

Appendices I. SVI used in agriculture

VI	Description	Formulation	Use
		$\log(1/R_{737})$	Chlorophyll
		R^{-1}_{700}	Chlorophyll
		R^{-1}_{550}	Chlorophyll
		$R_{800}-R_{550}$	Biomass
		$R_{800}-R_{680}$	Biomass
		R_R/R_B	Vegetation discrimination
		R_R/R_G	Vegetation discrimination
	Red normalized	$R_R/(R_R+R_G+R_B)$	Vegetation discrimination
	Green normalized	$R_G/(R_R+R_G+R_B)$	Vegetation discrimination
	Blue normalized	$R_B/(R_R+R_G+R_B)$	Vegetation discrimination
ARI	Anthocyanin reflectance index	$R^{-1}_{550} - R^{-1}_{700}$	Anthocyanin
ARVI	Atmospherically resistant vegetation index	$(R_{800} - (2 \times R_{680} - R_{450})) / (R_{800} + (2 \times R_{680} - R_{450}))$	Reduce atmospheric effect, vegetative vigour
BGI1	Blue green index 1	R_{400}/R_{550}	Water, vegetation discrimination
BGI2	Blue green index 2	R_{450}/R_{550}	Water, vegetation discrimination
BI	Brightness index	$\text{Sqrt} [(R^2_G+R^2_R)/2]$	Brightness
BNDVI	Blue normalized difference vegetation index	$(R_{NIR} - R_B) / (R_{NIR} + R_B)$	Vegetation discrimination
C420	-	R_{420} / R_{695}	Relative changes in Chlorophyll content, stress levels
CCCI	Canopy chlorophyll content index	$(NDRE-NDRE_{min}) / (NDRE_{max} - NDRE_{min})$	N estimation
CCI	Canopy chlorophyll index	R_{720}/R_{700}	Plant N concentration
CI	Colour index	$(R^2_R - R^2_G) / (R^2_R + R^2_G)$	Plant N concentration
CI _G	Green chlorophyll index	$(R_{790}/R_{550}) - 1$	LAI, GPP, Chlorophyll
CI _R	Chlorophyll index red	$(R_{NIR} / R_R) - 1$	Chlorophyll, growth, nutrition status
CI _{RE}	Red edge chlorophyll index	$(R_{790}/R_{720}) - 1$	LAI, GPP, Chlorophyll
CIVE	Color index of vegetation	$(0.441 \times R_R) - (0.811 \times R_G) + (0.385 \times R_B) + 18.78745$	Growth, nutrition status
CRI	Carotenoid reflectance index	$R^{-1}_{510} - R^{-1}_{550}$	Carotenoid content
CUR	Curvature index	$(R_{675} \times R_{690}) / R^2_{683}$	Diurnal variation of Chlorophyll fluorescence, F _v /F _m
CVI	Chlorophyll vegetation index	$R_{NIR} \cdot R_R / R^2_G$	Chlorophyll, leaf N concentration
DCNI	Double peak canopy nitrogen index	$(R_{720}-R_{700})/(R_{700}-R_{670})/(R_{720}-R_{670}+0.16)$ $(R_{720} - R_{700}) / (R_{700} - R_{670}) / (R_{720} - R_{670} + 0.03)$	Estimate N status

DVI	Difference vegetation index	$R_{NIR} - R_R$	Vegetation density, biomass, N status
DVIRE	Difference vegetative index red-edge	$R_{RE} - R_R$	Vegetation density, biomass
ENDVI	Enhanced normalized difference vegetation index	$[(R_{NIR} + R_G) - 2R_R] / [(R_{NIR} + R_G) + 2R_R]$	Vegetation classification, canopy structure analysis
