

Ballyhaise Experimental Update:

Futureproofing grazing dairy systems

- Dairy farms under financial pressure: rising costs & lower margin
- Requirement to reduce chemical N
- High productivity pastures critical - >80% of feed required
- White clover is essential but not investigated in BMW region
- Reseeding new swards is expensive (€750 >>>>1,150/ha)

Whole farm systems trial (2021-2025)

- Spring calving herd
- WF SR of 2.5 cows/ha
- MP SR 2.7 cows/ha
- 81% optimum soil fertility

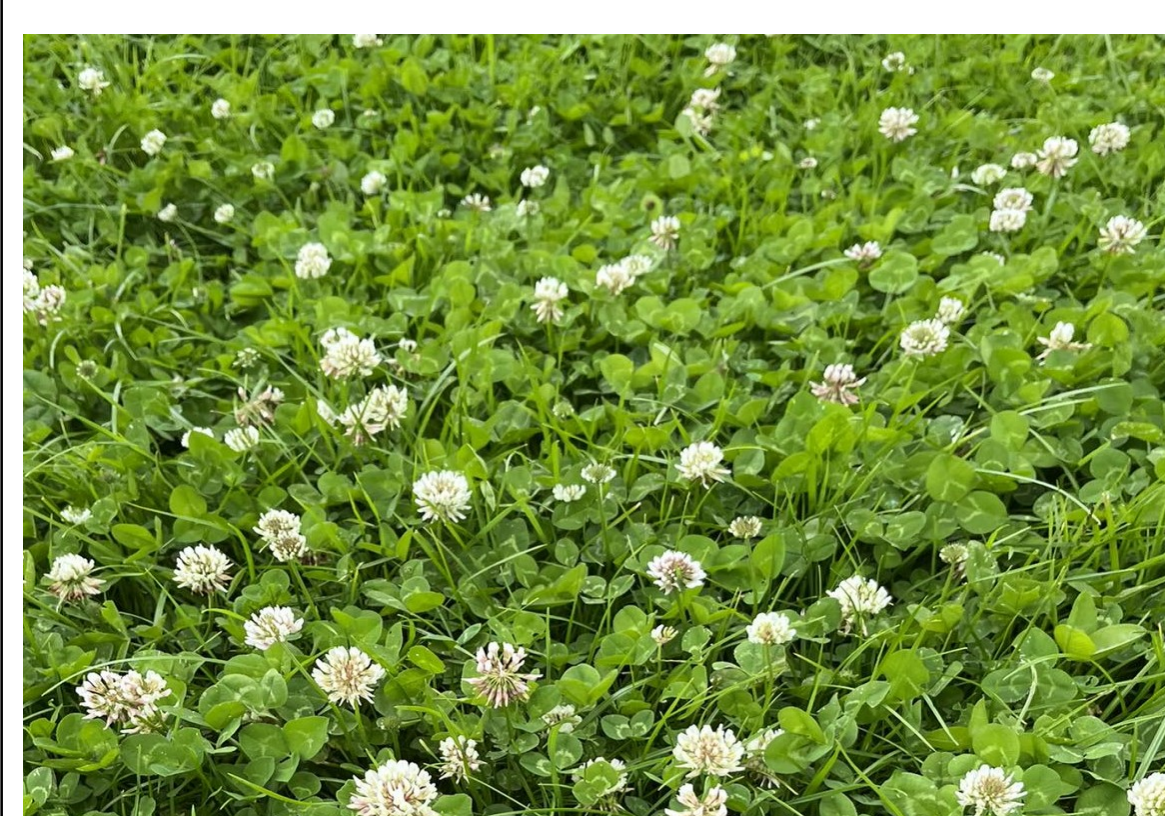
% area sward renewal

	PR-new	WC-new	WC-over
2021	30	30	20
2022	50	50	40
2023	80	80	20

PRG



PRG + WC



Chemical N applied

225 kg N/ha



125 kg N/ha

Methods of establishment

Reseeding

- 3 high PPI grasses + 2 kg/ac WC
- Grazed at 1200 kg DM/ha to 4cm
- Sufficient WC = 0 kg chemical N

