

A role for alternative forages?

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HIGH levels of lamb growth post weaning can be achieved from grazed grass alone. However, many commercial producers are unable to finish lambs without concentrate supplementation. Studies at Athenry have shown that concentrate supplementation at pasture increases lamb performance but is not economically justified for lambs that are marketed after the end of June.

In recent years there has been interest by producers of mid-season prime lamb in growing alternative forages, particularly tyfon, when reseeding pasture for lambs post weaning. A recently completed study at Athenry evaluated the effects of reseeding and use of tyfon and chicory on the performance of weaned lambs.

Grazing study

A grazing study compared tyfon and chicory grazed either as pure stands or in combination with perennial ryegrass. The performance of lambs grazing old permanent pasture was evaluated also to determine the benefits from reseeding. Paddocks were ploughed and seeded on 29 May to give the following treatments:

- Perennial ryegrass (PRG)
- Chicory plus PRG
- Tyfon plus PRG
- Chicory
- Tyfon

The perennial ryegrass mixture was based on intermediate heading varieties and is presented in *Table 1*. The old permanent pasture had been grazed by ewes for the last 10 years, and had been used recently for extended grazing. The old permanent pasture sward was made up of Meadowgrass 39%, Perennial ryegrass 27%, Cocksfoot 11%, Clover 8.5%, Timothy 7.5% and weed species 7.0%. Weaned lambs grazed the experi-



Dr Tim Keady studies a crop of chicory.

mental treatments from 7 July until being drafted for slaughter. Lambs were drafted every three weeks. The effects of grazing treatment on lamb performance are presented in *Table 2*. High levels of lamb performance were achieved; the average daily liveweight gain being 217g/day. Relative to the new perennial ryegrass sward, including chicory in the seed mixture reduced daily liveweight gain by 36g/day but increased kill-out percentage by 1.2 units. Includ-

ing tyfon in the seed mixture had no beneficial effect on lamb performance. Grazing pure stands of either tyfon or chicory did not increase animal performance compared with lambs grazing the new reseeded pasture or the old permanent pasture. Lambs grazing the old permanent pasture produced the same daily liveweight gain as the lambs on the other treatments.

The distribution of herbage yield during the grazing season was influenced by the reseeding treatment. For example, the new perennial ryegrass sward and the swards which included perennial ryegrass with either chicory or tyfon produced the same total dry matter yield during the grazing season. However, the swards containing tyfon produced higher yields during the first rotation but lower herbage yields during the subsequent rotations relative to those containing perennial ryegrass alone or in combination with chicory.

The effect of sward type on lamb grazing days has a major impact on stock carrying capacity, and on liveweight gain per hectare (*Table 3*). In the reseeded pastures, relative to perennial ryegrass, including either chicory or tyfon in the seed mixture did not increase lamb liveweight gain per hectare. Use of chicory as a pure stand resulted in the same lamb performance as perennial ryegrass (*Table 2*). Liveweight gain per hectare was reduced by 42% due to much reduced stock carrying capacity.

Table 1 | Grass seed mixture, Athenry

Variety	Seeding rate (kg/ha)
Grass - Aberdart	2.5
- Aberstar	9.9
- Greengold	7.4
- Dunluce	7.4
Clover - Chieftain	1.2
- Crusader	1.2

IN SHORT | the problem

- High level of lamb performance was achieved in the study.
- Old permanent pasture sustained the same level of lamb performance as reseeded pasture.
- Including tyfon in the reseed had no beneficial effect on lamb performance.
- While including chicory in the reseed reduced daily liveweight gain, kill-out percentage was improved.
- On sheep farms the reseeding date should be based on herbage demand, which is lowest from July onwards when lambs are weaned and winter forage requirements have been conserved.

Table 2: Effect of sward type on lamb performance

	Sward type					
	Perennial ryegrass (PRG)	Tyfon + PRG	Tyfon only	Chicory + PRG	Chicory only	Old Permanent pasture
Liveweight gain(g/d)	226	220	213	190	226	219
Kill-out (%)	42.1	42.6	42.9	43.2	43.4	42.1

Table 3: Effect of sward type on lamb output per hectare (relative to PRG)

	Sward type				
	Perennial ryegrass (PRG)	Tyfon + PRG	Tyfon only	Chicory + PRG	Chicory only
Lamb grazing days	100	94	92	99	56
Liveweight gain (kg/ha)	100	90	87	93	58