Best Practice for Grazing.

with Mick Alexander

MANAGING STUBBLE – More Options for advanced farming systems

One of the biggest breakthroughs in farming systems in the past decade is the establishment of microbial treatments & foliar sprays to aid in the breakdown of stubble in the paddock. In the past, many farmers simply had to burn the stubble, to be able to double crop straight after harvest. However, past research has demonstrated the nutrient losses from a stubble fire are highly damaging to soil biota and will potentially lose up to $100 per hectare in nutrients, which have to be replaced. Instead, farmers can help the microbes to create a healthier soil and retain nutrients.

Close up of the fine white threads from the fungi

CSIRO research has shown the best way to breakdown stubble is by

1. *Maximising soil contact with the trash (stubble),*
2. *Increasing oxygen supply with minimum cultivation,*
3. *A small nitrogen application and*
4. *Starting the process as soon after harvest as possible.*

Well known bio-agronomist, Bart Davidson explained, often, the fungi are already in the paddock and simply need feeding a nutrient brew (such as FungalFuel) to get them working and the stubble will breakdown. FungalFuel is a soluble food source for stubble digestion fungi known as Saprophytes (saprophytic fungi) which decompose stubble. These saprophytes are seen as fine white threads through the underside of stubble and trash. The benefit of Saprophytic fungi is that they require significantly less nitrogen (approximately 20 kg N/ tonne of Carbon) to decompose stubble compared to bacteria (approximately 200 kg N/tonne of Carbon). The problem is many of our soils are bacterial dominant due to past farming practices and so trash may take longer to break down.

He continued, "Sometimes it may be necessary to establish Fungal population in the paddock (in a culture such as Enviro-Pro BreakDown) to start the process going. Often, it is as simple as checking out the stubble to see if it is decomposing or if there is already saprophytic fungi in the paddock. If there is a visible population of white fungi on the trash in the topsoil, there are fewer requirements for adding biology. Instead, it may be necessary to simply add a soluble food source and some soluble nitrogen as a protein source. Which-ever way growers decide to go, it is important to begin as long before replanting as possible to ensure the stubble has good soil contact and enough time to break down before planting". If you would like to know what the fungi look like in the paddock, or for more information, call SaPN (Soil and Plant Nutrition) on 0749383919. A full stubble management factsheet is available from www.grazingbestprac.com.au

Mick Alexander "Grazing BestPrac" showing the saprophytic fungi on stubble trash

The next TOGG workshops will be held in Moura on the 8th and 9th March and the next Soil and Plant Nutrition workshop will be held at Biloela on the 31st March.

Conventional spray tank set up to apply microbial food (FungalFuel) source and decomposing microbes (Enviro-Pro Breakdown) for digesting stubble.