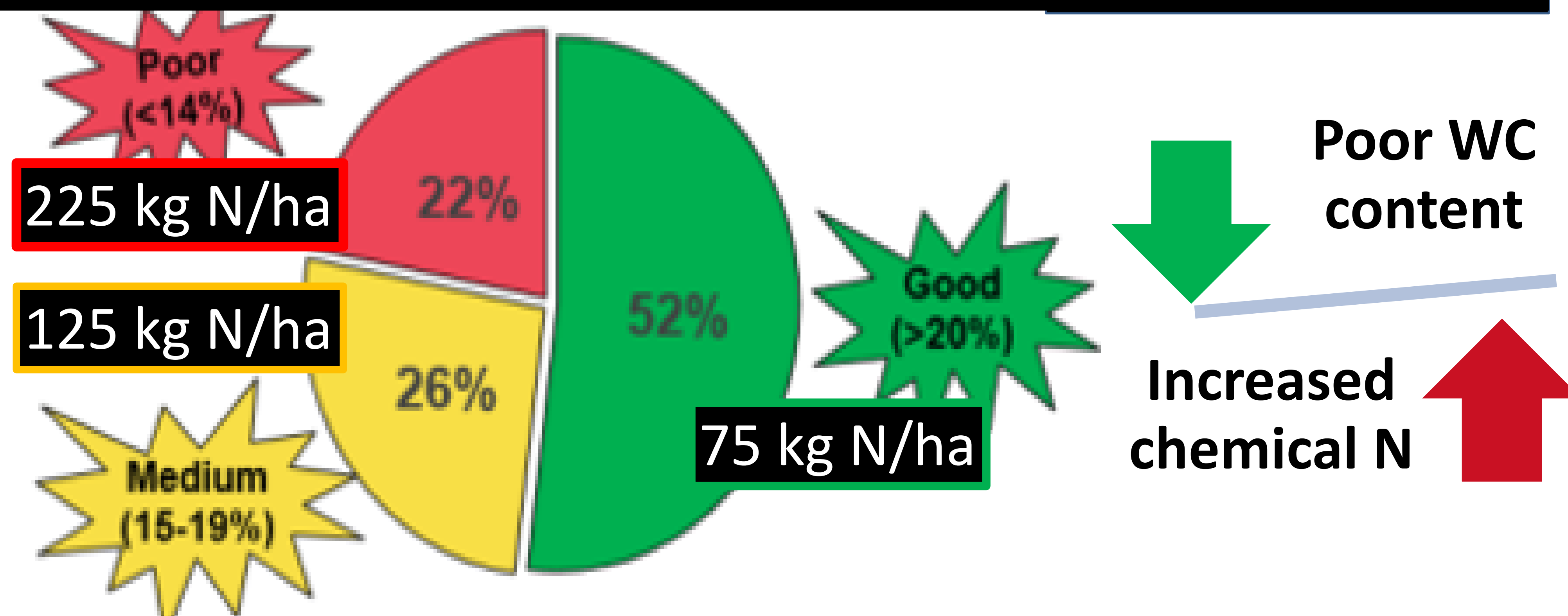


Oversowing

- Einboc + 2.5 kg/ac WC
- Grazed at 800 kg DM/ha to 4cm
- Sufficient WC = 0 kg chemical N