ENDVIRE	Enhanced normalized difference vegetation index red-edge	$[(R_{RE} + R_G) - 2R_R] / [(R_{RE} + R_G) + 2R_R]$	Early stress detection, Chlorophyll LAI, biomass, photosynthetic capacity, canopy greenness without saturation problems
EVI	Enhanced vegetation index	$2.5 \times [(R_{800} - R_{680}) / ((R_{800} + 6 \times R_{680}) - (7.5 \times R_{450} - 1))]$ $2.5 \times [(R_{NIR} - R_R) / (R_{NIR} + 2.4R_R + 1)]$	LAI, biomass, photosynthetic capacity, canopy greenness without saturation problems
EVIRE	Enhanced vegetation index1 red-edge	$2.5 \times [(R_{RE} - R_R) / (R_{RE} + 2.4R_R + 1)]$	LAI, biomass, photosynthetic capacity, canopy greenness without saturation problems
ExB	Excess blue	$(1.4 \times R_B) - R_G$	Water mapping, snow detection, soil assessment
ExG	Excess green	$(2 \times R_G) - R_R - R_B$	Green vegetation
ExGR	Excess green red	$3R_G - 2.4R_R - R_B / R_R + R_G + R_B$ $ExG - ExR$	Plant segmentation
ExR	Excess red	$(1.4 \times R_R) - R_G$	Senescence, stress
GDPR	Red-green difference	$R_R - R_G$	Leaf pigments
GDVI	Green difference vegetative index	$R_{NIR} - R_G$	Vegetative vigour, biomass
GDVIRE	Green difference vegetative index red-edge	$R_{RE} - R_G$	Early stress, N estimation
GI	Green index	R_{551} / R_{677} R_{554} / R_{677}	Canopy greenness, yield
GIT	Triangular greenness index	$R_G - (0.39R_R) - (0.61R_B)$	Chlorophyll, stress
GLI	Green leaf index	$(2R_G - R_R - R_B) / (2R_G + R_R + R_B)$	Vegetation fraction, canopy cover, weed discrimination
GNDVI	Green normalized difference vegetation index	$R_{810} - R_{560} / R_{810} + R_{560}$ $R_{810} - [(R_{810} + R_{561}) / 2] / R_{810} + [(R_{510} + R_{561}) / 2]$	Intercepted PAR, vegetation cover, canopy greenness, photosynthetic capacity, N status
GNDVIRE	Green normalized difference vegetation index red-edge	$(R_{RE} - R_G) / (R_{RE} + R_G)$	LAI, biomass
GOSAVI	Green optimized soil adjusted vegetation index	$(R_{NIR} - R_G) / (R_{NIR} + R_G + 0.16)$	LAI, biomass
GRDVI	Green re-normalized different vegetation index	$(R_{NIR} - R_G) / \text{Sqrt}(R_{NIR} + R_G)$	LAI, biomass
GSAVI	Green soil adjusted vegetation index	$1.5 \times [(R_{NIR} - R_G) / (R_{NIR} + R_G + 0.5)]$	LAI, biomass
GVI (GRVI)	Green (ratio) vegetation index	R_{NIR} / R_G	LAI, biomass
GWDRVI	Green wide dynamic range vegetation index	$(a \times R_{NIR} - R_G) / (a \times R_{NIR} + R_G) (a = 0.12)$	LAI, biomass
II	Infrared index	$R_{NIR} - R_{SWIR} / R_{NIR} + R_{SWIR}$	Vegetation water status
LAIDI	LAI-determining index	R_{1250} / R_{1050}	LAI, biomass
MCARI	Modified Chlorophyll Absorption in Reflectance Index	$[(R_{700} - R_{670}) - 0.2(R_{700} - R_{550})] (R_{700} / R_{670})$	N status
