

Table 2: Remote sensing indices of salt problems in soil

Image bands†	Index	Image band ratio
SWIR1(B6), NIR(B5), SWIR2(B7)	NSI	$NSI = (B6 - B7) / (B6 - B5)$
Green (B3), Red (B4)	SI1	$SI1 = \sqrt{B4 * B3}$
Blue (B2), Red (B4)	SI2	$SI2 = \sqrt{B4 * B2}$
Green (B3), Red (B4)	SI3	$SI3 = \sqrt{B4^2 * B3^2}$
SWIR1(B6), NIR(B5),	SI4	$SI4 = (B5 * B6 - B6^2) / B5$
Blue (B2), Red (B4)	SI5	$SI5 = B2 / B4$
Red(B4), NIR(B5), Green(B3)	SI6	$SI6 = B4 * B5 / B3$
NIR(B5), Red(B4)	SAVI	$SAVI = (B5 - B4) / (B5 + B4 + 0.5) * 1.5$ SAVI-soil adjusted vegetation index
Green(B3), Red(B4), NIR(B5)	VSSI	Vegetation Soil Salinity Index $VSSI = 2 * B3 - 5 (B4 + B5)$
Red(B4), NIR(B5)	NDSI	Normalized Difference Salinity Index (NDSI) $NDSI = (B4 - B5) / (B4 + B5)$
NIR(B5), Red(B4)	NDVI	Normalized Difference Vegetation Index $NDVI = (B5 - B4) / (B5 + B4)$
Blue(B2), Green(B3), Red(B4),	SR	Salinity Ratio (SR) $SR = (B3 - B4) / (B2 + B4)$
NIR(B5), Red(B4), Green(B3), Blue (B2)	CRSI	Canopy Response Salinity Index (CRSI) $CRSI = \sqrt{B5 * B4 - B3 * B2} / (B5 * B3 + B3 * B2)$
Red(B4), Green(B3), NIR(B5)	BI	Brightness Index (BI) $BI = \sqrt{B3^2 + B4^2 + B5^2}$

†Band notation to simplify equations for band ratios: SWIR-shortwave infrared; NIR-Near infrared