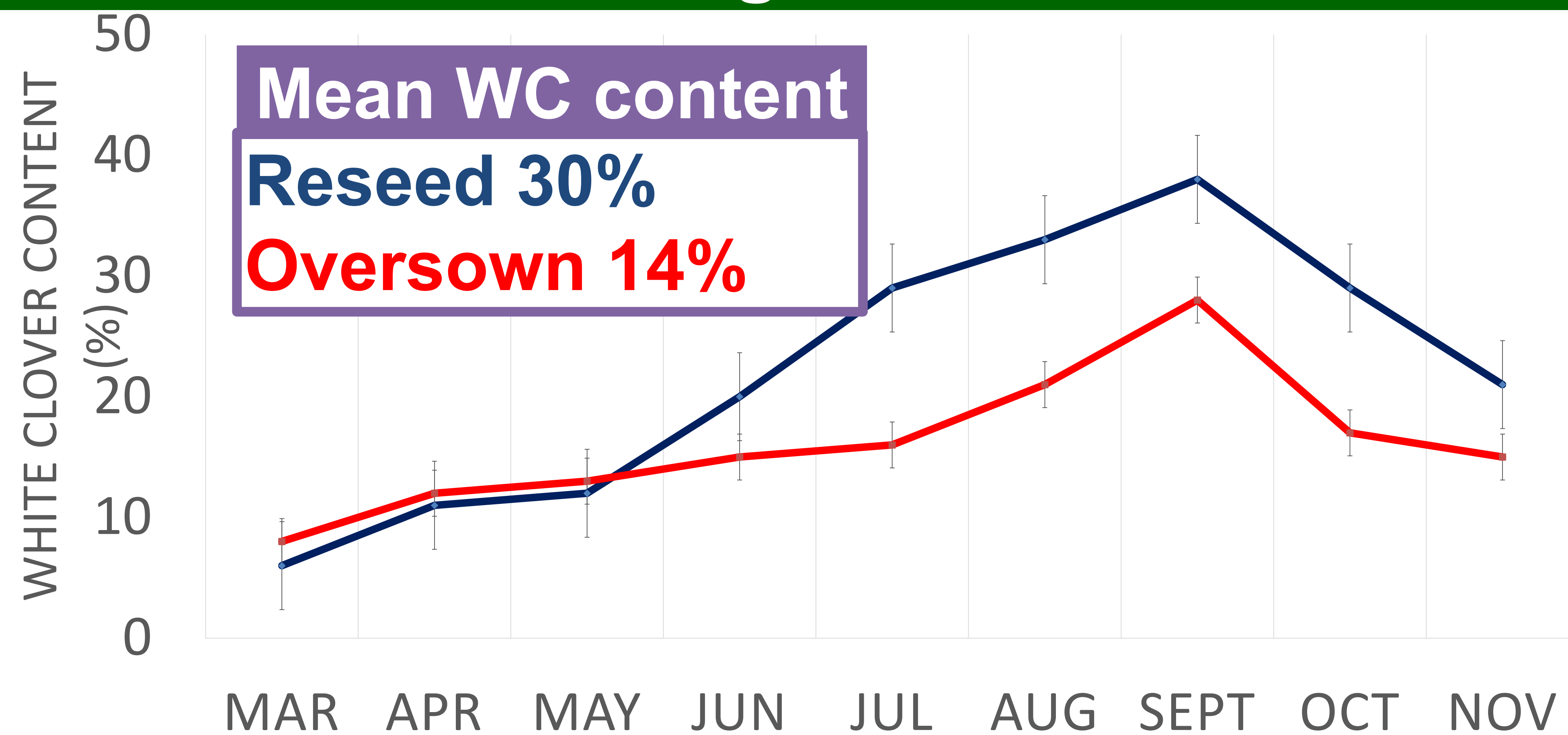


Good clover establishment < N application



Clover-based dairy systems in BMW

Clover contents higher in reseeded swards



Farm system performance 2021-2023

Sward system	PR	PRWC
Milk yield (litres/cow)	5,092	5,197
Fat plus protein yield (kg/cow)	461	473
Pasture growth (t DM/ha)	12.9	11.9
Chemical N applied (kg N/ha)	205	107
Concentrate fed (kg DM/cow)	840	848
Silage fed (kg DM/cow)	1,677	1,626
Winter feed self-sufficiency (%)	55	56

Pasture performance & Chemical N applications

	PR-old	PR-new	WC-new	WC-over
Pasture production (t DM/ha)				
Establishment year	14.2	8.9	8.6	11.3
Year 2		14.1	14.7	12.8
Year 3		14.9	15.6	15.2
Chemical N (kg N/ha)				
Establishment year	229	200	84	124
Year 2		245	94	103
Year 3		246	93	131

Take home messages

- Successful establishment of WC on a challenging soil type
- WC content in reseeds superior to oversown swards
- Significant reduction in chemical N applied and increased pasture and milk solids production from WC swards
- Significant reduction in winter feed production with reseedling – additional reserves of winter feed are required