

AgMRI analytics can help you find disease pressure to guide applications and protect yield.

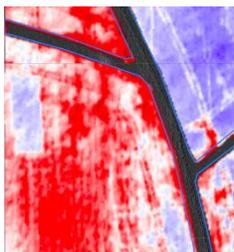
FINDING DISEASE

High thermal values can be an early warning sign of disease—often appearing in thermal imagery before visible to the naked eye or even via NDVI. When using AgMRI to look for disease, keep in mind:

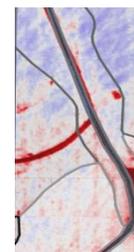
- Isolate your search for disease to fields with high emergence at or near crop canopy. Earlier in the season, thermal data is more closely tied to emergence due to soil effects between rows.
- Exclude areas that follow a distinct machine pattern and/or appear to be related to soil type or emergence.



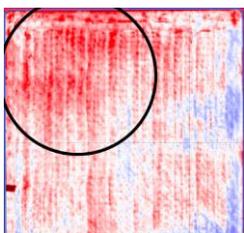
Thermal values in this image can be excluded as possible disease as higher thermal values coincide with areas of low emergence in this field.



Elevated temperatures closely follow the boundaries between different soil types (separated by gray lines).



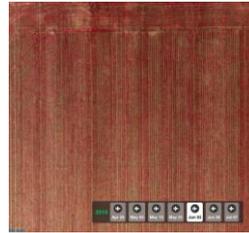
If elevated temperatures in a field at or near canopy with high emergence cannot be attributed to soil type or machine patterns, there is a high probability of disease. The below imagery from June 26 illustrates how to evaluate possible disease risk. At far left, there is an area with elevated thermal values that does not coincide with soil types, nor is it suffering from low emergence.



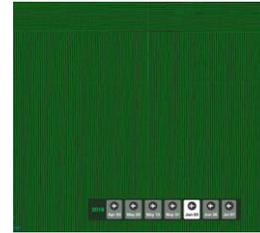
Thermal image showing an area of elevated temperatures



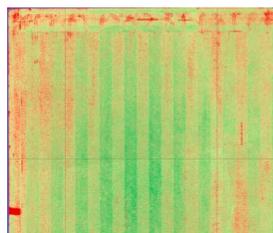
Soil map on RGB image



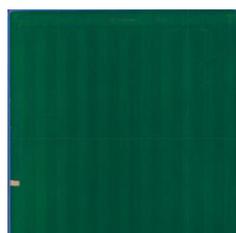
Infrared and Emergence Map (RowTracer) showing good emergence, meaning the elevated thermal values in the northwest corner are most likely disease.



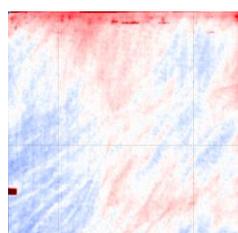
July 7 Imagery



The same area exhibits lower NDVI values where the disease first moved into the field, particularly on end rows.



RGB imagery shows the growth stage of the crop.



At this growth stage, disease damage is visible in NDVI, but does not show it well in thermal, making it important to check earlier growth stages for thermal insights.

PRO TIP – Note this is a split hybrid field where one is struggling vs. the other (visible via NDVI).

This is common in fields with disease, as some hybrids are more susceptible to disease than others. This will often show up with certain hybrids going down later in the year or suffering from green snap from weather events.