MCARI/MTVI2	Combined index	$(R_{700} - R_{670} - 0.2(R_{700} - R_{550})) / (R_{700} / R_{670}) / 1.5(1.2(R_{800} - R_{550}) - 2.5(R_{670} - R_{550})) \text{sqrt}((2R_{800} + 1)^2 - (6R_{800} - 5\text{sqrt}(R_{670})) - 0.5)$	N status

MCARI/OSAVI	Modified chlorophyll absorption in reflectance index/Optimized soil-adjusted vegetation index	$\frac{[(R_{700} - R_{670}) - 0.2 * (R_{700} - R_{550}) (R_{700}/R_{670})]}{[(1 + 0.16) (R_{800} - R_{670}) / (R_{800} + R_{670} + 0.16)]}$	N status
MCARI/OSAVI.RE	Red edge-based modified chlorophyll absorption in reflectance index/Optimized soil-adjusted vegetation index	$\frac{[(R_{750} - R_{705}) - 0.2 * (R_{750} - R_{550}) (R_{750}/R_{705})]}{[(1 + 0.16) (R_{750} - R_{705}) / (R_{750} + R_{705} + 0.16)]}$	N status
MCARI1	Modified chlorophyll absorption in reflectance index 1	$(1.5 * [2.5 * (R_{NIR} - R_{RE}) - 1.3 * (R_{NIR} - R_G)]) / \text{Sqrt}((2 * R_{NIR} + 1)^2 - (6 * R_{NIR} - 5 * R_{RE}) - 0.5)$	N status
MCARI1 / GOSAVI		MCARI1 / GOSAVI	N status
MCARI1 / MRETVI		MCARI1 / MRETVI	N status
MCCCI	Modified canopy chlorophyll content index	NDRE / GNDVI	N status
MDD	Modified double difference index	$(R_{NIR} - R_{RE}) - (R_{RE} - R_G)$	N status
MEVI	Modified enhanced vegetation index	$2.5 * (R_{NIR} - R_{RE}) / (R_{NIR} + 6 * R_{RE} - 7.5 * R_G + 1)$	N status
MExG	Modified excess green	$1.262R_G - 0.884R_R - 0.311R_B$	Water, N status
MGSAVI	Modified GSAVI	$0.5 * [2 * R_{NIR} + 1 - \text{Sqrt}((2 * R_{NIR} + 1)^2 - 8 * (R_{NIR} - R_G))]$	N status
MNDI	Modified normalized difference index	$(R_{NIR} - R_{RE}) / (R_{NIR} - R_G)$	N status
MNDRE	Modified normalized difference red edge	$[R_{NIR} - (R_{RE} - 2 * R_G)] / [R_{NIR} + (R_{RE} - 2 * R_G)]$	N status
MNDWI	Modified NDWI	$(R_G - R_{MIR}) / (R_G + R_{MIR})$	Water status
MNGRD	Modified normalized green red difference	$(R_G - R_{SWIR}) / (R_G + R_{SWIR})$	Water, N status
mpRI	Modified Photochemical Reflectance Index	$R_G^2 - R_R^2 / R_G^2 + R_R^2$	Potassium, xanthophyll, photosynthetic efficiency
MRENDVI	Modified red edge NDVI	$R_G + R_R / R_G - R_R$	Plant stresses
MRESAVI	Modified RESAVI	$(R_{750} - R_{705}) / (R_{750} + R_{705} - (2 * R_{445}))$	N status
MRETVI	Modified RETVI	$0.5 * [2 * R_{NIR} + 1 - \text{Sqrt}((2 * R_{NIR} + 1)^2 - 8 * (R_{NIR} - R_{RE}))]$	N status
MSAVI	Modified SAVI	$1.2 * [1.2 * (R_{NIR} - R_G) - 2.5 * (R_{RE} - R_G)]$	Biomass
mSR	Modified spectral ratio	$1 / 2 (2(R_{810} + 1) - \text{sqrt}(2R_{810} + 1)^2 - 8(R_{810} - R_{690}))$	Biotic stress
MSR	Modified simple ratio	$R_{750} - R_{445} / R_{704} + R_{445}$	N status
MSR _G	Modified green simple ratio	$(R_{800} / R_{670} - 1) / \text{sqrt}(R_{800} / R_{670} + 1)$	N status
MSRRE	Modified red edge simple ratio	$(R_{NIR} / R_G - 1) / \text{Sqrt}(R_{NIR} / R_G + 1)$	N status
