Fact Sheet

Turf Queensland
Grow Green

2019 - 02

Turbidity Checks on Six Erosion Control Test Plots.

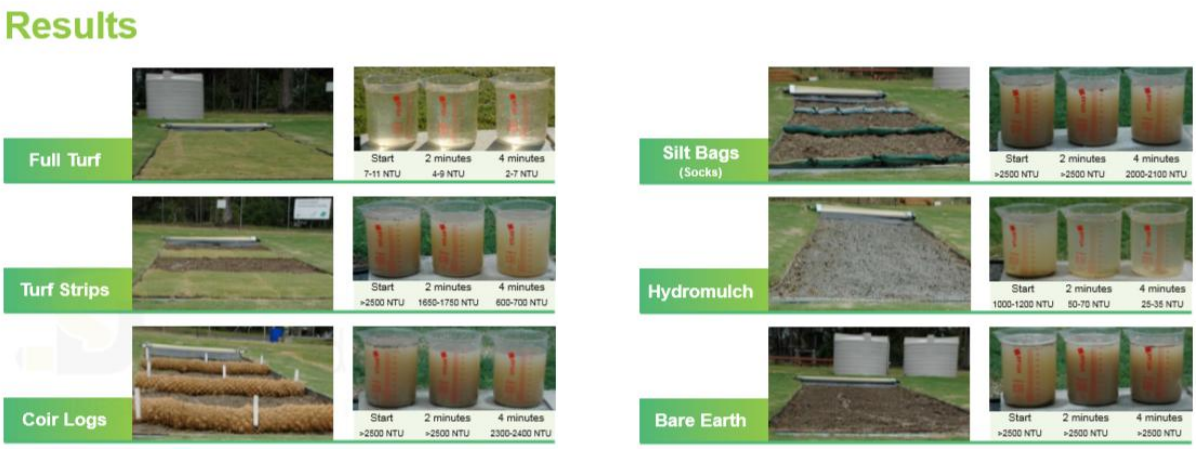
The Erosion Control Demonstration Facility was developed at the Redlands Research Facility, Cleveland, to display the physical effects of rain events on the soil, soil erosion and water quality. With the aim to compare their effect on the turbidity of runoff water, six erosion control measures were prepared at facility in May 2012:

1. Full turf
2. Turf strips
3. Coir logs
4. Silt bags or socks
5. Hydromulch (hydro spray grass)
6. Bare soil.

Each erosion control measure was established in a 30 m2 (3m x 10 m) plot with a gradient of 8%. After six days, a 1-in-100-year rain event was simulated and applied to each plot for approximately 10 minutes. Flow rates ranged from 2 to 3.5 litres per second to simulate sheet erosion across the plots.
One litre of runoff was collected at three times within the 10-minute period.

THE RESULTS:

- Full turf on an 8% grade provided the best results with respect to sediment control and the filtration of water containing sediment, in comparison to all erosion control measures.
- Turbidity from the full turf treatment was as low as 9 NTU in runoff water that was collected after 4 minutes.
- Some contamination of the first sample was apparent in all the treatments, due to debris in the collection troughs from heavy rainfall on the night preceding the demonstration.



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