

CASE STUDY

Cleanaway compost supports successful paddock renovation

FARM LOCATION Gunning, NSW

Trial conducted between November 2023 and September 2024.

THE TRIAL

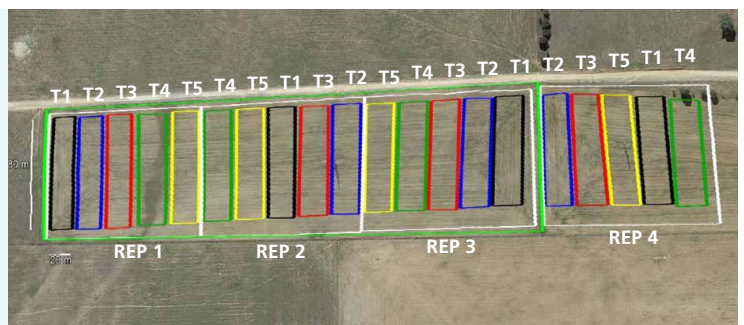
A paddock on a working farm in Gunning NSW, was selected for a Cleanaway compost trial. The trial's aim was to evaluate the compost's effectiveness in improving soil fertility and structure, ahead of a new crop rotation, at a lower cost than traditional fertilisers.

In preparation for winter, this former lucerne paddock was being renovated for a winter oats crop. The paddock was sprayed out and left fallow for 6 months, allowing weed breakdown and soil stabilisation prior to the application of trial treatments. Baseline soil tests were conducted prior to any treatment, with results showing:

- **pH (CaCl₂):** 5.0-5.1 – marginally acidic, typical for the region
- **Phosphorus (Colwell P):** 40-50 mg/kg – adequate, reflecting previous fertiliser history
- **Potassium:** 0.20-0.27 meq/100g – slightly deficient
- **Sulphur:** 3.8-4.0 mg/kg – low
- **Cation Exchange Capacity (CEC):** 4.7-6.2 cmol(+)/kg – relatively low
- **Organic Carbon:** 1.7-2.0% – modest

In November 2023, the paddock was divided into 20 plots, with each plot receiving one of the treatment applications below. Winter oats were sown in March 2024 and all plots were managed with standard weed control practices.

- Treatment 1: Control – no fertiliser or compost
- Treatment 2: Single Super Phosphate (SSP) – 125 kg/ha
- Treatment 3: Compost – 5 t/ha
- Treatment 4: Compost – 10 t/ha
- Treatment 5: Compost – 20 t/ha



Initial biomass cuts were taken in late April (6 weeks after the crop was sown) to assess early production. After this, the paddock was grazed through to June. Following grazing, a selective herbicide was applied and in September 2024, a second assessment of crop growth and paddock condition was conducted.

RESULTS

Cuts taken in April showed a lift in yield where compost was applied. The more compost applied, the better the result. These yield improvements equated to a production value increase.

Further pasture cuts taken in August 2024 showed little growth and variation across all treatments. This could be due to late heavy-frosts or the use of herbicides to keep weeds down. Regardless of the cause, these results highlight the importance of regular compost application. Regular compost application helps maintain healthy soils, replenishing essential nutrients and supporting crop resilience under challenging conditions.

Soil testing

Post-treatment soil testing (April) showed no significant differences from those taken prior to treatment application, across most parameters. However, a notable increase in available potassium (as a % of CEC) was observed in compost-treated plots.

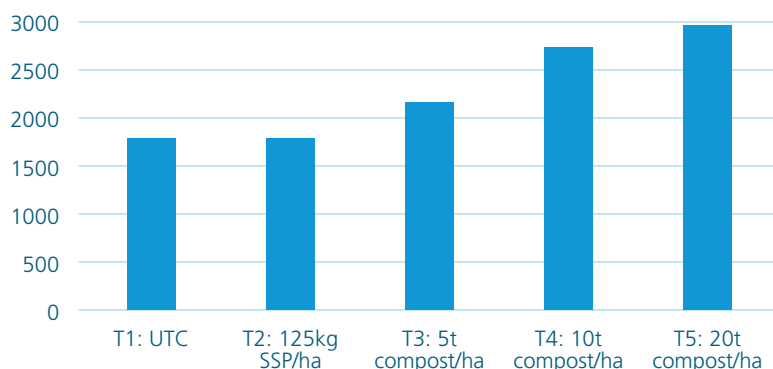
ONGOING MONITORING

Cleanaway is continuing to monitor these trial plots and will do so across several seasons and crop rotations. The aim is to observe the long-term value compost can offer in improving soil health and plant growth.

ABOUT CLEANAWAY COMPOST

Cleanaway compost is manufactured in Cleanaway's Eastern Creek Organics facility. Made from food organics and garden organics (FOGO), which includes food scraps and garden clippings from local households, this product recycles valuable nutrients, reduces greenhouse gas emissions and contributes to the circular economy by reducing waste and promoting sustainable practices. Cleanaway is excited to be recovering and returning these valuable nutrients back to farmland, helping to enrich soils, support healthier ecosystems and make a sustainable future possible.

Mean dry weight (kg/ha)



Disclosure

The trial was designed and supervised by Roger Garnsey of Roger Garnsey Agronomy. The trial was spread and managed by Fertspreed. The trial was paid for by Cleanaway to cover the costs of sampling, analysis, trial design and measurement.