MTCARI	Modified transformed CARI	$(R_{NIR} / R_{RE} - 1) / \text{Sqrt}(R_{NIR} / R_{RE} + 1)$	N status
MTCARI / GOSAVI		$3 * [(R_{NIR} - R_{RE}) - 0.2 * (R_{NIR} - R_G) (R_{NIR} / R_{RE})]$	N status
MTCARI / MRETVI		MTCARI / GOSAVI	N status
MTCI	Meris terrestrial chlorophyll index	MTCARI / MRETVI	Plant N concentration
MTVI1	Modified triangular vegetation index 1	$(R_{750} - R_{710}) / (R_{710} - R_{680})$	Dry biomass
MTVI2	Modified triangular vegetation index 2	$1.2[1.2(R_{800} - R_{550}) - 2.5(R_{670} - R_{550})]$	Dry biomass
ND705	Normalized difference 705 index	$1.5[1.2(R_{800} - R_{550}) - 2.5(R_{670} - R_{550})] / \text{sqrt}((2R_{800} + 1)^2 - (6R_{800} - 5\text{sqrt}(R_{670}) - 0.5))$	N status
NDII	Normalized difference infrared index	$(R_{750} - R_{705}) / (R_{750} + R_{705})$	Vegetation traits
NDL-LMA	Normalized Difference Lignin Mass per Area Index	$(R_{819} - R_{1600}) / (R_{819} + R_{1600})$	N status
NDPI	Normalized difference pond index	$(R_{2260} - R_{1490}) / (R_{2260} + R_{1490})$	Water status
NDRE	Normalized difference red edge index	$(R_{SWIR} - R_G) / (R_{SWIR} + R_G)$	Leaf water content, N, Chlorophyll
NDRE / GOSAVI		$R_{790} - R_{720} / R_{790} + R_{720}$	N status
		NDRE / GOSAVI	

NDVI	Normalized difference vegetation index	$R_{810} - R_{690} / R_{810} + R_{690}$	Intercepted PAR, vegetation cover, Chlorophyll, photosynthetic capacity, energy absorption
NDVI _{canste}	Ndvi - canopy stress estimation	$(R_{760} - R_{708}) / (R_{760} + R_{708})$	Stress detection
NDVI-ON	NDVI using near infrared (NIR) and orange (O) bands	$R_{NIR} - R_O / R_{NIR} + R_O$	Chlorophyll, N status
NDVIRE	Normalized difference vegetation index red edge	$(R_{RE} - R_R) / (R_{RE} + R_R)$	Canopy green ness, photosynthetic capacity, energy absorption
NDWI	Normalized difference water index	$(R_{860} - R_{1240}) / (R_{860} + R_{1240})$ $(R_{970} - R_{850}) / (R_{970} + R_{850})$ $(R_{970} - R_{920}) / (R_{970} + R_{920})$ $(R_{970} - R_{880}) / (R_{970} + R_{880})$	Canopy water content
NDWI _{McFeeters}	Normalized Difference Water Index - mcfeeters Version	$(R_G - R_{NIR}) / (R_G + R_{NIR})$	Canopy water content
NG	Normalized green	$R_G / (R_R + R_G + R_B)$	Abiotic stresses
NGRVI (NGRDI)	Normalised green red vegetation (difference) index	$(R_G - R_R) / (R_G + R_R)$	N status, Chlorophyll
NIR/G	Near infrared/Green	R_{780} / R_{550}	N analysis
NIR/NIR	Near infrared/Near infrared	R_{780} / R_{740}	N analysis
NLI	Nonlinear vegetation index	$(R_{NIR}^2 - R_R) / (R_{NIR}^2 + R_R)$	N analysis
NMDI	Normalized Multi-band Drought Index	$(R_{860} - (R_{1640} - R_{2130})) / (R_{860} + (R_{1640} - R_{2130}))$	Water status
