

Boosting Clover Content - Case study



This case study is from data taken from an independent pasture trial run by PastureFirst. It showed that EMNZ Products Enhance Production, Clover and help to reduce Nitrogen. When we focus on the clover impact, there were some clear treatment effects on Clover Content within the pasture sward. As expected, the high rate of urea (80) reduced clover content at both assessment dates. This is often seen in high nitrogen use systems. The low nitrogen rate (urea 40) had no effect on clover content.

Method:

White Clover content was assessed by counting the number of plants (trifoliate leaves) within a quadrat (1m²) area. 3 random quadrat assessments were taken per plot. Two assessments were conducted – December 2021 and April 2022.



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Summary

At the first assessment date, EM Soil and Crop and EM Plant Stimulant significantly increased clover content compared to untreated control and compared to both urea alone treatments. At the second assessment date a similar result was seen, although EM Plant Stimulant had similar clover content to untreated. At the first assessment date, EM Fert Enhance did increase clover content compared to untreated, but this was not statistically significant. It did however significantly increase clover content compared to the urea only treatments. A similar result was seen at the second assessment date, but the increased clover content was seen only against the high rate of urea. The addition of 40kg/ha Urea to the three EM products did reduce clover content but not statistically. The increased level of clover being able to be produced by implementing the above system, compared to high nitrogen systems, will also be a long-term benefit for pastoral farmers.

| Treatment Total | Clover % - 1 st Measurement | Clover % - 2 nd Measurement | Average Clover % | Clover Produced | N Fixed | N Produced over the Control | Value of extra N to Farmer (ha) |
|------------------------------------|--|--|------------------|-----------------|---------|-----------------------------|---------------------------------|
| Urea Full (80) | 51 | 25 | 38 | 5573 | 223 | -29 | -\$75 |
| EM Plant Stimulant (1) + urea (40) | 77 | 46 | 61.5 | 8849 | 354 | 102 | \$263 |
| EM Soil & Crop (20) + urea (40) | 78 | 45 | 61.5 | 8759 | 350 | 98 | \$254 |
| EM Fert Enhance (10) + urea (40) | 71 | 46 | 58.5 | 8210 | 328 | 76 | \$197 |
| Urea Half (40) | 65 | 35 | 50 | 6567 | 263 | 11 | \$27 |
| EM Plant Stimulant (1) | 82 | 47 | 64.5 | 8460 | 338 | 86 | \$223 |
| EM Fert Enhance (10) | 78 | 46 | 62 | 8030 | 321 | 69 | \$178 |
| EM Soil & Crop (20) | 88 | 52 | 70 | 8638 | 346 | 93 | \$241 |
| Control | 69 | 39 | 54 | 6301 | 252 | - | - |