

M.K. Seeliger

(Glencoe, SA)

Average milking herd: 300 cows
 Type of effluent system: Mechanical separation



The system was designed to manage effluent from a 450 cow dairy, plus a feed shed with capacity for 300 cows.

Effluent from the dairy shed and yard gravitates in to a trafficable sand trap. Sand and stones fall out of solution in the trap, whilst liquid effluent and suspended manure gravitates to a square collection sump located 150 metres from the dairy.

The sump is equipped with a pontoon mounted agitator and effluent pump. When the sump reaches a pre-determined level the agitator is engaged, then the pump starts several minutes later. Mixed effluent is pumped up to a Yardmaster screw press separator.

Solids are extruded out the auger and fall on to a collection pad, whilst liquid effluent gravitates in to a 3.9 ML effluent storage pond. The pond is lined with 1.0mm HDPE.

Effluent from the pond is recycled for yard hydrant washing and will be used in the feed shed when it is constructed. Effluent recycling will conserve up to 19 ML of freshwater per year.

Effluent will be applied to 44 hectares of pasture through a travelling irrigator and centre pivot during the irrigation months. Solids will be applied to sandy areas of the farm using the property's Marshall belt spreader.

Nutrients captured at the dairy shed annually:

- 2,933 kg/yr of Nitrogen
- 553 kg/yr of Phosphorous
- 2,055 kg/yr of Potassium



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