NNIR	Normalized NIR index	$R_{NIR} / (R_{NIR} + R_{RE} + R_G)$	Vegetation dicrimination
NPCI	Normalized pigments chlorophyll ratio index	$(R_{680} - R_{430}) / (R_{680} + R_{430})$	Canopy water, N status
NR	Normalized red	$R_R / (R_{NIR} + R_R + R_G)$	Growth kinetics
NREI	Normalized red edge index	$R_{RE} / (R_{NIR} + R_{RE} + R_G)$	N status
NRGDI	Normalized red green difference index	$(R_G - R_R) / (R_G + R_R)$	Vegetation discrimination
NRI	Modified red edge simple ratio index	$(R_{750} - R_{445}) / (R_{705} - R_{445})$	N status
NRI	Nitrogen reflection index	$(R_G - R_R) / (R_G + R_R)$	Water stress
OSAVI	Optimized soil-adjusted vegetation index	$(1 + 0.16) (R_{800} - R_{670}) / (R_{800} + R_{670} + 0.16)$	Chlorophyll content, canopy greenness reducing the effect of soil interference, biomass
OSAVIRE	Optimized soil adjusted vegetation index red-edge	$(R_{RE} - R_R) / (R_{RE} + R_R + 0.16)$	Biotic stress
PPR	Plant pigment ratio	$R_G - R_B / R_G + R_B$	Water stress
PRI	Photochemical reflectance index	$(R_{531} - R_{570}) / (R_{531} + R_{570})$	Light capture efficiency carotenoid content, xanthophyll cycle, gas exchange, non-photochemical quenching
PRI norm	Normalized photochemical reflectance Index (PRI norm)	$(R_{515} - R_{531}) / (R_{515} + R_{531})$	N status
PSND	Pigment-specific normalized difference index	$R_{NIR} - R_B / R_{NIR} + R_B$	LAI
PSRI	Plant senescence reflectance index	$(R_{680} - R_{500}) / R_{750}$	Senescence, maturity
PSSR _a	Pigment-specific simple ratio of chlorophyll a	R_{800} / R_{675}	Chl a content
PSSR _b	Pigment-specific simple ratio of chlorophyll b	R_{800} / R_{650}	Chl b content
PSSR _c	Pigment-specific simple ratio of carotenoid	R_{800} / R_{470}	Carotenoid
PVI	Perpendicular vegetative index	$(R_{NIR} - a R_R - b) / (1 + a^2)^{1/2}$ $R_{NIR} / (R_{NIR} + R_{RED})$	LAI

RARSa	Ratio analysis of reflectance spectra of chlorophyll a	R_{675}/R_{700}	Chl a content
RARSb	Ratio analysis of reflectance spectra of chlorophyll b	$R_{675}/(R_{650} \times R_{700})$	Chl b content
RDMI	Renormalized difference vegetation index	$(R_{800} - R_{670}) / (R_{800} + R_{670})^{0.5}$	Water status
RECI	Red-Edge chlorophyll index	$R_{NIR}/R_{RE} - 1$	Leaf N status
REDVI	Red edge difference vegetation index	$R_{NIR} - R_{RE}$	Vegetation traits
REGDVI	Red edge green difference vegetation index	$R_{RE} - R_G$	N status
REGNDVI	Red edge GNDVI	$(R_{RE} - R_G) / (R_{RE} + R_G)$	N status
REGRVI	Red edge green ratio vegetation index	R_{RE} / R_G	N status
REIP	Red edge inflection point	$700 + 40 [(DVI/2) - R_{740}] / (R_{760} + R_{740})$	Biotic stress
REIP-LI	Red edge inflection point: linear interpolation method	$700 + 40(R_{RE} - R_{700}) / (R_{740} - R_{700})$ Re: $(R_{670} + R_{780})/2$	Inflection point, N assessment
