EFFECTIVENESS OF THE VETIVER SYSTEM IN TREATING SEWAGE EFFLUENT

Vetiver was planted to dispose sewage effluent from a small recreational airfield in Queensland, Australia

Paul Truong
Planting Design

- 8 rows of vetiver
- 10m long each
- Inter-row spacing 1m
- Plant spacing 5 plants/m
- Total plants 400
- Gravel trench 60cm deep
- Land area 100 sqm
- Bund wall W54 X H30cm
First year: The first few rows have excellent growth, but the last 2 rows are very poor due to lack of effluent.
The first few rows have excellent growth
The last few rows have very poor growth, due to lack of effluent flow.
Third year: Excellent growth, exceeding 2m.
Cutting down to 50cm every 3 months

**VETIVER**

This grass is being used as a low impact alternative to managing effluent.
The increased uptake rate of Vetiver reduces odours, leakages and contamination of the subsoil and water table.
Properly maintained, note no weed in or between hedges
Monitoring wells and nutrient levels

Monitoring wells

Bund

N=0.059mg/L
P=0.067mg/L

N=0.13mg/L
P=0.21mg/L
Hay for mulch or fodder
INPUT
Average daily flow: \textbf{1 670L}
Average total N: \textbf{68mg/L}
Average total P: \textbf{10.6mg/L}
Average Faecal Coliform: \textbf{>8 000}

SUMMARY

OUTPUT
Average daily flow: \textbf{Almost Nil*}
Average total N: \textbf{0.095mg/L}
Average total P: \textbf{0.138mg/L}
Average Faecal Coliform: \textbf{<10}

* \textit{Only flow after heavy rain}
Thank You

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