Migrant workers worth their weight in gold

International backpackers play an important role in local agriculture. None more-so than the many thousands of migrant workers that have flocked to the Manjimup area to help farmers capitalise on an under-utilised resource.

Warren Catchments Council has implemented a dung beetle program to distribute colonies of winter-active dung beetles, *Bubas bison*, throughout cattle properties in the region. These deep tunnelling beetles, introduced from Mediterranean regions, will do their part in burying the 13 tonnes of manure each animal excretes annually, to depths of approximately 60 centimetres.

Not only will they be incorporating the organic matter but Queensland Department of Agriculture, Fisheries and Forestry calculates the manure includes approximately 75kg of Nitrogen, Phosphorus (25kg), Potassium (55kg) and a healthy dose of other minerals that make up the 13 essential nutrients for plant growth.

Besides adding these nutrients, the tunnelling action brings soil to the surface – often clay – and with it the nutrients leached to the sub-soil. The tunnels aerate the soil, foster beneficial soil microbiology and enable root penetration to far greater depths, accessing a larger pool of available moisture and nutrients. Dr Bernard Doube’s Meat and Livestock Australia funded trial demonstrated the 30% increase in pasture production after dung burial persisted three years later.

*Bubas bison* can completely incorporate manure within 48 hours which can reduce the amount of nitrogen volatised by 80%. Rapid removal of manure also eliminates fly and parasite breeding habitats.

*Bubas bison* is active in the south west from break of season to early spring. It buries brood masses, each containing two eggs, at the end of deep, mostly vertical, manure-filled tunnels. Males are easily distinguished from females by a horn on the pronotum, the covering of the thorax. However some horns are much larger than others! The *B bison* typically flies at dusk and dawn when they can be seen bouncing off car windscreens or skewering themselves on barbed wire fences! The paddock can sound like a small airfield when they are swarming.

Dr Doube, a former CSIRO dung beetle specialist, now a private researcher based in South Australia, has conducted several workshops in the region, stressing the value of dung beetles to farming and detailing appropriate management strategies. Dr Doube also visited properties of local Middlesex cattle producers and dung beetle enthusiasts, Bob Pessotto and Doug Pow.

The dung beetle project is funded by the Australian Government’s national Landcare Programme through South West Catchments Council.