REOSAVI	Red edge optimal soil adjusted vegetation index	$(1 + 0.16) * (R_{NIR} - R_{RE}) / (R_{NIR} + R_{RE} + 0.16)$	N status
RERDVI	Red edge re-normalized different vegetation index	$(R_{NIR} - R_{RE}) / \text{Sqrt}(R_{NIR} + R_{RE})$	Vegetation traits
RERI	Red edge reflectance index	R_{750}/R_{710}	N status
RERVI	Red edge ratio vegetation index	R_{NIR} / R_{RE}	N status
RESAVI	Red edge soil-adjusted vegetation index	$1.5 \times [(R_{NIR} - R_{RE}) / (R_{NIR} + R_{RE} + 0.5)]$	Vegetation traits
RETVI	Red edge transformed vegetation index	$0.5 * [120 * (R_{NIR} - R_G) - 200 * (R_{RE} - R_G)]$	N status
REWDRVI	Red edge wide dynamic range vegetation index	$(a \times NIR - RE) / (a \times NIR + RE); a = 0.12$	Vegetation traits
RGR	Red green ratio	$(R_{612} + R_{660}) / (R_{510} + R_{560})$	Red pigments, Chlorophyll content
RI	Redness index	$\text{Sqrt} [(R_G^2 + R_R^2) / 2]$	Weed discrimination
RI-1dB	Ratio Index-1db	R_{735}/R_{720}	N status
R-M	Red model	$(R_{750}/R_{720}) - 1$	N status
RRE	Reflection in red edge	$(R_{NIR} + R_R) / 2$	Vegetation traits
RTVI	Red-edge triangular vegetation index	$(1000(R_{750} - R_{730}) - 10(R_{750} - R_{550}) \text{ sqrt}(R_{700}/R_{670}))$	Biomass
RVI	Ratio vegetation index	R_{810} / R_{560} R_{755} / R_{698} R_{810} / R_{660}	N status, biomass
SAVI	Soil-adjusted vegetation index	$[(R_{800} - R_{680}) / (R_{800} + R_{680} + 0.75)] (1 + 0.75)$	Chlorophyll content, canopy greenness without soil interference
SAVIRE	Soil adjusted vegetation index red-edge	$1 + L \times [(R_{RE} - R_R) / (R_{RE} + R_R + L)]$	Remove soil interference
SCCCI	Simplified canopy chlorophyll content index	$NDRE / NDVI$	Leaf N status
SIPI	Structure Independent / insensitive Pigment Index	$(R_{800} - R_{445}) / (R_{800} - R_{680})$ $(R_{800} - R_{435}) / (R_{415} - R_{435})$	Carotenoid, Chlorophyll, plant senescence related to stress
SLAIDI	Standardized LAI-determining index	$5 * (R_{1050} - R_{1250}) / (R_{1050} + R_{1250}) R_{1555}$	Plant phenotyping
SPVI	Spectral polygon vegetation index	$0.4(3.7(R_{800} - R_{670}) - 1.2abs(R_{550} - R_{670}))$	N status, pigment analysis
SR	Simple ratio	R_{900}/R_{680}	Biomass, LAI, cover canopy greenness, Chlorophyll content
Sr705	Modified red edge normalized pigment chlorophyll index	$(R_{750} - R_{705}) / (R_{750} + 2R_{445})$	N status, pigment analysis
TCARI	Transformed chlorophyll absorption reflectance index	$3[(R_{700} - R_{670}) - 0.2(R_{700} - R_{550})] (R_{700}/R_{670})$	Canopy greenness, Chlorophyll content, gas exchange reducing the effect of soil, non-photosynthetic components

