

## Technical Data Sheet

### Stubble Digester

#### Driving the breakdown of organic matter

Plater Bio's **Stubble Digester** is ideally suited to arable farming; especially no-till/min-till cultivation with treatment leading to the degradation of crop residues left after harvest. If left untreated these residues lock up valuable nutrients and make it more difficult to plant and establish subsequent crops.

**Stubble Digester** uses Plater Bio's in-house carboxylic acid technology to stimulate the growth and activity of the saprotrophic fungi already present in the soil. The growth of these microbes is massively increased after treatment with **Stubble Digester** and this leads to the degradation of organic matter. This occurs because **Stubble Digester**;

- Provides a readily accessible form of nitrogen, which is required for the fungi to synthesise the proteins required to degrade organic matter.
- Supplies organic acids that allow the fungi to solubilise the mineral nutrients from the soil which are essential for their growth.
- Supplies enough organic acid to drive the Krebs's Cycle, a metabolic pathway that the fungi use to release stored energy from the carbohydrates, fats and protein locked up in the organic matter.

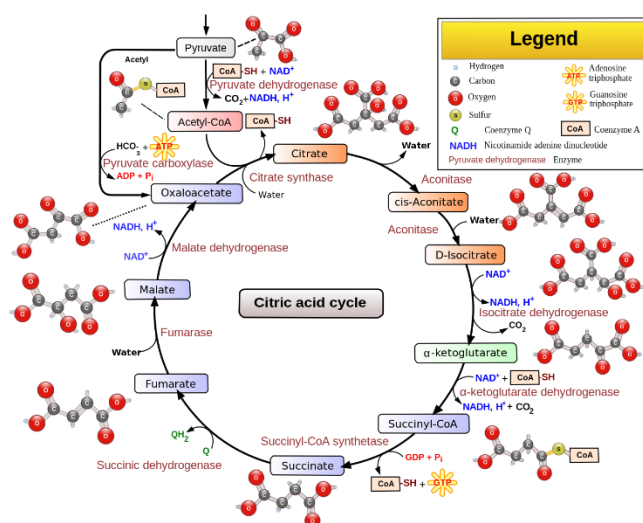


Figure 1; organic acids form the key steps in the Krebs's Cycle which organism use to release energy from organic matter.

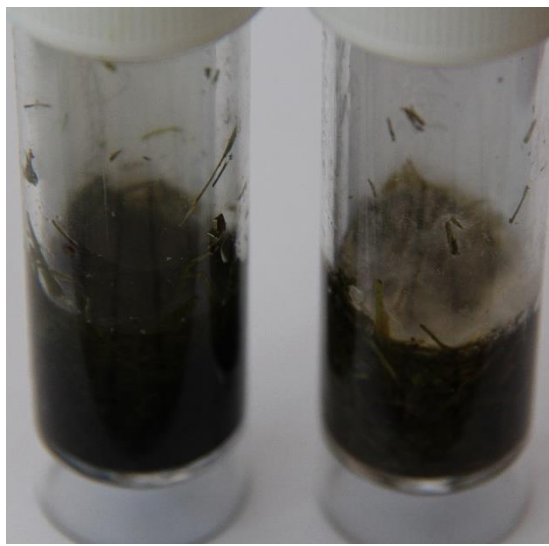


Figure 2; The stimulation of saprotrophic fungi growing on turf grass clippings. Left = control, Right = **Stubble Digester**-treated. This experiment is easy to recreate and demonstrate to end-users.

One particularly important advantage of using Plater Bio's **Stubble Digester** to degrade crop residues over microbial digesters is its *consistency*. I.e. it doesn't require there to be the perfect conditions (temperature, nutrition etc.) for the product to work effectively. Other advantages include a more competitive price per treatment, and it being far easier to apply and its ability to penetrate further into the soil. Therefore, **Stubble Digester** will breakdown and release nutrients from organic matter in both the O and A soil horizons. In contrast, microbial inoculants need to be spread as a suspension and the fungal strands will not flow into and across the soil.