

Mallee Seeps

Mallee seeps have been a problem in the SA Murray-Darling Basin NRM region for the past decade, however concern is growing with the formation of new seeps and existing seeps increasing in size as a result of the recent above average rainfall years. The geographic area affected by these seeps is also increasing. The main concern about the formation of Mallee seeps is the resulting loss of productive cropping land as soils become waterlogged and increasingly saline overtime, thereby becoming incapable of supporting crop growth. The risk of soil erosion also increases as there is little or no vegetative cover to protect it. The prevalence of weeds, particularly rye grass, on the margins of the seep areas may increase as these plants are better adapted to the harsh conditions. Machinery access is limited due to the waterlogged and boggy nature of the soil and management of weeds and pests can prove difficult in these areas.



A Mallee seep which has become saline. There is very little vegetation present and no potential for growing crops.

Natural Resources SA Murray–Darling Basin (Natural Resources SAMDB) is undertaking several investigations into Mallee seeps through the establishment of trial sites to determine how best to prevent or rehabilitate affected seeps areas. Four trial sites have been established to assess options for treating seeps including;

- Lucerne establishment near Bowhill
- Soil improvement to improve crop root growth and water use near Karoonda
- Saltbush and native vegetation establishment near Wynarka
- Soil moisture monitoring under crop rotations and management near Wynarka

Natural Resources SAMDB is working in partnership with the Karoonda Agricultural Bureau to use NDVI (Normalised Difference Vegetation index) which measures the greenness of crops to determine if seep areas can be detected before they form. It is hoped NDVI may detect increased plant growth that occurs as a result of additional soil moisture relative to other parts of the paddock thereby possible indicating areas at risk of forming seeps in future.

For more information on managing Mallee Seeps, including trial reports, and technical investigations, please visit the Natural Resources SAMDB webpage:
<http://www.naturalresources.sa.gov.au/samurraydarlingbasin/land-and-farming/soils/soils-resources>



Rye grass around the margins of a Mallee seep is difficult to manage as machinery access is limited due to the boggy soils.



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