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## Milk Waste & Sawdust

During 2005 compost was successfully made using sawdust from the Neville Smith Timbers sawmill, bark from a nearby harvesting operation and high-nitrogen ingredients {fish waste & poultry manure}. The composting process took seven months to complete and involved irrigation and frequent turning of the heap by front end loader. In June 2005, the compost was applied to a coupe {AR070K} prior to plantation establishment in a trial to evaluate the benefits of using compost to improve tree nutrition. This field trial will be monitored over the 3 – 5 years {Photos 1 & 2}

Another site near Southwood was selected for application of un-composted sawdust mulch {BB028} and a large volume of sawdust was stockpiled for this purpose. Several months ago, liquid waste {milk waste and some fish waste} was incorporated with the sawdust to improve carbon:nitrogen ratios prior to spreading as a mulch onto the young *E. globulus* {blue gum} plantation in mid January 2006. Milk waste was obtained from Cadbury chocolate factory near Hobart. This is a by product after the fermentation process. Up to 8,000L per week was transported in Collex tankers to the site over a period of several weeks during November 2005. The sawdust mulch spreading is again being carried out by Nugent farmer, Mr Noel White. {photo 3}

The new plantation coupe was previously run-down pasture and had been used as a motorbike racing track for many years and was consequently in a poor condition resulting in compacted soils, low organic matter and low fertility. In order to achieve acceptable growth rates by trees on the site, a rehabilitation plan was developed whereby ripping, mounding was undertaken and is to be followed by the application of the sawdust/milk waste mixture to improve the soil organic matter on the site. The benefits from the sawdust mulch may also include less weed competition, improved water retention and a reduction in fertilising requirements.

Raw sawdust on its own is very low in nutrients and has a very high carbon:nitrogen ratio {600:1} which means it is a good source of carbon but poor source of nutrients. In order for the sawdust to break down and constituents recycle in the soil, the soil microbes involved in decomposition require a source of nitrogen for energy. Unless there is adequate nitrogen source in the sawdust, the microbes can cause a temporary “drawdown” in available soil nitrogen as they use this source during decomposition. While much of the nitrogen is recycled with microbe turnover and after decomposition, the temporary “drawdown” can cause nitrogen deficiency in young tree seedlings. Therefore, nitrogen fertilizer will be applied to each seedling during the next few months to avoid the deficiency problem.



**Photo 1.** Mixing chicken manure in with the sawdust and bark heap.



**Photo 2.** Spreading compost at AR070K using agricultural spreader.



**Photo 3.** Sawdust and Milk waste being spread  
The next topic for the wood centre report will be on sawdust to bricks.