded 11 bales to the acre (26/ha) over two cuts and it got a grazing in October and another grazing this spring. While there was some poaching visible, Peter was of the opinion that there was very little damage done to the red clover.

He showed Irvine where the growing point on the red clover was. He explained that it was important not to damage it. Peter added that red clover will tolerate a bit of grazing, but it should be still used as a silage crop for the majority of the season.

## Red clover sward

Irvine outlined his plans for the red clover sward for the coming year: "The field will get slurry using the umbilical system by April 20th, with the aim of getting a cut of silage by May 20th. It will then receive another 3,000 gallons of slurry after first cut with another cut of silage taken seven weeks later in mid-July.

The third and final cut will be taken in early Sept and it will receive approximately 2,000 gallons of slurry at this stage. If weather conditions allow, the field will be grazed in mid-October with light weanlings.

Peter felt that this would be similar to what will be implemented on the red clover silage in Teagasc Grange. Irvine said he was thinking of rolling the silage field after the poaching that occurred in the spring.

The final consensus was that rolling may damage the growing point on the advanced (tall) plant, so it would be better to leave the rolling until we know more about how this practice will affect the longevity of the sward.

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### What will be on show at the Teagasc Grange open day regarding silage and grazing?

Key items in the Forage Village will include:

- The management of red clover silage and the performance of cattle on it.
- How to incorporate white clover onto farms through over sowing or reseeding.
- Outline cattle performance data on multi-species vs. grass-clover vs. grass-only swards.
- Permanent fencing demonstrations.
- Grazing demos.
- Pasturebase demos on calibrating slurry and fertiliser spreaders.
- Water quality demonstrations.
- Silage quality demonstrations.