Earth's Future

Supporting information for

Wavelength-Selective Solar Photovoltaic Systems: Powering greenhouses for plant growth at the food-energy-water nexus

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Contents of this file

Table S1

Additional Supporting Information (Files uploaded separately)

None

Introduction

This supporting information is a Table of survey data for photosynthetic rates for multiple species.

Species	Clear windows	Dyed windows	Test Statistic & Significance
Capsicum annuum var. Big Red	0.536 (0.090)	0.494 (0.110)	0.168 (0.869)
C. annuum var. Talaroo	**0.630 (0.016)**	**0.651 (0.023)**	**23.5^{MW} (0.046)**
C. annuum var. Sensation	**0.608 (0.039)**	**0.650 (0.025)**	**2.859 (0.010)**
Citrus aurantifolia	**0.210 (0.130)**	**0.394 (0.130)**	**2.567 (0.028)**
C. japonica	0.318 (0.120)	0.387 (0.080)	1.183 (0.264)
C. reticulata	0.497 (0.120)	0.500 (0.800)	1.491 (0.083)
Citrus × limon	0.233 (0.120)	0.338 (0.140)	1.505 (0.163)
Citrus × sinensis	0.316 (0.150)	0.445 (0.140)	1.504 (0.154)
Cucumis sativus var. Bushslicer	0.330 (0.060)	0.374 (0.080)	1.138 (0.186)
C. sativus var. Oxwell	0.569 (0.041)	0.589 (0.036)	1.167 (0.258)
C. sativus var. Spacemaster	0.425 (0.170)	0.422 (0.160)	0.092 (0.928)
C. sativus var. Telegraph	0.581 (0.055)	0.533 (0.062)	1.070 (0.299)
C. sativus var. Marketmoore	0.476 (0.150)	0.356 (0.130)	1.898 (0.074)
Fragaria × ananassa	**0.398 (0.110)**	**0.504 (0.090)**	**2.592 (0.017)**
Lycopersicon esculentum var. Black Crimea	0.576 (0.470)	0.555 (0.110)	0.434 (0.671)
L. esculentum var. Roma	**0.477 (0.120)**	**0.583 (0.100)**	**2.225 (0.039)**
L. esculentum var. Siberian	0.538 (0.120)	0.585 (0.060)	0.924 (0.371)
Ocimum basilicum	0.511 (0.130)	0.640 (0.040)	2.026 (0.077)

Table S1. Efficiency of energy transfer within Photosystem II (ΦPSII) for some common North American crop and tree fruit species grown under polymethylmethacrylate (PMMA) with ("Dyed windows") or without ("Clear windows") dye. Data are means (± SD); they were arcsin transformed to meet assumptions of normal distribution and equal variance. Test statistic indicates t values and significance is indicated by *P* values (two-tailed Student's t-test), or Mann-Whitney U Test Statistic (indicated by ^{MW}). Significant results are in bold. Sample size (n) is three to ten per species.