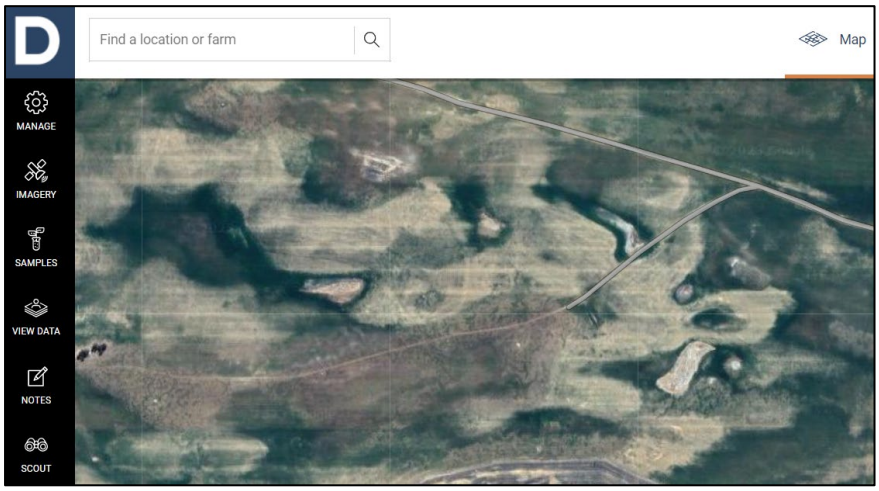
Using DecipherAg Satellite NDVI program to assess your Mallee Seep issues.

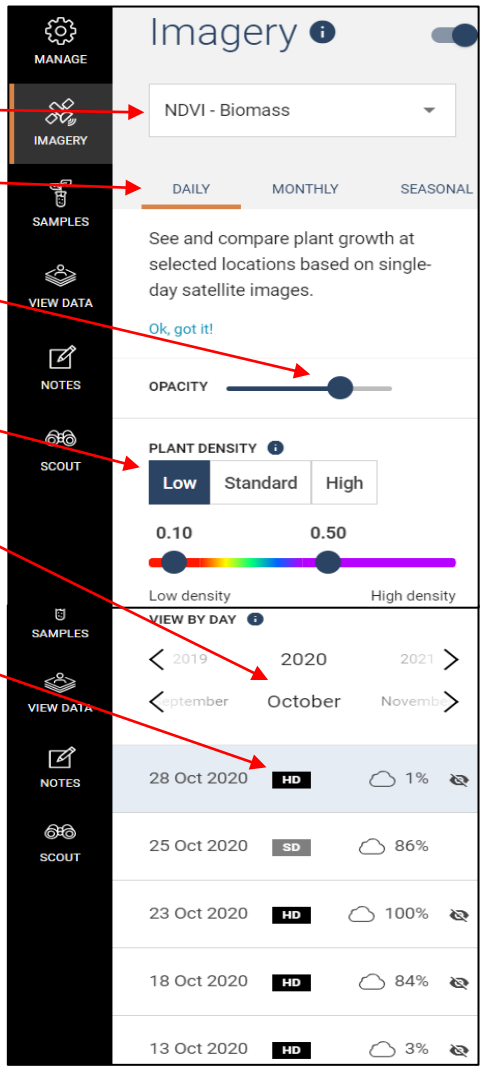
Step 1:
Register with the NDVI imaging program, https://app.csbpdecipherag.com.au/home

Step 2:
Find and zoom into the paddock area of concern, to an area of approximately 50-100ha, including the sandy rises and discharge areas. Larger focus areas may be useful within catchment areas with multiple mallee seep concern areas.



Step 3:
Click on the **IMAGERY** tab.
Set parameters to:

