Table S1. Hyperspectral vegetative indices used in this work.

Vegetation Index	Formula	Target	Reference
AI (Anthocyanin Index)	$\frac{R600 - R699}{R500 - R599}$	Anthocyan	[1]
ARI (Anthocyanin Reflectance Index)	$\frac{1}{R550} - \frac{1}{R700}$	Carotenoids	[2]
CAR (Carotenoid Index)	$R515/R570$	Carotenoids	[3]
DVI Simple Ratio NIR/RED Difference Vegetation Index	$R782 - R675$	Plant vitality	[4]
FWBI1 (Floating-Position Water Band Index 1)	$\frac{R900}{min\{R930 \div 980\}}$	Water	[5]
FWBI2 (Floating-Position Water Band Index 2)	$\frac{R920}{min\{R960 \div 1000\}}$	Water	[5]
GI1 (Greenness Index)	$R550/R670$	Plant vitality and chlorophyll	[6]
GI2 (Greeness Index)	$R539/R682$	Plant vitality	[7]
gNDVI (Green NDVI)	$\frac{R750 - R550}{R750 + R550}$	Vegetation	[8]
HNDVI (Hyperspectral NDVI)	$\frac{R774 - R677}{R774 + R677}$	Vegetation	[9]
HVI (Hyperspectral Vegetation Index)	$R743/R692$	Plant vitality	[10]
LI (Lomin Index)	$min\{R640 \div 680\}$	Chlorophyll	[11]
LIC3 (Lichtenthaler Indices 3)	$R440/R740$	Carotenoids	[12]
LRDSI (Leaf Rust Disease Severity Index)	$6.9 \times \frac{R605}{R455} - 1.2$	Rust severity	[13]
MCARI (Modified Chlorophyll Absorption in Reflectance Index)	$[(R712 - R682) - 0.2 \times (R712 - R539)] \frac{R712}{R682}$	Chlorophyll	[14]
MCARI1 (Modified Chlorophyll Absorption Reflectance Index 1)	$1.2 \times [2.5 \times (R800 - R600) - 1.3 \times (R800 - R550)]$	Plant vitality and chlorophyll	[15]
mNDVI705 (Modified NDVI705)	$\frac{R750 - R705}{R750 + R705 - 2 \times R445}$	Vegetation	[16]
MSAVI (Modified Soil Adjusted Vegetation Index)	$0.5 \times [2 \times R800 + 1 - 2\sqrt{2 \times R800 + 1} - 8 \times (R800 - R670)]$	Vegetation	[17]
mSR705 (Modified Simple Ratio 705)	$\frac{R750 - R445}{R705 + R445}$	Vegetation	[18]
NDVI (Normalized Difference Vegetation Index)	$\frac{R670 - R800}{R670 + R800}$	Plant vitality and chlorophyll	[19]
NDVI 705	$\frac{R750 - R705}{R750 + R705}$	Vegetation	[20]
NPQI (Normalized Phaeophytinization Index)	$\frac{R415 - R435}{R415 + R435}$	Chlorophyll	[21]
OSAVI (Optimized Soil Adjusted Vegetation Index)	$\frac{(1.16) \times (R800 - R670)}{R800 + R670 + 0.16}$	Vegetation	[22]
PRI (Photochemical Reflectance Index)	$\frac{R531 - R570}{R531 + R570}$	Photochemical activity	[23]
PRI515 (Photochemical Reflectance Index)	$\frac{R515 - R531}{R515 + R531}$	Carotenoids	[24]
PRIn (Photochemical Reflectance Index normalized)	$\frac{PRI}{RDVI} \times \frac{R700}{R670}$	Carotenoids	[25]
PSRI (Plant Senescence Reflectance Index)	$\frac{R678 - R500}{R750}$	Vegetation	[26]
PSSRa (Pigment-Specific Simple Ratio a)	$R800/R680$	Chlorophyll	[27]
PSSRb (Pigment-Specific Simple Ratio b)	$R800/R635$	Chlorophyll	[27]
PSSRc (Pigment-Specific Simple Ratio)	$R800/R470$	Carotenoid	[27]
PVI (Perpendicular Vegetation Index)	$\frac{R800 - 0.2 \times R670 - 0.6}{1.019}$	Vegetation	[28]

R705/(R717+R491)	$\frac{R705}{R717+R491}$	Vegetation and chlorophyll	[29]
RARS (Ratio Analysis of Reflectance Spectra)	$R746/R513$	Carotenoids	[30]
RDVI (Renormalized Difference Vegetation Index)	$\frac{R800-R670}{(R800+R670)^{0.5}}$	Plant vitality and chlorophyll	[31]
RE-NDVI (Red Edge NDVI)	$\frac{R750-R705}{R750-R705}$	Vegetation	[20]
REP (Red-Edge Position Linear Interpolation)	$R700 + 40 \times \frac{\frac{R670+R780}{2}-R700}{R740-R700}$	Red-edge position	[32]
RGRcn (Red Green Ratio Chlorophyll Content)	$\frac{R612+R660}{R510+R560}$	Chlorophyll	[33]
RVI (Ratio Vegetation Index)	$R493/R678$	Plant vitality	[34]
RVSI (Red-Edge Vegetation Stress Index)	$\frac{R800-R670}{(R800+R670)\times 0.5}$	Plant vitality	[31]
SAVI (Soil Adjustment Vegetation Index)	$\frac{R782-R675}{R782+R675+0.2}\times 1.2$	Crop parameters	[35]
SIPI (Structure Intensive Pigment Index)	$\frac{R800-R445}{R800-R680}$	Chlorophyll	[36]
SRI (Simple Ratio Index)	$R800/R680$	Vegetation, Chlorophyll, Leaf area index	[37]
SRPI (Simple Ratio Pigment Index)	$R430/R680$	Chlorophyll	[38]
TCARI (Transformed Chlorophyll Absorbtion Ratio Index)	$3\times[(R700-R670) - 0.2\times(R700 - R550)\times(\frac{R700}{R670})]$	Plant vitality and chlorophyll	[39]
TCARI/OSAVI		Plant vitality and chlorophyll	[39]
TSAVI (Trasformed Soil Adjustment Vegetation Index)	$R782-R675$	Crop parameters	[35]
TVI (Triangular Vegetation Index)	$0.5\times[120\times(R750-R550) - 200\times(R670-R550)]$	Plant vitality and chlorophyll	[40]
VARIgreen (Visible Atmospherically Resistant Index green)	$\frac{Rgreen-Rred}{Rgreen+Rred-Rblue}$	Vegetation	[41]
VOG1 (Vogelmann Index1)	$R740/R720$	Plant vitality and chlorophyll	[42]
VOG2 (Vogelmann Indices 2)	$\frac{R734-R747}{R715+R726}$	Plant vitality and chlorophyll	[42]
VOG3 (Vogelmann Indices 3)	$\frac{R734-R747}{R715+R720}$	Plant vitality and chlorophyll	[42]
WBI (Water Band Index)	$R950/R900$	Water Index	[43]
WI (Water Index)	$R900/R970$	Water content	[44]
ZTMI (Zarco-Tejada-Miller Index)	$R750/R710$	Chlorophyll	[45]

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