

## Update from the Clover150 Programme 2022

In 2021 a group of 30 farmers from across the country enrolled in a 5 clover programme, with a range of land types, geographic spread and farming enterprises. White clover was established on farms by a combination of reseeding and oversowing, over the past two years. The objectives of the project were:

1. Maintain herbage production  $\geq 14$  t DM/ha grown
2. Reduce Nitrogen (N) Surplus  $<130$  kg N/ha and an increase N use efficiency  $>40\%$
3. Reduce N fertiliser to  $\leq 150$  kg N/ha per year
4. Achieve an average sward clover content of 20 – 25%

### *Results to date:*

The area of the farms in clover at the end of 2022 was 64% an up from 45%, an increase of 19%, with an average sward white clover content of 18%, an increase of 6% from 2021. Sward clover content between reseeded paddocks and oversown paddocks was similar, at 19% and 18%, respectively. The improved establishment of white clover has resulted in a 48 kg N/ha reduction in whole farm chemical N input from 206 kg N/ha in 2021 to 158 kg N/ha in 2022. This in turn has led to a significant improvement in the whole farm gate N surplus from 179 kg N/ha in 2021 to 139 kg N/ha in 2022. This will have a significant impact within farm systems with potentially less available N to be lost to the environment. Grass grown on farm however has reduced by 1 t DM/ha, with a large proportion of this reduction caused by the drought in late summer in 2022. Over the next number of years as the clover area and clover content increases on the farm, there is even greater potential to reduce chemical N applied on farm and lead to reduced N surplus, while maintaining feed self-sufficiency on farm.

### *Key recommendation from the Clover150 programme:*

Clover will be the main innovation responsible for a rapid reduction of chemical N on farm as shown on Clover 150 farms. Below are recommendations developed from the project;

- Carry out a N plan for 2023 on PBI
  - Identify and tailor N application for individual paddocks
- Greater use of soiled water in summer
  - ~2,500 gallons of slurry/soiled water per rotation can successfully replace chemical N in summer rotations on established clover swards ( $> 25\%$  clover)
- Continue to increase clover area and content
  - Over sow approximately 15% of farm in late March/April

- Reseed 5 - 10% per year
- Maintain balance of grass and clover – average 20-25% annually
  - 10-15% in spring
  - 20-25% in summer
  - < 40% in autumn

Table 1: Herbage production and Nitrogen application on the Clover50 farms for 2021 and 2022

	<b>Annual tonnage</b>	<b>N applied (kg N/ha)</b>	<b>N Surplus (kg N/ha)</b>	<b>Area of farm under clover</b>
<b>2021</b>	14.5	206	179	45%
<b>2022</b>	13.5	158	139	64%
<b>Difference</b>	- 1.0	- 48	- 40	+ 19