TCARI/OSAVI	Transformed chlorophyll absorption in reflectance index/Optimized soil-adjusted vegetation index	$3 * [(R_{700} - R_{670}) - 0.2 * (R_{700} - R_{550}) (R_{700}/R_{670})] / (1 + 0.16) (R_{800} - R_{670}) / (R_{800} + R_{670} + 0.16)$	N status, Chlorophyll
TCARI/OSAVI.RE	Red edge-based transformed chlorophyll absorption in reflectance index/Optimized soil-adjusted vegetation index	$3 * [(R_{750} - R_{705}) - 0.2 * (R_{750} - R_{550}) (R_{750}/R_{705})] / [(1 + 0.16) (R_{750} - R_{705}) / (R_{750} + R_{705} + 0.16)]$	Chlorophyll, stress detection
TCARI _{705,750}	Transformed chlorophyll absorption reflectance index using 705 nm and 750 nm reflectance	$3[(R_{750}-R_{705})-0.2(R_{750}-R_{550}) (R_{750}/R_{705})]$	Canopy greenness, Chlorophyll content, gas exchange reducing the effect of soil, non-photosynthetic components
TCARI _{RE}	Transformed chlorophyll absorption reflectance index in red edge	$3 [(R_{RE} - R_R) - 0.2(R_{RE} - R_B) (R_{RE}/R_R)]$	Chlorophyll
TSAVI	Transformed soil adjusted vegetative index	$a (R_{NIR} - aR_R - b) / (R_R + aR_{NIR} - ab)$	LAI, biomass
TVIRE _{Trans}	Transformed vegetation index red-edge	$[(R_{RE} - R_R) / (R_{RE} + R_R) + L]^{1/2}$	Stress detection
TVI _{Trans}	Transformed vegetation index	$Sqrt((R_{NIR} - R_R) / (R_{NIR} + R_R) + 0.5)$	Chlorophyll, stress
TVI _{Tri}	Triangular vegetation index	$0.5[130(R_{810} - R_{560}) - 210(R_{690} - R_{560})]$ $0.5(120(R_{750} - R_{550}) - 200(R_{670} - R_{550}))$	Chlorophyll, biomass
VARI	Visible atmospherically resistant indices	$VARI_G = (R_G - R_R) / (R_G + R_R)$ $VARI_{RE} = (R_{RE} - R_R) / (R_{RE} + R_R)$ $(R_{560} - R_{660}) / (R_{560} + R_{660} - R_{459})$ $VARI_{700} = (R_{700} - 1.7 * R_R + 0.7 * R_B) / (R_{700} + 2.3 * R_R - 1.3 * R_B)$	Green vegetation fraction, canopy coverage, density estimation
VEG	Vegetative	$R_G / ((R_R^{0.667}) * (R_B^{(1 - 0.667)}))$	Vegetation discrimination
VI _{opt}	Optimal vegetation index	$(1 + 0.45) ((R_{800})^2 + 1) / (R_{670} + 0.45)$	Growth monitoring, N status
V _{lopt1}	Optimized vegetation index 1	$100 * (\ln R_{NIR} - \ln R_{RE})$	
VOG _{REI}	Vogelman red edge index	R_{740} / R_{720}	Growth monitoring, N status
VOG _{REI} 1	Vogelman red edge index 1	$(R_{734} - R_{747}) / (R_{715} + R_{720})$ $(0.1R_{890} - R_{670}) / (0.1R_{890} + R_{670})$	N status
WDRVI	Wide dynamic range vegetation index	$(0.15 * R_{810} - R_{698}) / (0.15 R_{810} + R_{698})$	LAI, vegetation cover, biomass
WDVI	Weighted difference vegetation index	$R_{NIR} - R_R (R'_{NIR} / R'_R)$	Vegetation cover, biomass
WI	Water index	R_{900} / R_{970}	Canopy water content
WI	Woebbecke index	$(R_G - R_B) / (R_R - R_G)$	Vegetation discrimination