

# Introducing the New

# Terra Range

from



## A NEW SUSTAINABLE FERTILISER SOLUTION FOR FARMERS

### Issues & challenges facing Irish agriculture

- New regulation changes expect farmers to be part of environmental solutions.
- Water quality (Nitrogen Action Plan and River Basin Management Plan).
- Nitrogen Use Efficiency (Derogation review).
- Ammonia fines pending for Ireland for 17/18/19.
- GHG emissions require lower methane and Nitrate Oxide levels.
- EU Farm to Fork Strategy is targeting a 20% reduction in fertiliser use by 2030.

### What is the solution?

- The efficiency of Nitrogen used on Irish farms according to Teagasc for 2019 was 24.4% utilisation out of the total N applied.
- To improve this efficiency Target has teamed up with Brandon Biosciences to research new products to deliver improved Nitrogen Use Efficiency (NUE) within Irish agriculture.
- Brandon Biosciences identified a specific molecule PSI 362 which stimulates Nitrogen uptake and utilisation within the plant.
- Target have now developed Terra, a new range of fertiliser products treated with the bio stimulant PSI 362 which specifically increases the assimilation of additional protein and yield in the crop as can be seen in our trials below.



### Trial 1

A grass bucket trial carried out on a number of different soil types

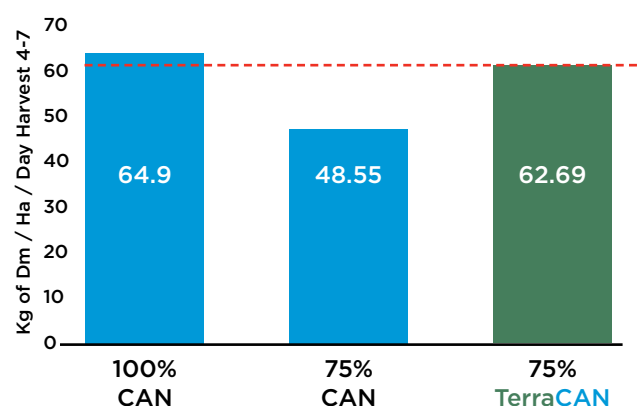
The three rates compared are:

- CAN (27% N) at 100% rate
- CAN (27% N) at 75% rate
- TerraCAN at 75% rate

### Result

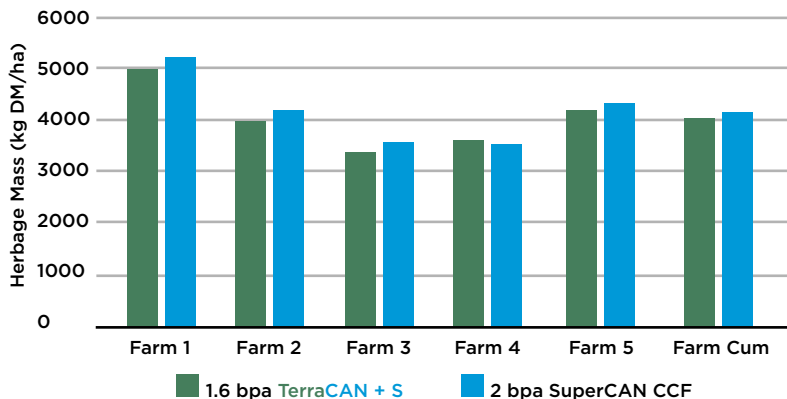
75% TerraCAN (PSI 362 treated) performed almost identically to the 100% CAN treatment.

### Average Growth Rate



## Trial 2

Grass trials using treated & untreated SuperCAN CCF were compared over 5 farms



The SuperCAN used was 27 N + 4S CCF

The two rates compared are:

- SuperCAN CCF at 2 bags/acre
- TerraCAN + S at 1.6 bags/acre

As seen in the table below there were additional benefits to herbage quality when TerraCAN + S was used.

	1.6 bpa TerraCAN + S	2 bpa SuperCAN CCF
Dry Matter %	12.9	12.1
Crude Protein %	18.1	18.9
ADF %	25.5	30.2
DMD %	76.0	70.4
ME MJ/kg	11.1	10.2

### Result

No major pre-harvest yield difference across the 5 farms combined at the 1.6 bag/acre of TerraCAN + S (PSI 362 treated) V's 2 bag/acre of SuperCAN.

Performance of PSI 362 treated TerraCAN + S at the lower application rate delivered almost the same herbage mass.

## Target Fertilisers Terra Product Range

	N	P	K	S	Recommended Rate
TerraCAN + S	22	0	0	3	1 - 1.5 bags/acre on grazing
TerraGRAZE + S	22	0	5	3.5	1 - 1.5 bags/acre on grazing
TerraCUT + S	20	2	12	2	4 bags/acre on 1st cut silage

Adjust application rates based on slurry application

### Benefits of the TERRA Product Range

N

Precision extract specific to improving Nitrogen Use Efficiency



Plant multi-level activity; absorption, transportation and utilisation

25%

Lower N required (Up to 25% less N applied due to increased uptake)



Proven results on Irish grass trials in 2020 season



Natural product with no harmful residues

The Terra Product Range is manufactured by Target Fertilisers



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