SUPPLEMENTARY DATA



Figure S1. Plants were imaged inside a photo booth. Artificial lighting was mounted inside the booth and outside, with lights shining into the photo booth.

Table S1. Vegetation indices that were compared among inoculation treatments (controls and plants inoculated with *N. parvum, P. chlamydospora*, or *T. texanus*), at weeks 8, 9, and 14.

Vegetation index	Equation	Description	Reference
Structural indices			
Enhanced Vegetation Index	$EVI = [2.5 \times (R_{800} - R_{670})] / [(R_{800} + 6)(R_{670} - 7.5)(R_{800} + 1)]$	Responsive to canopy structural variations, including leaf area, canopy type, plant physiognomy, and canopy architecture.	(Huete *et al.*, 2002)
Modified Chlorophyll Absorption Index	$MCARI = [(R_{700} - R_{670}) - 0.2 (R_{700} - R_{550})] \times (R_{700} - R_{670})$	Measures depth of chlorophyll absorption.	(Daughtry *et al.*, 2000)
Modified Soil-Adjusted Vegetation Index	$MSAVI = 2 \times R800 + 1 - \sqrt{(2 \times R800 + 1)\ 2 - 8(R800 - R670)\ /2}$	Measures depth of chlorophyll absorption, when bare soil is visible between leaves.	(Qi *et al.*, 1994)
Modified Triangular Vegetation Index 1	$MTVI1 = 1.2\ [1.2\ (R_{800} - R_{550}) - 2.5\ (R_{670} - R_{550})]$	Measures crop growth and yield.	(Haboudane *et al.*, 2004)
Normalized Difference Red Edge	$NDRE = (R_{800} - R_{720}) / (R_{800} + R_{720})$	Measures canopy health and vigor. Has been investigated in *Vitis vinifera* with symptoms of Esca.	(D'Auria *et al.*, 2016; Daglio *et al.*, 2022)
Normalized Difference Vegetation Index	$NDVI = (R_{800} - R_{670}) / (R_{800} + R_{670})$	Measures canopy health and vigor.	(D'Auria *et al.*, 2016; Daglio *et al.*, 2022)
Optimized Soil-Adjusted Vegetation Index	$OSAVI = [(1 + 0.16) \times (R_{800} - R_{670})] / (R_{800} - R_{670} + 0.16)$	Accounts for soil optical properties, to minimize the effect of reflectance from soil.	(Rondeaux *et al.*, 1996)
Renormalized Difference Vegetation Index	$RDVI = (R_{800} - R_{670}) / \sqrt{(R_{800} - R_{670})}$	Ratio of light absorbed in the near-infrared spectrum, to light absorbed in the red range of the visible spectrum.	(Roujean & Breon, 1995)
Simple Ratio	$SR = R_{800} / R_{670}$	Minimizes the effect of reflectance from soil, ice, and water.	(Jordan, 1969)

Pigment indices

Gitelson & Merzlyak Index 1	$GM1 = R_{750} / R_{550}$	Measures chlorophyll content in leaves.	(Gitelson *et al.*, 1996; Gitelson & Merzlyak, 1997)
Gitelson & Merzlyak Index 2	$GM2 = R_{750} / R_{700}$	Measures chlorophyll content in leaves.	(Gitelson *et al.*, 1996; Gitelson & Merzlyak, 1997)
Chlorophyll Index Red Edge	$CI = R_{750} / R_{710}$	Measures chlorophyll a and chlorophyll b content in leaves, to detect chlorosis.	(Zarco-Tejada *et al.*, 2005)
Normalized Phaeophytinization Index	$NPQI = (R_{415} – R_{435}) / (R_{415} + R_{435})$	Measures chlorophyll degradation, as a phaeophytinization-based spectral trait.	(Barnes *et al.*, 1992; Gamon *et al.*, 1992)
Carotenoid Reflectance Index 550	$CRI_{550} = (1 / R_{510}) – (1 / R_{550})$	Measures the physiological state of plants during development, senescence, acclimation/ adaptation to different environments, and various stresses.	(Gitelson *et al.*, 2002)
Carotenoid Reflectance Index 700	$CRI_{700} = (1 / R_{510}) – (1 / R_{700})$	Measures carotenoid reflectance.	(Gitelson *et al.*, 2002)
Pigment Specific Simple Ratio Chlorophyll a	$PSSR_a = R_{800} – R_{675}$	Measures light absorption and photosynthesis.	(Junges *et al.*, 2018; Marín-Ortiz *et al.*, 2020)
Pigment Specific Simple Ratio Chlorophyll b	$PSSR_b = R_{800} – R_{650}$	Measures the physiological state of plants during development, senescence, and various stresses.	(Junges *et al.*, 2018; Marín-Ortiz *et al.*, 2020)
Pigment Specific Simple Ratio Carotenoid	$PSSR_c = R_{800} – R_{500}$	Measures chlorophyll content in leaves, under infection by necrotrophic pathogens.	(Junges *et al.*, 2018; Marín-Ortiz *et al.*, 2020)
Pigment Specific Normalized Difference	$PSNDc = (R_{800} – R_{470}) / (R_{800} + R_{470})$	Measures carotenoid concentration in leaves at different stages of senescence.	(Blackburn, 1998a, Blackburn, 1998b)

Xanthophyll indices			
Photochemical Reflectance Index 570	$PRI_{570} = (R_{570} - R_{531}) / (R_{570} + R_{531})$	Measures photoprotective pigments. Has been investigated in *Vitis vinifera* infested by *Phylloxera*, the feeding of which is associated with lower leaf chlorophyll content, compared to the leaves of uninfested vines.	(Blanchfield *et al.*, 2006; Gamon *et al.*, 1992)
Photochemical Reflectance Index 515	$PRI_{515} = (R_{515} - R_{531}) / (R_{515} + R_{531})$	Measures light-use efficiency.	(Blanchfield *et al.*, 2006; Gamon *et al.*, 1992)
Photochemical Reflectance Index 512	$PRI_{512} = (R_{512} - R_{531}) / (R_{512} + R_{531})$	Measures diurnal changes in photosynthesis.	(Blanchfield *et al.*, 2006; Gamon *et al.*, 1992)
R/G/B indices			
Redness Index	$R = R_{700} / R_{670}$	Measures chlorophyll concentration.	(Gitelson *et al.*, 2000)
Greenness Index	$G = R_{570} / R_{670}$	Measures chlorophyll concentration.	(Calderón *et al.*, 2013)
Blue Index	$B = R_{450} / R_{490}$	Measures anthocyanin concentrations.	(Calderón *et al.*, 2013)
Lichtenthaler Index	$LIC1 = (R_{800} - R_{680}) / (R_{800} + R_{680})$	Measures damage to photosynthesis.	(Lichtenthaler *et al.*, 1996)
Chlorophyll index			
Reflectance Curvature Index	$CUR = (R_{675} \times R_{690}) / R^2_{683}$	Measures changes in steady-state fluorescence between stressed and non-stressed plants.	(Zarco-Tejada *et al.*, 2005)
Plant disease index			
Healthy Index	$HI = (R_{534} - R_{698}) / (R_{534} + R_{698}) - ½ \times R_{704}$	Classifies healthy and disease plants.	(Mahlein *et al.*, 2013)