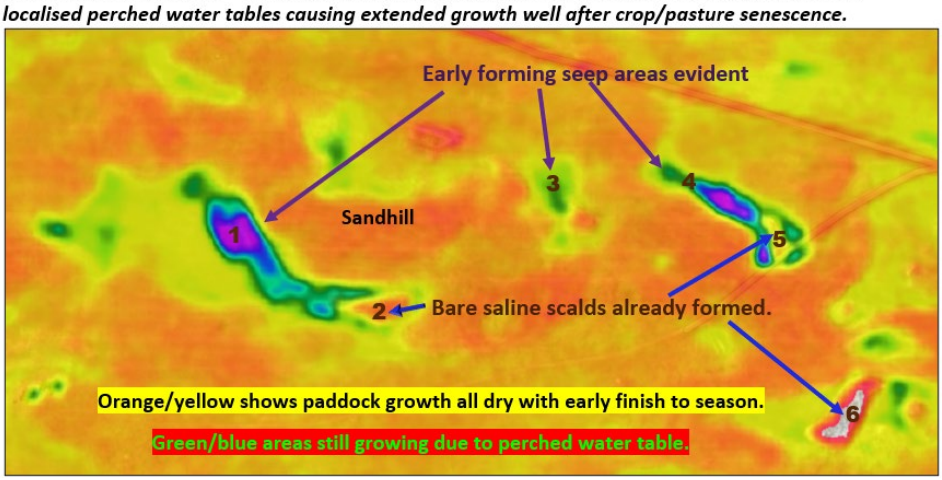
1. **NDVI - Biomass**
2. **Daily**
3. **About 75% Opacity – to allow for some vision of landscape features through imagery.**
4. **Low Plant Density**
5. **HD (High Density)**
6. **Initially choose a fairly recent year and month (ie 2020, Oct) when most paddock growth has dried.**
7. **Choose a HD image date with relatively low cloud cover. NB: Sometimes it can still work for your paddock on a higher cloud cover day.**
8. **Check for areas indicating high plant growth for longer, well past the surrounding crop or pasture senescence.** Bare scald areas will generally show up as a red/orange or clear, often with distinct edge lines. Growth areas appear green/blue/purple depending on density. Permanent vegetation will also show up clearly in these colours.
9. **Begin to look at specific months (ie from September to November) in a range of years to find the best images that reveal the key information as explained below. Some trial and error is needed to find the best images.**



A. Using NDVI to assess land under threat of developing into a Mallee Seep:

The aim is to identify areas that are staying greener for longer because the plants (crops, pastures or summer weeds) are accessing a perched water table, as in Figure 1. It may be necessary to look at a range of images due to the impacts of late Spring rainfall, cloud cover and rotation, to find the most definitive evidence of extended perched water table impacts around developing areas of concern. Generally these images reveal the areas under threat of salinisation are greater than first thought

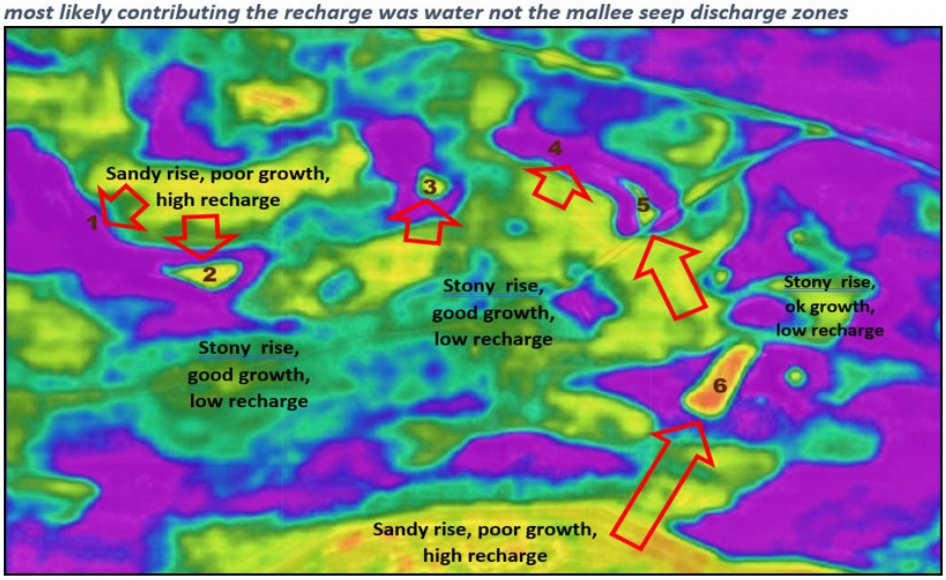
Figure 1. NDVI image 29th October 2018 (2 seasons after wet 2016 Spring) showing evidence of localised perched water tables causing extended growth well after crop/pasture senescence.



B. Using NDVI to indicate Recharge Areas and strategic Interception Zones

This is better achieved by viewing earlier images (August/September) to reveal areas of poorer crop growth (usually deep sands) that at allowing rainfall to seep through to the Mallee Seep areas as shown in Figure 2. Often the scalded seep areas are immediately surrounded by high growth areas that are under threat. These images can also reveal how numerous seeps may be connected through the localised catchment, which is critical for applying high water use strategies to best manage and return the land into sustainable production.

Figure 2. Site 1 NDVI image, Sept 2018 showing areas of deep sands and poor crop growth most likely contributing the recharge was water not the mallee seep discharge zones



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