Nebraska Precision Ag Center for Excellence





Learn About... NIR

Most remote sensing data applied to agriculture, include near infrared (NIR) bands. NIR reflectance is mainly controlled by the structure of the spongy mesophyll and has a positive correlation with crop condition and yield; NIR radiation can be scattered upward or downward; downward scatter can continue to transmit through the canopy and reflect off the soil, which has lower reflectance than green vegetation. As a result, if a green canopy is closed but is thinner in areas, NIR radiation (unlike visible light) can detect the difference). Also, as plants are subjected to stress, change is more noticeable in the NIR than visible spectrum. It is important to note that the NIR band is not effective enough at detecting corn condition differences after tassel (tassels obscure green vegetation too much) but can detect soybean crop condition very well through most of the reproductive stages.



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